

# WASHINGTON SUBURBAN SANITARY COMMISSION

## 2013 WSSC PLUMBING & FUEL GAS CODE

**Effective Date:** May 1, 2013

### CERTIFICATION OF AUTHORITY

The General Counsel certifies that the statutory authority for the adoption of this Code is:

Annotated Code of Maryland:

Maryland Public Utilities Article:

§§ 17-403, 17-404, 17-406, 23-101, 24-101, 24-102, 24-103, 24-104, 24-105, 24-106, 24-201, 24-801, 25-101, 25-105, 29-101, 29-102, 29-103, 29-105, 29-107

Business Occupations and Professions Article:

§§ 12-305, 12-307

Environment Article:

§9-332

Explanation of Formatting:

Printed Version (Black & White) – Additions and revisions between this version of the Code and the previous Code are shown with a thick vertical line in the right margin as shown immediately to the right.

Deletions are shown with a horizontal arrow as shown to the right.

Electronic Version – in addition to the margin indicators present in the print version, the electronic version also features **blue colored text** to indicate an addition or revision.

Chapter 9 is a new addition to this Code; however it is presented in all black text and without margin indicators.



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# CHAPTER 1

## ADMINISTRATION

### SECTION 101 GENERAL

**101.1 Title.** These regulations may be cited as the "WSSC Plumbing and Fuel Gas Code," hereinafter referred to as "this Code."

**101.2 Purpose.** The purpose of this Code is to provide minimum requirements and standards regarding plumbing and fuel gas systems for the protection of the public health, safety and welfare. The purpose of this Code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected.

#### **101.3 Adoption of Model Codes**

##### **101.3.1 International Codes**

**101.3.1.1 International Plumbing Code.** The 2012 edition of the International Plumbing Code (hereinafter "IPC"), published by the International Code Council, Inc., is hereby adopted and incorporated herein by reference, and has the same force and effect as though fully set forth in this Code, subject to the additions, deletions or other modifications thereto set forth in Chapter 3 of this Code.

**101.3.1.2 International Residential Code (IRC).** The Commission is no longer using the IRC to regulate Group R-3 occupancies. Refer to adopted versions of the IPC and IFGC as well as Chapters 3 & 4 of this code.

**101.3.1.3 International Fuel Gas Code.** The 2012 edition of the International Fuel Gas Code (hereinafter "IFGC"), published by the International Code Council, Inc., are hereby adopted and incorporated herein by reference, and have the same force and effect as though fully set forth in this Code, subject to the additions, deletions or other modifications thereto set forth in Chapter 4 of this Code.

**101.3.2 Referenced Codes and Standards.** Other International Code volumes referenced in the IPC and the IFGC, and the standards referenced therein (IPC-Chapter 13 and IFGC-Chapter 8) shall be considered part of the requirements of this Code to the prescribed extent of each such reference. Where the requirements of referenced standards or manufacturer's installation instructions do not conform to minimum provisions of this Code, the provisions of this Code shall apply.

**Exception:** When enforcement of a Code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and the manufacturer's installation instructions shall apply.

**101.3.3 Appendices.** Provisions of appendices within the adopted International Code volumes or within other International Code volumes referenced therein shall not apply unless specifically adopted herein.

**101.4 Scope.** The provisions of this Code shall apply to: 1) all classes of work usually performed by plumbers, gasfitters, site-utility contractors, and sewer and drain cleaners; including the installation, alteration, repair, relocation, replacement, addition to, use or maintenance of plumbing, fuel gas, and site-utility systems; and 2) industrial and special wastes, generally on private property within the Washington Suburban Sanitary District (WSSD). This Code shall also regulate sanitary and condensate vacuum collection systems.

**101.4.1 Fuel Gas Systems.** This Code shall apply to the installation of *natural and undiluted liquefied petroleum (aka LP or propane)* gas piping systems, *natural and LP* gas utilization equipment and related accessories.

**101.4.1.1 Fuel Gas Piping Systems.** This Code shall cover piping systems for *natural* gas with an operating pressure of 125 psig or less and *liquefied petroleum* gas with an operating pressure of 20 psig or less. Coverage shall extend from the point of delivery, to the outlet of the equipment shutoff valves. Piping system requirements shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation and maintenance.

**101.4.1.2 Fuel Gas Utilization Equipment.** Requirements for *natural* gas and *liquefied petroleum* gas utilization equipment and related accessories shall include installation, combustion and ventilation air, venting, and connection to piping systems.

**101.4.2 Systems and Equipment Outside of the Scope.** This code shall not apply to items listed in the current adopted version of the International Fuel Gas Code, Section 101.2.4.

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

## SECTION 102 APPLICABILITY

**102.1 General.** The provisions of this Code shall apply to all matters affecting or relating to work on *private* property as set forth in Section 101 or as otherwise specified in law. Where in any specific case, different sections of this Code specify different materials, methods of construction or other requirements, the most restrictive section shall govern as determined by the Code Official.

**102.2 Existing Installations.** Plumbing and fuel gas systems lawfully in existence at the time of the adoption of this Code shall be permitted to have their use and maintenance continued if the use, maintenance, or repair is in accordance with the original design and requirements existing at the time of installation, *and*, if no hazard to life, health, property, *or* to the Commission's systems; is created by such system.

### 102.3 Maintenance

**102.3.1 General.** All plumbing and fuel gas systems, site utility systems, industrial discharge control systems, materials and appurtenances, both existing and new, and all parts thereof, shall be maintained in proper operating condition and in a safe and sanitary condition in accordance with the original design and requirements. All devices or safeguards required by this Code shall be maintained in compliance with the code edition under which they were installed. The property owner, the owner's designated agent, occupant and/or proprietor shall be responsible for maintenance of work or systems regulated by this Code on private property. To determine compliance with this provision, the Code Official shall have the authority to require any system to be re-inspected.

**102.3.2 Commission Maintenance.** The Commission shall maintain all Commission water and sewer mains, service connections, water meters, and appurtenances.

**102.3.2.1** WSSC personnel shall have right of entry onto private property to analyze and maintain water and sewer service connections to ensure the integrity, safety and healthfulness of same. This includes, but not limited to, operation of fire hydrants and other water outlets; and access to and through sewer manholes and cleanouts.

**102.3.3 Right-of-Way Services.** All right-of-way services shall be maintained by the property owner from the building to the edge of the right-of-way or the property line, whichever is closer to the building.

**102.3.4 Commission-Ordered Repairs.** When the Code Official directs repairs to plumbing or fuel gas systems, repair efforts shall be completed within the time specified in a written notification. If deemed a health or safety hazard, or when Commission-ordered repairs do not start within the time specified, the Commission may perform maintenance or repair work on private property, and shall assess the property owner for the labor, material, and overhead costs for work performed.

**102.3.5 Accessibility to Commission Structures.** Water meters, water meter settings and vaults, valve and curb boxes, property-line cleanouts, and similar Commission structures shall be *readily accessible* to Commission personnel. A person shall not block access to or deny access by WSSC personnel to any such structure or to an inside water meter or to a backflow prevention device.

### **102.3.6 Sewer Stoppages**

**102.3.6.1 Property Owner's Responsibility.** The property owner shall employ, at his or her own expense, a WSSC-licensed Master Plumber or a WSSC-licensed Sewer and Drain Cleaner to clear the stoppage, from the building to the Commission's sewer main as set forth in Section 102.3.6.2. If the stoppage was caused by a defective building sewer, or by a defective connection at the joint connecting the private sewer to the WSSC service connection, the property owner shall be responsible for hiring a WSSC-licensed Master Plumber to correct the problem at the property owner's expense.

**102.3.6.2 Master Plumber's or Drain Cleaner's Responsibility.** The following requirements shall be the responsibility of the Master Plumber or the Licensed Drain Cleaner when attempting to clear a stoppage in a building sewer (Note: Through-out this section the references to a drain cleaner shall apply to both the Licensed Master Plumber or Licensed Drain Cleaner):

**102.3.6.2.1 Equipment.** Sewer cleaning equipment shall be adequate and in proper working order, to satisfactorily complete the work.

**102.3.6.2.2 System Entry.** Sewer cleaning equipment shall be introduced into the drainage system through an opening that is *not* served or protected by a plumbing trap.

**102.3.6.2.2.1 Property Line Clean-out.** Where a WSSC property line clean-out exist, the drain cleaner shall first attempt to locate, open, and determine through visual means if the WSSC service connection is stopped up. If confirmed, the drain cleaner shall notify the property owner and the Commissioner's Emergency call center of their findings. The call center will dispatch a WSSC crew or WSSC authorized contractor. If the visual inspection of the property line clean-out does not indicate a stoppage, the drain cleaner shall access the sewer through the most favorable clean-out or access point on-property.

**102.3.6.2.3 Extent of Cleaning Operation, Soft Stoppages.** In the case of a soft stoppage and an intact service connection, the drain cleaner shall operate the cleaning equipment until the cleaning head has extended into the Commission's sewer main, and the soft stoppage has been completely cleared. The drain cleaner shall be required to notify the Commission.

**102.3.6.2.4 Commission Notification.** If an obstruction causing a stoppage is located in the Commission's service connection, the drain cleaner shall notify the Commission's Emergency Call Center by telephone, fax, or electronically within 72-hours. If the stoppage was *not* cleared the drain cleaner shall notify the Commission by telephone *immediately*. The drain cleaner shall also inform the Commission, in his or her opinion, what the cause of the obstruction was i.e. soft stoppage, broken/misaligned piping, roots, grease, debris, etc.

**102.3.6.2.5 Equipment Problems.** If the sewer cleaning equipment becomes lodged in any portion of the sewer system, the drain cleaner shall retrieve the equipment. Under no circumstances shall the jobsite be abandoned until the drain cleaning equipment has been removed; if it cannot be removed the Commission shall be notified *immediately*.

If the service connection is not defective, the drain cleaner shall reimburse the Commission for its expenses in retrieving the drain cleaning equipment. If the service connection is defective, and the defect caused the drain cleaning equipment to become lodged, the drain cleaner shall *not* be required to reimburse the Commission for its expenses in retrieving the equipment.

**102.3.6.3 Commission's Responsibility.** The Commission shall ascertain if the Commission's sewer main is clear. Stoppages in Commission sewer mains shall be cleared or otherwise corrected by the Commission. If the stoppage was reported by the drain cleaner as originating in the service connection, the Commission shall initiate the following actions:

**102.3.6.3.1 Follow-up.** If the condition reoccurs, the Commission shall follow-up to determine both the general condition and the integrity of the service connection.

**102.3.6.3.2 Defective Connection.** If the drain cleaner could not relieve a hard or soft stoppage in a defective service connection, the stoppage shall be relieved, or the condition corrected by the Commission, *without* back-charge to the drain cleaner.

**102.3.6.3.3 Claim.** If the Commission determines that the stoppage was caused by a defective service connection, the Commission shall instruct the property owner to submit a claim for the cost of the drain cleaner's *initial* activity. The property owner may be reimbursed for such costs *at the prevailing usual and customary charges* for such work.

**102.3.7 Water Leaks.** The Commission shall investigate and determine responsibility for leaks on water services and appurtenances. If it is found that the leak is *not* the Commission's responsibility, the property owner shall be directed to have necessary repairs performed by a WSSC-licensed Master Plumber at their own expense.

**102.3.8 Sewer Leaks and Defects.** The Commission shall investigate and determine responsibility for leaks and defects on sewer services and appurtenances. If it is found that the leak or defect is *not* the Commission’s responsibility, the property owner shall be directed to have necessary repairs performed by a WSSC-licensed Master Plumber at their own expense.

**102.3.9 Backflow Prevention Devices, Maintenance and Replacement.**

**102.3.9.1 Group R-3 Occupancies.** In Group R-3 occupancies (one- and two-family residences), the owner shall have ASSE 1012 and ASSE 1024 non-testable backflow device replaced or re-built every *5-years*, with the starting date beginning on the date of FINAL plumbing inspection for the building. Other testable backflow devices shall be tested annually by a WSSC-registered Certified Backflow Technician, with the starting date beginning on the date of the latest test tag attached to each device.

**102.3.9.2 All Other Occupancies.** In all other occupancy Group classifications, the owner shall have non-testable backflow prevention devices replaced every *5-years*, with the starting date beginning on the date of FINAL plumbing inspection for the building. The testable backflow *containment* device(s), as well as testable backflow devices used for isolation, shall be tested *annually* (or more frequently if determined by the Commission) by a WSSC-registered Certified Backflow Technician, with the starting date beginning on the date of the latest test tag attached to each device.

**102.3.10 Alternative Pipe Restoration Methods.**

**102.3.10.1 General.** Alternative pipe restoration methods used for water and sewer piping including cured-in-place-piping (CIPP), pipe bursting, and pipe relining systems, shall be performed using equipment and procedures recommended by the equipment manufacturer. Such restorations shall *require* a permit and inspection(s).

**102.3.10.2 Water Piping.** Products used in the final stage restoration process shall conform to IPC Section 605.4. Restored water piping systems shall be labeled or permanently tagged at the main service valve, riser valves, and on exposed piping at 10-foot minimum intervals. The label shall indicate that the piping has been so restored and shall list precautions regarding future maintenance, including the requirement for flameless pipe joining methods when applicable. All backflow prevention devices shall be re-tested or replaced.

**102.3.10.3 Sewer Piping.** Restored sewer piping shall be flushed with clean water and televised as a part of the inspection requirements.

**102.4 Additions, Alterations or Repairs.** Additions, alterations, renovations or repairs to any plumbing or fuel gas system shall conform to requirements set forth in this Code for a new system, without requiring the existing plumbing or fuel gas system to comply with all the requirements of this Code. Additions, alterations or repairs shall not cause an existing system to become unsafe, unsanitary or overloaded. Minor additions, alterations,

renovations and repairs to existing plumbing and fuel gas systems shall be permitted in the same manner and arrangement as in the existing system, provided that such repairs or replacement are not hazardous and are approved.

**102.5 Change in Occupancy.** It shall be unlawful to make any change in the occupancy of any structure or property that will subject the structure or property to any special provision of this Code without approval of the Code Official. The Code Official shall certify that such structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.

**102.6 Historic Buildings.** The provisions of this Code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the State or a local jurisdiction as historic buildings when such buildings or structures are judged by the Code Official to be safe and not contrary to the public interests of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of buildings.

**102.7 Moved Buildings.** Subject to Section 102.2, plumbing and fuel gas systems that are a part of buildings or structures moved into or within the jurisdiction shall comply with the provisions of this Code for new installations.

**102.8 Special Exception, Federal Property.** Pursuant to federal regulation or written agreement, where property is owned by the federal government and where buildings are being erected or improved, plumbing, fuel gas and/or site utility systems shall not require WSSC permits or inspections. For requirements on the federal government, see Section 102.8.3 below.

**102.8.1 Exemption Not Applicable.** This exemption does not apply to property or buildings under lease or condominium ownership. This exemption also does not restrict the federal government from securing permits and scheduling inspection in cases where the government desires the Commission's inspection of plumbing, fuel gas, or site utility systems.

**102.8.1.1 Voluntary Request for Permits and Inspections.** Where work is to be performed by federal agency staff and permits and inspections by WSSC are desired, each federal agency or campus shall register per Section 113.5. Where contract work will be performed on federal property and permits and inspections by WSSC are desired, contracting firms shall be registered per Section 113.1.

**102.8.2 Regulatory Compliance.** This exemption does not exempt the federal government from compliance with other specific provisions of this code: Chapter 5 - Cross-Connection Control; Chapter 8 - Industrial Discharge Control (Pretreatment); or Sections 302.10, 804 and 818 - Fats, Oil & Grease Program.

**102.8.2.1 Cross Connection Control.** The Commission shall issue a special license to each federal property for the sole purpose of submitting and tracking backflow test reports. No other permit or inspection activities will be allowed under this license. See Chapter 5 for Cross Connection/backflow prevention requirements.

**102.8.3 Federal Property Application Requirements.** Federal property improvement projects are required to apply for hydraulic planning analysis so WSSC can evaluate existing and projected water and sewer flow demands. Application is required for meters, service connection, and/or WSSC system extension. Application, site utility plans, and plumbing plans are required in order for WSSC to determine applicable System Development Charges. In all cases, the federal government is responsible for all fees and charges associated with these Commission business functions.

**102.9 Changes to This Code.** Changes to this Code shall apply to permits issued after the effective date of the approved change by the Commission, or to work initiated after the effective date if no permit is required for the work. Such changes in the interest of public health, safety or welfare may apply retroactively if specified by the Commission at the time of adoption.

**102.10 Requirements Not Covered by Code.** Any requirements necessary for the strength, stability or proper operation of an existing or proposed plumbing or fuel gas system, or for the public safety, health and general welfare, not specifically covered by this Code shall be determined by the Code Official.

## SECTION 103 COMMISSION FUNCTIONS

**103.1 General.** The Washington Suburban Sanitary Commission (WSSC) is authorized by *Public Utilities Article* of the *Annotated Code of Maryland* to adopt, administer and enforce regulations for the construction and installation of plumbing and fuel gas systems. The unit within the WSSC created to carry out this function shall be known as the Regulatory Services Group. All Commission employees charged with enforcement of this Code shall be known individually and collectively as Code Officials. The Commission shall designate a person who shall be known as the Chief Code Official to have administrative authority over the activities of a Code Official.

**103.2 Code Officials.** Code Officials shall be Commission employees. The Commission shall have the authority to designate related technical officers, inspectors and other employees to administer this Code.

**103.3 Inspection Staff.** Code officials *directly* associated with daily interpretation and enforcement of plumbing and fuel gas codes on a *technical* level, including administration, document review, and field inspection; shall as a minimum, be qualified as a *Master* licensee in the plumbing and fuel gas trades.

## SECTION 104

### DUTIES AND POWERS OF THE COMMISSION

**104.1 General.** The Commission and its Code Officials shall enforce all of the provisions of this Code, and shall act on any question relative to the installation, alteration, repair, maintenance or operation of all systems, devices and equipment governed by this Code except as otherwise specifically provided for by law.

**104.2 Rule-Making Authority.** The Commission shall have authority as necessary in the interests of public health, safety and general welfare to adopt and promulgate regulations to interpret and implement the provisions of this Code to secure the intent thereof and to designate requirements applicable because of local climatic or other conditions. Such regulations shall not have the effect of waiving structural or fire performance requirements specifically provided for in this Code, or of violating accepted engineering practice involving public safety.

**104.3 Applications and Permits.** The Commission shall receive applications and issue permits for the installation and alteration of covered work as may be required by this Code, inspect the premises for which such permits have been issued, and generally enforce compliance with the provisions of this Code.

**104.4 Inspections.** A Code Official shall make all the required inspections, or shall accept reports of inspection by approved agencies or individuals. All reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The Commission shall retain the right at its discretion, to monitor or re-inspect any inspection reported by other approval agencies or individuals. The Commission shall be authorized to engage such expert opinion as deemed necessary to report on unusual technical issues that arise.

**104.5 Right of Entry.** Whenever it is necessary to perform an inspection to enforce the provisions of this Code, or whenever a Code Official has reasonable cause to believe that there exists in any building or upon any premises any violations of this Code, the Code Official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the Code Official by this Code. If such building or premises is occupied, the Code Official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the Code Official shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. If entry is refused, or if the owner or the owner's agent cannot be located, the Code Official shall have recourse to any remedy provided by law to secure entry.

When the Code Official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, the owner, occupant, proprietor, or person having

charge or control of any building or premises shall promptly permit entry by the Code Official for the purpose of inspection and examination pursuant to this Code.

**104.6 Identification.** A Code Official shall carry proper identification when inspecting structures or premises in the performance of duties under this Code.

**104.7 Notices and Orders.** A Code Official shall issue all necessary notices or orders to ensure compliance with this Code. Where deemed inadequate, a system shall be provided, altered, or repaired as directed, and in a timeframe indicated by, a Notice of Violation (NOV) served upon the property owner, occupant, proprietor, or operator.

**104.8 Commission Non-Interference.** The Commission shall have no responsibility nor shall the Commission pass judgment in any financial matters or other business-related controversy between the registered person and the public, under any circumstance.

**104.9 Liability.** The code official, member of the WSSC Plumbing and Fuel Gas Board, or other employee charged with the creation and/or enforcement of this code, while acting for the Commission in good faith and without malice in the discharge of the duties required by this code or other applicable regulation or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damages accruing to persons or property as a result of an act or by reasons of an act or omission in the discharge of official duties.

**104.9.1 Defense.** Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the Commission until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

## SECTION 105 APPROVAL

### 105.1 Product and Material Acceptance

**105.1.1 Standards.** Except as otherwise provided for in this Code, products and materials shall conform at least to the standards cited in this Code, which shall be considered *minimum* standards, when used in the construction, installation, alteration, or repair of plumbing and fuel gas systems or parts of these systems. The inclusion or listing of a product or material although indicated as approved for purposes of these regulations, does *not* infer unqualified endorsement as to its selection or serviceability in any or every installation.

**105.1.2 Materials Handling.** Products and materials installed in plumbing and fuel gas systems shall be handled and installed as to avoid damage so that the quality of the product or material shall not be impaired.

**105.1.3 Damaged Materials.** Defective or damaged products, materials, equipment, or apparatus shall not be installed or maintained.

**105.1.4 Materials Installation.** All products and materials used shall be installed in strict accordance with the standards and listings under which the materials are accepted or approved, including the appendices of the standards, and in strict accordance with the manufacturer's instructions.

**105.1.5 Material and Equipment Reuse.** Materials, equipment and devices shall not be reused unless reconditioned, tested, placed in good and proper working condition, and approved.

**105.2 Alternative Materials, Methods and Equipment.** The provisions of this Code shall not be intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this Code, provided that any such alternative has been approved. An alternative material or method of construction shall be approved where the Code Official finds that the proposed design is satisfactory and complies with the intent of this Code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this Code in quality, strength, effectiveness, fire resistance, durability and safety.

**105.3 Required Testing.** Whenever there is insufficient evidence of compliance with the provisions of this Code, or evidence that a material or method does not conform to the requirements of this Code, or in order to substantiate claims for alternate materials or methods, the Code Official shall have the authority to require tests to be made, at no expense to the Commission, as evidence of compliance.

**105.3.1 Test Methods.** Test methods shall be as specified in this Code or by other recognized test standards. In the absence of recognized and accepted test methods, the Code Official shall approve the testing procedures.

**105.3.2 Testing Agency.** All tests shall be performed by an approved agency.

**105.3.3 Test Reports.** Reports of tests shall be retained by the Code Official.

**105.4 Alternative Engineered Design.** The design, documentation, inspection, testing and approval of an alternative engineered design plumbing or fuel gas system shall comply with Sections 105.4.1 through 105.4.6 of this Code.

**105.4.1 Design Criteria.** An alternative engineered design shall conform to the intent of the provisions of this Code, and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components

shall be designed and installed in accordance with the manufacturer's installation instructions.

**105.4.2 Submittal.** The registered design professional shall indicate on the permit application that the plumbing system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the approved installation.

**105.4.3 Technical Data.** The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that its performance meets the intent of this Code.

**105.4.4 Construction Documents.** The registered design professional shall submit to the Code Official two complete sets of signed and sealed construction documents for the alternative engineered design. The construction documents shall include floor plans and a riser diagram for the work. Where appropriate, the construction documents shall indicate the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.

**105.4.5 Design Approval.** Where the Chief Code Official determines that the alternative engineered design conforms to the intent of this Code, the plumbing or fuel gas system shall be approved. If the alternative engineered design is not approved, the Code Official shall notify the registered design professional in writing, stating the reasons for disapproval.

**105.4.6 Inspection and Testing.** The alternative engineered design shall be tested and inspected in accordance with the requirements of Section 107 of this Code.

**105.5 Modifications (Waivers).** When practical difficulties involved in carrying out the provisions of this Code arise, the Commission shall have the authority to grant a modification for individual cases, provided that the Chief Code Official shall first find special individual reasons that make the strict letter of this Code impractical, that the modification is in conformity with the intent and purpose of this Code, and that such modification does not lessen health, life or fire safety requirements or cause damage to the Commission's systems. Records of action granting modifications shall be maintained by the Commission's Regulatory Services Group.

**105.5.1 Request.** A modification request shall be submitted on the official [Modification Request form](#). The form shall be signed by the Owner and by the Master Plumber/Gasfitter or Engineer.

**105.5.2 Indemnification.** The *owner* or his or her legal representative shall sign the hold-harmless agreement section of the modification request form, indemnifying the Commission and/or its employees from and against all losses and liabilities that may result from the granting of the modification request.

**105.5.3 Future Editions.** This Code incorporates by reference the current editions of many nationally recognized codes and standards. Revised and updated editions of such codes and standards shall not automatically become part of this Code. However, the Code Official may consider such amendments to published editions of referenced codes and standards not yet adopted by the Commission as evidence supporting an application for a modification.

## SECTION 106 PERMITS

### 106.1 Required Permits

**106.1.1 General.** Any owner, authorized agent or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any plumbing, site utility, fuel gas appliance, or fuel gas system, the installation of which is regulated by this Code, or to cause any such work to be done, shall *first* make application to the Commission and obtain the required permit for the work. All work identified in this Code, except for "Exempt Work" set forth in Section 106.2, shall be installed under a Long Form or Short Form Plumbing/Gasfitting permit, or under a Site-Utility permit.

**106.1.2 Required Inspections.** It shall be the licensee's responsibility to ensure that all work is inspected and approved in accordance with Section 107 of this Code.

**106.1.2.1 Disclosure.** The Licensee shall be responsible for notifying the property owner or owner's agent of all permit and inspection requirements associated with the work performed prior to installation.

**106.2 Exempt Work.** The following work shall be exempt from the requirement for a permit. Exemption from the permit requirement of this Code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this Code or any other laws.

**106.2.1 Repairing Leaks.** The stopping of leaks in drains, water, soil, waste or vent pipe, provided that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and an inspection made as provided in this Code, subject to the provisions set forth in Section 106.2.2.

**106.2.2 Ten-Percent Rule, General.** Within the building envelope including below grade, if *less than* 10-percent (nominal) of the existing piping for a system, sub-system, or fixture group is replaced, a permit and inspection shall *not* be required. This shall not

preclude the licensee from obtaining permits and inspections for such work if so desired.

**106.2.2.1 Other than Group R-3 Occupancies.** The intent of the 10-percent rule exclusions in Section 106.2.2 shall be applicable to minor repairs and replacement piping only. In buildings other than Group R-3 occupancies, a permit and inspection shall be required for more extensive work if *more than* 10-percent (nominal) of a *floor level, wing, or area* is involved, even though the floor level, wing, or area defines *less than* 10-percent (nominal) of the total building plumbing.

**106.2.2.2 Repairs Below Grade.** Repairs to outdoor piping below grade shall *not* be exempt work, and shall require a permit and inspection. Examples of repair work requiring a permit shall include, but shall not be limited to: Building sewer, building water service, grinder pump replacement, and site-utility water and sewer piping.

**106.2.2.3 Repairs to Gas Piping.** Repairs to gas piping shall *not* be exempt work, and shall require a permit and inspection.

**106.2.3 Plumbing Maintenance.** The clearing of stoppages in fixture branches; the repairing of incidental leaks in pipes, valves or fixtures; the removal and reinstallation or replacement of existing plumbing fixtures, residential type plumbing appliances including electric water heaters, non-testable backflow devices, and plumbing appurtenances; provided that such repairs *do not* involve or require the replacement of *concealed* piping, or the rearrangement of valves, pipes or fixtures.

**106.2.3.1 Testing and Rebuilding of Testable Backflow Preventers.** Testing and rebuilding of testable backflow preventers is exempt of a required permit but shall only be performed by a WSSC registered Cross Connection Technician and requires the submission of a completed WSSC backflow preventer test report to the WSSC Cross Connection Control and Backflow Prevention Office.

**106.2.3.1.1 Submittal Deadline.** The Test Report shall be submitted to WSSC within 5 business days of a successful test.

**106.2.3.2 Replacing and Rebuilding of Non-testable Backflow Preventers.** Replaced or rebuilt non-testable backflow preventers do not require submission of a form to WSSC but a completed WSSC Replace or Re-build Notification Tag must be hung on or near the device. See WSSC 302.3.3 and 402.25.1.

**106.2.4 Gas Appliance Maintenance.** Replacement, repair, or adjustment of gas controls, burners, or minor components; luminous and portable appliances; to the extent that such replacement shall not alter the condition of previous approval or render such equipment unsafe.

**106.2.5 Special Exception, Natural Gas Utility Companies.** Gas Utility personnel or their subcontractors may perform a limited "house line" alteration for a Group R-3

occupancy without a permit. This house line alteration shall only be allowed when the gas meter is relocated from inside to outside as part of the utilities' system maintenance. The scope of work shall be subject to same limits and parameters described in the "Twelve Joint Rule," as set forth in Section 402.4. Meter relocations exceeding the limits of the Twelve Joint Rule or those initiated by the property owner or the owner's agent shall require a Short Form permit and inspection as required by this code.

**106.2.6 Federal Property Exempt.** See Sections 102.8.

**106.3 Permit Application.** Each application for a permit, with the required fee, shall be filed with the Commission on a permit application form furnished for that purpose. All permit applications including site-utility permits shall be completed at time of application, including: property owner's/owner's agent name, address, and contact information; as well as work premise address/property description, and description of work being performed. The application shall be signed or electronically validated by the licensee. A permit application shall *not* be a permit, and the submission of an application shall *not* confer permission to proceed with the work.

**106.4 Authorized Permit Applicant.** Application for a permit shall be made by the licensee or licensee's agent to install all or part of any plumbing, fuel gas, or site utility system. The applicant shall meet all qualifications established by this Code and/or by other applicable law. The full name and address of the applicant shall be stated in the application.

**106.4.1 Purchase of Permits Security Policy.** Only the Master Plumber/Gasfitter or their authorized representatives (proxies) will be able to purchase Long Form or Short Form Permits. The identity of the licensee or proxy will be validated using the Commission's database, along with photo identification such as a driver's license.

**106.5 Construction Documents Submission.** Construction documents, engineering calculations, diagrams and other such data shall be submitted in two sets with each application for a Long Form plumbing/gasfitting permit or for a site-utility permit; or for a Short Form permit when required by the Code Official. The Commission may require construction documents, computations and specifications to be prepared and designed by a registered design professional. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location; nature and extent of the work proposed and show in detail that the work conforms to the provisions of this Code.

**Exception:** The Code Official shall have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for shall be such that reviewing of construction documents shall not be necessary to determine compliance with this Code. In general, construction documents shall not be required for Group R-3 one- and two-family residences; or for commercial work *without* FOG abatement, *and*, with a *cumulative total* of 10 or fewer items. The cumulative total of 10 or fewer items may include plumbing fixtures; and 3 or fewer gas

appliances, served by a dedicated source, with an input rating of less than 200,000 Btuh each.

**Note:** The use of *multiple* permits under the exception cited above, on jobs with a cumulative total exceeding 10 items, shall *not* be acceptable.

**106.5.1 Electronic Submittal Required.** Design plans and other required supporting documentation shall be submitted to the WSSC in accordance with applicable electronic submittal and related checklist protocols.

**106.5.2 Approved Construction Documents.** When the Commission issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped **APPROVED** by the Code Official/plans reviewer. Such approved construction documents shall not be changed, modified or altered without authorization from the Code Official. All work shall be done in accordance with the approved construction documents.

At the Commission's discretion and direction, the Code Official shall have the authority to issue a permit for the construction of a part of a plumbing, fuel gas, or site utility system before the entire construction documents for the whole system have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this Code. The licensee shall proceed at his or her own risk, without assurance that the permit for the entire system shall be granted.

**106.5.3 Retention of Construction Documents.** One set of construction documents shall be retained by the Code Official until **FINAL** approval of the work covered therein. One set of approved construction documents shall be returned to the applicant, and shall be kept on the site of the building or work at all times during which the authorized work is in progress.

**106.6 Permit Issuance.** The application, construction documents and other data filed by an applicant for a permit shall be reviewed by the Code Official. If the Code Official finds that the proposed work conforms to the requirements of this Code, and that the fees published by the Commission have been paid, a permit shall be issued to the applicant.

**106.6.1 Validity.** The issuance of a permit or approval of construction documents shall *not* be construed to be a permit for, or an approval of, any violation of any of the provisions of this Code or of other law of the jurisdiction. No permit presuming to give authority to violate or cancel the provisions of this Code shall be valid.

The issuance of a permit based upon construction documents and other data shall *not* prevent the Code Official from requiring the correction of errors in construction documents and other data, or from preventing building operations being carried on when in violation of this Code or of other Commission regulations.

**106.6.2 Permit Invalidation.** Subject to applicable State law, the Commission may suspend, revoke, or invalidate a permit or approval issued under the provisions of this Code in case of any false statement or misrepresentation of fact in the application or on the construction documents upon which the permit or approval was based.

Examples of misrepresentation of fact shall include, but not be limited to, the following:

- Payment of residential fees for a property used in a commercial manner.
- Permit issued for an outbuilding or garage that is subsequently illegally converted for use as a residence.
- Permit applicant falsely representing himself or herself as owner, not the owner's agent.

**106.7 Fees.** A permit shall not be issued until all applicable fees have been paid, and an amendment to a permit shall not be released until the additional fee, if any, due to an increase of the plumbing, fuel gas, or site utility systems, has been paid.

**106.7.1 Insufficient Funds.** In cases where funds are insufficient in check and electronic fund transfers, the applicant shall pay for associated costs as a part of the required fees. The Commission reserves the right to impose a 6-month *cash only* status in these cases.

**106.7.2 Work Commencing Before Permit Issuance.** Any person who commences any work on a plumbing, fuel gas, or site-utility system before obtaining the necessary permits shall be subject to, *in addition to* the published permit fees, 100% of both the minimum permit fee and the fixture/appliance inspection fees. Systems Development Charge (SDC) fees or other impact fees shall be excluded from this penalty.

**106.7.3 Fee Schedule.** The permit fees for all plumbing, gasfitting, and site-utility work, as well as System Development Charge (SDC) fees or other impact fees, if any, shall be as indicated in separate fee schedules published by the Commission.

**106.7.4 Fee Credits.** In cases where a building is being demolished and/or renovated, an SDC credit shall be allowed for existing plumbing fixtures that will be removed. *Prior to* the credit being issued, a fixture credit permit shall *first* be obtained and the fixtures to be removed shall be verified by the Code Official.

**106.7.5 Fee Refunds.** Except as otherwise provided in Public Utilities Article, Annotated Code of Maryland, the Commission shall authorize the refunding of fees, no later than 180-days after the date of permit cancellation, expiration, or FINAL inspection, whichever is last, as follows:

**106.7.5.1 Erroneous Payment.** The full amount of any fee paid that was erroneously paid or collected.

**106.7.5.2 Permit Cancelled.** If a permit is cancelled or expires, the current minimum permit fee shall be retained to cover administrative costs. The balance including impact fees shall be refunded, provided that no work has been performed and no inspections have been made.

**106.7.6 Re-Inspection Fees.** A re-inspection fee may be assessed against the permittee for scheduled inspections not meeting the requirements of this Code. One Short Form permit shall constitute a re-inspection fee. Subsequent inspection requests shall *not* be scheduled until these fees have been paid. A re-inspection fee for a homeowner's permit shall be paid directly to Permit's counter and will be noted on the active permit.

**106.7.6.1 Procedures.** The licensee shall schedule the original Long Form or Short Form permit for inspection. For Short Form permits, WSSC's Inspection Aides will record the permit number of the re-inspection fee permit into the history of the original permit. The licensee shall print a copy of the Short Form permit and have it on the job for the re-inspection. The Plumbing Inspector will sign this copy of the permit which then goes to the property owner. If the licensee wishes to have a signed copy of the permit, they shall print an additional copy and have on the job with instructions for the additional signatures.

**106.8 Long Form Permit.** A Long Form permit shall be required for all new plumbing and fuel gas work requiring one or more inspections, including major alterations or additions and design retrofit work; for any plumbing work requiring the establishment of a new WSSC customer account; and for a new, or the relocation of a, testable or non-testable backflow preventer, residential or commercial.

**106.8.1 Expiration.** A Long Form permit shall expire if the work authorized by the permit does not pass an inspection within 18-months from the date of issuance of the permit, or if the work authorized by the permit does not pass another progress inspection or final inspection within 18-months from the last performed inspection.

**106.8.1.1 Re-activation.** Before the original permitted work can be recommenced, the current minimum long form permit fee must be paid as a re-issue fee. In addition, the current amount for inspection fees and System Development Charges (SDC) shall be due for additional fixtures and the difference in SDC is due for existing permitted fixtures based on the originally permitted fee.

**106.8.2 Commission Sub-Meter Permit Application.** The applicant shall be responsible to provide accurate account information including name, address; billing account number and main water meter ID and serial number. Applicable only to non-residential properties.

**106.9 Short Form Permit.** A Short Form permit shall be allowed for the replacement, repair, or alteration of *existing* plumbing and fuel gas systems, fixtures, or appliances requiring only *one* inspection. A Short Form permit may also be used for the direct replacement of all testable backflow preventers provided the existing location and application are acceptable under this Code, assembly listings, and manufacturer's installation instructions.

**106.9.1 Limitations.** A Short Form permit for a singular inspection shall be limited to 3 items, fixtures, or appliances. Private meters and tees for future gas appliances shall be considered as items. Gas appliances shall be limited to 450,000 Btuh each. Only *one* address or *one* occupancy unit shall be listed on *each* permit. Only *one* inspection shall be performed for each permit.

**106.9.2 Re-Inspection Fee.** A Short Form shall also be used as a method of collecting payment as a "re-inspection fee" as cited in Sections 107.2.1.8 and 107.3.4. Subsequent inspection requests shall *not* be honored until the re-inspection fee has been paid.

**106.9.3 Activation.** A Short Form permit shall be activated through the scheduling of the inspection upon completion of the work.

**106.9.3.1 Present During Work.** WSSC Short Form Permits shall be on the jobsite at the time of installation.

**106.9.3.2 Timely Activation.** All required inspections, including new or replacement gas appliances, shall be scheduled for inspection to occur as soon as practical, but not to exceed 10 business days from the date of installation.

**106.9.3.3 Obstructed Process.** If the property owner or agent of the owner obstructs or refuses to allow the licensee to schedule the inspection required under 106.9.3.2, the licensee shall promptly notify WSSC in writing. The notification shall occur within 15 days of installation and it shall include: property owner or owner agent's name; mailing address, job address, phone number(s), email address, permit number, and documentation of attempts to schedule the inspection.

**106.9.4 Expiration.** A Short Form permit shall expire if not activated four (4) months from the date of purchase, without benefit of refund.

**106.9.4.1 Failed Inspection.** Active Short Form permits shall expire 60 days from the date of a disapproved inspection.

**106.9.4.2 Reuse or Refund.** A Short Form permit scheduled in error shall not be reused or refunded.

## 106.10 Permit Release and Transfer

**106.10.1 Licensee Request.** The licensee may be released from completing work that has been authorized under a permit by submitting a written request to the WSSC Permit Services Unit.

**106.10.2 Owner Request.** Transfer of a permit prompted by a property owner shall require a *written* request *by the owner* to the Commission. The request shall include the owner's name, property address, and owner's phone number. The Commission shall notify the original licensee of the transfer.

**106.10.3 Transition Inspection.** Prior to *any* work being performed by the permit transferee (new licensee), and *at the transferee's discretion*, the transferee shall schedule and shall stand a transition inspection to determine limits of responsibility. When no work has been performed on the original permit beyond the last approved inspection, a transition inspection shall not be necessary.

**106.10.4 Fee Refund.** See Section 106.7.5.

**106.11 Work by Homeowners.** Homeowners may perform the following plumbing work in their own residential unit as provided in this Section.

**106.11.1 Work Not Requiring Permits.** A homeowner may perform classes of plumbing work that do not require a permit as set forth in Section 106.2.

**106.11.2 Work Allowed Under a Homeowner Permit.** A homeowner may perform most classes of work normally performed by a plumber, except those items set forth in Section 106.11.5, provided that the conditions for a homeowner permit have been satisfied in accordance with Sections 106.11.3 and 106.11.4.

### 106.11.3 Conditions for a Homeowner Permit.

**106.11.3.1 Building Type.** The premises shall be a Group R-3 occupancy (single family detached house or an attached row style house).

**106.11.3.2 Separate Services.** Building water and building sewer services shall be provided by *separate* Commission service connections, *i.e.* not shared with or serving any other property, or shall be provided by private well and/or septic systems.

**106.11.3.3 Ownership.** The applicant shall provide proof, such as property records, that the applicant is the bona fide owner of the premises. The applicant shall sign an affidavit indicating that they are the bona fide owner and occupant of the premises; and that the premises is *not* being built or remodeled for sale or for rent. The affidavit shall state that all work shall be performed by the applicant in *strict* compliance with this Code and approved drawings including: All inspections, tests,

re-inspections when required due to failed inspections, re-inspection fees, and other administrative requirements normally required of licensed plumbers.

**106.11.4 Additional Applicant Requirements**

**106.11.4.1 Codebook.** Depending on the type of work to be performed, the applicant shall be required to obtain the current approved versions of the WSSC Plumbing and Fuel Gas Code and the International Plumbing Code.

**106.11.4.2 Written Test.** The applicant shall be required to *pass* a written test appropriate to the proposed plumbing work. The test shall include questions about general trade knowledge of plumbing and basic code requirements. The test shall be open-book, shall have a time limit, and shall be administered by the Commission or its exam consultant. The applicant shall be permitted to re-take the written test *one* time, if it is failed.

**106.11.4.3 Drawings.** The applicant shall submit floor plans and/or riser diagrams for approval, as directed by the Code Official, and shall install the work in accordance with this approval.

**106.11.4.4 Containment.** The homeowner shall install or update an ASSE 1024 backflow preventer for *containment* of domestic water on premise.

**106.11.5 Work Not Allowed.** The following work shall *not* be performed by homeowners:

**106.11.5.1** Below grade piping deeper than 4 feet, including repair of water or sewer services deeper than 4 feet, or piping that crosses other utilities.

**106.11.5.2** Connection to a Commission water or sewer service connection: This work shall be performed by a WSSC-licensed Master Plumber.

**106.11.5.3** Projects involving seven or more fixtures or appurtenances that require a permit and inspection.

**106.11.5.4** Installation and testing of *testable* backflow devices.

**106.11.5.5 Gasfitting** installations, including the installation or replacement of a gas-fired water heater or appliance.

**106.11.5.2** Work on public property, Commission-owned structures or appurtenances.

## SECTION 107 INSPECTIONS AND TESTING

**107.1 General.** Plumbing, fuel gas, and site-utility installations requiring a permit shall require inspection and approval by the Commission for each phase of work outlined herein, and in accordance with applicable model code requirements.

**107.1.1 Federal Property Exempt.** See Section 102.8.

### 107.2 Licensee Responsibility

#### 107.2.1 General

**107.2.1.1 Scheduling.** The licensee shall be *responsible for* scheduling *all* inspections, or ensuring that all inspections have been scheduled. Short form permits may be scheduled for inspection by the licensee, the property owner, or the owner's agent; however, this accommodation shall *not* relieve the licensee from the responsibility for scheduling the inspection, and ensuring inspection approval.

**107.2.1.2 Cancellations.** The licensee shall be responsible for all inspection cancellations.

**107.2.1.3 Plans on Jobsite.** On buildings requiring a plans review, a WSSC Master licensee or a WSSC Journeyman licensee shall be present at the inspection site, and shall provide the approved construction documents including modifications. The Master or Journeyman licensee shall be appropriately licensed for the scope of work being inspected; either plumbing, gasfitting, or both.

**107.2.1.4 Licensee Supervision.** All registered Master licensees of record shall be available for consultation with the Code Official and for supervision of work installed under their license. When required by the Code Official, the Master licensee shall stand the inspection.

**107.2.1.5 Gas Connection.** Fuel gas piping may be connected to the serving utility's meter rack or second stage pressure regulator, but shall *not* be activated until the Commission's *fuel gas* CLOSE-IN inspection has been approved.

**107.2.1.6 Concealment.** No piping shall be covered or concealed *prior to* inspection and approval by the Code Official, except as set forth in Sections 107.2.1.9 and 107.2.1.10. *Only* an approval sticker or tag, signed by the Code Official, shall indicate an approved installation.

**107.2.1.7 Tests.** Tests that are required on piping systems shall be made ready for inspection verification *prior to* the Code Official's arrival on the jobsite.

**107.2.1.8 Failed Inspections.** Installations that fail inspection shall be corrected and scheduled for re-inspection. A re-inspection consisting of one Short Form permit shall be charged, at the discretion of the code official. See Section 107.3.4.

**107.2.1.9 Self-Certification, Plumbing Work.** When authorized in advance by the Code Official, the licensee may self-inspect the work, in lieu of an inspection by the Code Official, and certify that the work meets requirements set forth in this Code. It shall be the licensee's responsibility to ensure that all self-inspected work has been so authorized. Self-inspected work shall be subject to re-inspection by the Code Official at any time.

**107.2.1.10 Self-Certification, Gasfitting Work.** Gasfitting work shall *not* be self-certified.

**Exception:** Subject to *pre-approval* by the Code Official, the serving gas utility may self-certify the installation of outdoor gas lights, modification of customer piping in connection with outside meter relocation, and similar outdoor work.

**107.2.1.11 Standard and Minor Site Utility Systems.** Standard and minor site-utility systems shall be installed by a WSSC approved utility contractor *or* by a WSSC-registered Master Plumber. These systems shall be inspected in accordance with procedures outlined in Chapter 7.

**107.2.2 Inspection Timeframe.** It shall be the licensee's responsibility to have work inspected in a timely manner and to ensure that the work has passed inspection as follows:

**107.2.2.1 Permits, General.** Upon completion of each work phase, and prior to concealment where applicable.

**107.2.2.2 Short Form Permit.** Subject to Sections 106.9.3.2 and 106.9.3.3, an inspection shall be completed within 10 business days of installation; and prior to concealment where applicable.

**107.2.2.3 Site-Utility Permit.** Prior to the *plumbing* FINAL inspection.

**107.2.3 Jobsite Entry and Access.** The licensee shall be responsible for ensuring entry and access to the jobsite or inspection location as follows:

**107.2.3.1 Street Sign.** A sign with the street name, *as listed on the permit*, and *clearly visible* from a vehicle, shall be posted at the nearest intersection.

**107.2.3.2 Lot and Block Posting.** Lot and block numbers, or street address, *as listed on the permit*, shall be posted on every building scheduled for inspection so as to be clearly visible from a vehicle. Letters and numbers shall be a minimum of 8-inches high. On an existing building and on FINAL inspections, the building address, *as*

*listed on the permit* and *clearly visible* from a vehicle, shall be acceptable in lieu of lot/block posting.

**107.2.3.3 Vehicle Access.** The licensee shall provide vehicular access to within 200 feet of the inspection location.

**107.2.3.4 Foot Traffic Safety.** Foot traffic access meeting OSHA and MOSHA safety standards shall be provided from the parking area to the point of inspection.

**107.2.3.5 Ladder Safety.** Where access to the inspection site requires use of a ladder, a manufactured type of ladder in sound condition, meeting OSHA and MOSHA safety standards, shall be provided by the licensee.

**107.3 Code Official Responsibility and Inspection Criteria.**

**107.3.1 Timely Inspections.** In general, the Code Official shall provide a timely inspection following established procedures, usually *the next working day*, on installations that have been properly permitted and scheduled in advance.

**107.3.2 Backlogged Inspections.** Inspections that cannot be completed due to the Code Official's workload or weather conditions shall be backlogged on a priority basis and shall be automatically rescheduled by the Code Official for the next available workday.

**107.3.3 Inspection Stickers.** The Code Official shall notify the licensee of inspection status through the posting at the jobsite of a signed sticker or tag, specific to the work installed, indicating passed/**APPROVED** or failed/**DISAPPROVED** inspection status.

**107.3.4 Failed Inspections.** A scheduled inspection for work that is not in compliance with this Code shall fail and shall be so designated by the posting of a *red DISAPPROVED* sticker. Reasons for failure or Code sections with which work is in non-compliance shall be listed on the sticker. Failed inspections shall be subject to a re-inspection fee. See Sections 106.7.6 and 107.2.1.8.

**107.3.5 Partial Inspections.** On larger installations, a **PARTIAL** sticker shall be posted at the jobsite indicating that part of a construction phase has passed inspection. The *approval plans shall be made available* at the jobsite for similar notation.

**107.3.6 Inspection Result Notification.** The Code Official shall *not* be responsible for contacting the licensee when an inspection has failed, and the Code Official shall *not* be responsible for redesigning systems or preparing checklists.

**107.3.7 Emergency Inspections.** Weekend, holiday, and after-hours emergency inspections shall be performed *only* after prior notification and prior approval by the Chief Code Official or his/her designee. Examples of emergencies include, but shall not be limited to: Fuel gas repairs where building occupants are without heat in extremely cold weather, fuel gas repairs in multifamily complexes, water service repairs

in freezing weather, and repairs to deeply buried piping in highly populated areas or where jobsite conditions pose an imminent threat to public safety.

**107.4 Inspections by Work Phase.** Each phase of plumbing or fuel gas installation shall require inspections as outlined below.

**107.4.1 Required Plumbing Inspections.**

**107.4.1.1 Sewer.** Building sewers shall be inspected from the point of connection to the building drain to the point of connection at the service connection, septic tank, or other point of disposal. Critical inspection factors shall include, but not be limited to: Trenching, bedding, depth, slope, appurtenances and materials. Outdoor grinder pump systems located on private property shall be considered as part of the building SEWER inspection.

**107.4.1.2 Water Service.** Building water services shall be inspected from the service valve to the point of connection at the service connection, well casing, or other source of supply. Critical inspection factors shall include, but not be limited to: Trenching, bedding, depth, separation from other utilities, appurtenances, and materials. Mechanical joint water services shall be subject to additional requirements particular to that piping; see Chapter 7.

**107.4.1.3 Groundwork.** A **GROUNDWORK** inspection shall include, but not be limited to: Drainage and vent piping below grade inside of buildings, the building drain, and below grade water distribution systems. Critical inspection factors shall include, but not be limited to: Trenching; bedding; slope; sizing; piping tie-downs, hangers, and supports; materials; sewage ejectors; capping or plugging; and required tests. NOTE: If a water distribution system is installed below grade, it shall be scheduled as a **WATER GROUNDWORK** inspection.

**107.4.1.4 Close-In.** A **CLOSE-IN** inspection shall include all rough-in work above grade. Critical inspection factors shall include, but not be limited to: Slope, piping support, sizing, materials, built-in fixtures, fixture carriers, capping or plugging, piping protection, and required tests. Where applicable, a "hung groundwork" shall be inspected as a part of the close-in inspection. On factory-built housing or in buildings with factory-built plumbing cores, the installation shall have a State of Maryland inspection sticker and the drainage and venting system shall require a peppermint-test in the presence of the Code Official.

**107.4.1.5 Final.** A **FINAL** inspection shall include all required plumbing fixtures and appliances, appurtenances, and gas appliances. Prior to scheduling a final inspection, the licensee shall be responsible for assuring successful completion of all prerequisite inspections. Critical inspection factors shall include, but not be limited to: All fixtures and appliances accurately included on the permit with associated fees paid; curb box installation where applicable; outside or inside meter setting complete and in conformance with Commission Standard Details (see Chapter 6); property line

cleanout complete and to grade in conformance with Commission Standard Details; required cleanouts accessible; hot water to fixtures; fixtures clean, undamaged, secure, and operating properly; no leaks; no water hammer; mechanical equipment properly installed; backflow devices in place; and all tests completed.

**107.4.1.6 Meter Pick-Up Authorization.** On buildings requiring an inside meter setting 1½-inch or larger, a separate inspection shall be scheduled for meter pick-up authorization. Critical inspection factors shall include, but not be limited to: Sizing in accordance with the permit and Commission right-sizing policy, freeze protection, required area and access, provisions for testing, "release" of Commission-owned systems; and adherence to Commission Standard Details.

**107.4.2 Required Fuel Gas Inspections.** All fuel gas and fuel gas-fired equipment installations shall be subject to a *gasfitting* CLOSE-IN and a *gasfitting* FINAL inspection. On limited installations, particularly those completed under a Short Form permit, both inspections shall be completed simultaneously as a *gasfitting* FINAL inspection.

**107.4.2.1 Gasfitting Close-In.** Gas piping, from the point of delivery to the equipment shutoff valve, shall be tested. Masonry chimneys and metal vents that are to be concealed shall also be a part of this inspection. Critical inspection factors for piping shall include, but not be limited to: Sizing; materials and supports; welder's certification; marking; labeling; clearances and other safety items; trenching; bedding and depth, where applicable; and use of appropriate tests and test equipment. Critical inspection factors for vents shall include, but not be limited to: Sizing; materials and supports; clearances; existing masonry vents cleaned or relined if required; and installation in accordance with the manufacturer's installation requirements.

**107.4.2.2 Gas Final.** This inspection shall focus primarily on proper installation and operation of equipment and final connections to the gas supply and venting system. Critical inspection factors shall include, but not be limited to: *gasfitting* CLOSE-IN approval; equipment installation, protection, accessibility, and clearances; combustion and make-up air; *manufacturer's instructions on the jobsite*; and performance of a complete operational firing sequence when required.

**107.4.2.3 Temporary LP Gas Service.** Gas supply systems that are designed and installed for use with natural gas, but will be operated temporarily with liquefied petroleum (LP) gas, shall be tested and inspected in the same manner as natural gas.

**107.5 Site-Utility Systems.** Standard and minor site-utility systems shall be installed by a WSSC approved utility contractor *or* by a WSSC-registered Master Plumber. These systems shall be inspected in accordance with procedures outlined in Chapter 7.

**107.6 Emergency Inspections.** See Section 107.3.7.

**107.7 Special Plumbing Inspections.** Special inspections of alternative engineered design plumbing systems shall be conducted in accordance with Sections 107.7.1 and 107.7.2.

**107.7.1 Periodic Inspection.** The registered design professional or designated inspector shall periodically inspect and observe the alternative engineered design to determine that the installation is in accordance with the approved construction documents. All discrepancies shall be brought to the immediate attention of the plumbing contractor for correction. Records shall be kept of all inspections.

**107.7.2 Written Report.** The registered design professional shall submit a final report in writing to the Code Official upon completion of the installation, certifying that the alternative engineered design conforms to the approved construction documents. A notice of approval for the plumbing system shall not be issued until this written report has been submitted.

**107.8 Testing.** In general, *installations shall be tested* as required in this Code. Plumbing and fuel gas work shall be tested as required in the respective sections of the IPC and IFGC; and for Group R-3 occupancies, in the IRC. Tests shall be made by the licensee and observed by the Code Official.

**107.8.1 New, Altered, Extended, Replaced or Repaired Systems.** New plumbing and fuel gas systems and parts of existing systems that have been altered, extended, replaced or repaired shall be tested as prescribed herein to disclose leaks and defects. See the IPC and WSSC Chapter 3, Sections 302.3.3.1 & 302.3.3.2; the IRC and WSSC Chapter 4 Sections 402.24.3, 402.25.1 & 402.25.2; and the IFGC and WSSC Chapter 5, Section 502.4.3.

**107.8.2 Apparatus and Labor for Tests.** Apparatus, equipment, instruments, material and labor required for testing an installation or part thereof shall be furnished by the licensee.

**107.8.3 Re-Inspection and Testing.** Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made in order to achieve compliance with this Code. The work or installation shall then be resubmitted for inspection and testing, and re-inspection fees paid where applicable. See Section 106.7.6.

**107.9 Coordination of Inspections.** When in the enforcement of this Code or another code or ordinance, and where the responsibility of more than one Code Official of this jurisdiction is involved, or if more than one jurisdiction is involved, it shall be the duty of the code officials involved to coordinate their inspections and administrative orders as fully as practical so that the owners and occupants of the structure shall not be subjected to visits by numerous inspectors or multiple or conflicting orders. Whenever an inspector from any agency or department observes an apparent or actual violation of some provision of some law, ordinance or code not within the inspector's authority to enforce, the inspector shall report the findings to the code official having jurisdiction.

**107.10 Approval.** After the prescribed tests and inspections indicate that the work complies with this Code, an **APPROVAL** sticker or tag shall be issued by the Code Official.

**107.11 Temporary Connection.** The Code Official shall have the authority to authorize the temporary connection of:

- The building or system to the utility source for the purpose of testing plumbing systems; or
- An installation to the sources of energy for the purpose of testing the installation, or for use under a temporary certificate of occupancy.

## SECTION 108 VIOLATIONS AND PENALTIES

**108.1 Unlawful Acts.** No person shall erect, construct, alter, repair, remove, demolish or utilize any plumbing, fuel gas, site-utility system, or industrial discharge control system; or cause same to be done, in conflict with or in violation of any of the provisions of this Code.

**108.2 Notice of Violation.** A Code Official shall serve a Notice of Violation (NOV) or order to the person responsible for the erection, installation, alteration, extension, repair, removal or demolition of work in violation of the provisions of this Code, or in violation of a directive or the approved construction documents thereunder, or in violation of a permit or certificate issued under the provisions of this Code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation within a specified timeframe.

**108.2.1 Failure to Comply.** *Failure to comply* with a Notice of Violation or other enforcement action *shall be a further violation* of this Code. This may result in the issuance of a WSSC Civil Citation, a Stop Work Order at the premises where the improper work occurred, termination of Commission services, or additional enforcement measures.

**108.2.2 Abatement of Violation.** The imposition of the penalties herein prescribed shall not preclude the Commission from instituting appropriate action to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent illegal occupancy of a building, structure or premises, or to stop an illegal act, conduct, business or utilization of the plumbing, fuel gas, or site-utility systems on or about any premises.

**108.3 Stop Work Order.** Upon notice from the Code Official, work that is performed contrary to the provisions of this Code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be posted at the jobsite; given

to the owner of the property, to the owner's agent, or to the person performing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the Code Official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after being served with a Stop Work Order, except work that the person is directed to perform to remove a violation or unsafe condition, shall be subject to license action if licensed, and/or civil citation(s).

**108.4 Civil Citations.** Pursuant to Section 29-101, Public Utilities Article, Annotated Code of Maryland, a Code Official shall be authorized to issue civil citations to any person violating any provision of this Code. A person committing any of the following violations of this Code shall be subject to *immediate* delivery of a WSSC civil citation at the discretion of the Code Official, with or without first being issued a Notice of Violation:

**108.4.1 Work Without License.** Performing plumbing, gasfitting, or sewer and drain cleaning work without a valid license where such license is required by this Code.

**108.4.2 Work Without Permit.** Performing work without a valid permit where such permit is required by this Code.

**108.4.3 Theft of Services.** Committing a theft of Commission water or sewer services as set forth in Section 110.

**108.4.4 Septic Waste Discharge.** Violating any requirement of the septic waste discharge provisions of this Code. See Chapter 8.

**108.4.5 Willful Code Violations.** Willfully or deliberately violating any provision of this Code.

**108.4.6 Health and Safety.** Violating any provision of this Code where such violation presents an imminent threat to the public health, welfare, or safety or to the Commission's systems.

**108.4.7 Negligence, Incompetence, or Misconduct.** Committing acts constituting negligence, incompetence or misconduct while providing plumbing, gas fitting, site-utility, sewer and drain cleaning, or waste hauling services, or while assisting in providing these services.

**108.4.8 Aiding or Abetting.** Aiding or abetting any person to evade or violate any provision of this Code.

**108.4.9 Deceptive Practices.** Engaging in an unfair or deceptive trade practice as defined in Section 13-301 of the Commercial Law Article, Annotated Code of Maryland, or otherwise performing work where such work was not necessary.

**108.4.10 NOV Non-Compliance.** Failing to comply with a Notice of Violation within the prescribed deadlines.

**108.5 Un-licensed Work Subject to Criminal Liability.** Where an individual or a group of individuals willfully advertised, solicited, contracted and/or performed plumbing, gasfitting, site-utility, sewer and drain cleaning, or waste hauling services without proper licenses or permits, the individual or group of individuals may be subject to civil liability and criminal prosecution under Maryland law.

**108.6 Termination of Service.** A property owner is subject to termination of water, sewer, or gas service where any of the following conditions exist:

**108.6.1** The property owner engaged in plumbing work without required authorization; or failed to schedule the required inspection for permitted work.

**108.6.2** The property owner engaged in gasfitting work, without a license.

**108.6.3** The property owner has been uncooperative or untimely in obtaining a licensed individual to rectify unauthorized plumbing or gasfitting work.

**108.6.4** The property owner is aiding or abetting an unlicensed individual or unregistered firm who performed plumbing or gasfitting services on his/her property.

**108.7 Licensee Responsibility.** Licensed Master Plumbers, Master Gasfitters, and Sewer and Drain Cleaners shall be held responsible for the violation of any part of this Code whether the violation is committed by themselves or by their employees or agents.

#### **108.8 Denials, Reprimands, Suspensions, and Revocations**

**108.8.1 General.** Subject to the hearing provisions of Section 108.9 of this Code, and in any order depending upon the circumstances, the Commission may deny a license to an applicant, reprimand a licensee, or suspend or revoke a license, if the Commission determines that the applicant or licensee:

**108.8.1.1 Misrepresentation.** Fraudulently or deceptively obtained or attempted to obtain a license for the applicant or licensee, license examinee, or for another person.

**108.8.1.2 Misuse of License.** Fraudulently or deceptively used a license to obtain permits for another person, or for any other purpose.

**108.8.1.3 Gross Negligence, Incompetence, or Misconduct.** Was guilty of bribery or attempted bribery of a Code Official; misconduct while interacting with a Code Official; or gross negligence, incompetence, or misconduct while providing or assisting in providing plumbing, gasfitting, site utility, drain and sewer cleaning, or waste hauling services. A failed routine inspection of permitted work shall *not* be considered as gross negligence, incompetence or misconduct.

**108.8.1.4 Deceptive Practices.** Engaged in an unfair or deceptive trade practice as defined in Section 13-301 of the Commercial Law Article, Annotated Code of Maryland, or otherwise performed work where such work was not necessary.

**108.8.1.5 Deliberate Code Violations.** Willfully or deliberately violated any provision of this Code.

**108.8.1.6 Aiding or Abetting.** Aided or abetted any person to evade or violate any provision of this Code.

**108.8.2 Denial.** The Commission shall deny a license to an applicant who provides incomplete, inaccurate, fraudulent, or false information on his or her application, or during the examination process; has been found guilty of one or more of the provisions set forth in Section 108.8.1 as a non-licensee; or, if applying as a reciprocal licensee, has an invalidated license in another jurisdiction.

**108.8.3 Reprimand.** The Commission shall have the authority to reprimand a licensee who is guilty of one or more of the provisions set forth in Section 108.8.1, and/or has received one or more notices of violation, depending on the seriousness and nature of the Code violations. A reprimand shall not restrict the licensee from continuing to perform work, obtaining permits, or requesting inspections.

#### **108.8.4 License Reinstatement**

**108.8.4.1 Suspension.** Following the term of any license suspension, the license shall be reinstated by the Commission, provided that the licensee meets all of the requirements of Section 113 of this Code for the particular type of license.

**108.8.4.2 Revocation.** Following the term, if any, of any license revocation the license may be reinstated by the Commission, provided that the licensee passes the required WSSC examination and otherwise qualifies for the particular type of license in accordance with the requirements of Sections 113 and 114 of this Code.

**108.8.5 Future License Actions.** One or more reprimands, suspensions or revocations may have a bearing on future license actions, depending upon the nature and seriousness of the prior license action(s) and/or future violation(s).

#### **108.9 Administrative Hearings**

**108.9.1 Opportunity for Hearing by Licensee.** Subject to the provisions of Title 10, Subtitle 2, of the State Government Article, Annotated Code of Maryland, before the Commission takes any final license denial, suspension or revocation action under Section 108.8 of this Code, it shall give the applicant or licensee against whom the action is contemplated an opportunity for a hearing.

**108.9.2 Notification Procedure.** The Commission shall give notice, and the hearing shall be held in accordance with Title 10, Subtitle 2, of the State Government Article, Annotated Code of Maryland, and WSSC Standard Procedures for adjudicatory hearings. The notification procedures set forth in this Section shall apply.

**108.9.2.1 In Writing.** The applicant or licensee shall be notified of pending action in writing through certified mail, and/or certificate-of-mailing, and/or hand-delivery.

**108.9.2.2 Licensee Response Time.** To request an administrative hearing, the applicant or licensee shall respond, in writing or electronically, within 15 calendar days from the date of notification of the pending action. Failure by the applicant or licensee to maintain current address information with the Commission, or failure to collect mail shall not constitute a valid excuse for failure to meet response deadlines.

**108.9.2.3 Hearing Notification.** If an administrative hearing is requested by the applicant or licensee, the Commission shall schedule a hearing, generally to occur within 45 calendar days of receipt of the request, and shall notify the requestor in writing of the hearing date, time, and location.

**108.9.3 Failure to Appear.** If after due notice, the individual against whom the action is contemplated fails or refuses to appear, the Commission or its designee may nevertheless hear and determine the matter.

**108.9.4 Commission's Right to Proceed.** The lapse or suspension of a license by operation of law or by order of the Commission or a court, or its voluntary surrender by a licensee, shall not deprive the Commission of jurisdiction to investigate or act in disciplinary proceedings against the licensee.

**108.9.5 Delegation of Hearing Authority.** The Commission delegates its administrative hearing authority to the WSSC Plumbing and Fuel Gas Board, which shall conduct the hearing and submit proposed findings of fact and proposed conclusions of law to the Commission for final disposition.

## **108.10 Unsafe Installations**

**108.10.1 Inspection Authority.** Subject to the limitations set forth in Section 102.2, existing installations regulated by this Code may be inspected at any time, and modifications may be required to return such systems into compliance with this Code.

**108.10.2 Hazardous Conditions.** Any installation regulated by this Code that is unsafe, or that constitutes a fire or health hazard, unsanitary condition, or is otherwise dangerous to human life shall hereby be declared unsafe. Any use of an installation regulated by this Code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment shall hereby be declared an unsafe use. Unsafe equipment

shall hereby be declared a public nuisance and shall be abated by repair, rehabilitation, demolition or removal.

**108.10.3 Authority to Condemn Equipment.** Whenever a Code Official determines that any installation, or portion thereof, regulated by this code has become hazardous to life, health or property or has become unsanitary, the Code Official shall order in writing that such installation either be removed or restored to a safe or sanitary condition. A time limit for compliance with such order shall be specified in the written Notice of Violation. Using or maintaining such defective installations *after* receiving a Notice of Violation shall be *prohibited*.

When such an installation is to be disconnected, written notice as prescribed in Section 108.2 shall be given. In cases of immediate danger to life or property, the order to disconnect shall be effective immediately *without* such notice.

**108.10.4 Authority to Disconnect Service Utilities.** A Code Official shall have the authority to authorize *disconnection* of utility service to any building, structure or system regulated by this Code to eliminate an immediate danger to life, property, environment or the Commission's systems. Where possible, the owner and/or occupant of the building, structure or service system shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnection, the owner or occupant of the building, structure or service systems shall be notified in writing, as soon as practical thereafter.

**108.10.5 Re-Connection After Order to Disconnect.** Any connection regulated by this Code that has been disconnected or that has been ordered to be disconnected, or the use of which has been ordered to be discontinued, shall *not* be re-established until a Code Official authorizes the reconnection and use of such system or equipment.

When any installation is maintained in violation of this Code, and in violation of any notice issued pursuant to the provisions of this Section, a Code Official may institute any appropriate action to prevent, restrain, correct or abate the violation.

## SECTION 109 APPEAL OF CODE OFFICIAL DECISIONS

**109.1 Application for Appeal.** Any person shall have the right to appeal a decision of the Chief Code Official to the WSSC Plumbing and Fuel Gas Board (Board) on matters relating to Code interpretation. An appeal [request](#) shall be based on a claim that the true intent of this Code or the rules legally adopted thereunder have been incorrectly interpreted, that the provisions of this Code do not fully apply, or that an equally good or better form of construction is proposed. The [appeal request](#) shall be filed [in writing](#) within 20 days after the decision was issued. This Section shall not apply to license action decisions.

**109.2 Notice of Meeting.** The Board shall meet, upon notice from the chairman, within 45 days of the filing of an appeal or at stated periodic meetings.

**109.3 Open Hearing.** All appeal hearings before the Board shall be open to the public. The appellant, the appellant's representative, the Code Official and any person whose interests are affected shall be given an opportunity to be heard.

**109.4 Procedure.** The Board shall adopt and make available to the public procedures under which a hearing shall be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information is received.

**109.5 Board Decisions.** The Board shall affirm, modify or reverse the decision of the Chief Code Official by a majority vote or as otherwise specified in any bylaws adopted by the Board. The decision of the Board shall be final.

**109.5.1 Resolution.** The decision of the Board shall be by resolution. Official copies shall be furnished to the appellant and to the Chief Code Official.

**109.5.2 Administration.** The Chief Code Official shall take immediate action in accordance with the decision of the Board.

## SECTION 110 THEFT OF COMMISSION SERVICES

### 110.1 Intent to Obtain Services Without Payment

**110.1.1 Tampering.** Unless otherwise allowed by law or by prior written permission of the Commission, a person shall not tamper with, install, tap, remove, displace, or make any connection with any pipe, valve, fire hydrant, meter, fitting, connection or other fixture, appurtenance, or equipment of the Commission *with the intent* to obtain water or sewer service without payment therefor.

**110.1.2 Evidence.** If a person tampers with, installs, taps, removes, displaces, or makes any connection with any pipe, valve, fire hydrant, meter, fitting, connection or other fixture, appurtenance, or equipment of the Commission, it shall constitute *prima facie evidence of an intent* to obtain water or sewer service without payment therefor.

### 110.2 Intent to Divert Services.

**110.2.1 General.** Unless otherwise allowed by law or by prior written permission of the Commission, a person may not make or cause to be made any pipe, tube, or other instrument or contrivance or connect the same or cause it to be connected with any water or sewer main, service connection, or other pipe for conducting or supplying water in such manner as to be calculated to supply water around or without passing

through a meter provided by the Commission for the measuring and registering of the quantity of water and/or sewer usage.

**110.2.2 Illegal Sewer Connection or Discharge.** Water from *any* source that has not first been measured or registered through a Commission water meter shall *not* be discharged to the Commission's sanitary sewer system, *unless specifically allowed* by this Code. Examples of illegal sewer connections or discharges shall include, but not be limited to: Storm water or ground water from any source, air conditioning condensate, blow-down connections from chilled water systems supplied by a sub-meter, outdoor pool and deck drains, building foundation drains or foundation sump pumps. See IPC Section 314.2 and WSSC amendments.

**110.2.3 Evidence.** The existence of any pipe, tube, or other instrument or contrivance which effects the diversion of water or without the water being measured or registered by or on a meter provided by the Commission, or the use of water furnished by the Commission without it being measured or registered on a meter provided therefor by the Commission, shall constitute *prima facie evidence of intent* to violate and of the violation of this Section by the person or persons who would receive the direct benefits from the use of the water/sewer services without it being measured or registered on a meter.

**110.2.4 Test-Meter.** If a test-meter or check-meter installed or employed by the Commission shows that a customer is using a greater amount of water than that registered on the meter on or for the customer's premises for the purpose of registering the amount of water used by that customer, such condition shall constitute prima facie evidence that the unregistered water has been wrongfully diverted by such customer, and shall further constitute prima facie evidence of the intent to violate the provisions of this Section and of the violation of this Section.

## SECTION 111 CONNECTION TO THE COMMISSION'S SYSTEMS AND METERING

### 111.1 General

**111.1.1 Size, Type, and Location.** The Commission shall have approval authority of the size, depth, location, and type of construction of water and sewer service connections.

**111.1.1.1 Water Service Connection, Minimum Size.** The minimum size new *water service connection* for Group R-3 occupancies shall be 1.5 inches. Water service connections that are already buried may be utilized provided they are deemed adequate to serve the greater demand of either the total proposed fixture load or the fire sprinkler system.

**111.1.1.2 Design Consideration.** New water service connections may be designed as 1” provided the future load can be predetermined and where no segment of the building’s domestic or fire protection system shall exceed 1”. These criteria must be met for all models and all lots; and the entire extension project excluding “pipe-stem” lots, must be designed uniformly.

**111.1.2 Non-Abutting Properties.** Connections to property not abutting directly on a Commission water or sewer main may be permitted under certain conditions.

**111.1.3 Right-of-Way Connection.** If the property to be served is to be connected to a Commission water or sewer main located in a right-of-way, on or off the owner’s property, services shall be provided under the following conditions:

**111.1.3.1 Responsibility.** All necessary excavation, backfill, and restoration within right-of-ways shall be the responsibility of the Master Plumber.

**111.1.3.2 Trenching.** The main shall be exposed and the trench protected in accordance with all MOSHA requirements.

**111.1.3.3 Tapping.** Only Commission-authorized personnel shall make taps or connections into Commission water and sewer mains.

**111.1.4 Reconnection.** Reconnections to abandoned building sewers and water services shall be permitted provided they conform to applicable Code requirements.

**111.1.5 Existing Water Connection.** New buildings utilizing an existing water service connection, with either an existing outside or inside water meter setting, shall be required to *re-establish* a water meter setting, at the Commission's discretion, with the size, type and location of the new water meter as designated by the Commission.

**111.1.5.1** Existing water connections not being re-used shall be disconnected at the main through an abandonment permit at the expense of the property owner.

**111.1.6 Existing Sewer Connection.** New buildings utilizing a previously un-used existing sewer service connection, and existing buildings having the building sewer *replaced*, shall be *required* to have a *property line cleanout* installed within 1-foot of the property line, or at the edge of the right-of-way in the case of right-of-way connections, *if* such a cleanout does not already exist. The base connection shall be a combination wye and one-eighth bend lying on its back. The cleanout cover assembly shall conform with WSSC Standard Detail S-5.1 or S-5.2.

**111.1.6.1** Existing sewer connections not being re-used shall be disconnected at the main through an abandonment permit at the expense of the property owner.

**111.1.7 Applicant Built Service Connection Permits.** Where applicant built service connection permits apply, a completed applicant built package shall be submitted and accepted by Permit Services prior to the first plumbing permit. Where applicant built permits are for abandonment of water and/or sewer service connections, the applicant built package is required at the time the applicant built package is submitted for new service.

**111.2 Separate Service Connection**

**111.2.1 General.** Separate water and sewer service connections shall be installed for each habitable building on a lot or parcel except as provided in Section 111.3.

**111.2.2 Services Through Another Property.** A building water service, building sewer, or site-utility system for a lot, building, premise, or establishment shall not be installed under, over or through any other lot, building, or premise *except* in an approved and recorded right-of-way or easement to the property served.

**111.3 Exceptions to Separate Connections.** Separate service connections shall not be required in the following circumstances, subject to such conditions as may be determined by the Commission:

**111.3.1 Group R-3 Buildings.** Detached buildings under common ownership located on the same lot or parcel. If the detached building is converted wholly or in part to a dwelling or place of business and subdivided under separate ownership, separate service connections shall be required.

**111.3.2 Multi-Unit Buildings.** A structure other than Group R-3 occupancy under one ownership, but divided as to provide for multiple occupancies, shall be served with a single service connection unless otherwise approved by the Commission.

**111.3.3 Other Than Group R-3 Buildings, One Owner.** Multiple buildings other than Group R-3 occupancy, under one ownership of the buildings and/or land located on a single tract of ground, which may consist of a group of lots or parcels, shall be served by a single sewer and water service connections unless otherwise approved by the Commission. Multiple buildings and/or properties under single ownership shall submit a covenant at the time of new service or significant change of use stipulating that separate connections or an approved shared site utility system agreement shall be in place before a sale/transfer of ownership can proceed.

**111.3.4 Other Than Group R-3 Buildings, Separate Owners.** *Multiple properties* or buildings other than Group R-3 occupancy, under *separate ownership* of the buildings and/or parcels and located on a single tract of land, may be served by a *shared* site-utility system under conditions determined by the Commission. These conditions shall include obtaining and recording the necessary covenants and easements relating to the maintenance of the shared site-utility system, following review by the Commission of such documents. Such properties shall be served by an *outside* water meter or, if the

site-utility system has more than one service connection, an outside meter at *each* connection billed to a *common* account. The Commission shall *not* provide a water meter or account for each property.

**111.4 Fire Service Connections and Fire Hydrants.** Water connections for combined domestic and fire service, or for fire service only, shall be provided under such conditions as determined by the Commission.

**111.4.1 Group R-3 Single Family Occupancies.** Connection to the potable water supply shall be made in accordance with provisions set forth in Chapter 6, Installation of Commission Water Meters, Sections 603.2.2 and 604.3.2.

**111.4.2 Other than Group R-3 Occupancies**

**111.4.2.1 Systems Without Fire Hydrants.** If the water service is to serve a fire sprinkler system with *no* private fire hydrants, a reduced pressure detector assembly, or a double check detector assembly *supplied by the applicant*, shall be installed.

**111.4.2.2 Systems With Fire Hydrants.** If the water service is to serve private fire hydrants and/or other fire protection systems, a Factory Mutual (FM) water meter shall be installed.

**111.4.2.2.1 Exception.** Where an inside meter is permitted by WSSC, see 701.3, a single fire hydrant may be permitted to be installed as a monitored hydrant.

**111.4.2.3 Existing Monitored Systems.** Existing properties served with monitored fire sprinkler systems and/or monitored fire hydrants shall continue to monitor those systems via a WSSC approved third party alarm monitoring company. Properties may be altered and new buildings erected utilizing monitored systems with approval from the Commission. Permission will be contingent on successful demonstration of past and present monitoring agreements; updated agreements will be required for all building fire sprinkler systems and all private fire hydrants served by the service connection(s) supplying the proposed work.

**111.4.3 Private Fire Hydrants.** Private fire hydrants shall be painted *red*. The use of private fire hydrants shall be limited solely to fire protection. Any other use shall be prohibited.

**111.5 Metering**

**111.5.1 General.** The Commission shall determine meter size, type, and metering schemes for all properties. In general, water meters shall be right-sized based on plumbing hydraulic load, as set forth in Section 602.3. Oversized meters shall be *prohibited*, unless an exception is approved by the Code Official.

**111.5.1.1 Existing Metering Schemes.** Existing properties may be permitted to have their existing metering schemes remain in lieu of new provisions of this Code. Properties may be altered and new buildings erected utilizing existing metering schemes with approval from the Commission.

**111.5.2 Location.** Water meters shall be set adjacent to the property line, or at the edge of a right-of-way where applicable, unless an exception is approved for location inside of a building. Water meter settings and vaults shall be constructed in accordance with WSSC Standard Details.

**111.5.3 Responsibility.** Commission water meters shall be supplied and maintained by the Commission, shall remain the property of the Commission, and shall be installed in accordance with provisions set forth in Chapter 6.

**111.5.4 Protection.** Commission water meters shall be protected from damage by freezing or physical abuse. The property owner shall be responsible for expenses related to meter repair, replacement, or loss due to neglect or damage.

**111.5.5 Tampering.** It shall be unlawful to tamper with a Commission water meter, meter seal, bypass seal, appurtenance, meter setting, curb valve, valve box, or meter vault.

**111.5.6 Exceptions.** All water provided by Commission shall be metered, except as provided in Section 111.4.2.3.

**111.5.7 Meter Settings and Installation.** The *Commission* shall furnish *all* water meters. The Commission or its designee shall install all outside meters. Outside settings for ¾-inch through 2-inch meters and outside vaults for 3-inch and larger meters shall be furnished installed by the utility contractor. The plumber shall install inside Commission meters size 1½-inch and larger. The Commission or its designee shall install inside meters size 1-inch and smaller. See Chapter 6, Installation of Commission Water Meters.

**111.5.8 Multi-Unit Buildings.** The Commission shall *not* provide separate water meters to units within a multi-unit building except as required in 111.5.8.1 or as allowed in 111.5.8.1.1. Where required by the owner, unit water meters shall be privately installed and maintained.

**111.5.8.1 Mixed-Use Buildings.** Where both residential and commercial units in the same building (a “Mixed-Use” building) are served by a single water service connection or multiple service connections forming into a single system on property, two meters shall be installed, as set forth below, to allow for the separate registering or computation of residential unit and commercial unit water consumption at the building.

**111.5.8.1.1 Live/Work Units.** In such mixed-use buildings where only one residential unit and one commercial unit are served by a single water service, the owner may choose to have one or two meters. Where only one meter is installed, the “Unit Count” for billing purposes shall be one.

**111.5.8.1.2 Inside Meters.** When a Mixed-Use building is allowed by other sections of this Code to be served by an inside meter application, the two required meters, one to register only residential unit water consumption and the other to register only commercial unit water consumption, shall be installed inside per Chapter 6 of this Code.

**111.5.8.1.3 Outside Meters.** When a Mixed-Use building is required by other sections of this Code to be served by an outside meter application, the two required meters shall be installed per Chapter 6 and as follows: One meter shall be installed outside on the water service connection to register all consumption on-property. The other meter shall be installed inside to register the commercial unit water consumption only so that the difference between the two meter readings represents the residential unit water consumption at the building.

**111.5.9 Commission Sub-Meter.** Except as otherwise allowed by law, where water furnished by the Commission is used for purposes where *none* of the water that passes through the sub-meter enters the Commission's sewerage system, the owner may request the installation of a Commission sub-meter. See Public Utilities Article, Section 25-502 & 25-504.

**111.5.10 Sewer-Only Accounts.** When a building classification other than Group R-3 using a private water supply system is connected to the Commission sewerage system, a Commission meter shall be installed on the water supply to determine the sewer use charge. Group R-3 occupancies served as above shall be billed based on a flat rate, or based on a sewer use meter, at the Commission's discretion.

**111.5.11 Hydrant Meters.** The Commission may authorize use of a fire hydrant water meter to applicants requiring water for temporary use. A WSSC small hydrant meter shall include an integral ASSE 1011 backflow prevention device. For a WSSC large hydrant meter, the applicant shall provide a high-hazard backflow prevention device assembly (ASSE 1013). The assembly must carry a satisfactory test tag current within six months. Fire hydrant use shall be restricted to temporary or seasonal applications such as, but not limited to: Tank truck filling, temporary water for construction sites, special events (e.g., charity walks, fairgrounds), and seasonal uses (e.g., irrigation). Fire hydrants shall *not* be used to circumvent the need to obtain service connections to supply water to full time businesses, nurseries with retail and maintenance buildings, and similar applications. Such applications shall require a *permanent* service connection.

**111.6 Containment.** All buildings shall have a backflow containment device installed on the *outlet* side of the water meter, prior to water uses within the premise, as cited in

Section 502.3 in Chapter 5 of this Code. Backflow preventers shall be maintained *by the owner* as cited in Section 102.3.9.

## SECTION 112 PLUMBING AND FUEL GAS BOARD

### 112.1 Duties

**112.1.1 Code Advisory Role.** The WSSC Plumbing and Fuel Gas Board (Board) shall be responsible for reviewing and recommending to the Commission Code requirements governing plumbing, fuel gas, and site-utility installations, and industrial discharge control. Code requirements reviewed and recommended by the Board shall not become effective until they have been approved and adopted by the Commission pursuant to Public Utilities Article, 17-403, of the Annotated Code of Maryland.

**112.1.2 Hearings and Appeals.** The Board shall serve as a hearing authority in cases set forth in Section 108.7, Administrative Hearings; Section 109, Appeal of Code Official Decisions; and requests for exceptions to Section 114, Trade Qualifications and Exam, when referred by or denied by the Chief Code Official.

**112.1.3 Limitations.** The exercise and performance of functions and duties of the Board shall be subject to the authority of the Commission as set forth in Public Utilities Article, Annotated Code of Maryland.

**112.2 Voting Membership.** Membership on the Board shall consist of the following 7 voting members, 6 of who shall be from outside the Commission and shall be selected by the General Manager of the Commission:

1. A WSSC-registered Master Plumber/Gasfitter representing the large commercial and/or large volume residential sector.
2. A WSSC-registered Master Plumber representing a local plumbing trade association.
3. A WSSC-registered Master Gasfitter representing a local HVAC trade association.
4. A plumbing/mechanical registered professional engineer.
5. A consumer representative from Montgomery County, with an understanding of technical issues, who shall not have any financial interest in any person regulated by the Board.
6. A consumer representative from Prince George's County, with an understanding of technical issues, who shall not have any financial interest in any person regulated by the Board.

7. The Commission's Chief Code Official who shall be a permanent voting member of the Board.

**112.2.1 Alternate Members.** The General Manager may select an alternate for each of the Board's external members. The alternate may only vote in the absence of member representing their particular class of membership.

**112.3 Staff Attorney.** A Commission staff attorney, who is appointed by the General Counsel of the Commission, shall participate in all Board meetings as an advisory non-voting member.

**112.4 Chairman.** The Board shall elect a Chairman from among its membership. The Chairman shall manage Board meetings and maintain rules of order, and shall vote only in cases of a tie vote.

## SECTION 113 LICENSES AND REGISTRATION

**113.1 Licensees.** The Commission shall license *only individual* Master Plumbers, Master Gasfitters, Master Plumber/Gasfitters, and Sewer and Drain Cleaners who shall then be considered as the responsible licensee of record (*i.e.* "principal" licensee), representing a particular firm or corporation that performs plumbing, gas fitting, or sewer and drain cleaning work in the WSSD. Additionally, Master Plumbers, Master Gasfitters, Master Plumber/Gasfitters, and Sewer and Drain Cleaners may be licensed as "non-principal" Master licensees or "non-principal" Sewer and Drain Cleaners. Non-principal licensees shall not be eligible for permit issuance, shall not portray themselves as the licensee of record for any firm or corporation, and shall perform work *only* under the direction and control of a Master licensee of record. All licensees shall be responsible for keeping address and telephone information current with the Commission. Address and phone number corrections and changes shall be transmitted in writing.

**113.2 Who Is Not Licensed.** The Commission shall *not* license any firm or corporation, other than indirectly through control of the licensee of record per Sections 113.3 or 113.4.

**113.3 One Licensee Per Firm.** A licensee of record shall represent *only one* firm or corporation; a firm or corporation shall be represented by *only one* licensed Master Plumber, Master Gasfitter, Master Plumber/Gasfitter, or Sewer and Drain Cleaner of record.

**113.4 Firms with Multiple Divisions.** If a firm or corporation has multiple operating branches, divisions, or geographic locations, licensee of record requirements shall be determined as follows:

**113.4.1 Single Name.** If all branches or divisions operate under a single corporate or advertised name, representation by one licensee of record shall be required.

**113.4.2 Multiple Names.** If each branch or division operates under its own advertised name, different than the corporate name of which it is a part but in respects other than just geographic location, then each such branch or division shall be required to be represented by its own licensee of record.

**113.5 Institutional License Required.** Any public agency or utility, institution, industrial or commercial establishment, or similar entity that carries out the act of plumbing and/or gasfitting "in-house" throughout their campus and/or within their building(s) shall be represented by a licensed WSSC Master Plumber/Gasfitter as applicable. The licensee shall register as the principle licensee for the entity and shall also comply with 113.3.

**113.5.1 Institutional Employment.** A Master Plumber, Master Gasfitter, or Master Plumber/Gasfitter may be regularly employed for public work, or by an institution, industrial establishment, or public utility, but shall not carry on the *business* of plumbing or gasfitting outside of that employment unless licensed and registered as herein required.

**113.5.2 Federal Property Exempt.** See Section 102.8.

### **113.6 Authorization for Work**

**113.6.1 Master Plumber.** A Master Plumber license shall authorize the licensee to provide plumbing, and sewer and drain cleaning services.

**113.6.2 Master Gasfitter.** A Master Gasfitter license shall authorize the licensee to provide gasfitting services.

**113.6.3 Master Plumber/Gasfitter.** A Master Plumber/Gasfitter license shall authorize the licensee to provide plumbing, sewer and drain cleaning, and gasfitting services.

**113.6.4 Journeyman Plumber.** A Journeyman Plumber license shall authorize the licensee to provide plumbing and sewer and drain cleaning services under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter.

**113.6.5 Journeyman Gasfitter.** A Journeyman Gasfitter license shall authorize the licensee to provide gasfitting services, under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter.

**113.6.6 Journeyman Plumber/Gasfitter.** Journeyman Plumber/Gasfitter license shall authorize the licensee to provide plumbing and sewer and drain cleaning services, under the direction and control of a WSSC-licensed Master Plumber or Master

Plumber/Gasfitter; and gasfitting services under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter.

**113.6.7 Apprentice Plumber.** An Apprentice Plumber license shall authorize the licensee to *assist* in providing plumbing services and sewer and drain cleaning services, under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter on the jobsite; or under a WSSC-licensed Journeyman Plumber or Journeyman Plumber/Gasfitter on the jobsite who is under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter.

**113.6.8 Apprentice Gasfitter.** An Apprentice Gasfitter license shall authorize the licensee to *assist* in providing gasfitting services, under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter on the jobsite; or under a WSSC-licensed Journeyman Gasfitter or Journeyman Plumber/Gasfitter on the jobsite who is under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter.

**113.6.9 Apprentice Plumber/Gasfitter.** An Apprentice Plumber/Gasfitter license shall authorize the licensee to *assist* in providing plumbing and sewer and drain cleaning services, and gasfitting services, under the direction and control of a WSSC-licensed Master Plumber/Gasfitter on the jobsite; or under a WSSC-licensed Journeyman Plumber/Gasfitter on the jobsite who is under the direction and control of a WSSC-licensed Master Plumber/Gasfitter.

**113.6.10 Non-Licensed Worker.** A non-licensed worker such as a "helper" or "laborer" shall *not* provide or assist in providing plumbing or gasfitting work. A non-licensed person shall only perform classes of work that support plumbing and gasfitting work. Examples include, but shall not be limited to: Excavating, backfilling, cutting and drilling of the structure, carrying materials and equipment, cleaning up, painting, patching, and similar classes of support work.

**113.6.11 Sewer and Drain Cleaner.** The cleaning of drainage systems regulated by the Commission shall be performed *only* by a WSSC-licensed Sewer and Drain Cleaner; or by individuals who are under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter, or of a WSSC-licensed Sewer and Drain Cleaner. Additional work shall be regulated and restricted as follows:

**113.6.11.1 Fixture Removal Access.** The Sewer and Drain Cleaner license shall allow the licensee to remove and reset a plumbing fixture for access to the drainage system only when engaged in sewer and drain cleaning activity.

**113.6.11.2 Plumbing Prohibited.** A WSSC-licensed Sewer and Drain Cleaner shall be *prohibited* from installing, extending, or altering any plumbing; and shall be *prohibited* from engaging in the plumbing or gas fitting business.

**113.6.11.3 Master Plumber.** A WSSC-licensed Master Plumber or Master Plumber/Gasfitter shall not be required to hold a Sewer and Drain Cleaner’s license in order to engage in the sewer and drain cleaning business.

**113.6.11.4 Institutional Employees.** A person regularly employed by any person, firm or corporation, municipal or private, or by a municipal, state, or federal government agency within the WSSD, and who in the course of such employment performs incidental sewer and drain cleaning work, shall not be required to become licensed as a WSSC-licensed Sewer and Drain Cleaner for these exclusive employment conditions.

**113.6.12 Minor Work Not Requiring a Licensee.** An individual shall not be required to be a licensee to perform minor plumbing and gas appliance maintenance services. Minor plumbing and gas appliance maintenance services shall be defined as *Exempt Work*, as cited Section 106.2.3, Plumbing Maintenance, and Section 106.2.4 Gas Appliance Maintenance.

**113.7 Backflow Technician**

**113.7.1 Eligible Persons.** *Only* a WSSC-licensed Master Plumber, Master Plumber/Gasfitter, Journeyman Plumber, or Journeyman Plumber/Gasfitter shall be eligible for licensing as a WSSC Backflow Prevention Technician.

**113.7.2 Training.** All Backflow Technician applicants shall pass a State-approved 32-hour Cross-Connection/Backflow Prevention training program, or pass a 32-hour Cross-Connection/Backflow Prevention training program from another jurisdiction or state that is acceptable to the Commission.

**113.7.3 Certified Technician.** Only those individuals licensed with the Commission as a Backflow Technician shall be authorized to certify the installation and testing of mechanical cross-connection control devices.

**113.7.4 Re-Certification Limit.** A Backflow Technician license shall be valid for a period of 3-years. Individuals shall be required to complete a State-approved 8-hour re-certification program. Individuals who allow their certification to lapse shall be required to complete a State-approved 32-hour Cross-Connection/Backflow Prevention training program.

**113.8 Insurance Requirements and Warranty.**

**113.8.1 Coverage Parameters**

**113.8.1.1 Proof of Coverage.** Prior to registration as the Master licensee of record, or Sewer and Drain Cleaner licensee of record, for a firm or corporation, the licensee shall provide evidence to the Commission that minimum insurance coverage has

been acquired to cover general liability exposure. This evidence shall be submitted in the form of a Certificate of Insurance, with WSSC listed as the certificate holder.

**113.8.1.2 Person Representing a Public Agency or Public Service Corporation.**

In cases where a licensee is representing a public agency or public service corporation, the licensee shall provide evidence of insurance coverage or financial responsibility and statements of self-insurance on each required coverage.

**113.8.1.3 Minimum Coverage.** The minimum insurance requirement shall be a Commercial General Liability policy with a combined aggregate limit for bodily injury and property damage of \$300,000.

**113.8.2 Premium Obligations**

**113.8.2.1 Insurance Company.** The insurance company issuing policies of insurance shall be licensed for business in the State of Maryland.

**113.8.2.2 Licensee Responsibility.** The licensee of record shall be responsible for submitting an updated certificate of insurance prior to the policy expiration date. Failure to do so shall result in lapse of registration.

**113.8.3 Insurance Cancellations.** A minimum of 30 days written notification to WSSC shall be given by the insurer of any alteration, change, or cancellation affecting any certificates or policies of insurance as required under this Code. Notification shall be sent via registered or certified mail, or shall be hand-carried to the Commission.

**113.8.4 Insurance Conditions**

**113.8.4.1 Scope.** All aforementioned policies and certificates of insurance shall be obtained *prior to* the issuance of a WSSC license or permit.

**113.8.4.2 Purpose.** Insurance requirements set forth herein shall satisfy part of the requirements for the issuance of a license to the licensee of record for a firm or corporation.

**113.8.4.3 Protection.** Insurance requirements shall not be construed by anyone to indicate that such requirements are sufficient or adequate under all circumstances.

**113.8.5 Warranty.** On all work requiring a permit, the licensee shall warrant the work as cited below. Contracts between a licensee, individual, or company, and the owner, owner's agent, or proprietor, shall define responsibilities between these parties and shall *not* involve the Commission.

**113.8.5.1 Sewer and Water Service.** The building sewer and the building water service shall be warranted for 3-years from date of FINAL inspection.

**113.8.5.2 All Other Work.** All other work shall be warranted for 1-year from date of FINAL inspection.

**113.8.5.3 Exception.** Where the owner or owner's agent obstructs or refuses to allow inspection, the warranty requirements shall not apply to the work subject to inspection, provided the licensee has notified the Commission in accordance with Section 106.9.3.3.

### **113.9 Registration Procedure**

**113.9.1 Registration.** Applicants shall register at the Commission after trade and examination qualifications are satisfied per Sections 114 and 115, as applicable. Required work experience as a Journeyman begins at the time of registration.

**113.9.2 License Issuance.** A license shall be issued upon payment of registration fees, approval, submission of necessary documents, and insurance requirements, as applicable.

**113.9.3 Referral Evidence.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**113.9.4 Four-Year Registration, Master License by WSSC Exam.** Master license applicants passing the WSSC exam shall renew their license every 4-years.

**113.9.5 Two-Year Registration, Journeyman License.** Journeyman license applicants shall renew their license every 2-years.

**113.9.6 One-Year Registration, Apprentice License.** Apprentice applicants shall renew their license annually. At the time of registration or renewal, an Apprentice shall provide proof of legal working age, and evidence that the applicant is currently employed by a WSSC licensee of record.

**113.9.7 Two-Year Registration, Master License by Reciprocation.** Master Plumbers, Master Gasfitters, and Master Plumber/Gasfitters registering under the reciprocity provisions of Section 115 shall be required to renew their license every 2-years.

**113.9.8 Two-Year Registration, Sewer and Drain Cleaner License.** Sewer and Drain cleaners shall renew their license every 2-years.

**113.10 Registration Card.** Licensees shall be *required* to carry their registration card when performing plumbing, gas fitting, or sewer and drain cleaning work. The registration card and, if requested by the Code Official, a picture identification card, shall be presented upon request to the Code Official. If a WSSC registration card is lost or destroyed, the licensee shall apply for a new registration card within 5 calendar days.

**113.11 Change of Business or Licensee Status.** If a licensee of record changes their business affiliation, goes out of business, or is deceased, or if the firm or corporation for which they are the licensee of record changes its name, the respective registration as licensee of record shall immediately become null and void. The licensee (or, if deceased, the firm or corporation) shall notify the Commission of the change in writing within 5 business days of the change.

**113.12 Lapse of Registration.** Lapse of registration shall render a WSSC license invalid. No work regulated by this Code shall proceed until registration is current.

**113.12.1 Plumber or Gasfitter.** If a licensee fails to renew their license within 4-years after the license expires, or if a licensee applicant who has passed the Commission exam fails to apply for registration within 4-years of the date of qualification, the licensee or applicant shall be required to re-qualify in accordance with the provisions set forth in Sections 113 and 114 of this Code. Otherwise, only the appropriate registration fee shall be required if all other requirements of this Code are shown to be satisfied.

**113.12.2 Sewer and Drain Cleaner.** If the licensee fails to renew their license within 2 years after the license expires, the licensee shall be required to re-qualify in accordance with the provisions set forth in Sections 113 and 114 of this Code. Otherwise, only the appropriate registration fee shall be required if all other requirements of this Code are shown to be satisfied.

**113.13 License Display.** Each Master or Sewer and Drain Cleaner licensee-of-record shall display the license number conspicuously in the principal place(s) of business, on each vehicle used at the jobsite for providing services, and in each business advertisement in the name of the business or licensee of record per Sections 113.3 and 113.4.

## **SECTION 114**

### **TRADE QUALIFICATIONS AND EXAM**

**114.1 Apprentice.** Prior to registration as a WSSC-licensed Apprentice Plumber, Gasfitter, or Plumber/Gasfitter, applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of working in the plumbing trade, gas fitting trade, or both, under the direction and control of a WSSC-licensed Master Plumber, Master Gasfitter, or a Master Plumber/Gasfitter as appropriate. No exam shall be required.

**114.1.1 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**114.2 Journeyman Plumber.** In order to qualify for the Journeyman Plumber exam, applicants shall meet the following requirements:

**114.2.1 Work Experience.** Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the plumbing trade as an apprentice (or equivalent work experience) under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter for a minimum of 7500-hours and 4-years of work experience in the trades.

**114.2.2 Formal Training.** Apprentices in the plumbing trade who graduate from approved plumbing training courses, conducted under the auspices of an approved trade association, utility, or educational institution, shall gain additional credit toward the working hours requirement. Up to 750-hours spent by the applicant in attending such courses shall count as *double* when applied toward the total required hours.

**114.2.3 Backflow Certification.** As a prerequisite for taking the Journeyman Plumbing exam, applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3-years prior to application.

**114.2.4 Exam.** See Section 114.7.

**114.2.5 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**114.3 Master Plumber.** In order to qualify for the Master Plumber exam, applicants shall meet the following requirements:

**114.3.1 Work Experience.** Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the plumbing trade as a registered Journeyman Plumber under the direction and control of a WSSC-licensed Master Plumber or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades.

**114.3.2 Backflow Certification.** As a prerequisite for taking the Master Plumbing exam, applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from

another jurisdiction or state that is acceptable to the Commission, within 3-years prior to application.

**114.3.3 Exam.** See Section 114.7.

**114.3.4 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**114.4 Journeyman Gasfitter.** In order to qualify for the Journeyman Gasfitter exam, applicants shall meet the following requirements:

**114.4.1 Work Experience.** Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the gasfitting trade as an apprentice (or equivalent work experience) under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades.

**114.4.2 Formal Training.** Apprentices in the gasfitting trade who graduate from approved gasfitting training courses, conducted under the auspices of an approved trade association, utility, or educational institution, shall gain additional credit toward the working hours requirement. Up to 375-hours spent by the applicant in attending such courses shall count as *double* when applied toward the total required hours.

**114.4.3 Exam.** See Section 114.7.

**114.4.4 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**114.5 Master Gasfitter.** In order to qualify for the Master Gasfitter examination, applicants shall meet the following requirements:

**114.5.1 Work Experience.** Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the gasfitting trade as a registered Journeyman Gasfitter under the direction and control of a WSSC-licensed Master Gasfitter or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades.

**114.5.2 Exam.** See Section 114.7.

**114.5.3 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a

minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**114.6 Sewer and Drain Cleaner.**

**114.6.1 Work Experience.** Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the sewer and drain cleaning business under the direction and control of a WSSC-licensed Sewer and Drain Cleaner, Master Plumber, or Master Plumber/Gasfitter for a minimum of 3750-hours and 2-years of work experience in the trades. Proof of work experience shall be supported by written statements from one or more employers of the applicant.

**114.6.2 Journeyman Plumber.** A WSSC-licensed Journeyman Plumber or Journeyman Plumber/Gasfitter shall be considered a qualified applicant in lieu of the work experience required in Section 114.6.1.

**114.6.3 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**114.7 Exam.**

**114.7.1 Type of Exam.** Applicants at both the Journeyman and Master levels shall be required to pass a multiple-choice, open-book exam on knowledge of this Code, particular to the trade being examined. At the Journeyman level, questions outside of this Code that relate to general knowledge of hands-on trade practice shall also be included. At the Master level, questions outside of this Code that relate to safety regulations, mathematics, common principles of physics, construction drawings and riser diagrams, building structural integrity, pipe sizing, standard details and specifications, materials standards, and general knowledge of hands-on trade practice shall also be included.

**114.7.2 Fee.** Fees for the exam are applied according to the schedule of Fees and charges approved by the Commission at time of exam application. Failure to pay required fees shall render an application invalid.

**114.7.3 Passing Score.** A passing score of no less than 75% shall constitute successful completion of the exam.

**114.7.4 Re-Exam.** Applicants shall be permitted to re-take the exam every 30 days until a passing score has been obtained.

## SECTION 115 RECIPROCITY OF LICENSES

**115.1 Master Plumber or Master Gasfitter, *With License from a Jurisdiction Having Reciprocity with WSSC*.** The Commission shall reciprocate at the Master licensee level with a jurisdiction where the applicant has passed a plumbing exam and/or gasfitting exam, acceptable to the Code Official. Applicants shall qualify for registration as a WSSC-licensed Master Plumber or Master Gasfitter upon satisfaction of or pursuant to the following conditions:

**115.1.1 Current License.** Present a current Master Plumber or Master Gasfitter license issued by the reciprocating jurisdiction or licensing agency.

**115.1.2 Good Standing.** Present a letter of good standing from the reciprocating jurisdiction or licensing agency.

**115.1.3 Backflow Certification.** Master Plumber applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3-years prior to application.

**115.1.4 Exam Verification.** Master Gasfitter applicants shall present a validated WSSC exam verification form, from the reciprocating jurisdiction or licensing agency, verifying that the applicant has passed a separate Master Gasfitter exam.

**115.1.5 License and Registration.** Satisfy the requirements set forth in Section 113.

**115.1.6 License Invalidation.** A WSSC license issued pursuant to the provisions set forth herein shall become null and void if the applicant's license from the jurisdiction or licensing agency from which it was reciprocated becomes revoked, suspended, lapsed, or otherwise invalidated.

**115.2 Master Plumber or Master Gasfitter, *With License from a Jurisdiction Not Having Reciprocity with WSSC*.** Applicants shall qualify for the exam as a WSSC-licensed Master Plumber or Master Gasfitter upon satisfaction of the following conditions:

**115.2.1 Current License.** Present a current Master Plumber or Master Gasfitter license issued by the jurisdiction or licensing agency.

**115.2.2 Good Standing.** Present a letter of good standing from the jurisdiction or licensing agency.

**115.2.3 Backflow Certification.** Master Plumber applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3-years prior to application.

**115.2.4 License and Registration.** Satisfy the requirements set forth in Section 113.

**115.2.5 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.

**115.3 Journeyman Plumber or Journeyman Gasfitter, *With License from a Jurisdiction Having Reciprocity with WSSC.*** The Commission shall reciprocate at the Journeyman licensee level with a jurisdiction where the applicant has passed a plumbing exam and/or gas fitting exam, acceptable to the Code Official. Applicants shall qualify for registration as a WSSC-licensed Journeyman Plumber or Journeyman Gasfitter upon satisfaction of or pursuant to the following conditions:

**115.3.1 Current License.** Present a current Journeyman Plumber or Journeyman Gasfitter license issued by the reciprocating jurisdiction or licensing agency.

**115.3.2 Good Standing.** Present a letter of good standing from the reciprocating jurisdiction or licensing agency.

**115.3.3 Backflow Certification.** Journeyman Plumber applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3 years prior to application.

**115.3.4 Exam Verification.** Journeyman Gasfitter applicants shall present a validated WSSC exam verification form, from the reciprocating jurisdiction or licensing agency, verifying that the applicant has passed a separate Journeyman Gasfitter exam.

**115.3.5 License and Registration.** Satisfy the requirements set forth in Section 113.

**115.3.6 License Invalidation.** A WSSC license issued pursuant to the provisions set forth herein shall become null and void if the applicant's license from the jurisdiction or licensing agency from which it was reciprocated becomes revoked, suspended, lapsed, or otherwise invalidated.

**115.4 Journeyman Plumber or Journeyman Gasfitter, *With License from a Jurisdiction Not Having Reciprocity with WSSC.*** Applicants shall qualify for the exam as a WSSC-licensed Journeyman Plumber or Journeyman Gasfitter upon satisfaction of the following conditions:

**115.4.1 Current License.** Present a current Journeyman Plumber or Journeyman Gasfitter license issued by the jurisdiction or licensing agency.

**115.4.2 Good Standing.** Present a letter of good standing from the jurisdiction or licensing agency.

**115.4.3 Backflow Certification.** Journeyman Plumber applicants shall have passed a 32-hour State-approved Backflow Prevention Certification Program, or passed a Backflow Prevention Certification Program from another jurisdiction or state that is acceptable to the Commission, within 3 years prior to application.

**115.4.4 License and Registration.** Satisfy the requirements set forth in Section 113.

**115.4.5 References.** For all prospective licensees, referral and character evidence furnished by the applicant upon application for registration shall be obtained from a minimum of 3 persons. References listed on the application shall be employers or persons acquainted with the applicant's trade qualifications and character.



## CHAPTER 2

# DEFINITIONS

### SECTION 201 GENERAL

**201.1 Definitions, Generally.** In addition to the definitions set forth in the model codes adopted and incorporated by reference in this Code (*see* §101.3) and the definitions set forth in Public Utilities Article, Annotated Code of Maryland, the definitions set forth below in §202 apply to the provisions of this Code.

**201.1.1 Ordinary Words.** Ordinary words not otherwise defined in this Code are used in accordance with their established dictionary meanings to further the purpose of this Code.

**201.2 Industrial and Special Waste.** In addition to the definitions set forth in this Chapter 2 of this Code, the definitions set forth in §801.2 specifically apply to the provisions of Chapter 8 (Industrial and Special Waste) of this Code.

### SECTION 202 ADDITIONAL DEFINITIONS

**AIR-GAP.** The unobstructed vertical distance through free atmosphere between the lowest effective opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the effective opening of the water supply outlet, never less than 1 inch above the receiving vessel flood rim. Special conditions may require more stringent requirements.

**ANSI.** American National Standards Institute.

**APPLICANT BUILT SERVICE CONNECTION PERMIT.** An applicant built permit is for service connection that will be constructed and financed by the owner and/or their designees. The Commission will inspect, approve and then accept all ownership and maintenance responsibilities thereafter.

**APPROVED.** Accepted by WSSC as meeting an applicable standard, specification, requirement, or as suitable for proposed use.

**ASSE.** American Society of Sanitary Engineering.

**ASSEMBLY.** A testable backflow preventer with one or more approved body components and including approved valves.

**ATMOSPHERIC VACUUM BREAKER (AVB).** The AVB consists of a float check, a check seat, and an air-inlet port. A shutoff valve immediately upstream may or may not be an integral part of the device. The AVB is designed to allow air to enter the downstream water line to prevent backsiphonage. This unit may never be subjected to a backpressure condition or have a downstream shutoff valve, or be installed where it will be in continuous operation for more than 12 hours.

**AUXILIARY WATER SUPPLY.** Any water supply on or available to the premises other than WSSC's approved public potable water supply. These auxiliary waters may include water from another water purveyor's public potable water supply or any natural source(s), such as a well, lake, spring, river, stream, harbor, and so forth; or used waters, reclaimed waters, recycled waters, or industrial fluids. These waters constitute an unacceptable water source over which WSSC does not have sanitary control.

**AWWA.** American Water Works Association.

**BACKFLOW.** The undesirable reversal of flow of a liquid, gas, or other substances in a potable water distribution piping system as a result of a cross-connection.

**BACKFLOW PREVENTER (BFP).** An assembly, device, or method that prohibits the backflow of water or other substances into potable water supply systems.

**BACKPRESSURE.** A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler, air/steam pressure, or any other means, which may cause backflow.

**BACKSIPHONAGE.** A type of backflow where the upstream pressure to a piping system is reduced to a sub atmospheric pressure.

**CHIEF CODE OFFICIAL.** The supervisor or higher level authority, of the "code official."

**CLASS 1 FIRE-PROTECTION SYSTEM.** Direct connections from public water mains only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or other additives of any kind; all sprinkler drains discharging to atmosphere, dry wells, or other safe outlets.

**COMMISSION.** The Washington Suburban Sanitary Commission or its duly authorized agents acting within the scope of duties entrusted to them.

**CONTAINMENT.** The appropriate type or method of backflow protection at the beginning of the service connection or immediately inside the building, commensurate with the degree of hazard of the property owner's potable water system.

**CONTAMINATION.** Impairment of the quality of the water which creates an actual hazard to the public health and safety.

**CRITICAL FACILITIES.** Facilities typically having multiple water services off multiple mains to ensure continuity of service, such as hospitals, schools, certain federal facilities, and other facilities deemed critical by the required use.

**CROSS-CONNECTION.** A connection or a potential connection between any part of a potable water system and any other environment containing other substances in a manner that, under any circumstances, would allow such substances to enter the potable water system. Other substances may be gases, liquids, or solids, such as chemicals, water products, steam, water from other sources (potable or non-potable), or any matter that may change the color of or add odor to the water. Bypass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or any other temporary or permanent connecting arrangement through which backflow may occur are considered to be cross-connections.

**CROSS-CONNECTION CONTROL.** A program to eliminate, monitor, protect and prevent cross-connections from allowing backflow.

**CROSS-CONNECTION TECHNICIAN.** A WSSC-licensed Master Plumber, Master Plumber/Gasfitter, Journeyman Plumber or Journeyman Plumber/Gasfitter who is licensed by WSSC for installing, servicing and testing of backflow assemblies.

**CUSTOMER.** For purposes of this Code, a member of the regulated community which may be a property or building owner, tenant, occupant, or other controlling entity over any portion of a property's water distribution system or water utilizing equipment.

**DEGREE OF HAZARD.** An actual or potential threat of contamination of a physical or toxic nature to the public potable water system or the owner's potable water system.

**DEVICE.** A non-testable backflow preventer.

**DOMESTIC HOT WATER.** Hot water supplied to normal plumbing fixtures such as showers, bathtubs, lavatory sinks, residential type kitchen sinks, residential type clothes washers, etc. for use in all occupancy types. Domestic Hot Water is limited to 140°F. Commercial and industrial applications such as culinary, laundering, laboratory, and similar processes are not subject to the limits of domestic hot water.

**DOUBLE CHECK DETECTOR BACKFLOW-PREVENTION ASSEMBLY (DCDA).** A specially designed backflow assembly composed of a line-size-approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall be provided by WSSC. The meter piping shall allow the meter to be installed either horizontal or vertical. This assembly shall only be used to protect against a non-health hazard (i.e., a pollutant).

**DOUBLE CHECK VALVE ASSEMBLY (DC or DCVA).** A complete assembly consisting of two internally loaded, independently operating check valves, located between two tightly closing resilient-seated shutoff valves with four properly placed resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (i.e., a pollutant).

**DRAIN CLEANER.** A WSSC-licensed Sewer and Drain Cleaner, Master Plumber, or person in their employment, performing drain cleaning operations.

**FIELD TESTING.** A procedure to determine the operational and functioning status of a backflow preventer.

**FLOW-BASED GREASE INTERCEPTOR.** Grease interceptor design based on flow rate with a specific requirement for upstream sink tail piece flow restriction (for indirectly connected fixtures) and a flow control device. Solids screens or strainers with a maximum screen size of 1/8" perforations must be provided to capture the solids discharge from dish/pot washing sinks and floor sinks to avoid overloading the grease interceptor with solids. Sizing is based on the reasonable maximum flow anticipated from the fixtures connected to the grease interceptor based on the WSSC Tail Piece Flow Rate Table (new) for indirect connections, and IPC Chapter 10/ASME A112.14.3 for direct connections. Minimum size = 7 gallons per minute. Flow-based grease interceptors shall conform to ASME A112.14.3 or ASME A112.14.4 at the calculated flow rate. The following flow-based grease interceptors are differentiated based on whether or not there are mechanical grease removal features:

**FOG.** An acronym for fats, oils, and grease.

**FUTURES, DEAD ENDS, DORMANT SYSTEMS, and SEASONAL USES/OCCUPANCIES.** General terms used to describe unused or stagnant water distribution systems or segments. Examples include but are not limited to: pool houses; unoccupied suites; piping to future areas or fixtures not intended to be operational by the initial occupancy of a building; or sections or floors of a building being decommissioned during renovation projects where any part of the building will remain occupied.

**GREASE ABATEMENT SYSTEM.** Any grease interceptor, grease trap, grease recovery device, or any treatment system designed to remove Fats, Oils and Grease (FOG) from FSE wastewater, with two general subcategories; see Volume Based Grease Interceptor and Flow Based Grease Interceptor.

**GREASE INTERCEPTOR.** A passive interceptor with a static liquid capacity of 300 gallons or more; referred to hereafter in Code as a Volume Based Grease Interceptor. In general, grease interceptors are constructed from precast concrete, have manhole access, and are designed for outdoor installation. However, grease interceptors may be constructed from other materials such as but not limited to composites and metal, and under some applications are installed indoors.

**GREASE RECOVERY DEVICE (GRD).** A specialized type of grease trap equipped with electro-mechanical components intended to extract FOG; referred to hereafter in Code as a Mechanical Flow Based Grease Interceptor.

**GREASE TRAP.** A passive interceptor, or a passive interceptor equipped with non-mechanical components, intended for indoor installation; referred to hereafter in Code as a Passive Flow Based Grease Interceptor. In general, grease traps are constructed from cast iron, stainless steel, aluminum, or a composite material, and are available in sizes that range from 10 gpm to several hundred gpm based on manufacturer's ratings.

**GROUP R-3 OCCUPANCIES.** In general, 1- and 2-family detached houses and attached row-style houses. Specifically per the International Building Code (IBC): Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2, R-4 or I-1, I-2, I-3, or I-4,, and where buildings do not contain more than two dwelling units as applicable in Section 101.2 (IBC), or adult and child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours. Adult and child care facilities that are within a single-family home are permitted to comply with the *International Residential Code* in accordance with Section 101.2 (IBC).

**GUARDED DOMESTIC HOT WATER DELIVERY OUTLET.** Faucets and other delivery outlets that incorporate a form of scald prevention or tempering as required by this Code. Items include, but are not limited to, bathtubs, showers, bidets, public hand washing facilities.

**HARD STOPPAGE.** A clog or obstruction in a building sewer or drain that cannot be readily relieved by a Drain Cleaner, utilizing proper-sized and type rotating drain cleaning equipment. Examples of a hard stoppage include but are not limited to: Root intrusions, broken or misaligned pipe, a solidified mass that cannot be dislodged, and permanent objects in the pipe.

**HIGH HAZARD (health hazard).** A cross-connection or potential cross-connection involving any substance that could, if introduced into the potable water supply, cause death or illness, spread disease, or have a high probability of causing such effects.

**HOUSE LINE.** An industry term used to describe the gas piping system downstream of the point of delivery (Gas Meter).

**INTERNAL PROTECTION.** Fixture isolation and/or isolation of an area or zone. Protection at the fixture means installing an approved backflow preventer at the source of the potential hazard within a specific area.

**ISOLATION.** Assemblies or devices installed to protect against backflow at individual cross connections.

**LOW HAZARD (non-health hazard).** A cross-connection or potential cross-connection involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the potable water supply.

**LOW LEAD CONTENT. Low lead content means:**

- (1) containing not more than 0.2% lead for solder and flux;
- (2) containing not more than 8% lead by dry weight for pipes and pipe fittings;
- (3) containing a percentage of lead for plumbing fittings and fixtures that is in compliance with standards established under Section 1417 of the federal Safe Drinking Water Act (42 USC Section 300g-6); and
- (4) containing not more than a weighted average lead content of 0.25% for the wetted surfaces of a pipe, pipe fitting, plumbing fitting, or fixture intended to dispense water for human consumption through drinking or cooking; or
- (5) meeting NSF standards 372 and 61-Annex G.

**MAY.** A word indicating optional practice at the discretion of the installer, as opposed to required practice as indicated by the word "shall," or the phrase "shall be permitted to be." See also "Shall".

**MECHANICAL FLOW-BASED GREASE INTERCEPTOR.** Grease interceptor design with mechanical grease removal features. Typically - installed indoors under a sink. Cleaned and maintained by the FSE, pumping contractors, or specialty maintenance contractors. Sometimes - referred to as a grease removal (or recovery) device.

**MISCONDUCT.** Use of abusive language, threats, mischievous or criminal acts, directed toward the public while providing services, or toward a code official while performing their official duties. See Sections 108.4.7 and 108.6.1.3.

**NON-GUARDED DOMESTIC HOT WATER DELIVERY OUTLET.** Faucets and other delivery outlets that do not incorporate a form of scald prevention or tempering as allowed by this Code. Items include, but are not limited to, residential lavatories, laundry sinks, pantry/break room sinks, patient room sinks, bar sinks, shampoo sinks, residential type kitchen sinks, classroom sinks, and general use hose bibbs.

**NON-RESIDENTIAL BUILDING or OCCUPANCY.** The classification non-residential shall apply to any building type or occupancy that does not meet the parameters of a Group R-3 occupancy as set forth in the International Building Code. Group R-3 classifications include single family homes and row style townhomes (single dwelling unit from bottom floor to top floor). All other building types or occupancies shall be deemed non-residential.

**NON-POTABLE WATER.** Water which is not reliably safe for drinking, personal use or culinary related utilization.

**PASSIVE FLOW-BASED GREASE INTERCEPTOR.** Grease interceptor design with no mechanical grease removal features. Typically - installed indoors under a sink or outdoors in-ground. Cleaned by the FSE or pumping contractors. Sometimes referred to as

a hydro-mechanical grease interceptor (when designed and installed with a flow control device with air intake) or a grease trap (when designed and installed with a flow control device without air intake).

**PERMITTEE.** The person responsible as indicated on a permit.

**PERSON.** Any individual; partnership; co-partnership; firm; company; corporation; association; joint stock company; trust; estate; Federal, State, and local governmental entity; society; group; or any other legal entity; or their legal representatives, agents, assigns or governmental entities.

**POINT OF DELIVERY.** For natural gas systems, the point of delivery is the outlet of the service meter assembly or the outlet of the service regulator or service shutoff valve where a meter is not provided. Where a valve is provided at the outlet of the service meter assembly, such valve shall be considered to be downstream of the point of delivery. For undiluted liquefied petroleum (aka LP or propane) gas systems, the point of delivery shall be considered the outlet of the second-stage pressure regulator that provides utilization pressure, exclusive of line gas regulators, in the system. *For purposes of gas pipe sizing* from a service regulator or from a line regulator, the first 2-feet (nominal) of piping may be sized the same as the service regulator/meter assembly connection, or the line pressure regulator outlet.

**PRESSURE VACUUM-BREAKER ASSEMBLY (PVB).** An assembly consisting of an independently operating, internally loaded check valve, an independently operating, loaded air-inlet valve located on the discharge side of the check valve, with properly located resilient-seated test cocks and tightly closing resilient-seated shutoff valves attached at each end of the assembly designed to be operated under pressure for prolonged periods of time to prevent backsiphonage. The pressure vacuum breaker may not be subjected to any backpressure. This assembly may be used to protect against a non-health hazard (i.e., a pollutant) or a health hazard (i.e., a contaminant).

**PUBLIC HAND WASHING FACILITY.** Lavatory or group hand washing fixture located in a public toilet facility or other hand wash operation to be used by customers, patrons, employees, patients, inmates and visitors. Uses include, but are not limited to, patient service areas, wash fountains, detention center including cells, classroom sinks, and general hand sinks.

**REDUCED-PRESSURE PRINCIPLE BACKFLOW-PREVENTION ASSEMBLY (RPBA or RPZA).** A complete assembly consisting of a mechanical, independently acting, hydraulically dependent relief valve, located between two independently operating, internally loaded check valves that are located between two tightly closing resilient-seated shutoff valves with four properly placed resilient-seated test cocks. This assembly may be used to protect against a non-health hazard (i.e., a pollutant) or a health hazard (i.e., a contaminant).

**REDUCED-PRESSURE PRINCIPLE DETECTOR BACKFLOW-PREVENTION ASSEMBLY (RPDA).** A specially designed backflow assembly composed of a line-size proved reduced-pressure principle backflow-prevention assembly with a bypass containing a specific water meter and an approved reduced-pressure principle backflow-prevention assembly. The meter shall be provided by WSSC. The meter piping shall allow the meter to be installed either horizontal or vertical. This assembly may be used to protect against a non-health hazard (i.e., a pollutant) or a health hazard (i.e., a contaminant).

**REPRIMAND.** A formal written notification to a licensee, that the licensee has committed one or more serious code violations, but less serious than that which would warrant a recommendation for suspension or revocation of their license. See Section 108.6.

**REVOCAION.** A formal written notification to a licensee, that the licensee has committed one or more serious code violations, that warrants termination of their license for an extended period of time, generally in "years." See Section 108.6.

**RIGHT-OF-WAY SERVICE CONNECTION.** A tap or tee that is constructed by the Commission or its designee, into a Commission water or sewer main located in a right-of-way on private property, serving only the property in which the Commission water or sewer main is located.

**SERVICE CONNECTION.** In general, a lateral service pipe that is constructed by the Commission or its designee, from a Commission water or sewer main to a property line. See also "Right-of-Way Service Connection."

**SHALL.** A word indicating required practice, as opposed to an optional practice at the discretion of the installer, indicated by the word "may." See also **May**.

**SOAP TEST.** As prescribed in this code, any liquid producing visible bubbles or changing appearance, when applied to a leaking pipe. Specialized leak detection equipment shall also qualify as a soap test.

**SOFT STOPPAGE.** A clog or obstruction in a building sewer or drain caused by an over-accumulation of normal sewage solids, that can be readily relieved by a Drain Cleaner, utilizing proper-sized and type rotating drain cleaning equipment.

**SPILL-RESISTANT PRESSURE VACUUM-BREAKER BACKSIPHONAGE-PREVENTION ASSEMBLY (SVB):** A backflow assembly containing an independently operating, internally loaded check valve and independently operating loaded air-inlet valve located on the discharge side of the check valve. The assembly is to be equipped with a properly located resilient-seated test cock, a properly located bleed/vent valve, and tightly closing resilient-seated shutoff valves attached at each end of the assembly. This assembly is designed to protect against a non-health hazard (i.e., a pollutant) or a health hazard (i.e., a contaminant) under backsiphonage condition only.

**SUSPENSION.** A formal written notification to a licensee, that the licensee has committed one or more serious code violations, that warrants termination of their license for a specified period of time, but less serious than that which would warrant a revocation of their license. See Section 108.6.

**SYSTEMS DEVELOPMENT CHARGE (SDC).** An impact fee established by Section 25-401 & 25-405 of the Public Utilities Article, Annotated Code of Maryland, to recover cost of growth related facilities within the WSSD.

**VENTILATED SPACE.** A space within a building that allows air or gases to freely exchange with any unconfined space or outdoors. Building structural voids such as chases, wall cavities, and similar dead spaces shall not be utilized as a ventilated space. The air exchange opening shall be adequately sized to accommodate the equipment and appurtenances within the space but in no case less than seven (7) square inches and where no dimension is smaller than three (3) inches.

**VISIBLE READY ACCESS AREA.** A space within a building where daily activity is expected; whereby items requiring observation are visible and abnormalities will not go undetected.

**VOLUME-BASED GREASE INTERCEPTOR.** Grease interceptor design based on volume and retention time with no specific requirement for upstream sink tail piece flow restrictions or a flow control device. Sizing is based on the number of drainage fixture units connected to the grease interceptor based on the 2006 Uniform Plumbing Code (UPC) Table 10-3. Minimum size = 300 gallons. Typically - installed outdoors and underground. Typically - cleaned by pumping contractors. Sometimes - referred to as a gravity grease interceptor or outdoor grease interceptor.

**WATER RE-USE SYSTEMS.** Varieties of water recycling from the following sources: wastewater treatment plant effluent; graywater; rainwater; ground water; condensate; process and equipment discharge. [See Chapter 9]

**WEIGHTED AVERAGE LEAD CONTENT.** Weighted average lead content means:

- (1) identifying each component of a pipe, pipe fitting, plumbing fitting, or fixture that water flows through and comes into contact with during normal operation;
- (2) indentifying the percentage lead content of each component of the pipe, pipe fitting, plumbing fitting, or fixture;
- (3) determining the wetted surface area of the pipe, pipe fitting, plumbing fitting, or fixture;
- (4) determining the percentage of the total wetted surface area of the pipe, pipe fitting, plumbing fitting, or fixture represented in each component;
- (5) calculating the contributing percent lead for each component that comes into contact with water by multiplying the percentage of lead content of the component by the percentage of total wetted surface area represented by the component; and
- (6) calculating the sum of each contributing percent lead value determined for each component under item (5) of this subsection.

**WSSC.** The Washington Suburban Sanitary Commission.

**WSSD.** The Washington Suburban Sanitary District. Generally, the entirety of Montgomery and Prince George's Counties, Maryland, less certain incorporated city limits and federal properties.

# CHAPTER 3

## ADOPTION OF INTERNATIONAL PLUMBING CODE

### SECTION 301 GENERAL

**301.1 Adoption.** The 2012 edition of the **International Plumbing Code** (hereinafter “IPC”), published by the International Code Council, Inc., is hereby adopted and incorporated herein by reference, and has the same force and effect as though fully set forth in this Code, subject to the additions, deletions or other modifications set forth in this Chapter as amendments thereto.

**301.2 Applicability.** The IPC applies to all occupancies including Group R-3 Occupancies (see definition), and their accessory structures.

**301.3 Availability for Review.** At least 1 copy of the aforesaid IPC shall be filed in the Office of the Secretary of the WSSC and made available for public use and inspection.

### SECTION 302 AMENDMENTS TO THE INTERNATIONAL PLUMBING CODE

**302.1 Amendment of IPC CHAPTER 1, ADMINISTRATION.** IPC Chapter 1, Administration, is hereby DELETED in its entirety.

302.2 Reserved

#### **302.3 Amendment of IPC CHAPTER 3, GENERAL REGULATIONS**

**302.3.1 IPC Section 305.4, Freezing,** is hereby AMENDED by ADDING provisions thereto, specifying certain freeze protection for piping, all to read as follows:

(IPC as amended)

**305.4 Freezing.** Water, soil and waste pipes shall not be installed outside of a building, in attic or crawl spaces, concealed in outside walls, or in any other place subjected to freezing temperatures unless adequate provision is made to protect such pipes from freezing by insulation, heat or both. Water piping installed in exterior walls, ceilings,

and unprotected floor spaces shall be protected by a minimum R-24 insulation on the "cold" side of the piping, with *no* insulation on the "warm" side of the piping. Exterior water supply system piping shall be installed not less than 6 inches below the frost line and not less than 12 inches below grade. In Prince George's County and Montgomery County, exterior water supply system piping shall be installed not less than 30-inches below final grade.

**302.3.2 IPC Section 305.4.1, Sewer Depth**, is hereby **AMENDED** by **COMPLETING** minimum cover depth dimensions for building sewers, all to read as follows:

(IPC as amended)

**305.4.1 Sewer Depth.** Building sewers that connect to private sewage disposal systems shall be a minimum of 18 inches below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 24 inches below grade.

**302.3.3 IPC Section 305.4, Freezing**, is hereby **AMENDED** by **ADDING** Section 305.4.2, to provide requirements for draining or protecting various seasonal applications as follows:

(IPC as amended)

**305.4.2 Winterization.** For seasonal uses, a means to facilitate de-watering water lines in areas subject to freezing and protection of fixture traps shall be provided as follows:

**305.4.2.1** Piping arrangements shall include a means to drain water piping at all low points and a means to relieve any vacuum to enable drain down. For draining water piping at low points, opening fixture outlets, removing fixture stop valve components, boiler drains and similar drain ports are acceptable methods. Trapped piping arrangements shall be prohibited where piping is intended to be winterized.

**305.4.2.2** For below grade piping subject to freezing, drain down pits are prohibited and a means for forced air elimination of residual water must be provided.

**305.4.2.3** Fixture traps shall not be removed and they shall be filled with non-toxic (glycerin based) anti-freeze.

**305.4.2.4** Hose bibb shutoff valves shall be provided with a maintenance tag detailing winterization and start-up procedures.

**302.3.4 IPC Section 306, Trenching, Excavation and Backfill**, is hereby **AMENDED** by **ADDING** Section 306.5, to designate responsibilities for geotechnical considerations as follows:

(IPC as amended)

**306.5 Geotechnical Considerations.** The project owner and their design team shall be responsible for special geotechnical considerations relating to the proper installation and backfill of buried pipelines. The responsible parties shall notify the installers of specific installation and/or backfilling criteria. The responsible parties shall also inspect and approve all aspects of trenching and backfill as related to special geotechnical considerations. Items of concern include, but are not limited to: fill, debris, groundwater, corrosion or unsuitable soil below the bottom of the trenching or the imposed loads placed onto the pipelines by mobile equipment or the backfill itself. In cases where unusual site conditions are encountered by the installer, the owner shall be notified.

**302.3.5 IPC Section 312.5, Water Supply System Test,** is hereby AMENDED by ADDING provisions to recognize safe air testing practices for rigid plastic piping systems in winter months, all to read as follows:

(IPC as amended)

**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, for piping systems other than plastic, by an air test of not less than 50 psi (344kPa). This pressure shall be held for at least 15 minutes. The water utilized for tests shall be obtained from a potable source of supply. The required tests shall be performed in accordance with this section and Section 107. Subject to 105.1.4, testing for plastic piping systems shall follow a two step process in winter months:

- (1) The system shall be air tested with 5 psi prior to wall close-in by the plumbing contractor using a safe and reliable method, see manufacture's recommendations and requirements. DO NOT leave air pressure charged on an unmanned project and NO other work may be performed on premises during an air test.
- (2) Then after permanent heat is available and prior to final inspection the plumbing contractor shall fill the CPVC or PVC system with water equal to system working pressure. The water test shall be held for 24 hours without loss.

**302.3.6 IPC Section 312.6, Gravity Sewer Test,** is hereby AMENDED by ADDING provisions to allow air as a test medium, all to read as follows:

(IPC as amended)

**312.6 Gravity sewer test.** Gravity sewer tests shall consist of plugging the end of the sewer at the point of connection with the public sewer, filling the building sewer with water or air, testing with 5 psi of air or not less than a 10-foot (3048mm) head of water and maintaining such pressure for 15 minutes.

**302.3.7 IPC Section 312.10.2, Testing,** is hereby **AMENDED** by **ADDING** the requirement for tagging testable backflow preventers after testing, as follows:

(IPC as amended)

**312.10.2 Testing.** Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, pressure vacuum breaker assemblies, reduced pressure detector fire protection backflow prevention assemblies, double check detector fire protection backflow prevention assemblies, hose connection backflow preventers, and spill-proof vacuum breakers shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with one of the following standards:

ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CAN/CSA B64.10

Tests shall be performed by a Certified Backflow Prevention Mechanic. A ***dated test tag*** indicating test results shall be attached to each testable backflow prevention device. ASSE 1012, ASSE 1022, and ASSE 1024 devices shall be tagged and shall include: Installation date, and the words, "FOR OPTIMAL PERFORMANCE AND SAFETY THIS DEVICE SHALL BE REPLACED OR RE-BUILT EVERY 5 YEARS." [Test tags available from WSSC]

**302.3.8 IPC Section 314.1, Fuel-Burning Appliances,** is hereby **AMENDED** by **ADDING** certain provisions thereto, specifying conditions under which condensate may be discharged to the Commission's sanitary sewer system, all to read as follows:

(IPC as amended)

**314.1 Fuel-Burning Appliances.** Liquid combustion by-products of condensing appliances shall be collected and discharged to an approved plumbing fixture or disposal area in accordance with the manufacturer's installation instructions, and shall be appropriately neutralized. See Section 804.1. Condensate piping shall be of approved corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

**302.3.9 IPC Section 314.2.1, Condensate Disposal,** is hereby **AMENDED** by **ADDING** certain provisions thereto, specifying conditions under which condensate may be discharged to the Commission's sanitary sewer system, all to read as follows:

(IPC as amended)

**314.2.1 Condensate Disposal.** Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance. The *only* such discharges allowed into the Commission's sanitary sewer systems shall be from *replacement* equipment serving Group R-3 occupancies constructed prior to 1965.

#### **302.4 Amendment of IPC CHAPTER 4, FIXTURES, FAUCETS AND FIXTURE FITTINGS**

**302.4.1 IPC Section 406.3, Waste Connection,** is hereby **AMENDED** To **CLARIFY** washing machine waste lines do not have to connect to a 3 inch drain or stack, all to read as follows:

(IPC as amended)

**406.3 Waste Connection.** The waste from an automatic clothes washer shall discharge through and 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 branch drain or drainage stack a minimum of 3 inches (76 mm) in diameter in other than Group R-3 occupancies; and of 2 inches (51 mm) in diameter for Group R-3 occupancies. Automatic clothes washers that discharge by gravity shall be permitted to drain to a waste receptor or an approved trench drain.

**302.4.2 IPC Section 424.1, Approval,** is hereby **AMENDED** by **MODIFYING** Section 424.1, to align with and incorporate federal regulations mandating low lead plumbing fixtures, fittings and other components and further **AMENDED** by **ADDING** Section 424.1.3 to ensure that fixture components and appurtenances match fixture flow characteristics as follows:

(IPC as amended)

**424.1 Approval.** Faucet and fixture fittings shall conform to ASME A112.18.1/CSA B125.1. Faucet and fixture fittings that supply drinking water for human ingestion shall conform to the requirements of NSF 61, **Annex G** and NSF 372. Flexible water connectors exposed to continuous pressure shall conform to the requirements of Section 605.6.

**424.1.3 Compatibility.** All components utilized to deliver domestic hot water, such as temperature control/limiting devices and their corresponding shower heads and aerators, shall be compatible and incorporate similar flow ratings.

**302.5 Amendment of IPC CHAPTER 5, WATER HEATERS**

**302.5.1 IPC Section 501, General**, is hereby **AMENDED** by **ADDING** Sections 501.1.1 - 501.1.4 to provide scope of applicability and general parameters for minimum and maximum water temperature for domestic hot water as follows:

(IPC as amended)

**501.1.1 Applicability.** The provisions contained within Chapter 5 of the IPC and herein shall be applicable to new construction and replacement of domestic hot water generating equipment.

**501.1.2 Recommended Minimum Best Practices.** In order to safeguard against scalding as well as water borne bacteria growth, an optimal hot water system will incorporate all of the following parameters:

**501.1.2.1 Guarded Domestic Hot Water Delivery Outlets**

**501.1.2.2** Water Storage at 140°F or greater

**501.1.2.3** Domestic hot water is tempered by a master thermostatic mixing valve, complying with ASSE 1017, to limit the water delivered at any non-guarded domestic hot water delivery outlet to a maximum temperature of 125°F.

**501.1.2.4** *As a recommendation*, the above **shall not** be construed as a code requirement. The intent is to identify potential scalding and bacterial growth hazards associated with hot water systems.

**501.1.3 Minimum and Maximum Storage Temperatures.** Where water is *stored* for domestic use, the water within the storage tank shall maintain a minimum of 120°F, not including draw down and recovery. Where an ASSE 1017 master thermostatic mixing valve is *not* utilized, hot water storage temperatures shall not exceed 125°F.

**501.1.4 Maximum Delivery Temperature.** In general, domestic hot water temperature shall be limited to 140°F at any point of delivery from the distribution system. Where *guarded domestic hot water delivery outlets* are *not* utilized (older construction), hot water *delivery* temperatures shall not exceed 125°F.

**302.5.2 IPC Section 501, General**, is hereby **AMENDED** by **ADDING** Sections 501.9 and 501.10, to provide requirements for mixing valves to be utilized for all adult care and child care fixtures and where any heat transfer systems produces domestic hot water as follows:

(IPC as amended)

**501.9 Nursing Homes, Hospitals and Adult and Child Care Facilities.** A master thermostatic mixing valve complying with ASSE 1017 shall be provided to safeguard the temperature of the water delivered from the potable domestic hot water distribution

system. See 501.1.4. The potability of the water shall be maintained throughout the system.

**501.10 Heat Transfer Systems.** A master thermostatic mixing valve complying with ASSE 1017 shall be provided to safeguard the temperature of the water delivered from the potable domestic hot water distribution system. See 501.1.4. The potability of the water shall be maintained throughout the system.

**302.5.3 IPC Section 504.7, Required Pan,** is hereby AMENDED to CLARIFY where water heater safe pans shall and shall not be required, to avoid conflict with subsequent IPC prescriptive language that is not enforceable in a practical manner, all to read as follows:

(IPC as amended)

**504.7 Required Pan.** Where water heaters or hot water storage tanks are installed in locations where leakage of the tanks or connections will cause damage, the tank or water heater shall be installed in a galvanized steel pan having a minimum thickness of 24 gauge, or other pans approved for such use. This requirement shall apply **only** to water heaters located **above** habitable space or the lowest habitable level. Pans shall **not** be required in basements or for slab-on-grade constructions, whether finished or unfinished.

### 302.6 Amendment of IPC CHAPTER 6, WATER SUPPLY AND DISTRIBUTION

**302.6.1 IPC Section 601, General,** is hereby AMENDED by ADDING Section 601.5, to provide requirements for futures, dead ends, dormant systems and seasonal use/occupancies as follows:

(IPC as amended)

**601.5 Futures, Dead Ends, Dormant Systems, and Seasonal Uses/Occupancies.** Provisions shall be provided to isolate unused or stagnant sections of water distribution piping as follows:

**601.5.1 Isolation Valve.** Each unused system or segment shall be provided with a valve within 12" of where the stagnant system or segment connects to an active potable water line, main or riser.

**601.5.2 Flushing Port.** Within 12" downstream of the required isolation valve, each un-used system or segment shall be provided with a flushing port to facilitate the independent flushing and/or disinfection of the stagnant section prior to operating the isolation valve and commissioning that system or segment.

**601.5.3 Backflow Preventer.** As an alternate to the flushing port, an ASSE 1024 DCV Backflow Device shall be installed within 12" downstream of the isolation valve.

**601.5.4 Testable Backflow Assemblies.** See Section 508.2.6 for testing requirements for testable backflow assemblies serving any dormant use or seasonal uses such as irrigation, swimming pools, decorative fountains, etc.

**601.5.5 Infrequently Used Fixtures.** Water supply laterals serving infrequently used fixtures, including emergency showers and eye washes, shall connect directly to active water mains when possible, shall be as short as practical, and shall be flushed in adequate time and quantity to ensure the potability of the water within the laterals.

**601.5.6 Activation.** Prior to initial use or after a period of stagnation, any system described in 601.5 shall be determined potable through flushing, disinfection and testing, as needed, prior to activation with a potable system. (See IPC Section 602.3.4)

**302.6.2 IPC Section 602.2, Potable water required,** is hereby **AMENDED** by **ADDING** Section 602.2.1 and 602.2.2, to allow certain water re-use systems to supply non-potable water to toilets, urinals, mechanical systems or equipment cooling; and to recognize certain end-use fixtures as plumbing fixtures in order for Section 602.2 to be applicable to them as follows:

**602.2.1 Exception.** Toilets, Urinals, Mechanical Systems and Equipment Cooling may utilize non-potable water under the provisions of Chapter 9 of this Code.

**602.2.2 Applicability of End-Use Fixtures.** Certain end-use fixtures such as, but not limited to, hose bibbs, spray irrigation, self-service vehicle washing, etc. shall be considered plumbing fixtures and supplied with potable water unless otherwise approved by the Code Official. Emergency eye wash/showers/drenching stations shall never be supplied with non-potable water.

**302.6.3 IPC Section 604, Design of Building Water Distribution System,** is hereby **AMENDED** by **MODIFYING** Section 604.1, to describe, and provide details for, the alternate means of sizing water distribution systems as follows:

(IPC as amended)

**604.1 General.** The design of the water distribution system shall conform to accepted engineering practice. Methods utilized to determine pipe sizes shall meet one of the specified methods below:

**604.1.1 IPC Appendix E, Section E103.3 Segment Loss Method.** Professional designs shall be validated and approved by the Plans Review office.

**604.1.2 IPC Appendix E, Section E201 Size of water-service mains, branch mains and risers.**

**604.1.2.1** Water Service Connections (WSSC main to property line) for Group R-3 occupancies shall be sized per 604.1.3 below.

**604.1.2.2** Table E201.1 "Meter and Service Pipe" column is used to determine size of water service (on-property only); disregard meter size whether inside or outside. Use developed length from property line to service valve.

**604.1.2.3** Table E 201.1 "Distribution Pipe" column is use to determine size of distribution main (service valve to first major branch, riser, or water heater supply). Use developed length from service valve to most remote fixture.

**604.1.2.4** For all other segments, use developed length from distribution main to most remote fixture served through that segment.

**604.1.3 Existing Service Connection Size Validation for Renovation or Additions to; or Replacement of; or New Group R-3 Occupancies (Flush Tank type toilets only):**

**604.1.3.1** The following considerations shall only apply to domestic fixture demand sizing. Adequacy of an existing service connection to serve a fire sprinkler system shall be determined by the appropriate county or city fire protection review agency.

**604.1.3.2** The following considerations provide only a minimum standard of service; are to be considered as an alternative to expensive street excavation; and are not meant to serve a dwelling with moderate to heavy occupancy and/or fixture use.

**604.1.3.3** A 3/4" service connection is limited to 25 wsfu as determined by Table E103.3(2).

**604.1.3.4** A 1" service connection is limited to 50 wsfu as determined by Table E103.3(2).

**604.1.3.5** The homeowner shall sign and submit an acceptance letter when existing 3/4" and 1" service connections will serve additional fixtures, or new or replaced houses.

**604.1.4 Engineered Designs.** Plans Review validation and approval required.

**302.6.4 IPC Section 605.2, Lead content of water supply pipe and fittings**, is hereby AMENDED by MODIFYING Section 605.2, to align with and incorporate federal regulations mandating low lead plumbing fixtures, fittings and other components as follows:

(IPC as amended)

**605.2, Lead content of water supply pipe and fittings.** Pipe and pipe fittings, including valves and faucets, utilized in the water supply system shall have a maximum of 8-percent lead content. Pipe, fittings, faucets, valves, etc located within the flow path from the water service connection to a faucet or outlet intended for human consumption/ingestion shall not exceed a weighted average lead content of 0.25% with respect to the wetted surface areas of the pipe, fittings, faucets, valves, etc. Pipe, fittings, faucets, valves, etc in the flow path to human consumption/ingestion shall meet NSF standards 61-Annex G and 372.

**302.6.5 IPC Section 606.2, Location of shutoff valves**, is hereby AMENDED by MODIFYING Item number 2, to include various nomenclatures for hose bibb type connections and to specifically include "frost-free" type bibbs as requiring a shutoff valve for servicing.

(IPC as amended)

606.2 Location of shutoff valves.

2. On the water supply pipe to each sillcock, hose bibb, wall or yard hydrant, irrigation supply, decorative fountain or general water outlet including "frost-free" or "frost-proof" type devices. See Amended Section 302.3.3 (added IPC 305.4.2) for winterization requirements.

### **302.7 Amendment of IPC CHAPTER 7, SANITARY DRAINAGE**

**302.7.1 IPC 708.3, Cleanouts, Where Required**, is hereby AMENDED by CHANGING the requirement for manholes to include pipelines of 6 inches diameter, all to read as follows:

(IPC as amended)

**IPC 708.3.2 Building Sewers.** Building sewers shall be provided with cleanouts located not more than 100 feet (30480mm) apart measured from the upstream entrance of the cleanout. For building sewers 6 inches (153mm) and larger, manholes shall be provided and not located more than 100 feet (30480mm) from the junction of the *building drain* and *building sewer*, at each change of direction and at intervals or not more than 400 feet (122m) apart. Manholes and manhole covers shall be of *approved* type.

**302.7.2 IPC Section 708.3, Cleanouts, Where Required**, is hereby **AMENDED** by **ADDING** as new sections 708.3.7 and 708.3.7.1, requirements for a property line cleanout, all to read as follows:

(IPC as amended)

**708.3.7 Property Line.** WSSC sewer service connections with a vertical riser, shall be connected to by the plumber in accordance with WSSC Standard Details S-5.0. The cleanout cover assembly shall be installed by the plumber in accordance with WSSC Standard Detail S-5.1 or S-5.2.

**708.3.7.1 Replacement Sewers.** When an *existing* sewer service connection is being re-connected to, *or*, when an *existing* building sewer is being replaced, a property line cleanout shall be established by the plumber. The base connection shall be a combination wye and one-eighth bend lying on its back, connected immediately to the WSSC service connection located at the property line or edge of right-of-way. The cleanout cover assembly shall conform with WSSC Standard Detail S-5.1 or S-5.2. See Section 111.1.6.

**302.7.3 IPC Section 708.9, Access**, is hereby **AMENDED** by **MODIFYING** to include a height restriction to facilitate safe and practical servicing of drain lines as follows:

(IPC as amended)

**708.9 Access.** Access shall be provided to all cleanouts. Cleanout openings shall not exceed 36" above finished floor level. Where provided, cleanouts serving horizontal drainage systems above ceiling level shall extend to the floor above and terminate as an accessible floor cleanout or extend to outdoors.

**302.7.4 IPC Section 715, Backwater Valves**, is hereby **AMENDED** by **MODIFYING** Section 715.1 to recognize private manholes and by **ADDING** Section 715.6, to specify marking and labeling requirements for backwater valve access as follows:

(IPC as amended)

**715.1 Sewage backflow.** Where plumbing fixtures are installed on a floor with a finished floor elevation below the elevation of the manhole cover of the next upstream manhole in a *public or private* sewer, such fixtures shall be protected by a backwater valve installed in the building drain, or horizontal branch serving such fixtures. Plumbing fixtures installed on a floor with a finished elevation above the elevation of the manhole cover of the next upstream manhole in a *public or private* sewer shall not discharge through a backwater valve.

**715.6 Marking and Labeling.** The access cover serving a backwater valve shall be permanently labeled with the following message: "Backwater valve located below this access cover, do not cover with permanent floor finishing material such as carpet or tile." In addition, a tag shall be affixed at the main water supply valve indicating the use and location of the backwater valve(s).

### 302.8 Amendment of IPC CHAPTER 8, INDIRECT/SPECIAL WASTE

**302.8.1 IPC 802.1.4, Swimming Pools,** is hereby AMENDED by ADDING a maximum pipe size for sanitary discharge and recognition that this requirement may further require a surge tank to augment normal pool discharge flows.

(IPC as amended)

**IPC 802.1.4.1 Maximum Size Discharge.** Such waste may discharge to the sanitary sewer but shall be limited to a maximum of 2 inches diameter pipe for gravity flow or 50gpm of pump flow; this may require the installation of a surge tank.

**IPC 802.1.4.2 Prohibited Discharge.** No outside deck drains or surface water drains shall enter the sanitary sewer.

**302.8.2 IPC Section 802.3, Waste receptors,** is hereby AMENDED by MODIFYING language to prohibit indirect waste connections in areas that are not readily visible as follows:

**802.3 Waste receptors.** Waste receptors shall be of an approved type. A removable strainer or basket shall cover the waste outlet of waste receptors. Waste receptors shall be installed in *ventilated spaces and visible ready access areas*. Waste receptors shall not be installed in bathrooms, toilet rooms, plenums, crawl spaces, attics, interstitial spaces above ceilings and below floors or in any inaccessible or unventilated space such as a closet or storeroom. Ready access shall be provided to waste receptors.

### 302.9 Amendment of IPC CHAPTER 9, VENTS

**302.9.1 IPC Section 901.3, Chemical waste vent systems,** is hereby AMENDED by MODIFYING Section 901.3, to require chemical waste and vent systems to be engineered design systems as follows:

(IPC as amended)

**901.3 Chemical waste vent systems.** The vent system for a chemical waste system shall be an engineered design system, independent of the sanitary vent system, and terminate separately through the roof to the outdoors or to an air admittance valve that complies with ASSE 1049.

**302.9.2 IPC Section 904.1, Roof Extension,** is hereby AMENDED by COMPLETING minimum vent extension dimension above a roof, all to read as follows:

(IPC as amended)

**Section 904.1, Roof Extension.** All open vent pipes which extend through a roof shall be terminated at least 12 inches above the roof or 6 inches above the anticipated snow accumulation, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet above the roof.

**302.9.3 IPC 905.4 Vertical Rise of Vent,** is hereby AMENDED to allow for and provide installation provisions for vents routed horizontally below flood rim of fixtures served.

(IPC as amended)

**905.4 Vertical Rise of Vent.** Horizontal dry vents below flood level rim. Dry vents may be routed horizontally below the flood level rim of the fixtures being served provided all of the following conditions are met:

- (1) the connection to the drain is in accordance with section 905.3;
- (2) an accessible clean-out shall be provided, and labeled, to service the horizontal run of vent;
- (3) the horizontal run of the vent shall slope at 2% minimum toward the drain
- (4) each vent shall be routed to a minimum of 6 inches above the highest flood rim before interconnecting with other vents or terminating outdoors;
- (5) where such vents terminate independently to the outdoors or where such vents are the "bottom" or beginning of a vent header or stack that terminates to the outdoors, the vent terminal shall be protected with a vandal proof termination fitting or a "return bend".

**302.9.4 IPC Section 918, Air Admittance Valves,** is hereby AMENDED by ADDING specific sub-sections to Section 918, to codify key components of manufacturer's instructions and provide additional parameters to ensure safe practices as follows:

(IPC as amended)

**918.2.1 Timing.** In addition to 918.2, air admittance valves shall be installed as close to the timing of fixture setting as practical to avoid construction debris, dust, painting, or harmful practices that may affect the proper operation of the valve.

**918.2.2 Painting.** Air admittance valve shall not be painted or otherwise altered in any way.

**918.4.1 Below Grade.** Air admittance valves are prohibited in pits, vaults, or areas subject to being submerged.

**918.5.1 Detection.** Air admittance valves shall be located in, or have air exchange with, visible ready access areas. Attics or areas where valve failure would otherwise go undetected are prohibited.

**918.5.2 Documentation.** A drawing, schematic, or schedule indicating each valves location, model and size shall be attached at the main water supply valve. In lieu, a tag indicating both the use of air admittance valves and the location of the required documentation shall be affixed at the main water supply valve.

**918.7.1 Minimum Size Vent.** The minimum size vent shall not be less than one-half the cross-sectional area of the largest portion of the building drain.

**918.8.1 Additional prohibited installations.** Air admittance valves shall not be used in FOG waste systems, suds-laden waste systems, flammable liquid waste systems, pathogenic waste systems, hospitals, healthcare facilities, adult or child care facilities, or similar at-risk occupancies.

**302.10 Amendment of IPC CHAPTER 10, TRAPS, INTERCEPTORS, AND SEPARATORS**

**302.10.1 IPC Section 1003, Traps, Interceptors, and Separators,** is hereby DELETED in its entirety. It is replaced with new Section 1003, all to read as follows:

**SECTION 1003  
TRAPS, INTERCEPTORS AND SEPARATORS**

**1003.1 Grease Abatement Systems - General.**

Grease abatement systems shall be provided to prevent the discharge of Fats, Oil, Grease, and other substances harmful or hazardous to the building drainage system, the public sewer, the private sewage disposal system or the sewage treatment plant or processes.

**1003.1.1 Applicability.** The regulations in this Section shall apply to establishments where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars, or any other commercial operation that has the

potential to discharge grease laden wastewater; hereafter referred to as Food Service Establishments (FSE).

### **1003.1.2 Definitions**

#### **1003.1.2.1 Grease Abatement System:**

Any grease interceptor, grease trap, grease recovery device, or any treatment system designed to remove Fats, Oils and Grease (FOG) from FSE wastewater, with two general subcategories as follows:

#### **1003.1.2.2 Volume-Based Grease Interceptor:**

Grease interceptor design based on volume and retention time with no specific requirement for upstream sink tail piece flow restrictions or a flow control device. Sizing is based on the number of drainage fixture units connected to the grease interceptor based on the 2006 Uniform Plumbing Code (UPC) Table 10-3. Minimum size = 300 gallons. Typically - installed outdoors and underground. Typically - cleaned by pumping contractors. Sometimes - referred to as a gravity grease interceptor or outdoor grease interceptor.

#### **1003.1.2.3 Flow-Based Grease Interceptor:**

Grease interceptor design based on flow rate with a specific requirement for upstream sink tail piece flow restriction (for indirectly connected fixtures) and a flow control device. Solids screens or strainers with a maximum screen size of 1/8" perforations must be provided to capture the solids discharge from dish/pot washing sinks and floor sinks to avoid overloading the grease interceptor with solids. Sizing is based on the reasonable maximum flow anticipated from the fixtures connected to the grease interceptor based on the WSSC Tail Piece Flow Rate Table (new) for indirect connections, and IPC Chapter 10/ASME A112.14.3 for direct connections. Minimum size = 7 gallons per minute. Flow-based grease interceptors shall conform to ASME A112.14.3 or ASME A112.14.4 at the calculated flow rate. The following flow-based grease interceptors are differentiated based on whether or not there are mechanical grease removal features:

##### **1003.1.2.3.1. Passive Flow Based Grease Interceptor:**

Grease interceptor design with no mechanical grease removal features. Typically - installed indoors under a sink or outdoors in-ground. Cleaned by the FSE or pumping contractors. Sometimes referred to as a hydro-mechanical grease interceptor (when designed and installed with a flow control device with air intake) or a grease trap (when designed and installed with a flow control device without air intake).

##### **1003.1.2.3.2. Mechanical Flow Based Grease Interceptor:**

Grease interceptor design with mechanical grease removal features. Typically - installed indoors under a sink. Cleaned and maintained by the FSE, pumping contractors, or specialty maintenance contractors. Sometimes - referred to as a grease removal (or recovery) device.

**1003.2 Where Required.**

**1003.2.1** A grease abatement system shall be required to receive the drainage from fixtures and equipment with potential grease-laden waste. Fixtures and equipment shall include, but not be limited to: pot sinks; pre-rinse sinks; soup kettles or similar devices; fresh meat cutting and prepping; wok stations; floor drains; floor sinks; automatic hood wash units; and dishwashers.

**1003.2.2** Flow Based Grease Interceptors shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged.

**1003.2.3** Volume Based Grease Interceptors shall receive the discharge of the entire kitchen and shall be sized accordingly. Exception: waste from sinks or fixtures with permitted food waste disposers shall discharge directly to the sanitary drainage system.

**1003.2.4** Property owners of commercial properties, or their official designee(s), shall be responsible for the installation and maintenance of grease abatement systems serving multiple Food Service Establishments that are located on a single parcel.

**1003.3 Where Not Required - Conditional Variance (Existing FSEs Only).**

**1003.3.1** At the request of the FSE, the Commission may grant a conditional variance of the grease abatement system requirements if, in the judgment of the Commission, there is limited potential for FOG in the discharge when considering, including but not limited to, the frequency of operation, the miscibility of the discharge, the volume of flow and the potential for fats, oils and grease discharge based upon the menu.

**1003.3.2** The conditional variance can be revoked due to an actual blockage or sanitary sewer overflow attributed to the FSEs FOG discharge.

**1003.3.3** This conditional variance applies to the requirement to install a grease abatement system only. FSEs granted this variance may still be required to obtain a wastewater discharge permit and will be subject to regular inspections.

**1003.4 Prohibited Connections**

**1003.4.1** Waste from bathrooms or similar fixtures conveying human waste shall connect directly to the building sanitary drain, and shall not connect through any grease abatement system.

**1003.4.2** Where fixtures not generally subject to grease such as fruit and vegetable washing sinks, connect to the regular building drain, a permanent engraved sign shall be posted at such sinks indicating their limited use. (Example: "VEGETABLE WASHING ONLY" or "NO GREASE").

**1003.4.3** Food Waste Disposers. Food Waste Disposers shall not be installed on any fixture that requires grease abatement.

**1003.4.4 Pumps.** All grease abatement systems shall receive only stabilized flow from gravity-flow grease waste collection systems and shall not receive pressurized discharge such as from sewage pumps or lift stations. Where pumping is required, grease must be separated prior to the lift station.

**1003.5 Flow Based Grease Interceptors****1003.5.1 General**

**1003.5.1.1** The location, size and piping details shall require plan approval prior to installation.

**1003.5.1.2** Flow-based grease interceptors shall conform to ASME A112.14.3 and/or ASME A112.14.4 and shall be installed in accordance with manufacturer's specifications.

**1003.5.1.3** The manufacturer required flow control device shall be installed, sized to match the interceptors flow rate, and shall be readily accessible for inspection, cleaning and maintenance. The flow-control device shall be vented and terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer's instructions.

**1003.5.1.4** Solids screens or strainers with a maximum of 1/8" perforations shall be provided to capture the solids discharge from dish/pot washing sinks and floor sinks to minimize the solids loading on flow-based grease interceptors.

### **1003.5.2 Location And Installation**

**1003.5.2.1** Flow-based grease interceptors shall be installed below grade, direct buried, where listed for such application or within a vault; or indoors within a conditioned space; or in accordance with manufacturer's requirements. Mechanical flow-based interceptors shall not be installed below grade or slab, including within a vault or manufacturer's recess/receiver box. Mechanical flow-based interceptors may be partially recessed in a manner that allows all electronic components to remain one (1) inch above finished floor.

**1003.5.2.2** Flow-based grease interceptors shall be readily accessible for daily maintenance, servicing and inspection.

**1003.5.2.3** Upon removal of the interceptors main access cover(s), the inlet and outlet chambers/baffles shall be unobstructed for visible inspection and not require the removal of internal obstructions such as plugs, caps, panels, etc. Where visible obstructions exist, auxiliary monitoring/inspection ports shall be field installed into the inlet and/or outlet piping as needed. Monitoring/inspection ports shall meet Commission details.

**1003.5.2.4** Headroom above flow-based grease interceptors as well as solid sediment strainers shall be sufficient to fully open lid and easily remove internal components.

**1003.5.2.5** The flow control device shall be accessible for maintenance.

### **1003.5.3 Sizing**

**1003.5.3.1** Directly Connected Fixtures:

For sinks, fixtures and drains directly connected to a flow-based grease interceptor (no requirement for an air gap), flow-based grease interceptor sizing shall be determined pursuant to IPC 1003.3.4, and shall conform to ASME A112.14.3.

**1003.5.3.2** Indirectly Connected Fixtures:

For sinks, fixtures and drains indirectly connected to a flow-based grease interceptor (air gap required), a restricted flow tail piece is required and the flow-based grease interceptor shall be sized utilizing Table 1003.a and Table 1003.b.

**1003.5.3.3** For a single indirectly connected fixture served by a flow-based grease interceptor, the full tail piece flow rate from Table 1003.a shall be used.

**1003.5.3.4** For multiple indirectly connected fixtures served by a single flow-based grease interceptor, fixtures with the highest flow rates shall be considered first, with the full tail piece flow rates for the two highest flow fixtures/drains, 1/2 of the tail piece flow rates for the next two highest flowing fixture/drains, and 1/4 of the tail

piece flow rates for each subsequent fixtures/drains shall be used (see Table 1003.b below).

**1003.5.3.5** Flow-based grease interceptors serving both indirectly and directly connected sinks, fixtures and/or drains shall be sized based on a proper combination of the methods listed above.

Table 1003.a  
Flow Rates for Various Drain Tail Piece Sizes

Tail Piece Diameter	Flow Rate
1/2"	7 gpm
3/4"	12 gpm
1"	20 gpm
1-1/4"	30 gpm
1-1/2"	40 gpm
2"	65 gpm

Note: No offsets permitted in 1/2" and 3/4" tailpieces

Table 1003.b  
Multiple Indirect Connection Flow Factor Table

Fixture/Drain #1	Full Tail Piece Flow Rate
Fixture/Drain #2	Full Tail Piece Flow Rate
Fixture/Drain #3	1/2 Tail Piece Flow Rate
Fixture/Drain #4	1/2 Tail Piece Flow Rate
All additional Fixtures/Drains	1/4 Tail Piece Flow Rate

Note: Each tub/basin of multi-compartment sinks shall be counted as individual fixtures.

## 1003.6 Volume Based Grease Interceptors

### 1003.6.1 General

**1003.6.1.1** Volume-Based Grease interceptors shall be designed and installed in accordance with current Commission details.

**1003.6.1.2** The location, size and piping details shall require plan approval prior to installation.

**1003.6.1.3** Precast Concrete interceptors shall conform to the structural requirements contained in ASTM 1613 Standard Specification for Precast Concrete Interceptor Tanks

### 1003.6.2. Location

**1003.6.2.1** In general, volume-based grease interceptors shall be located below grade outdoors or indoors; or above grade indoors where listed for such applications and within a conditioned space.

**1003.6.2.2** Volume-based grease interceptors shall be readily accessible for daily maintenance, servicing and inspection.

**1003.6.2.3** Manholes and cleanouts shall be readily accessible for convenient inspection and maintenance.

**1003.6.2.4** No structures shall be placed directly upon or over the Interceptor.

**1003.6.2.5** Where an outdoor location is not possible or is impractical, volume-based interceptors may be installed indoors within twenty (20) feet of an accessible service entrance, unless otherwise approved.

**1003.6.2.6** All volume based interceptors shall be installed at a maximum depth of twelve (12) feet; measured from the bottom of the tank to the highest manhole rim elevation. In addition, the maximum elevation difference between the tank bottom and the pavement (where the hauler will be parked during service), shall be twenty (20) feet.

### 1003.6.3 Sizing

The volume of the interceptor shall be determined by using table 1003.c below. If the drainage fixture units (DFUs) are not known, the interceptor shall be sized based on the maximum DFUs allowed for the pipe size connected to the inlet of the interceptor.

Table 1003.c  
Volume-Based Grease Interceptor Sizing  
(from 2006 Uniform Plumbing Code Table 10-3\*)

DFUs (1)	Interceptor Volume
8	500 gallons
21	750 gallons
35	1,000 gallons
90	1,250 gallons
172	1,500 gallons
216	2,000 gallons
307	2,500 gallons
342	3,000 gallons
428	4,000 gallons
576	5,000 gallons
720	7,500 gallons
2112	10,000 gallons
2640	15,000 gallons

\*Reprinted with the permission of the International Association of Plumbing and Mechanical Officials.

Notes to Table:

1. The maximum allowable DFUs plumbed to the kitchen drain lines that will be connected to the grease interceptor.

2. 300 Gallon Interceptor equals 5 DFUs.
3. 1600 Gallon Interceptor equals 181 DFUs.

**1003.7 Scale Trap** Seafood prep sinks shall discharge through a local scale separator prior to entering any portion of the drainage system or grease abatement system.

### **1003.8 Oil & Sand Separators Required**

#### **1003.8.1 General**

All oil and sand interceptor details for concrete or similar fabricated interceptors shall be plan approved prior to installation and shall meet industrial waste discharge limitations per Section 804.

#### **1003.8.2 Size**

Passive/Gravity/Volume-based Interceptor size shall be determined by application as follows:

- Small Interceptor – 500 Gallons
- Large Interceptor – 1600 Gallons

**1003.8.2.1 Engineered Sizing.** Manufactured mechanical separators or separators utilizing other means of abatement shall be submitted as an engineer's design. Plan submittal shall include calculations, manufacturer's guidelines, and engineer's seal and signature. Subject to Commission Plans Review approval.

#### **1003.8.3 Parking Garages**

Parking garages with less than 1/3 of side surface areas open to the outdoors and protected from surface and storm water run-off may have inside floor and trough drains connected to the Commission sanitary sewer through an interceptor. Parking garages with 40 or less spaces may be served by a small interceptor; those with greater than 40 spaces shall be served by a large interceptor.

#### **1003.8.4 Vehicle Washing Facilities**

All vehicle washing facilities shall have required drains connected to the sanitary drainage system through an oil and sand interceptor as follows:

**1003.8.4.1 Automatic Vehicle Washing.** Automatic vehicle washing facilities shall have the equivalent of one 1600 Gallon Interceptor per vehicle lane.

**1003.8.4.2 Self Service Vehicle Washing.** Self service type vehicle washing facilities shall have the equivalent of one 1600 Gallon Interceptor per eight wash bays. A single wash bay may be served by a small interceptor.

#### **1003.8.5 Vehicle Service Facilities**

Vehicle service facilities, maintenance and service garages, etc., shall have all inside floor and trough drains subjected to oil or sand connected to the sanitary drainage system through an interceptor.

**1003.8.5.1.** Up to eight (8) bays may be served by a small interceptor.

**1003.8.5.2.** Up to twenty-four (24) bays may be served by a large interceptor.

**1003.8.6 Barns and Stables.** Barns, stables, and similar facilities not open to the outdoors and protected from surface and storm water run-off shall have all inside floor drains and trench drains connected to the Commission sanitary sewer through a small interceptor.

**1003.9 Laundries.**

Laundry facilities not installed within an individual dwelling unit or intended for individual family use shall be equipped with an interceptor with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 0.5 in (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system.

**1003.10 Bottling Establishments.**

Bottling plants shall discharge process wastes into an interceptor that will provide for the separation of broken glass or other solids before discharging waste into the drainage system.

**1003.11 Slaughterhouses.**

Slaughtering room and dressing room drains shall be equipped with approved separators. The separator shall prevent the discharge into the drainage system of feathers, entrails, and other materials that cause clogging.

**1003.12 Venting of interceptors and separators.**

Interceptors and separators shall be designed so as not to become air bound where tight covers are utilized. Each interceptor or separator shall be vented where subject to a loss of trap seal.

**1003.13 Access and maintenance of interceptors and separators.**

Access shall be provided to each interceptor and separator for service and maintenance. Interceptors and separators shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the interceptor or separator.

**302.11 Amendment of IPC CHAPTER 11, STORM DRAINAGE**

**302.11.1 IPC Section 1101, General,** is hereby AMENDED by ADDING new Section 1101.9 specifying design by a professional engineer, to read as follows:

(IPC as amended)

**1101.10 Design.** Storm drainage systems shall be designed by a Registered Professional Engineer and documents for review shall be stamped accordingly.

**302.11.2 IPC Sections 1103 (Storm) Traps, through Section 1113, Sumps and Pumping Systems,** shall be **DELETED** in their entirety, as these provisions shall be enforced by the County building official.

**302.12 Amendment of IPC CHAPTER 12, SPECIAL PIPING AND STORAGE SYSTEMS.** IPC Chapter 12, Special Piping and Storage Systems, is hereby **DELETED** in its entirety.

**302.13 Amendment of IPC CHAPTER 13, GRAY WATER RECYCLING SYSTEMS.** IPC Chapter 13, Gray Water Recycling Systems, is hereby **DELETED** in its entirety and replaced with a new Chapter 9 in this Code.

# CHAPTER 4

## ADOPTION OF INTERNATIONAL FUEL GAS CODE

### SECTION 401 GENERAL

**401.1 Adoption.** The 2012 edition of the **International Fuel Gas Code** (hereinafter “**IFGC**”), published by the International Code Council, Inc., is hereby adopted and incorporated herein by reference, and has the same force and effect as though fully set forth in this Code, subject to the additions, deletions or other modifications set forth in this Chapter as amendments thereto.

**401.2 Applicability.** The IFGC applies to all occupancies including Group R-3 Occupancies (see definition), and their accessory structures.

**401.3 Availability for Review.** At least 1 copy of the aforesaid IFGC shall be filed in the Office of the Secretary of the WSSC and made available for public use and inspection.

### SECTION 402 AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE

**402.1 Amendment of IFGC CHAPTER 1, ADMINISTRATION.** IFGC Chapter 1, Administration, is hereby **DELETED** in its entirety. See WSSC 101.4.2 for a reference to IFGC 101.2.4 Systems and equipment outside the scope.

402.2 Reserved

**402.3 Amendment of IFGC CHAPTER 3, GENERAL REGULATIONS.**

**402.3.1 IFGC Section 304.12, Protection from fumes and gases,** is hereby **AMENDED** by **ADDING** Section 304.12.1 and 304.12.2, to require carbon monoxide detection systems for type R and I occupancies as follows:

**304.12.1 Carbon Monoxide Alarms, New Construction.** Carbon Monoxide Alarms shall be required for new construction in dwelling units where fuel burning appliances are installed; carbon monoxide alarms shall be installed in accordance with the corresponding version of the International Building Code or the International Residential Code.

**304.12.2 Carbon Monoxide Alarms, Existing Construction.** Carbon Monoxide Alarms shall be required for any existing building with R-3 occupancy containing one or more sleeping units or dwelling units follows:

**304.12.2.1.** Where any fuel burning appliance is added or replaced, including an outdoor generator or pool heater. Exception - outdoor grill.

**304.12.2.2.** Carbon monoxide alarms shall be installed in accordance with the corresponding version of the International Residential Code.

**402.3.2 IFGC Section 310.1.1, CSST,** is hereby AMENDED by ADDING specific bonding parameters for Corrugated Stainless Steel Tubing (CSST), all to read as follows:

(IFGC as amended)

**310.1.1 CSST.** Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building or where the gas piping is closest to the electrical service grounding electrode when the gas service and electric service are in separate areas. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent.

**310.1.2 Prohibited - Additional Driven Grounds.** All gas piping systems shall be bonded only to the main electrical system's grounding system; driving a secondary ground is prohibited.

#### **402.4 Amendments of IFGC CHAPTER 4, GAS PIPING INSTALLATIONS**

**402.4.1 IFGC Section 401, General,** is hereby AMENDED by ADDING Section 401.11 to codify requirements of private meters and gas utility submeters as follows:

**401.11 Private Meters and Gas Utility Submeters.** Private Meters and Gas Utility Submeters shall be installed as follows:

**401.11.1** Listed to ANSI B109.1 or B109.2, Readily Accessible, and located in a *Ventilated Space*.

**401.11.2** Located at least thirty-six (36) inches form an Ignition Source.

**401.11.3** Adequately supported and protected from physical damage, temperature extremes, corrosion, or excessive vibration.

**401.11.4** Where remote to a space or equipment served, each meter or its associated piping, fittings, valves, etc. shall be permanently tagged or marked indicating the space or equipment served.

**401.11.5** Prohibited Locations - bedrooms, bathrooms, buried/vaulted below grade/slab, or hazardous location.

**402.4.2 IFGC Section 406.1.2, Repairs and Additions,** is hereby **AMENDED** by referring to and **ADDING** thereto new Section 406.1.2.1, all to read as follows:

(IFGC as amended)

**406.1.2 (IRC G2417.1.2) Repairs and Additions.** In the event repairs or additions are made after the pressure test, the affected piping shall be tested.

Minor repairs and additions are not required to be pressure tested provided that the work is inspected and connections are tested with a non-corrosive leak-detecting fluid or other approved leak-detecting methods, as cited in Section 406.1.2.1.

**406.1.2.1 Twelve Joint Rule.** Where an existing gas piping system is altered, repaired, or extended, a soap test shall be permitted in lieu of a pressure test, under the following conditions:

- A maximum of 12 joints in the new and disturbed piping are allowed, excluding the equipment connector.
- The new piping and any disturbed piping shall not be concealed.
- The developed length of the new piping shall not exceed 15-feet.

It shall be the licensee's responsibility to perform the required soap test prior to inspection, and to ensure that the piping does not leak.

**402.4.2 IFGC Section 412, Liquefied Petroleum Gas Motor Vehicle Fuel-Dispensing Stations,** is hereby **DELETED** in its entirety.

**402.4.3 IFGC Section 413, Compressed Natural Gas Motor Vehicle Fuel-Dispensing Stations,** is hereby **deleted** in its entirety.

402.5 Reserved

402.6 Reserved

**402.7 Amendment of IFGC Chapter 7, GASEOUS HYDROGEN SYSTEMS.** IFGC Chapter 7, Gaseous Hydrogen Systems, is hereby **DELETED** in its entirety.

402.8 Reserved



# CHAPTER 5

## CROSS CONNECTION CONTROL BACKFLOW PREVENTION

### SECTION 501 GENERAL

**501.1 Scope.** This Chapter shall provide provisions to protect potable water distribution systems from contamination caused by unprotected or improperly protected cross connections (aka: backflow or backflow prevention). This includes the installation, alteration, repair, relocation, replacement, or maintenance of plumbing systems that use backflow preventers.

**501.2 Compilation.** This Chapter is the compilation of the 2010 WSSC Cross Connection Control Manual, the latest adopted International Plumbing Code Section 608, and related cross connection amendments previously contained in Chapter 3 of this Code.

**501.3 Definitions.** See Chapter 2 of this Code.

**501.4 Purpose.** A potable water system shall be designed, installed and maintained in such a manner so as to prevent contamination from non-potable liquids, solids, or gases being introduced into the potable supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to Table 5.1, except as specifically allowed or required in Section 506.

**501.5 Contamination by distribution components.** All piping, fixtures, fittings, equipment, appurtenances, accessories, filters, conditioners, heat exchangers, etc. shall be constructed of materials such that when the working surface areas of these components are in contact with potable water they shall not alter the taste, odor, color or potability of the water.

### SECTION 502 APPLICABILITY

**502.1 Applicability.** This Chapter applies to all occupancies, including Group R-3 Occupancies (see definition), and their accessory structures.

**502.2 Hazard Classification.**

**502.2.1 General.** For the purposes of this Code, commercial and industrial facilities are considered to fall into three categories with respect to cross-connection hazard levels: high hazard, moderate hazard and low hazard. WSSC assigns facilities to the hazard categories based on industry type and low-pressure vulnerability.

**502.2.2 Vulnerability.** WSSC prioritizes facilities based (first) on industry type and (second) on low-pressure vulnerability, to produce an overall prioritization. WSSC establishes industry type using North American Industry Classification System (NAICS) codes and descriptions. WSSC established low-pressure vulnerability using its computer water model and topographic data, and using its knowledge of areas prone to pressure transients.

### **502.3 Containment and Internal Protection (Isolation) .**

**502.3.1 New Facilities.** New facilities, of all hazard levels, **and existing facilities connecting to a new water service connection for the first time**, shall require both containment and internal-protection assemblies or devices, **as applicable**. Containment backflow preventers shall be installed on the outlet side of the water meter. New facilities, regardless of hazard levels, shall not have separate service lines for fire and domestic use; building water services shall be sized for a combination of fire and domestic water usage. Fire sprinkler supply may branch off in parallel to the building containment assembly and each branch shall be outfitted with the appropriate level of backflow prevention.

**502.3.2 Existing Facilities.** Containment and internal-protection assemblies in **all** facilities shall remain in service, be tested annually and repaired or replaced as otherwise needed to ensure compliance with this Code. Devices shall be replaced or rebuilt every five years. **Where existing water service connections are replaced as part of a design-retrofit or upgrade, containment and internal protection assemblies or devices for these facilities shall meet the same requirements as cited under 502.3.1.** Where a service connection is repaired or replaced solely in response to a maintenance issue, containment backflow prevention shall not be required.

**502.3.3 Retrofitting.** Facilities built before May 1, 2007 without containment backflow preventers may not need to be retrofitted, unless otherwise deemed warranted by WSSC. WSSC shall require a containment backflow assembly if high-hazard application(s) are present. Where a facility has a containment backflow preventer not commensurate with the degree of hazard, an upgrade will be required. These facilities shall be reclassified as moderate or high hazard facilities and future inspection frequency shall be adjusted accordingly.

**502.3.4 Containment Protection of Federal Property.** *Containment* backflow protection is required for federal properties proximate to each water service connection. RPZA-type protection shall be installed above grade and protected from freezing and other physical damage per Section 507.6.2. Backflow test reports shall be submitted electronically consistent with the Commission's submittal requirements.

**502.3.5 Isolation Protection on Federal Property.** Pursuant to federal regulations, federal properties **are not required** to submit backflow test reports for *isolation* type backflow prevention assemblies installed throughout the campus. Each campus shall

maintain an effective backflow program in accordance with federal standards. Program managers may voluntarily submit backflow test reports to the Commission; in doing so, reports shall be submitted electronically consistent with the Commission's submittal requirements.

## **SECTION 503 CUSTOMER'S RESPONSIBILITIES**

**503.1 Backflow Notification.** The customer shall immediately notify WSSC if there is reason to believe that backflow has or may have occurred. This shall include private water system, plumbing fixture, equipment utilizing water, or any building system with the means of contaminating the public water system or building's potable water distribution system.

**503.2 Testing and Maintenance of Backflow Preventers.** The customer, at their own expense, shall purchase, install, operate, test and maintain approved backflow-preventers as directed by WSSC. The customer shall immediately correct any malfunction of a backflow preventer revealed by periodic testing or observation. Backflow assemblies shall be tested annually or as otherwise directed by WSSC. Non-testable devices shall be replaced or re-built every 5 years.

**503.3 Licensed Cross-Connection Technician.** The customer shall be responsible for hiring a cross-connection technician (who is employed by a registered and insured Master Plumber), to perform the installation, testing and maintenance on his/her backflow-prevention assemblies.

**503.4 Elimination of Cross-Connections.** The customer shall be responsible for the elimination of, or protection against, cross-connections on their premises.

**503.5 Record Keeping.** The customer shall be responsible for maintaining all necessary records on backflow-prevention assemblies and/or devices installed on their premises.

**503.6 Change of Use.** The customer shall immediately contact WSSC when the use of his/her property changes. WSSC shall then reassess the hazard classification of the property and determine if an inspection is warranted.

**503.7 Backflow Preventers Out of Service.** The customer shall notify WSSC in writing of any backflow preventers that have been taken out of service.

## SECTION 504 CROSS-CONNECTION CONTROL TECHNICIAN'S RESPONSIBILITIES

**504.1 Violations.** Cross-Connection Technicians shall be held responsible for the violation of any part of this Manual whether the violation is committed by themselves or by their employees or agents.

**504.2 Testing and Maintenance of Backflow Preventers.** Cross Connection Technicians shall be responsible for performing accurate field tests and for repairing, overhauling or replacing backflow preventers. It shall be the Cross-Connection Technician's responsibility to safeguard the design, material and/or operational characteristics of an assembly during repair or maintenance unless otherwise approved by WSSC.

**504.3 Generation of Data.** Cross Connection Technicians shall be responsible for the accurate generation of data, a correct assessment of the workings of each assembly tested, and proper dissemination of the data to WSSC and to the customer.

**504.4 Test Reports.** Any work completed by a Cross Connection Technician to achieve satisfactory test results for a customer shall be documented on WSSC's standardized test reports. *All test reports must be purchased from WSSC either on-line or at the permit counter. All test reports shall be submitted to WSSC preferably on-line and must have an assigned test report number.*

**504.5 Replacement Parts.** Cross Connection Technicians shall be responsible for ensuring that original-manufacturer replacement parts are used in the repair of or replacement of parts in a backflow-prevention assembly.

**504.6 Safety Procedures.** Cross Connection Technicians shall conduct testing upon assurance that all safety procedures have been observed and that all personnel involved have been appropriately notified.

**504.7 Cross Connection Technician's Certification.** A Cross Connection Technician's certification shall be kept current by completing recertification on or before the date the current certification expires. Any lapses in certification or discontinuance of certification shall be reported to WSSC. See §801.3.

## SECTION 505 SELECTION OF BACKFLOW PREVENTERS

**505.1 Approved Standards.** Backflow preventers shall conform to ASSE standards as listed in this Code, or shall be equivalent to:

- ✓ ANSI/AWWA Standards
- ✓ USC Standards
- ✓ CAN/CSA Standards

**505.2 Other Standards.** Backflow preventers manufactured to other standards may also be installed, provided written approval is first obtained from WSSC. *All equipment connected to the potable water supply system used to retract human or animal body fluids shall be protected by an air gap or a reduced pressure principle backflow assembly.*

**505.3 Application of Backflow Preventers.** Application of backflow preventers including, but not limited to, those listed in Table 5.1 shall be subject to field verification of hazards and conditions by WSSC.

**Table 5.1 Application of Backflow Preventers**

Standard Number	Backflow Preventer or Method	Type of Protection BS=back-siphonage BP=back-pressure	Degree of Hazard	Installation Dimensions and Position	Pressure Condition I=Intermittent C=Continuous	Comments	Use
ANSI A112.2.1	Air Gap	BS & BP	High	Twice effective opening—not less than 1 inch above flood level	C	See by-pass arrangements	Lavatory, Sink, or Bathtub Spouts. Pot Fillers Residential Dishwasher (ASSE 1006) and Clothes Washer (ASSE 1007) Residential Type Refrigerator/Ice Maker
ASSE 1001	Pipe Applied Vacuum Breaker	BS	High	6 inches above highest outlet Vertical position only No down stream valves	I	Outside of Fume Hood or Similar Environments	Goosenecks and appliances not subject to back pressure or continuous pressure
ASSE 1011	Hose Connection Vacuum Breaker	BS	High	Locked on hose bibb threads	I	Yard hydrant supply requires auxiliary or additional protection	Hose Bibb, Wall Hydrant and Sill cock
ASSE 1012	Dual Check Valve with Atmospheric Vent	BS & BP	Low to Moderate	Any accessible position Drain piped to floor or by air gap over a receptor (Horizontal only )	C	Drain/vent outlet shall be between 3 & 9 o'clock *See footnote	Residential Boiler, Spas, Hot Tubs, Residential Water Treatment System, Heat Transfer Fluid Make-up to a Single Wall Heat Exchanger utilizing only Non-Toxic Heat Transfer Fluid
ASSE 1013	Reduced Pressure Principle Backflow Preventer	BS & BP	High	Inside building-18 inches to 48 inches (centerline to floor) 60 inches for 2 inch or less Outside building-18 inches to 24 inches (centerline to grade) Horizontal or Vertical Drain piped to air gap over a receptor Area Shall Be Suitable for Un-controlled Discharge For Residential - Outdoors Only	C	-Valves per section 603 **See footnote <a href="#">See 507.3.1</a>	Chemical or Biological Systems Chilled Water / Cooling Tower Commercial Boiler / Heat Exchanger utilizing Toxic Heat Transfer Fluid*** Commercial Swimming Pool, Spas, etc Food Injection Equipment Hospital Equipment Lawn Irrigation Dental / Medical Vacuum Systems Interconnection w/a Non-potable System Water and Wastewater Treatment Plants Fire Sprinkler with Chemical Additives Exhaust Hood / Degreaser Commercial Water Treatment System Commercial/Industrial Landry Vehicle or Train Wash System Hose Bibb(s) in Hazardous Area

**Table 5.1: Application of Backflow Preventers (continued)**

Standard Number	Backflow Preventer or Method	Type of Protection BS=back-siphonage BP=back-pressure	Degree of Hazard	Installation Dimensions and Position	Pressure Condition (I=Intermittent) (C=Continuous)	Comments	Use
ASSE 1015	Double Check Valve Assembly	BS & BP	Low	Inside building-18 inches to 48 inches (centerline to floor) 60 inches above floor for 2 inch or less Outside building-18 inches to 24 inches (centerline to floor) 24 inches above for 2 inch or less	C	-Valves per section 603 **See footnote	Fire Sprinkler w/o Chemical Additive Wash Down Rack Culinary Pressure Cooker & Industrial Food Steamer Commercial Domestic Water - Low and Moderate Containment
ASSE 1019	Vacuum Breaker Wall Hydrants	BS	High	Minimum 6 inches above grade	I		Wall Hydrant
ASSE 1020	Pressure Type Vacuum Breaker	BS	High	Minimum of 12 inches above highest outlet; Vertical only Max. 60 inches to floor/grade Area Shall Be Suitable for Un-controlled Discharge Residential - Outdoors Only	C	-Valves per section 603 **See footnote	Residential Lawn Irrigation System
ASSE 1022	Backflow Preventer for Carbonated Beverage Machine	BS & BP	Low to Moderate	Vertical or horizontal No copper pipe downstream of backflow preventer	C	*See footnote	Carbonated Beverage System or Equipment Tea/Coffee Makers/Dispenser Juice Dispenser Frozen Beverage/Makers/Dispenser

**Table 5.1: Application of Backflow Preventers (continued)**

Standard Number	Backflow Preventer or Method	Type of Protection BS=back-siphonage BP=back-pressure	Degree of Hazard	Installation Dimensions and Position	Pressure Condition (I=Intermittent) (C=Continuous)	Comments	Use
ASSE 1024	Dual Check Valve	BS & BP	Low	Any accessible position	C	*See footnote	Residential Domestic Water Containment Residential Fire Sprinkler System Outside Drinking Fountain Non-carbonated Beverage Dispenser Soft Serve Ice Cream or Yogurt Commercial Ice Maker Dental Operative Unit Water Filter Cartridge Humidifier Hand Held Shower Tub Spout Below Flood Rim Shower Steamer Food Steamer; Wok Range; Proofer; Eye Wash Station Clothes Dryer with Steamer
ASSE 1035	Laboratory Faucet Backflow Preventer	BS	High	Six (6) inches above downstream piping Area suitable for discharge	I		-Chemical faucets Hose sprays on faucets not meeting standards Miscellaneous faucet applications
ASSE 1047	Reduced Pressure Detector Assembly	BS & BP	High	Inside building -18 to 48 inches (center line to floor) Horizontal or Vertical Drain pipe to floor Area Shall Be Suitable for Un-controlled Discharge	C	**See footnote <a href="#">See 507.3.1</a>	Fire Sprinkler with Chemical Additive and where Detector Meter is needed.
ASSE 1048	Double Check Detector Assembly	BS & BP	Low	Inside building -18 to 48 Inches (centerline to floor) Horizontal or Vertical Drain pipe to floor	C	** See footnote	Fire Sprinkler w/o Chemical Additive and where Detector Meter is needed.

**Table 5.1: Application of Backflow Preventers (continued)**

Standard Number	Backflow Preventer or Method	Type of Protection BS=back-siphonage BP=back-pressure	Degree of Hazard	Installation Dimensions and Position	Pressure Condition (I=Intermittent) (C=Continuous)	Comments	Use
ASSE 1052	Dual Check Vacuum Breakers	BS & BP	High	Hose bib Dual Check Vacuum Breaker	C		-Miscellaneous hose bibb connections
ASSE 1055	Air Gap	BS	High	Minimum of 12 inches above outlet and stored concentrate	I		Janitorial Product Dispensing
ASSE 1056	Spill-resistant vacuum breaker	BS	High	Minimum of 12 inches above highest outlet; Vertical only Max. 60 inches to floor/grade	C	-Valves per section 603	-Soap dispensers -Specialty sinks -Cleaning equipment

\*A dated test tag shall be affixed to all ASSE 1012, ASSE 1022 and ASSE 1024 devices indicating:

- Installation date.
- The following statement: “FOR OPTIMUM PERFORMANCE AND SAFETY, WSSC CODE REQUIRES THAT THIS DEVICE SHALL BE REPLACED OR REBUILT EVERY FIVE (5) YEARS. [“Replace or Rebuild” Tags are available from WSSC]

\*\*A dated test tag shall be affixed to all ASSE 1013, ASSE 1015, ASSE 1020 ASSE 1047 and ASSE 1048 assemblies. [“Test” Tags are available from WSSC]

\*\*\*Double wall heat exchanger required for domestic hot water production where toxic heat transfer fluid is utilized.

## SECTION 506

### BACKFLOW PREVENTION FOR SPECIFIC FACILITIES OR USES

**506.1 Plumbing Fixtures.** The supply lines and fittings for every plumbing fixture shall be installed so as to prevent backflow. Plumbing fixture fittings shall provide backflow protection in accordance with ASME A112.18.1.

**506.2 Devices, appurtenances, appliances and apparatus.** All devices, appurtenances, appliances and apparatus intended to provide some special function, such as sterilization, distillation, processing, cooling, or storage of ice or food, and that connect to the water supply system, shall be provided with protection against backflow and contamination of the water supply system. Water pumps, filters, softeners, tanks and all other appliances and devices that handle potable water shall be protected against contamination.

**506.3 Water service piping.** Water service piping shall be protected in accordance with the International Plumbing Code Sections 603.2 and 603.2.1.

**506.4 Chemicals and other substances.** Chemicals and other substances that produce either toxic conditions, taste, odor or discoloration in a potable water system shall not be introduced into, or utilized in, such systems.

**506.5 Valves and outlets prohibited below grade.** Potable water outlets and combination stop and waste arrangements shall not be installed below grade. Freezeproof yard hydrants that drain the riser into the ground are considered a stop and waste arrangement.

**506.5.1 Exception.** Freezeproof yard hydrants that drain the riser into the ground shall be permitted to be installed, provided that the potable water supply to such hydrants is protected upstream of the hydrants in accordance with Table 5.1 and the hydrants are permanently identified as non-potable outlets by *approved* signage that reads as follows: “ Caution, Non-Potable Water. Do Not Drink.”

**506.6 Auxiliary Water Systems.** An approved backflow-prevention assembly shall be installed at the service connection to any premises where there is an auxiliary water supply or system as follows:

**506.6.1 Connections to Potable Water Systems.** For connections to potable water systems, an air-gap separation or a reduced-pressure principle backflow-prevention assembly shall be installed at the interconnection when the auxiliary water supply is or may be contaminated to a degree that it would constitute a high hazard. A double check valve assembly shall be installed at the interconnection when the auxiliary water supply is verified as municipal grade potable water treatment under a Maryland Department of the Environment permit.

**506.6.2 Private Water Supplies and Secondary Sources of Water.** For private water supplies and secondary sources of water, an air-gap separation or a reduced-pressure principle backflow-prevention assembly shall be installed at the interconnection because the private water supply and/or secondary source of water are un-regulated and may be contaminated.

**506.6.3 Used Waters and Industrial Fluids.** For used waters and industrial fluids, an air-gap separation or a reduced-pressure principle backflow-prevention assembly shall be installed where there is a high hazard.

**506.7 Fire Hydrant Meters and Backflow Preventers for Temporary or Seasonal Use.**

**506.7.1 General.** WSSC may authorize use of a fire hydrant water meter to applicants requiring water for temporary use as follows:

**506.7.2 Small Hydrant Meter.** A WSSC small hydrant meter (3/4inches) shall include an integral hose-connected vacuum breaker (ASSE 1011).

**506.7.3 Large Hydrant Meter.** For a WSSC large hydrant meter (3 inches), the applicant shall provide a reduced pressure principle backflow assembly (ASSE 1013) suitable for high-hazard applications. The assembly must carry a satisfactory test tag current within six months. The BFP shall be located within 20 feet of the Hydrant Meter, ahead of any water take-offs, and the inlet piping/or hose shall not be concealed.

**506.7.4 Fire Hydrant's Use Restrictions.** Fire hydrant use shall be restricted to temporary or seasonal applications such as, but not limited to: Tank-truck filling, temporary water for construction sites, special events (e.g., charity walks, fairgrounds), and seasonal uses (e.g., irrigation). Fire hydrants shall not be used to circumvent the need to obtain service connections to supply water to full-time businesses, nurseries with retail and maintenance buildings, and similar applications. Such applications shall require a permanent service connection.

**506.8 Parallel Systems.** In commercial applications and in R-3 occupancies where a 13R fire sprinkler system is specified, multiple water systems may be established in parallel as follows:

**506.8.1 Fire Sprinkler Systems** – shall be the first supply branch; this branch may be ahead of an inside domestic meter providing a detector meter type BFP is used; see 502.5.2 and 502.5.4 below.

**506.8.2 Irrigation** – branch shall be downstream of an inside meter; ahead of pressure reducing station, if applicable; backflow commiserate with hazard.

**506.8.3 Domestic** – branch shall be downstream of an inside meter; containment backflow commiserate with hazard.

**506.8.4 Non-potable system** – branch shall be downstream of an inside meter; containment backflow shall be an ASSE 1013 RP.

**506.9 Automatic Residential Fire Sprinkler Systems.** On residential buildings equipped with an NFPA 13D residential fire sprinkler system, the tee feeding the residential fire sprinkler system shall be located on the *outlet side* of the meter. Potable water systems shall be protected against backflow from automatic fire sprinkler systems by a minimum of a dual check valve, ASSE 1024, CSA B64.6. Chemical additives shall be *prohibited* in residential fire sprinkler systems. *No valve* shall be installed on the tee branch supplying the fire sprinkler system.

**506.10 Automatic Commercial Fire Sprinkler Systems.** Where potable water is used to serve or supplement a fire sprinkler system, backflow prevention shall be as follows;

**506.10.1** ASSE 1015 DCVA – Metered water; no chemical additives.

**506.10.2** ASSE 1048 DCDA – Un-metered water; no chemical additives.

**506.10.3** ASSE 1013 RPZA – Metered water; with chemical additive.

**506.10.4** ASSE 1047 RPDA – Un-metered water; with chemical additive.

**506.10.5** ASSE 1024 DCV - Limited System up to 7 heads; no chemicals or pump.

**506.11 Exceptions to Requirements of 506.9 and 506.10.**

**506.11.1** Where systems are installed as a portion of the water distribution system in accordance with the requirements of this Code and the IPC and are not provided with a fire department connection, isolation or the water supply system shall not be required.

**506.11.2** Isolation or the water distribution system is not required for deluge, preaction or dry pipe systems.

**506.12 Retrofits and Existing Commercial Fire Sprinkler Systems.** Existing Commercial Fire Sprinkler Systems shall be required to update/upgrade the backflow prevention as follows:

**506.12.1 Ten Head Rule.** Where more than ten sprinkler heads are added or relocated in conjunction with interior building renovations, a testable backflow assembly corresponding to 506.10 shall be installed.

**506.12.2 Single Check Valves.** Older systems (untouched or retrofitting up to ten heads), utilizing a single check valve for backflow prevention are not required to upgrade to a testable assembly provided all of the following conditions are met:

**506.12.2.1** No chemical additives are present or have ever been utilized.

**506.12.2.2** Single check valves are replaced every five years. New check valves shall be tagged with the installation date; the expiration date; and a notice identifying the requirement to replace by the expiration date.

**506.12.2.3** Where possible, a testable backflow assembly per 506.10 shall be installed.

**506.12.3 Unprotected Systems.** Unprotected systems shall be required to have a testable backflow assembly installed per 506.10.

**506.12.4 Hydraulic Consideration.** Where backflow protection is added or upgraded, the owner/applicant, their design team, and/or their installing contractor shall be required to coordinate/permit these changes with the appropriate county or local fire officials in order to ensure the changes meet hydraulic and flow requirements of the fire department. Proof of coordination/permit shall be required.

## **SECTION 507 INSTALLATION OF BACKFLOW PREVENTERS**

**507.1 Installation Dimensions.** Installation dimensions shall conform to Table 5.1. Double check detector assemblies (ASSE 1048) and reduced-pressure detector assemblies (ASSE 1047) shall be installed in accordance with WSSC's Standard Details for Construction.

### **507.2 Accessibility.**

**507.2.1 General.** Backflow preventers shall have *access* for maintenance, replacement and testing. Backflow preventers shall not be installed where platforms, ladders or lifts are required for access. Backflow preventers shall be installed inside buildings in an area capable of maintaining a minimum temperature of 50 degrees Fahrenheit, except those approved for seasonal removal or replacement.

**507.2.2 Backflow Preventers Above Grade.** If a new backflow preventer must be installed higher than 5 feet above finished floor/grade, the building owner shall install an OSHA-approved permanent platform at the backflow preventer to provide access for workers. For existing backflow preventers installed higher than 5 feet above finished floor/grade, the building owner shall provide an OSHA-approved platform or scaffold for maintenance and testing; or the owner shall contract a WSSC registered Master Plumber to relocate the assembly to an approvable location.

### **507.3 Designated Area.**

**507.3.1 General.** Backflow preventers shall be installed in an area exclusively reserved for such assemblies or devices. Related appurtenances including valves, water meters, and fire pumps and sprinkler standpipes shall be permitted to share the same area, provided respective dimensional requirements can be maintained. Adequate sized floor drains are recommended for assemblies and devices with relief opening installed inside buildings. The relief port opening shall be installed with a manufacturer's air gap fitting and piped to a floor drain or receptor.

**507.3.1.1 Alternate.** Where the drainage system is inadequate, impractical, or where the assembly cannot otherwise be located to accommodate the catastrophic discharge of the RP type backflow assembly, an automatic fail safe system, capable of sensing the failure and activating a system shut down, is recommended. Such a system is prohibited on critical water supplies that may include fire sprinkler systems and health care facilities unless a redundancy is in place.

**507.3.2 Space Requirements.** A minimum of 30 inches of unobstructed space shall be provided in front of backflow assemblies or devices for maintenance and testing. A minimum of 12 inches of unobstructed space shall also be provided behind 3-inch and larger backflow assemblies or devices. A minimum of 6” of unobstructed space shall be provided behind 2-inch and smaller assemblies or devices. A minimum of 6 feet of headroom shall be provided. An assembly or device may be installed in an alcove or under a counter provided it is within 12 inches of the opening and positioned in a serviceable manner.

**507.4 Identification of non-potable water.** In buildings where non-potable water systems are installed, the piping conveying the non-potable water shall be identified either by color marking or metal tags in accordance with Sections 507.4.1 through 507.4.3. All non-potable water outlets such as hose connections, open ended pipes, and faucets shall be identified at the point of use for each outlet with the words, “Non-potable—not safe for drinking.” The words shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inches in height and color in contrast to the background on which they are applied.

**507.4.1 Information.** Pipe identification shall include the contents of the piping system and an arrow indication the direction of flow. Hazardous piping systems shall also contain information addressing the nature of the hazard. Pipe identification shall be repeated at maximum intervals of 25 feet (7620mm) and at each point where the piping passes through a wall, floor or roof. Lettering shall be readily observable with the room or space where the piping is located.

**507.4.2 Color.** The color of the pipe identification shall be discernable and consistent throughout the building. The color purple shall be used to identify reclaimed, rain and gray water distribution systems.

**507.4.3 Size.** The size of the background color field and lettering shall comply with Table 5.2.

**Table 5.2 Size of Pipe Identification**

PIPE DIAMETER (inches)	LENGTH OF BACKGROUND COLOR FIELD (inches)	SIZE OF LETTERS (inches)
3/4" to 1-1/4"	8	0.5
1-1/2 to 2"	8	0.75

2-1/2 to 6	12	1.25
8 to 10	24	2.5
Over 10	32	3.5

**507.5 Valves.**

**507.5.1 Shut-off Valves.** Shut-off valves shall be required on the inlet and outlet of reduced-pressure assemblies (ASSE 1013 and 1047), double check assemblies (ASSE 1015 and 1048) and pressure-type vacuum breaker assemblies (ASSE 1020 and 1056), and on the inlet to atmosphere-type vacuum breaker (ASSE 1001) assemblies. Valves shall be factory affixed directly to the backflow assembly body.

**507.5.2 Requirements for ASSE 1013; 1015; 1047; and 1048 Assemblies.** A fine-mesh y-strainer with drain valve may be installed per manufacture’s specifications ahead of the inlet shut-off valve on ASSE 1013 assemblies. ASSE 1013 and 1047 assemblies shall not be installed in a vertical position unless approved by the manufacturer. ASSE 1013; 1015; 1047; and 1048 assemblies for fire sprinkler systems shall be installed with FM-UL rated valves or with rising stem gate valves; valves shall be indicator type and strainers shall not be installed.

**507.5.3 Full-Flow Characteristic Valves.** Full-flow characteristic valves; either ball type or resilient seated gate type shall be installed on all assemblies.

**507.6 Other Installation Requirements.**

**507.6.1. Bypass Arrangements.** Bypass arrangements shall be permitted around backflow preventers provided equivalent protection is installed on the bypass line.

**507.6.2 Relief Port Piping.** The termination of the piping from the relief port or *air gap* fitting of a backflow preventer shall be discharged to an *approved* indirect waste receptor or to the outdoors where it will not cause damage or create a nuisance.

**507.6.3 Backflow Preventers Installed Outside.** Backflow preventers shall be installed inside the building unless otherwise approved by WSSC. When installed outside of a commercial or industrial building, the building owner shall provide an above grade protective enclosure for the backflow preventers which shall be heated to prevent freezing and properly secured to prevent damage to the assembly or device. Outdoor enclosures for backflow prevention assemblies shall comply with ASSE 1060. Heat shall not be required if the assembly or device is removed during the winter months. Assemblies for seasonal application shall be installed with unions. Pressure vacuum breakers may be winterized in-place.

**507.6.4 Prohibited Locations.** Backflow preventers designed to vent to atmosphere and potable system drainage valves (such as stop and waste or boiler drain type), shall not be installed in pits, vaults or similar submerged areas and shall not be installed in chemical or fume hoods. BFP’s shall also be protected from freezing.

**507.6.5 Common Service.** For new construction wherein a common service splits into separate fire and domestic lines inside the property, backflow-prevention assemblies or devices shall be located after the split with no assembly or device required on the common service.

**507.6.6 Pumps and other appliances.** Water pumps, filters, softeners, tanks and all other devices that handle or treat potable water shall be protected against contamination.

**507.6.7 Booster Pumps.** Booster pumps for fire protection systems, domestic water, or local system/equipment enhancement shall be installed on the downstream side of the respective backflow preventers.

**507.6.8 Reutilization prohibited.** Water utilized for the cooling of equipment or other processes shall not be returned to the potable water system. Such water shall be discharged into a drainage system through an *air gap* or shall be utilized for non-potable purposes.

**507.6.9 Reuse of piping.** Piping that has been utilized for any purpose other than conveying potable water shall not be utilized for conveying potable water.

**507.6.10 Painting of water tanks.** The interior surface of a potable water tank shall not be lined, painted, or repaired with any material that changes the taste, odor, color or potability of the water supply when the tank is placed in, or returned to, service.

## SECTION 508 TESTING AND MAINTENANCE OF BACKFLOW PREVENTERS

**508.1 Replacement Intervals for Non-Testable Backflow Devices.** Customers shall have non-test backflow devices replaced rebuilt or replaced every five years.

**508.2 Testing Intervals for Testable Backflow Assemblies.** Customers shall have testable backflow assemblies tested as follows:

**508.2.1** On installation

**508.2.2** At least annually

**508.2.3** After repairs

**508.2.4** After relocation or replacement

**508.2.5** On responding to a reported backflow incident

**508.2.6** Prior to any re-activation or seasonal start-up of a dormant water use, such as, but not limited to: irrigation systems, swimming pools, pool houses, decorative fountains, summer homes, etc.

**508.3 Permits.**

**508.3.1 Rebuilding and Testing of Backflow Preventers.**

**508.3.1.1 Testable Assemblies.** Rebuilding and testing of testable backflow assemblies shall be exempt from a permit requirement but shall only be performed by a licensed cross-connection technician.

**508.3.1.2 Non-Testable Devices.** Replacing or rebuilding non-testable backflow preventers shall be exempt from a permit requirement and may be performed by a homeowner (residential only) or a licensed cross-connection technician. A notification tag must be hung on or near the device.

**508.3.2 Long-Form Permit.** A long-form permit shall be required for a new installation, or to relocate an existing, backflow assembly or a non-testable backflow device, residential or commercial.

**508.3.3 Short-Form Permit.** A short-form permit may be used for the direct replacement of backflow-prevention assemblies provided the existing location and application are consistent with the provisions of this Code and the manufacturer's installation instructions.

**508.3.4 Special Exception, Federal Facilities.** Permitting and inspection requirements for federal facilities shall be as provided in applicable law and/or pursuant to agreement with the appropriate federal agency. Such facilities may be required to install an outside water meter setting, and to contain the property with backflow protection, at the same general location as the meter. This installation shall be above ground and must be protected from freezing.

**508.4 Field-test procedures and equipment.**

**508.4.1 Field-Test Procedures.** The testing procedure for backflow-prevention assemblies shall be performed in accordance with one of the following standards: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5056, CAN/CSA B64.10.

**508.4.2 Field-Test Equipment.** To ensure the ability of the test equipment to provide accurate data, the field-test equipment shall be calibrated annually and the calibration date shall be entered on the test report. There shall be a dated calibration sticker affixed to the test equipment. Only test equipment meeting the recommendation of the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research shall be accepted for WSSC's reporting requirements.

**508.5 Test Reports.**

**508.5.1 General.** Testing of backflow assemblies requires the submission of a completed WSSC backflow preventer test report showing a passing test result.

Replaced or rebuilt non-testable backflow preventers do not require submission of a form but a notification tag must be hung on or near the device.

**508.5.2 Submission of Test Reports.** Test reports shall be completed by certified Backflow Technicians and shall be submitted preferably on WSSC's website. (<https://eservices.wsscwater.com/wps/portal/backflow>). The test report number must be entered when test reports are submitted. These numbers will be purchased by the Principal Master Plumber before submitting reports.

**508.5.3 Failed Tests.** Test reports showing a failing test result shall not be acceptable. In the event of a failed test, the backflow technician shall repair, rebuild or replace the backflow assembly until a passing test result is obtained. If property owners do not authorize repairs, water service should not be restored until the protection of the potable water supply system is reestablished and the licensed cross connection technician shall notify WSSC.

**508.5.4 License Number.** Licensed Cross Connection Technicians shall be required to provide their license number on all test reports. Submission of a test report online will not be possible without providing a license number. Cross Connection Technicians must also provide the registered master plumbers license number.

# CHAPTER 6

## WSSC WATER METERS

### SECTION 601 GENERAL

**601.1 Scope.** This chapter shall outline all details relating to the installation of Commission water meters. Work normally installed by plumbers that relates to Commission meters and as outlined in this chapter, shall be WSSC Plumbing and Fuel Gas Code requirements, and shall be enforced in conjunction with requirements specified in related sections of this code. In unusual circumstances, the Commission retains the right to deviate from these provisions. See Chapter 1, Administration, Section 111, Connection to the Commission's Systems and Metering, for administrative provisions relating to water service connections and Commission water meters.

#### **601.2 General Requirements.**

**601.2.1 Standard Details.** Commission water meters shall be installed in accordance with WSSC Standard Details.

**601.2.2 Jumpers Prohibited.** The installation of a straight pipe or jumper in lieu of a water meter shall be *prohibited*.

**601.2.3 Accessibility.** Water meters shall be *readily accessible* for maintenance, replacement, and reading.

### SECTION 602 WATER METER SELECTION

**602.1 Application.** The size and type of Commission water meters, both for new and design retrofit applications, shall be based on application and plumbing hydraulic load, in accordance with Table 602.1.

**602.2 Location.** The Commission shall determine the location, outside or inside of buildings, for all Commission water meters. See Section 111.5.

**602.3 Size.** The *minimum* size water meter required to meet plumbing hydraulic demand and minimum pressure requirements for proper operation of domestic plumbing fixtures and appliances shall be installed, regardless of water service connection size, building water service size, or building piping size. Plumbing hydraulic demand shall be estimated utilizing design criteria from IPC Section 604 and Appendix E; and IRC Section 2903.

**Table 602.1**  
**WSSC METER APPLICATION CHART**  
 (90% Maximum Flow Rate)

All Flow Characteristics <sup>1,2,8</sup>	
27 gpm = 3/4" PD <sup>3,4</sup>	90 gpm = 1 1/2" PD
45 gpm = 1" PD <sup>4</sup>	145 gpm = 2" PD
	288 gpm = 3" CMP
Variable Flow <sup>5,6,8</sup>	
450 gpm = 4" CMP	1440 gpm = 8" CMP
900 gpm = 6" CMP	
Constant Flow <sup>2,6,7,8</sup>	
	315 gpm = 3" TRB II
540 gpm = 4" TRB I	567 gpm = 4" TRB II
1125 gpm = 6" TRB I	1260 gpm = 6" TRB II
1620 gpm = 8" TRB I	2160 gpm = 8" TRB II
2610 gpm = 10" TRB I	3420 gpm = 10" TRB II
3870 gpm = 12" TRB I	4500 gpm = 12" TRB II

Abbreviations: PD = Positive Displacement; CMP = Compound; TRB = Turbine (Class I & II)

- 1) All meters, size 3/4" through 2" shall be Positive Displacement (PD) type.
- 2) Where large irrigation or similar demands will drive the size of an outside meter past the acceptable range of domestic flow needs, a separate "water-only" meter shall be installed parallel to the main meter as a "double" setting.
- 3) Minimum inside *or* outside meter size other than replacements, shall be 3/4-inch; for Group R-3 occupancies the minimum shall be 1-inch.
- 4) Group R-3 Occupancies with 6 or more water closets shall have a 3/4" *or* 1" meter based on *plumbing* hydraulic demand. Maximum meter size in Group R-3 Occupancies shall be 1-inch.
- 5) Buildings/Complexes with variable flow and less than 3,000 WSFU's shall be metered with a Compound Meter (CMP).
- 6) For Metered Fire or Metered Combination Fire/Domestic Service:
  - a) Size primary meter to match the Combined Flow Demand provided by applicant, typically shown on the Hydraulic Information Sheet (HIS).
  - b) Size secondary meter (by-pass) on domestic hydraulic demand *only*.
- 7) Constant flow applications and those exceeding 3000 WSFU's shall be metered with a Turbine Meter (TRB).
- 8) A larger meter shall be considered *only* on a case-by-case basis.

**602.4 Commission Sub-Meters.** Commission sub-meters shall meet the following requirements: Water passing through a Commission sub-meter shall *not* discharge into the sanitary sewage system, except as otherwise allowed by law.

- A Commission sub-meter shall be installed on the *outlet* side of the master meter.
- Where required, a Commission sub-meter remote reader wire shall be installed, and shall be tagged on both the outside and inside cable ends.
- The backflow prevention device shall be installed on the *outlet* side of the sub-meter.
- A Commission sub-meter shall not be connected to any portion of a fire sprinkler system.

## SECTION 603 OUTSIDE WATER METERS

**603.1 Installation Responsibility.** Outside meters, settings, and vaults shall be furnished and installed by the Commission or its designee. See Section 111.5.6, Meter Settings and Installation.

### 603.2 Building Service Valves.

**603.2.1 First Valve (Service Valve).** A full-flow building water service valve shall be installed within 3-feet of where the building water service enters the building.

**603.2.2 Second Valve (Domestic Isolation).** When a NPFA 13D or 13R fire sprinkler system is specified, a second full-flow valve shall be installed to provide domestic isolation and to provide an uninterrupted fire sprinkler supply. Irrigation supplies, hose bibbs, and pressure reducing valves, shall be installed *after* the fire sprinkler supply tee; and may be installed ahead of the domestic isolation valve.

**603.2.3 Parallel Systems.** When a NPFA 13 fire sprinkler system is specified, a minimum of a double check valve assembly (ASSE 1015) shall be installed to protect the domestic water from the fire sprinkler system. The supply for the fire sprinkler system may tee off before or after the first valve. When ahead of the first valve, a second domestic isolation valve is recommended but not required. Irrigation supplies, hose bibbs, and pressure reducing valves, shall be installed after the first valve and after fire sprinkler tee, as applicable. Process water/non-potable systems may be established in parallel to the domestic water branch; each branch shall contain an ASSE 1013 RP backflow preventer.

### 603.3 Outside Meters Size ¾-Inch Through 2-Inch

**603.3.1 Location.** In general, meter settings size ¾-inch through 2-inch, shall be located in the public right-of-way in accordance with Commission Standard Details.

**603.3.2 Water Service Connection.** The Commission's water service connection responsibility shall terminate at the property line; or, in the case of a WSSC right-of-way connection, at the edge of the right-of-way. The "pigtail" piping leaving the water meter, shall extend between 2-feet and 3-feet onto private property in accordance with Commission Standard Details.

**603.3.3 Activities by Plumbers.**

**603.3.3.1 Point of Connection.** Plumbers shall connect to the Commission water service connection "pigtail" on private property, *at or within 3-feet of* the property line.

**603.3.3.2 Limited Access.** Plumbers shall not enter meter settings except for operating the angle valve as part of construction-related activities, or for assessing a problem, which if detected, shall be reported to the Commission.

**603.3.3.3 Prohibited Activity.** Commission service connections, meter settings, or any portion thereof, shall not be removed, altered, or replaced except as directed by the code official or as cited in this Code.

**603.3.3.4 Verification Required.** The plumber shall verify that the correct size and type meter as shown on the plumbing permit has been installed; that the meter setting is the correct size and type for the meter, and is complete and to grade; prior to FINAL plumbing inspection. See Section 107.4.1.5.

**603.3.3.5 Minor Adjustments.** Minor adjustments to the meter setting, frame and cover, may be corrected by the plumber, prior to FINAL inspection. Major damages or meter setting deficiencies shall be reported to the Commission.

**603.4 Outside Meters Size 3-Inch and Larger**

**603.4.1 Meter Vault Location.** Where an outside water meter vault is specified by the Commission, the Commission or its designee shall construct the vault *on private property*, adjacent to public property, in a right-of-way provided by the property owner to the Commission.

**SECTION 604  
INSIDE WATER METERS**

**604.1 Freeze Protection.** Water meters installed inside of buildings shall be located in an area capable of maintaining a minimum temperature of 50 degrees Fahrenheit, as follows:

**604.1.1 Critical Dates.** The meter room or area shall be heated from November 1 through March 31.

**604.1.2 Insulation.** A meter room or area with outdoor exposure shall be thermally protected in accordance with International Building Code requirements. Meter rooms or areas with no direct exposure to the outdoors, shall *not* require extra thermal protection.

**604.1.3 Heat Source.** Where a heat source is required, it shall be thermostatically controlled within the meter room or area. As an alternative, heat may be provided indirectly with prior approval by the code official.

**604.2 Lighting.** Adequate permanent electric lighting shall be provided.

### **604.3 Building Service Valves**

**604.3.1 First Valve (Service/Meter Isolation Valve).** A full-flow building water service valve shall be installed within 3-feet of where the building water service enters the building, as close as practical to the meter, and shall be in the same room as the water meter.

**604.3.2 Second Valve (Domestic Isolation).** When a NPFA 13D fire sprinkler system is specified, a second full-flow valve shall be installed to provide domestic isolation and to provide an uninterrupted fire sprinkler supply. Irrigation supplies, hose bibbs, and pressure reducing valves, shall be installed after the fire sprinkler supply tee, and may be installed ahead of the domestic isolation valve.

**604.3.3 Parallel Systems.** When a NPFA 13 or 13R fire sprinkler system is specified, a minimum of a double check detector assembly (ASSE 1048) shall be installed to protect the domestic water from the fire sprinkler system as well as meter the fire sprinkler water. The supply for the fire sprinkler system shall tee off before the domestic meter assembly. Downstream of the domestic meter assembly, process water/non-potable systems may be established in parallel to the domestic water branch; each branch shall contain an ASSE 1013 RP backflow preventer.

**604.3.3.1 Double Check Detector Assembly.** A double check detector assembly (DCDA) shall be installed under a separate long form permit. The DCDA shall be procured without the 5/8" meter; the Commission will furnish and install the meter. The DCDA may be installed in a vertical orientation, including the meter, when listed by the manufacturer for vertical installation. Excluding the meter, the DCDA shall remain the property of, and be maintained by, the owner.

**604.3.4 Meter Isolation and Bypass.** Valves on larger meters, meter isolation and bypass valves shall be in the same room as the meter, and as close as practical to the meter.

**604.4 Remote Reader.** Provisions for a WSSC remote reader shall be provided for *all inside* Commission meters as follows:

**604.4.1 Conduit and Cable Exit.** 18 to 48 inches above grade; do not locate in a fenced or rear yard; preferred along the front wall or sides near front corners.

**604.4.2 Conduit.** Conduit shall be 1/2" minimum I.D. and shall have no fittings greater than 45 degrees; fittings may not be insert type.

**604.4.3 Conductor Cable.** Conductor cable shall be supplied by the Commission; 2 feet of excess cable shall be left at each end; multiple cables may share a conduit, proper identification is required.

**604.4.4 Penthouse Mechanical Rooms.** The conduit and cable shall be routed such that the remote reader can be located on an accessible exterior wall of the mechanical room. Where an accessible exterior wall is not available, an alternate location shall be pre-approved by the Commission's meter services department.

#### **604.5 Inside Meters Size ¾-Inch Through 2-Inch**

**604.5.1 Water Service Connection.** In general, water service connections, size 1-inch through 2-inch, shall be located in the public right-of-way in accordance with Commission Standard Details. The Commission water service connection shall terminate with a curb valve at the property line; *or*, from the edge of the right-of-way, whichever is closer to the main.

#### **604.5.2 Activities by Plumbers**

**604.5.2.1 General.** Plumbers shall connect to the Commission's curb valve. Commission service connections or any portion thereof, shall not be removed, altered, or replaced unless directed by a code official.

**604.5.2.2 Curb Valve Depth.** The *maximum* depth from finished grade to the curb valve shall be 60-inches; *minimum* depth shall be 42-inches.

**604.5.2.3 Valve Box Required.** A pre-manufactured cast *metal* valve/curb box shall be furnished and installed by the plumber at the property line, and shall consist of the valve box, adjustable top section, and lid. An extension stem and guide shall be installed on a curb stop valve 1" and smaller. 1-1/2" and 2" curb valves shall not be outfitted with an extension stem and guide.

**604.5.2.4 Valve Box Support.** The valve box assembly shall be installed on a firm foundation. It shall be installed on undisturbed earth, compacted or granular fill, or structural wood bridging supported by undisturbed earth, as approved by the code official. In vehicular traffic areas, a formed concrete pad 24-inches square or round, by 4 inches thick shall be provided to support the valve box. The concrete pad may be below finished paving.

**605.5.2.5 NFPA 13D Residential Fire Sprinkler Connection.** On residential buildings equipped with a NFPA 13D residential fire sprinkler system, the tee feeding the residential fire sprinkler system shall be located on the *outlet* side of the meter. No valve shall be installed on the tee branch supplying the fire sprinkler system.

**604.5.2.6 Final Plumbing Inspection.** The plumber shall verify that the top of the curb box is complete, operational, and flush with the permanent grade; and that the correct size and type of meter as shown on the plumbing permit has been installed; prior to **FINAL** inspection. See Section 107.4.1.5.

**604.6 Meter Test Sleeves Not Required.** Meter Test Sleeves/Piping shall not be required for any 1-1/2" meter or for any submeter located in a penthouse mechanical room. All other meter applications require test sleeves/piping according to Commission Standard Details.



# CHAPTER 7

## SITE-UTILITY SYSTEMS

### SECTION 701

#### GENERAL

**701.1 Scope.** This chapter shall govern the administration, design, construction, and inspection for a system of privately owned water and/or sewer mains located on private property.

**701.1.1 WSSC Inspections.** WSSC shall inspect all projects wherein the plans were signed and approved by WSSC on or after July 1, 2011. The inspections shall be conducted in accordance with the protocols outlined in this Chapter and as noted on the approved plans. Inspection Fees will be collected when the Site-Utility Permit is issued.

**701.1.2 Third-Party Inspections.** For projects where the plans are approved on or before June 30, 2011, inspections shall be conducted by the designated Third-Party Engineer in accordance with the protocols outlined within this Chapter and as noted on the approved plans.

**701.1.2.1 Sunset on Third-Party Inspections Program.** For projects that were approved in accordance with 701.1.2, but where work has not commenced by December 31, 2011, the projects will be converted to WSSC Inspected projects. Accordingly, the applicant must resubmit the project plans to WSSC for updates to the plan notations and re-approval. Additionally, the applicant must submit a re-review fee to WSSC, and after approval inspections of the project will be conducted in accordance with the protocols outlined in this Chapter and as noted on the re-approved plans.

**701.1.2.2 Required Notification.** In order to be recognized as a Third-Party Inspection project where work has commenced before the sunset of December 31, 2011, the site-utility contractor *and* the designated third-party engineer shall both *notify WSSC* using the following protocols: 1.) the contractor shall phone-in according to General Note #4 on the approved plan; 2.) the engineer shall notify the code official in writing and specify the starting date.

**701.2 Qualification.** Water service piping 4-inches in diameter or larger, sewer piping 6-inches in diameter or larger, and any non-residential pressure sewer system, shall be designed and submitted through the site-utility (on-site) system process described herein.

**701.2.1 Smaller Diameter Systems.** Water service piping 3-inches in diameter or smaller, and sewer piping 4-inches in diameter or smaller shall not be governed by this Chapter as a site-utility system design, except as cited in Section 701.2.2. A WSSC plumbing permit shall govern the review, installation and inspection of such smaller systems.

**701.2.2 Mixed Systems.** When *either* the building water service or the building sewer qualify as a site-utility system based on pipe size as cited in Section 701.2, and *either* the building water or sewer are smaller in diameter as cited in Section 701.2.1, the *entire* system shall be designed, approved, and constructed as a site-utility system in accordance with requirements cited in this Chapter.

**701.2.3 Minor Site-Utility Systems (Formerly Waived On-Site Systems).** At the discretion of the code official, site-utility system designs of less complexity and/or length shall be waived from going through the detailed site-utility document review process as outlined in this chapter, and shall be designated as a "minor" site-utility system as opposed to a "standard" site-utility system. The following requirements shall be met in order for a system to qualify as a minor site-utility system:

**701.2.3.1** Copies of the site plan shall be submitted in accordance with established submittal requirements, including the WSSC submittal checklist.

**701.2.3.2** The developed piping length to the building, measured from property line or edge of right-of-way, for both water and sewer shall not exceed 80-feet each.

**701.2.3.3** Installation and testing shall conform with requirements cited in Section 705; and shall be performed and inspected under a WSSC Plumbing permit.

**701.3 Outside Meter Requirement.** In general, all site-utility systems, both standard and minor, greater than 80-feet in developed length, shall be served by an outside meter. Subject to approval by the site-utility code official, systems less than 80-feet in developed length may be served by an inside meter. See Chapter 6, Installation of Commission Meters, for requirements relating to meter vaults and meter settings.

## **SECTION 702 DESIGN**

**702.1 Design Engineer.** A State of Maryland Registered Professional Engineer (engineer) shall be responsible for the design of a site-utility system, and shall review plans and other documents *prior to* their submission to the Commission. Final documents submitted for Commission approval shall have each sheet stamped, signed and dated by the engineer. The engineer shall not be required to, or shall not be prohibited from being, the engineer designated to oversee the installation process, where applicable.

**702.2 Design Basis.** The design engineer shall base the design on sound engineering protocols in conjunction with the following available guidelines:

- 702.2.1** WSSC Site-Utility Design Checklist;
- 702.2.2** This Code;
- 702.2.3** WSSC Pipeline Design Manual;
- 702.2.4** WSSC Standard Details; and
- 702.2.5** WSSC General Conditions and Standard Specifications.

**702.3 Documentation**



**702.3.1 Construction Plans.** Construction drawings or plans shall be formatted in accordance with the current WSSC Site-Utility Water and Sewer System Design Checklist. Plan size shall be 24 x 36 inches.

**702.3.2 Other Required Documents.** In addition to construction documents, release of the site-utility permit shall be contingent on submission of other required documents including but not be limited to the following:

- 702.3.2.1** Private and Public (WSSC)\_easements/rights-of-way;
- 702.3.2.2** Required covenants;
- 702.3.2.3** Shared water/sewer agreements;
- 702.3.2.4** Recordation where applicable; and
- 702.3.2.5** Supervised sprinkler agreement where applicable.

**702.3.3 Electronic Submittal Required.** Design plans and other required supporting documentation shall be submitted to the WSSC consistent with the current electronic submittal and related checklist protocols.

**702.4 Design Coordination with the Building Water Distribution and the Building Drain.**

**702.4.1 Water.** The site-utility water service shall terminate within 5-feet of building wall/foundation. This termination point may either be 5' outside of the foundation or at the "first flange" no greater than one (1) foot inside of the building.

**702.4.2 Sewer.** The site-utility sewer shall terminate within 5-feet outside of the building wall/foundation.

**702.5 Manhole Required.** Building sewers, 6 inches and larger, and greater than 80 feet in length, shall have a manhole within 100 feet of the junction with the building drain; at each change in direction or slope; and at intervals not to exceed 400 feet.

**702.6 Design Expiration.** Approved Plans are valid for a period of 18 months. Approval can be extended for one additional 18-month period if the applicable re-review fee is

submitted and the hydraulic and quantitative WSSC water and sewer capacities remain available.

## **SECTION 703 PERMITS**

**703.1 Site-Utility Permit.** The owner or the owner's designee shall secure a WSSC site-utility permit *prior to* construction of the site-utility system.

**703.1.1 Permit Expiration.** A Site-Utility Permit expires with the expiration of the approved plans. In accordance with Section 702.6 of this chapter, a Site-Utility Permit can be extended, along with the approved plans, for one additional 18-month period, if the requirements of 702.6 are met.

**703.2 Minor Site-Utility Permit.** A WSSC registered Master Plumber shall secure a WSSC plumbing permit *prior to* construction of the minor site-utility system.

**703.3 Service Connection Permit.** When a site-utility system is contingent upon a new service connection, the service connection permit shall be secured *prior to* the site-utility permit.

## **SECTION 704 INSTALLATION**

**704.1 Qualified Contractor.** All work shall be installed by a utility contractor (contractor) approved by the Commission, *or*, by a WSSC-licensed Master Plumber (contractor).

**704.2 Oversight.** In accordance with Sections 701.1.1 and 701.1.2 of this Chapter, either the WSSC or the designated third-party engineer shall provide complete oversight of the installation process for standard site-utility systems.

**704.3 Materials.** The WSSC or the designated third-party engineer shall validate that all materials comply with Commission standards and this Code.

**704.4 Supervision.** In accordance with Sections 701.1.1 and 701.1.2 of this Chapter, general supervision of the pipeline installation and related appurtenances, inspection over the work, project milestones, and decisions shall be completed by the WSSC or the designated third-party engineer. Key components of inspection shall include but not limited to the following:

**704.4.1** Open trench inspections, unless otherwise indicated on the approved plan;

**704.4.2** Alignment and sizing in accordance with approved construction documents;

**704.4.3** Installation, including bedding, in accordance with manufacturer's specifications and the WSSC General Conditions and Standard Specifications;

**704.4.4** Uniform slope of sewer pipelines; and

**704.4.5** Backfill with care and with suitable fill material.

**704.5 Deviation.** Minor changes to alignment and elevation shall be permissible as a result of unforeseen field conditions as follows:

**704.5.1** For WSSC Inspected projects, WSSC personnel will determine whether the scope of deviation is permissible to proceed and be documented through the as built process versus deviations that will require redesign and revised plan approval.

**704.5.2** For Third-Party Inspected projects, the designated engineer will manage deviations according to the following:

**704.5.2.1** The engineer shall report and record such changes as part of the required as-built drawings.

**704.5.2.2** When such changes effect system integrity, conflict with the design and/or intent of the approved drawings, or lack compliance with design standards or Code, the engineer shall obtain approval from the site-utility code official prior to installation.

**704.6 Exception.** For minor site utility projects: installation; oversight; materials validation; and inspection shall follow protocols established for water and sewer inspections performed under a WSSC plumbing permit. See 107.4.1.1&.2

## **SECTION 705 WATER QUALITY AND TESTING**

**705.1 Equipment.** The contractor shall furnish and operate all testing equipment.

**705.2 Coordination.** The contractor shall coordinate and schedule all testing, and ensure that the designated engineer, WSSC Systems Inspector, or WSSC Plumbing inspector as applicable is present during testing.

### **705.3 Water Quality**

**705.3.1 Chlorination.** Water system piping exceeding 50-feet in developed length shall be chlorinated during installation. After installation, the system shall be flushed to lower chlorine residual, prior to water sampling. Water system piping 50-feet or less in

developed length shall be thoroughly flushed upon connection to the Commission's system; chlorinating and sampling shall *not* be required on these systems.

**705.3.2 Water Samples.** Where piping has been chlorinated, water samples shall be taken from the end of the longest run within the system and from laterals exceeding 50-feet in developed length.

**705.3.3 Accredited Laboratory.** Water quality testing shall be performed and reported by a State of Maryland accredited laboratory.

**705.3.4 Reports.** Water quality test reports shall contain the following information:

**705.3.4.1** WSSC site-utility or minor site utility permit number;

**705.3.4.2** Acceptable chlorine residual;

**705.3.4.3** Absence of bacteria; and

**705.3.4.4** Compliance Statement: *“THIS SAMPLE MEETS FEDERAL STANDARDS FOR DRINKING WATER AND IS SAFE FOR HUMAN CONSUMPTION”*

**705.4 Water Main Testing.** All standard site-utility water systems and minor site-utility water systems shall be hydrostatically tested. The minimum test pressure shall be 200 psig, unless a greater pressure is designated on the approved construction documents, for a duration of 2-hours.

### **705.5 Gravity Sewer Testing**

**705.5.1 Pressure Test.** All site-utility and minor site-utility sewer systems greater than 50-feet in developed length shall be pressure tested with air at 4 psig for a duration of 5-minutes, and shall show no sign of leakage.

**705.5.2 Mandrel Test.** All site-utility and minor site-utility sewer systems 6-inches and larger and that incorporate 1 or more manholes, shall have a mandrel pulled through each segment greater than 50-feet in developed length to disclose any defect, distortion or misalignment of the pipe.

**705.6 Pressure Sewer.** All pressure sewer piping shall be hydrostatically tested. The minimum test pressure shall be 100 psig for a duration of 2-hours.

### **705.7 Engineer's or WSSC's Responsibility**

**705.7.1 Validation.** In accordance with Sections 701.1.1 and 701.1.2 of this Chapter, the Third Party engineer or WSSC Systems Inspector shall validate that all testing protocols comply with this Code and the General Site-Utility Water and Sewer Notes shown on the approved construction documents.

**705.7.2 Witness Tests.** The Third Party engineer or WSSC shall witness all requisite tests. Test that fail shall have piping corrected and re-tested until the test is satisfactory.

**705.7.3 Reporting.** The Third Party engineer shall report test results to the site-utility code official for third-party inspected projects. WSSC personnel shall record all test results for WSSC inspected projects.

**705.7.4 Exception.** For minor site utility projects, The WSSC plumbing inspector shall witness all required tests for water and sewer installations performed under a WSSC plumbing permit. At their discretion, the plumbing inspector may accept a third party engineer's test report for water line testing.

## **SECTION 706 HOOK-UP AND ACTIVATION**

### **706.1 Connection to Commission Mains.**

**706.1.1 Standard Site Utility Systems.** The contractor shall connect the site-utility system to the Commission’s system under the following conditions:

**706.1.1.1** The Commission's system and service connection shall have been *released* for hook-up.

**706.1.1.2** The engineer or WSSC, as applicable, shall have witnessed the installation and testing of the site-utility system, and shall have completed and submitted *all* required reports.

**706.1.1.3** The engineer or WSSC, as applicable, shall witness the final connection to the Commission's system.

**706.1.2 Minor Site Utility Systems.** A WSSC registered Master Plumber shall connect the minor site utility system to the Commission's system *only* after the Commission's system has been released for service and the minor site utility system has been inspected and approved by the WSSC plumbing inspector.

**706.2 Connection to Building Piping.** *Only* a WSSC-licensed master plumber shall connect the building water and drainage systems to the site-utility systems. A site-utility contractor shall *not* connect to the building plumbing systems. *Prior to connection*, the site-utility system shall be *released* as FINALED or “for connection to building only” by the site-utility code official. If released “for connection to building only”, the building systems and the site utility system may not be activated until the site utility system is *released* as FINALED.

**706.2.1 Water.** The plumber shall connect the water distribution system to the termination of the site-utility water service. See the approved Site Utility plan for the termination point either 5 feet outside or at the "first flange" within one (1) foot *inside* the building.

**706.2.2 Sewer.** The plumber shall connect the building drain to the site-utility sewer within 5-feet *outside* of the building wall/foundation.

## SECTION 707 AS-BUILT DRAWINGS AND FINAL APPROVALS

**707.1 General.** Final approval of the standard site-utility system permit shall be contingent upon complete documentation by the engineer (see 707.2 and 707.3 below) and full release of the Commission’s systems. Final approval of a minor site utility system shall be by the WSSC Plumbing Inspector.

**707.2 As-Built Drawings.** The engineer shall provide 2 copies of the as-built drawings to the site-utility code official for third-party inspected projects or to the WSSC systems inspector for WSSC inspected projects. As-built drawings shall include all deviations from the original approved plan for *both* the plan view and the profiles. Required notes shall include elevations of and shall indicate ties for all bends, valves, cleanouts, appurtenances, and similar buried items.

**707.3 Engineer’s Certification.** For third-party inspected projects, the engineer shall provide a FINAL overall certification letter addressing the following:

**707.3.1** Materials installed comply with Commission Standards and this code.

**707.3.2** The engineer provided general oversight for the installation of all pipelines, structures, and appurtenances.

**707.3.3** The engineer witnessed and properly reported all requisite tests.

**707.3.4** The site-utility system is in overall compliance with the as-built plan, Commission standards and this code.

**707.4 Commission Systems Release.** FINAL APPROVAL of the site-utility system shall be contingent upon *full release* of the Commission service connection(s). *Substantial completion* of the applicable WSSC permit shall be required *prior to* the site-utility permit being closed. In general, service connections shall be part of a Service Connection Permit (SCP), System Extension Permit (SEP), or Relocations and Major Systems (RMS) contract.

**707.5 Final Approval.** Only WSSC personnel shall have authority to approve as “final” the completion of both Third-Party and WSSC inspected Site-Utility Permits. Finalization and release of a Site-Utility Permit is required prior to final plumbing approval of WSSC plumbing permits.

# CHAPTER 8

## INDUSTRIAL AND SPECIAL WASTE

### SECTION 801

#### APPLICABILITY

**801.1 Scope.** This chapter shall authorize the regulation of Industrial Users discharging to the Commission wastewater system through the issuance of permits to certain non-domestic users and through enforcement of general requirements for other users; shall authorize monitoring and enforcement activities; shall detail user reporting requirements; and shall provide for the setting of fees for the equitable distribution of costs resulting from the program established herein. These requirements shall apply to all *persons* (see definition) within the WSSD and to persons outside the WSSD who are, users of the Commission sewer and wastewater treatment systems by agreement, permit or other means. Persons who apply for or receive service from the Commission shall be deemed to have consented to inspections and shall comply with Commission regulations. Water re-use systems are subject to chapter 9.

**801.2 Definitions.** In addition to the definitions generally applicable to the provisions of this Code [See Chapter 2], the following definitions are specifically applicable to the provisions of this Chapter 8, Industrial and Special Waste.

**801.2.1 Administrator.** The Administrator of the U.S. Environmental Protection Agency.

#### **801.2.2 Authorized Representative**

**801.2.2.1 Corporation.** If the Industrial User is a corporation, authorized representative shall mean:

- The president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
- The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations, can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

**801.2.2.2 Partnership or Proprietorship.** If the Industrial User is a partnership, or sole proprietorship, an authorized representative shall mean a general partner or proprietor, respectively.

**801.2.2.3 Government.** If the Industrial User is a Federal, State or local governmental facility, an authorized representative shall mean a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or his/her designee.

**801.2.2.4 Designee.** The individuals described in paragraph 801.2.2 may designate another authorized representative if the authorization is in writing; the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company; and the written authorization is submitted to the Commission.

**801.2.2.5 New Authorization.** If authorization in paragraph 801.2.2.4 is no longer accurate because a different individual or position has responsibility, a new authorization satisfying the requirements of paragraphs 801.2.2.1 and 801.2.2.4 of this section must be submitted to the Commission prior to or together with any reports to be signed by an authorized representative.

**801.2.3 Best Management Practices (BMPs).** Methods, activities, prohibitions of practices, maintenance procedures, and other management practices designed to reduce the quantity of pollutants discharged to a pretreatment system or to the POTW. BMP's also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

**801.2.4 Biochemical Oxygen Demand (BOD).** The measure of oxygen utilized in the biochemical oxidation of organic matter in 5 days at 20 degrees Celsius expressed in milligrams per liter (mg/l).

**801.2.5 Bypass.** The intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.

**801.2.6 Categorical Pretreatment Standard (Categorical Standard).** Any regulation containing pollutant discharge limits promulgated by EPA in accordance with Sections 307(b) and (c) of the Act which apply to a specific category of users and which appear in 40 CFR Chapter I, Sub-Chapter N, Parts 405-471.

**801.2.7 Code of Federal Regulations (CFR).** A codification of the general and permanent rules published in the Federal Register by the Executive Department and agencies of the Federal government.

**801.2.8 Chronic Violation.** Violations of wastewater discharge limits in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l).

**801.2.9 Discharge Authorization.** A permit issued by the Commission authorizing the discharge of industrial wastes into the wastewater treatment system subject to specific discharge standards, reporting requirements and other restrictions.

**801.2.10 Domestic Wastes.** The waterborne wastes derived from ordinary living processes.

**801.2.11 Effluent.** The flow of liquid out of a fixture, pipe, process, or system.

**801.2.12 Environmental Protection Agency (EPA).** The U.S. Environmental Protection Agency or, where appropriate, the Regional Water Management Division Director, or other duly authorized official of said agency.

**801.2.13 Existing Source.** Any source of discharge, the construction of which commenced prior to the publication by EPA of proposed categorical pretreatment standards, which will be applicable to such source if the standard is thereafter promulgated in accordance with Section 307 of the Act.

**801.2.14 Garbage.** The solid animal and vegetable waste resulting domestic or commercial handling, storage, dispensing, preparation, cooking and serving of foods.

**801.2.15 Grab Sample.** A sample taken from a wastestream without regard to the flow in the wastestream and over a time not to exceed 15 minutes. Grab samples shall be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. Using protocols (including appropriate preservation) specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: For cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil & grease the samples may be composited in the laboratory.

**801.2.16 Ground Water.** Subsurface water occupying the zone of saturation, either confined or free.

**801.2.16.1 Confined Ground Water.** A body of ground water covered with a material impervious enough to sever free hydraulic connection with overlying ground water.

**801.2.16.2 Free Ground Water.** Ground water in the zone of saturation extending down to the first impervious barrier.

**801.2.17 Indirect Discharge.** The introduction of pollutants into a POTW from any non-domestic source regulated under section 307(b), (c) or (d) of the Clean Water Act.

**801.2.18 Industrial User.** Any place of business, endeavor, arts, trade or commerce, whether public or private, commercial or charitable, that uses water in a product, process, or any manner that generates wastewater which is a source of indirect discharge.

**801.2.19 Industrial Wastes.** Liquid or liquid borne wastes resulting from the processes employed in industrial and commercial establishments.

**801.2.20 Influent.** The flow of a liquid into a fixture, pipe, process, or system.

**801.2.21 Interference.** A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal; and
- Is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA)), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**801.2.22 Lower Explosive Limit (LEL).** The minimum concentration of a particular combustible gas that can be ignited in air.

**801.2.23 Industrial Waste Monitoring Point.** A Commission approved access opening to the building drainage system for the purpose of obtaining samples of the industrial user's waste discharges. Limits imposed on permitted industries apply at this point.

**801.2.24 Misconduct.** Use of abusive language, threats, mischievous or criminal acts, directed toward the public while providing services, or toward a code official while performing official duties.

**801.2.25 New Source.** A New Source shall be defined as:

**801.2.25.1 Any Premises.** Any building, structure, facility, or installation from which there is, or may be, a discharge of pollutants; the construction of which commenced

after the publication of proposed pretreatment standards under Section 307(c) of the Clean Water Act which will be applicable to such source if such standards are thereafter promulgated in accordance with that section, provided that:

- (1) The building, structure, facility or installation is constructed at a site at which no other source is located; or
- (2) The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
- (3) The production or wastewater generating processes if the building, structure, facility or installation is substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.

**801.2.25.2 Construction Site.** Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of paragraphs 801.2.23.1.(2.) and 801.2.23.(3.) of this Section but otherwise alters, replaces, or adds to existing process or production equipment.

**801.2.25.3 New Source.** Construction of a new source as defined under this paragraph has commenced if the owner or operator has:

- (1) Begun, or caused to begin as part of a continuous on-site construction program as follows:
  - (a) Any placement, assembly, or installation of facilities or equipment; or
  - (b) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
- (2) Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

**801.2.26 Non-Contact Cooling Water.** Water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

**801.2.27 Non-Domestic Waste.** The liquid wastes from industrial or commercial processes, trade or business; distinct from domestic wastes.

**801.2.28 NPDES Permit.** A National Pollutant Discharge Elimination System Permit. NPDES Permits authorize the operation of WSSC wastewater treatment plants. NPDES Permits for WSSC plants shall be issued by the State of Maryland.

**801.2.29 Owner.** A proprietor, person, or entity who owns or has exclusive rights of possession.

**801.2.30 Person.** Any individual; partnership; co-partnership; firm; company; corporation; association; joint stock company; trust; estate; Federal, State, and local governmental entity; society; group or any other legal entity; or their legal representatives, agents, or assigns or governmental entities.

**801.2.31 Pass Through.** A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

**801.2.32 pH.** A measure of acidity, or alkalinity of a liquid. It is represented on a scale of 0 to 14 with 7 representing a neutral state; 0 representing the most acidic; and 14 representing the most alkaline.

**801.2.33 Pollutant.** Any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, chemical wastes, biological wastes, radioactive wastes, heat, rocks, sand and other industrial, municipal, commercial and agricultural waste or any other contaminant.

**801.2.34 Pollution.** The addition of sewage, industrial wastes, or other harmful or objectionable material to water. Sources of pollution can be privies, septic tanks, subsurface irrigation fields, seepage pits, sink drains, barnyard wastes, etc.

**801.2.35 POTW.** A Publicly-Owned Treatment Works of the Commission, which includes any device and system used in storage, treatment, recycling, and reclamation of municipal sewage or industrial waste of a liquid nature. Also included are sewers, pipes, and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

**801.2.36 POTW Treatment Plant.** That portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage.

**801.2.37 Pretreatment.** The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical, or biological processes, process changes, or by other means, except as prohibited by 40 CFR 403.6(d) of the General Pretreatment Regulations.

**801.2.38 Prohibited Discharges.** Absolute ban against the discharge of certain substance; these prohibitions appear in Section 804 of this code.

**801.2.39 Properly Shredded Garbage.** Garbage that has been shredded such that all particles will be freely carried under flow conditions normally occurring in the wastewater sewers with no particles greater than ½-inch in any dimension.

**801.2.40 RCRA.** Resource Conservation Recovery Act.

**801.2.41 Severe Property Damage.** Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

**801.2.42 Significant Industrial User.** An Industrial User meeting one or all of the criteria as defined in 40 CFR 403.3, the criteria being:

- (1) All Industrial Users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and
- (2) Any other Industrial User that discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blow-down wastewater); or
- (3) Any Industrial User which contributes process wastes stream which makes up 5-percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or
- (4) Any Industrial User designated by the Commission as defined in 40 CFR 403.12(a) on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

**NOTE:** Upon a finding that an Industrial User, meeting the above criteria of this definition, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Commission may at any time, on its own initiative or in response to a petition received from an Industrial

## INDUSTRIAL AND SPECIAL WASTE

User, and in accordance with 40 CFR 403.8(f)(6), determine that such Industrial User is not a Significant Industrial User.

**801.2.43 Slug Discharge.** A slug discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the Commission's regulations, local limits or Permit conditions.

**801.2.44 Special Wastes.** Wastes that require special treatment before entry into the normal plumbing system.

**801.2.45 Storm Water.** Any flow of water occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

**801.2.46 Technical Review Criteria (TRC).** Violations of wastewater discharge limits in which 33-percent or more of all the measurements taken for the same pollutant parameter taken during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil and grease; and TRC=1.2 for all other pollutants except pH).

**801.2.47 Toxic Substances.** Substances that, when inhaled or ingested, can cause death or disease.

**801.2.48 Total Toxic Organic (TTO).** A list of organic compounds specifically developed for regulation by the Commission.

**801.2.49 Upset.** An exceptional incident in which there is unintentional and temporary noncompliance with categorical pretreatment standards because of factors beyond the reasonable control of the Industrial User. An Upset does not include non-compliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

**801.2.50 Wastewater.** Liquid and water-carried industrial waste and sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated which are discharged to the POTW.

## SECTION 802 GENERAL PROVISIONS

**802.1 Objectives.** This Industrial and Special Waste chapter shall detail uniform requirements for Industrial Users discharging into the wastewater collection and treatment systems of the Commission and shall enable the Commission to comply with all applicable

state and Federal laws required by the Clean Water Act of 1977 and the General Pretreatment Regulations of 1981, as amended. The objectives of this Chapter shall be:

**802.1.1 Prevent Interference with Operations.** To prevent the introduction of pollutants into the Commission wastewater system that will interfere with the operation of the system or contaminate the resulting sludge.

**802.1.2 Prevent Inadequate Treatment.** To prevent the introduction of pollutants into the Commission wastewater system that will pass through the system, inadequately treated, into receiving waters or otherwise be incompatible with the system.

**802.1.3 Reclaim Wastes.** To improve the opportunity to recycle and reclaim municipal and industrial wastewater and sludge.

**802.1.4 Endangerment.** To prevent the introduction of pollutants into the collection system which endanger workers or interfere with the operation of the collection system or treatment plants.

**802.1.5 Fees.** To provide for the levying and collection of fees for the equitable distribution of the cost of the operation, maintenance and improvement of the Commission's Industrial Discharge Control Program.

## **SECTION 803 GENERAL DISCHARGE REQUIREMENTS**

**803.1 All Industrial Users.** All Industrial Users discharging non-domestic wastes into the Commission's sanitary sewers from a building drain or sewer or any other method shall meet the standards and requirements of this chapter. The Commission shall reserve the right, as it may deem proper, to require pretreatment of industrial wastes, or any other special kinds of wastes, before such wastes are discharged to the sanitary sewer.

**803.2 Federal and Other Standards.** All Industrial Users shall comply with the Federal general pretreatment regulations in 40 CFR Part 403 and the applicable national categorical pretreatment standards set out in 40 CFR Subchapter N Parts 401 through 471 as amended, and all other applicable Federal, State, or local discharge limitations, requirements or standards. Limitations imposed on users at the point of application shall be the most stringent limitations applicable. These may be Federal, State, or local requirements or standards. In the event that an Industrial User discharges to any outside jurisdiction, the Commission shall enforce discharge limitations, requirements, or standards at least as stringent as those established in the outside jurisdiction.

**803.3 Discharge Limits.** The Commission may impose mass discharge limits in lieu of, or in conjunction with, concentration discharge limits.

**803.4 Categorical Standards.** The national categorical pretreatment standards found in 40 CFR Chapter I, Subchapter N, Parts 401-471 shall hereby be incorporated.

**803.5 State Standards.** The State pretreatment standards found in COMAR Title 26 shall hereby be incorporated.

**803.6 Special Agreements.** No provision contained in these Regulations shall be deemed to prevent any special agreement or arrangement between the Commission and any person, whereby wastewater of unusual strength or characteristic may be accepted by the Commission for treatment, that will not violate or cause the Commission and/or the user to violate, Federal or State pretreatment requirements or standards; and which shall not be harmful to the system. Under no circumstances shall Federal or State pretreatment standards or requirements be waived.

## **SECTION 804 PROHIBITED DISCHARGES**

**804.1 Prohibited Discharge to Sanitary Sewer.** No person shall discharge the following, or cause the following to be discharged, directly or indirectly, into the Commission's sanitary sewer:

**804.1.1 Temperature.** Any liquids or vapors having a temperature greater than 140 degrees Fahrenheit (60°C). In no case shall discharged waste raise the temperature at the treatment works influent greater than 104 degrees Fahrenheit (40°C).

**804.1.2 Fire or Explosion Hazard.** Any liquids, solids or gases that by reason of their nature or quantity are, or may be, either alone or by interaction with other substances sufficient to cause a fire or explosion hazard in the POTW or its processes, including, but not limited to, waste streams with a closed cup flash point of less than 140-degrees Fahrenheit (60°C) using the test methods specified in 40 CFR 261.21. At no time shall an Industrial User discharge any substance which results in a reading of greater than 5-percent of the Lower Explosive Limit (LEL) for that substance using a methane calibrated combustible meter, at the point of discharge to a fixture or at any point in the system. Prohibited materials include but shall not be limited to; gasoline, kerosene, naphtha, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances determined to be a fire and/or explosion hazard.

**804.1.3 Public Nuisance or Hazard.** Any malodorous or toxic gases, vapors, fumes, or other substances that, either singly or by interaction with other wastes, shall be capable of creating a public nuisance, a hazard to human health or the environment, or the prevention of entry by Commission personnel into sewers for maintenance and repair.

**804.1.4 Interference and Pass-Through.** Any liquids, solids, or gases not amenable to treatment or reduction by the sewage treatment processes employed, or amenable to treatment only to such a degree that the wastewater treatment plant violates its NPDES permit; or any substance which may interfere with or pass-through the POTW into the receiving waters untreated or without adequate treatment.

**804.1.5 Excess Coloration.** Any liquids, solids, or gases that, singly or by interaction with other material, cause excessive coloration which may pass through the POTW to the receiving waters or any substance with excessive color such that the color is not removed in the wastewater treatment plant, including but not limited to, dye wastes.

**804.1.6 Obstruction to Flow.** Any lint, ashes, cinders, sand, mud, straw, shavings, metals, glass, bones, wood, plastics, stone dusts, rags, paunch manure, butcher's offal, or any solids, liquids or other substances capable of causing obstruction to the flow in sewers or other interference with the proper operation of the wastewater system.

**804.1.7 Concentrated Releases.** Any slug load, release rate of pollutants, concentration of pollutants, including oxygen demanding pollutants either singly or by interaction with other pollutants or waste streams, which shall cause interference with any wastewater treatment process, constitute a hazard to humans or animals, contaminate sludge, pass-through the POTW to receiving waters, or could result in a violation of the POTW's NPDES permit.

**804.1.8 Excess Daily Flow.** An average daily flow greater than 2-percent of the average daily sewage flow at the wastewater treatment plant receiving the industrial waste unless otherwise permitted in writing.

**804.1.9 Discharge Limitations.** Any water or wastewater containing substances in excess of the limitations contained in Table 804.1.9. These limits shall be subject to revision and may be modified to represent concentration or mass based standards.

**804.1.10 Radioactive Wastes.** Any radioactive wastes or isotopes of such half-life or concentration as to exceed limits established by applicable local, State, or Federal regulations. Reports of discharges to the Commission's system shall reflect actual discharge concentrations rather than any time or dilution adjustments.

**804.1.11 Pathogenic Wastes.** Any, substance containing viable pathogenic or parasitic organisms that could pose a health hazard to the public or interfere with the proper operation of the wastewater collection or treatment systems

**804.1.12 Storm or Ground Water.** Any storm water, surface water, ground water, roof runoff, subsurface drainage.

**804.1.13 Viscous Substances.** Any substances that could solidify or become viscous at temperatures between 40-degrees Fahrenheit (4°C) and 140-degrees Fahrenheit (60°C);

or at any other temperature that could cause obstruction and/or interference with the conveyance system or the POTW processes.

**804.1.14 Dilution Prohibition.** Any water added to a discharge as a partial or complete substitute for proper treatment to achieve compliance with applicable discharge limitations for any wastewater constituent.

**804.1.15 Hauled Pollutants.** Any trucked or hauled pollutants, except at discharge points designated by the Commission in conformance with the provisions cited in Section 814.

**804.1.16 Oils.** Any wastes containing petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that could cause interference or pass-through.

**804.1.17 Glycol.** Any glycol compound or derivative added to or contained in internal combustion engine cooling systems or liquid conveyance systems for the purposes of altering liquid freezing and/or boiling points.

**804.1.18 Pretreatment Residue.** Sludges, screenings or other residues from pretreatment systems or industrial processes.

**804.1.19 Corrosive Substances.** Substances causing corrosive damage, harm or endangerment to the collection system, pumps, personnel.

**804.1.20 Mercury.** Except as otherwise provided in this section, any substance containing mercury in amounts greater than 1 ug/l. Dental practices may follow Commission approved Best Management Practices (BMPs) for dental waste dischargers, in lieu of monitoring for the numerical discharge limitation for substances containing mercury.

**804.1.21 Perchloroethylene.** Any discharge of perchloroethylene or perchloroethylene-containing products from a water separator (used for the purpose of recovering perchloroethylene) or from any dry cleaning process.

**Table 804.1.9**

<b>Discharge Limitations<sup>1,2</sup></b>	
<b>Pollutant</b>	<b>Limit<sup>3</sup></b>
<b><i>Inorganics (Total)</i></b>	
	<b><i>Concentration (mg/l)</i></b>
Cadmium	0.17
Chromium	7.0
Copper	2.0
Cyanide	1.0
Lead	0.4
Nickel	3.4
Silver	1.2
Zinc	4.2
 <b><i>Organics (Total)</i></b>	
Total Toxic Organics <sup>4</sup>	2.13
 <b><i>Conventionals</i></b>	
	<b><i>Concentration (mg/l)</i></b>
	<b><i>(except as indicated)</i></b>
Dissolved Solids	1,500
Suspended Solids	400
Total Solids	1,900
BOD (5-day, 20°C)	300
COD	500
Fats, Oil and Grease <sup>5</sup>	100
pH <sup>6</sup>	6.0 - 10.0 units
Temperature	140°F

1. Limits expressed in this table represent absolute maximum limitations and shall not be exceeded at any time. This list shall not be construed as a complete list of restricted materials. Restrictions may also be placed on other materials when the concentration of these materials is sufficient to adversely affect any portion of the collection or treatment system.

2. To determine compliance with numerical permit limitations, unless otherwise specified in the permit, the analytical methods shall include: a) any approved method with a Method Detection Level (MDL) adequate to detect concentrations of at least one-tenth the level of the permit limitation, or b) if there is no approved method sensitive to at least one-tenth of the permit limitation, then the most sensitive method approved in 40 CFR Part 136 or other method approved by EPA for wastewater is required.

3. Maximum for any sample obtained during a calendar day.

4. Total Toxic Organics shall consist of the summation of toxic organics with values greater than ten (10) micrograms per liter. Toxic organics shall consist of the Commission designated list of organic compounds.

5. Fats, wax, grease, or oils of animal or vegetable origin, whether emulsified or not. Any discharge capable of causing an obstruction and/or interference with the plumbing system, conveyance system, or the POTW processes shall be prohibited regardless of limit.

6. In the event an Industrial User monitors their pH continuously, a pH violation shall be construed as any excursion less than 6 or greater than 10 for more than 15 minutes at any one time, or more than 30 minutes in aggregate, for any calendar day. The pH shall not be less than 5 for any period of time.

**SECTION 805**  
**STORAGE OF PROHIBITED, TOXIC, OR HAZARDOUS**  
**SUBSTANCES**

**805.1 General.** Storage of any materials that could enter the Commission's sanitary sewers via discharge, accidental spill, or leakage; or that could create a hazard or in any other way have a deleterious effect on the conveyance systems or treatment processes; or that could constitute a hazard to any individuals; shall be subject to review by the Commission. The Commission shall require reasonable safeguards to prevent the discharge, spill, or leakage of such materials into the sanitary sewage system. When deemed necessary, the owner shall install and maintain, at their expense, suitable control structures or devices that may include but shall not be limited to, dikes, dams, or sumps to prevent sudden or accidental waste discharges to the sanitary sewage system.

**SECTION 806**  
**DISCHARGE AUTHORIZATION PERMITS**

**806.1 Applicability.** The Discharge Authorization Permit (DAP) grants permission to the Industrial User to discharge industrial waste into the sewer system. All Industrial Users, that are or that have the potential to be Significant, shall apply to the Commission for a Discharge Authorization Permit. The Commission may require other Industrial Users, as it deems necessary, to submit a Discharge Authorization Permit Application and obtain a permit. Discharge Authorization Permit Applications shall be signed by an authorized representative of the Industrial User. No Significant Industrial User or other Industrial User designated by the Commission, shall discharge to the Commission's sanitary sewer system without first obtaining a Discharge Authorization Permit.

**806.1.1 Application Review.** The Commission shall review the application submitted by the Industrial User and may require additional information. Within 90-days of receiving a complete application, the Commission shall make the determination that a Discharge Authorization Permit may be warranted. The Commission shall issue a permit if it is determined that pretreatment facilities are adequate for efficient treatment of discharged waste and that the discharged waste complies with the discharge limitations of these regulations or with the National Pretreatment Standards, whichever is applicable.

**806.1.2 Duration.** The Discharge Authorization Permit shall be issued for a specified time period not to exceed 5-years. This permission shall be conditional on compliance with Discharge Authorization Permit requirements and this code.

**806.1.3 Terms and Conditions.** Permitted Industrial Users shall comply with the terms, conditions and limitations of a Discharge Authorization Permit. It shall be a violation of this code for any person to violate any term, condition or limitation set forth in any Discharge Authorization Permit. Failure to comply may result in civil or

criminal liability under applicable State or Federal law and may be grounds to impose penalties, as outlined in the Commission's Enforcement Response Plan.

**806.2 Discharge Authorization Permit Requirements.** The Discharge Authorization Permit contains requirements necessary for the Commission to assess and ensure compliance with these Regulations. Permitted Industrial Users shall take all reasonable steps to correct any adverse impact resulting from noncompliance with the Discharge Authorization Permit, including accelerated additional monitoring as necessary to determine the nature and impact of the non-compliant discharge. The Discharge Authorization Permit shall at a minimum contain the following:

- (1) Effective and expiration dates.
- (2) Statement of non-transferability as specified in Section 806.6.
- (3) Effluent limitations, including best management practices, based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and/or State and local law.
- (4) Self-monitoring, sampling, reporting, notification, and record keeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and/or State and local law.
- (5) Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond applicable federal deadlines.
- (6) Requirement to control slug discharges, if determined by the Commission to be necessary.
- (7) The Discharge Authorization Permit may contain other conditions as deemed appropriate by the Commission to ensure compliance with all applicable pretreatment standards and requirements.

**806.3 Discharge Authorization Permit Modifications.** The Commission may modify the Discharge Authorization Permit for good cause including, but not limited to, the following:

- (1) To incorporate any new or revised Federal, State, or local pretreatment standards or requirements.
- (2) To address significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of Discharge Authorization Permit issuance.

- (3) A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- (4) Information indicating that the permitted discharge poses a threat to the Commission's treatment plants, collection system personnel, or the receiving waters.
- (5) Violation of any terms or conditions of the Discharge Authorization Permit.
- (6) Misrepresentations or failure to fully disclose all relevant facts in the Discharge Authorization Permit application or in any required reporting.
- (7) Revision of or a grant of variance from categorical pretreatment standards pursuant to 40 CFR 403.13.
- (8) To correct typographical or other errors in the Discharge Authorization Permit.
- (9) To reflect a transfer of the facility ownership or operation to a new owner or operator.

**806.4 Discharge Authorization Permit Suspension/Termination.** The Commission may terminate or suspend a Discharge Authorization Permit for good cause including, but not limited to, the following:

- (1) Failure to notify the Commission in advance of significant changes to industry processes, pretreatment modifications, or wastewater characteristics.
- (2) Misrepresentation or failure to fully disclose all relevant facts in the Discharge Authorization Permit application.
- (3) Falsifying self-monitoring reports.
- (4) Tampering with monitoring equipment.
- (5) Refusing to allow Commission personnel timely access to the facility premises and records.
- (6) Failure to comply with Discharge Authorization conditions, requirements or effluent limitations.
- (7) Failure to pay fines, permit renewal fees, or annual discharge fee.
- (8) Failure to meet compliance schedules.
- (9) Failure to complete a wastewater survey or the Discharge Authorization Permit application.

- (10) Failure to provide advance notice of the transfer of business ownership of a permitted facility.
- (11) Violation of any pretreatment standard or requirement, or any terms of the Discharge Authorization Permit or these regulations.

**806.4.1 Suspension or Termination.** Upon notification of suspension or termination of a Discharge Authorization Permit by the Commission, the Industrial User shall cease all discharges of wastes regulated by the Discharge Authorization Permit.

**806.4.2 Reinstatement.** The Commission shall not reinstate or reissue a suspended or terminated Discharge Authorization Permit until the Industrial User:

- (1) Completes a new Discharge Authorization Permit application and pays the associated fees.
- (2) Requests in writing that the existing Discharge Authorization Permit be reinstated or reissued.
- (3) Identifies the steps taken to correct the violation(s) which led to the suspension or termination of the existing Discharge Authorization Permit.
- (4) Upon reviewing all of the required information provided, WSSC shall decide whether the Industrial User's request shall be approved.

### **806.5 Requests for Reconsideration**

**806.5.1 Time Limit.** Requests for reconsideration of any limitation, condition, or other requirement contained in a Discharge Authorization Permit shall be filed within 15-days from the issuance of the Discharge Authorization Permit, provided such request does not create a violation of any existing applicable requirements, standards, laws, or rules and regulations. The filing of a request by the Industrial User for a Discharge Authorization Permit modification, suspension, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any Discharge Authorization Permit condition.

**806.5.2 Submission of Request.** Any person seeking reconsideration of a Discharge Authorization Permit provision shall submit a request for reconsideration in writing. The request shall be addressed to the Regulatory Services Group and shall state in detail the provision(s) of the Discharge Authorization Permit objected to, the reason(s) for the objection and the proposed alternative, if any.

**806.5.3 Failure to File on Time.** Failure to file a request for reconsideration within the time specified in this section shall be deemed a waiver of the right to challenge or appeal a Discharge Authorization Permit limitation, condition, or other requirement.

**806.5.4 Final Decision.** The decision of the Commission on a request for reconsideration, permit modification or issuance of a Discharge Authorization Permit shall be final and binding upon the parties.

**806.5.5 Final Denial.** If the Commission fails to reach a decision on a request within 30-days from the date the request is filed, the failure shall be deemed a final denial of the request.

**806.6 Transferability.** Discharge Authorization Permits shall be issued to a specific user for a specific operation and shall not be reassigned, transferred, or sold to a new owner, new user, different premises, or a new or changed operation without the prior written approval of the Commission.

**806.6.1 Advanced Notice.** Discharge Authorization Permits may be transferred to a new owner or operator *only if* the permittee gives at least 30-days advance notice to the Commission, and the Commission approves the Discharge Authorization Permit transfer. The notice to the Commission shall include a written certification by the new owner or operator which:

- (1) States that the new owner and/or operator have no immediate intent to change the facility's operations and processes.
- (2) Identifies the specific date on which the transfer is to occur.
- (3) Acknowledges full responsibility for complying with the existing Discharge Authorization Permit.

**806.6.2 Failure to Provide Advanced Notice.** Failure to provide advance notice of a transfer shall render the Discharge Authorization Permit void as of the date of facility transfer.

**806.7 Discharge Authorization Permit; Re-issuance.** An Industrial User with an expiring Discharge Authorization Permit shall apply for a new Discharge Authorization Permit by submitting a complete Discharge Authorization Permit application within 90 days prior to the expiration of the Industrial User's existing Discharge Authorization Permit. Renewal of the Discharge Authorization Permit shall be contingent on payment of the permit renewal fee, and compliance with the terms, conditions and limitations of the existing Discharge Authorization Permit.

**806.8 Discharge Authorization Permit; New Industrial User.** Any Industrial User required to obtain a Discharge Authorization Permit who proposes to begin discharging into the Commission's sewer system, shall submit the required Discharge Authorization Permit Application. A complete application for the Discharge Authorization Permit shall be submitted to the Commission at least 90-days prior to the date the discharge is intended to start.

## SECTION 807 RIGHT OF ENTRY

### 807.1 Investigation Authority

**807.1.1 Scope of Duties.** Employees or agents of the Commission shall have the right to enter and inspect any properties, buildings and premises in the WSSD or in those portions of Montgomery and Prince George's Counties outside of the WSSD, while in the pursuit of their official duties cited in this code including but not limited to: Inspecting, monitoring, reviewing records, copying records, setting up monitoring or measuring equipment or any other actions necessary to determine compliance with this Code. Commission personnel shall have the right to document locations, processes, conditions or equipment, at an Industrial User's facility through the use of photographs or video cameras or at the discretion of the Commission, require the Industrial User to supply such documentation.

**807.1.2 Inspections.** Inspections of facilities shall be performed by the code official, employees of the Commission, or its agents as deemed necessary by the Commission. Inspections may be performed anytime the facility is in operation, discharging or has a potential to discharge.

**807.1.3 Identification and Entry.** Where an Industrial User has security measures or safety procedures in force that require proper identification and clearance or special protective equipment before entry can be gained into the premises, the Industrial User shall make necessary arrangements at its own expense, to enable Commission employees, their agents, the State or EPA entry without delay for the purposes of performing their official duties.

**807.1.4 Termination of Services.** Failure to permit inspections on demand shall be a violation of these regulations and may prompt the termination of water and/or sewer service.

**807.1.5 Jurisdictional Coordination.** Joint activities as indicated in Section 807.1.1 between Commission employees and employees of outside jurisdictions, State or Federal agencies may be conducted on any private premise and into any building that discharges ultimately to the outside jurisdiction or is subject to inspection by other State or Federal Regulatory agencies.

**807.1.6 Intimidation or Obstruction.** Industrial Users shall not initiate or permit any action which harasses, intimidates, obstructs or threatens Commission employees or their agents in the performance of their official duties.

## SECTION 808

### REPORTING REQUIREMENTS

#### 808.1 Submission of Required Information

**808.1.1 Documentation.** Upon request of the Commission, any discharger or potential discharger of industrial wastes into the Commission's sewer system shall submit plans, reports, questionnaires, notices, analytical data, or any other information necessary to evaluate waste discharge characteristics and ensure compliance with these regulations, and Federal and State pretreatment requirements or standards. These documents, as outlined above or as specified in 40 CFR 403.12, shall be completed in a manner as approved by the Commission and returned in a time frame as specified in 40 CFR 403.12 or, in the absence of such specification, in a time frame as directed by the Commission. All information submitted in order to meet the above pretreatment requirements, shall be signed by an authorized representative, as well as include the certification statement contained in 40 CFR 403.6(a)(2)(ii) when applicable. Analytical results associated with the required reports shall be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period.

**808.1.2 Process Changes.** Industrial Users shall immediately report any process changes that alter the characteristics of any industrial discharge to the Commission. Failure to report process changes or modifications to the Commission shall be a violation of the Code.

**808.1.3 Record Preservation.** Industrial Users shall retain and preserve any records, books, documents, memoranda, reports, correspondence, computer files, and summaries of these materials relating to testing, internal or external monitoring, sampling, investigative and chemical analyses made by or on behalf of the Industrial User in connection with its discharge (including documentation associated with Best Management Practices) for a minimum of 3-years from the date of drafting or preparation. All records that pertain to matters that are the subject of special orders, or any other enforcement or litigation activities brought by the Commission, shall be retained and preserved until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired. Such materials shall be made available to Commission personnel upon request.

**808.1.4 Compliance Schedule.** Industrial Users installing a pretreatment technology or taking any other series of activities necessary to obtain and maintain compliance with a pretreatment standard or requirement may be required to follow a compliance schedule developed by the Commission, or the Industrial User as approved by the Commission. Compliance schedules shall contain increments of progress in the form of activities to be performed and dates for the commencement and completion of these activities leading to the construction and operation of the pretreatment technology or completion

of other required activities to bring the Industrial User into compliance. Failure to initiate or complete the required activities to comply with the milestone and date elements of a compliance schedule shall be a violation of this Code.

**808.1.5 Owner's Expense.** All pretreatment technologies shall be installed, operated and maintained at the owner's expense.

**808.1.6 Documentation Approval.** Where pretreatment is necessary to conform to the requirements of the Commission, plans, procedures and complete specifications for the proposed work shall be submitted for review and approval by the Commission. Neither submission of plans nor issuance of a permit shall be construed to indicate that the Commission in any way vouches for, or warrants the capabilities of, any such pretreatment system or device, plans, specifications or data in any manner. The review and approval of plans, procedures or other information required by the Commission shall in no way relieve the Industrial User from the responsibility for modifying its pretreatment facilities to achieve compliance with the Commission's limitations. Industrial Users shall not make any alterations to pretreatment facilities without prior written notice to and approval of the Commission.

**808.1.7 Public Information.** Records concerning Industrial Users and the nature of their discharges shall be public information unless the Industrial User declares and is able to demonstrate to the satisfaction of the Commission, that the release of the information would divulge information, processes, or methods of operation entitled to protection as trade secrets pursuant to the requirements of the Maryland Public Information Act. Any such declaration shall be made at the time of the submission of the information or data. Effluent data shall not be treated as confidential information. When requested by the Industrial User furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public. Confidential portions of a report shall be available for use by the State or EPA in judicial review or enforcement proceedings involving the Industrial User furnishing the report.

**808.1.8 Periodic Reports.** All Significant Industrial Users shall submit to the Commission at least quarterly on dates specified by the Commission, reports indicating flows, and the nature and concentration of pollutants in the discharge in a format prescribed in the Discharge Authorization Permit. Specified standards or the Commission itself may require these reports to be filed more frequently. In addition, the Commission may require other users to submit periodic reports. In cases where the local limit or Pretreatment Standard requires compliance with a Best Management Practice (or pollution prevention alternative), the User shall submit documentation required by the Commission or the Pretreatment Standard necessary to determine the compliance status of the User.

**808.1.9 Slug Control Plan.** The Commission may require any Industrial User to develop and implement a slug control plan. However, the Commission shall evaluate whether each Significant Industrial User needs a plan or other action to control slug

discharges within 1-year of the regulatory changes or within 1-year of identifying an Industrial User as significant. Significant Industrial Users shall be required to notify the Commission immediately of any changes at their facility affecting potential for a slug discharge. Any Industrial User required to develop and implement a slug control plan shall submit a plan which addresses, at a minimum, the following:

- (1) Description of discharge practices, including non-routine batch discharges.
- (2) Description of stored chemicals.
- (3) Procedures for immediately notifying the Commission of any accidental or slug discharge. Such notification shall also be given for any discharge which would violate any of the prohibited discharges cited in Section 804 of this code.
- (4) Procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing pollutants (including inorganic, and organic chemicals) and/or measures and equipment for emergency response.
- (5) The Industrial User shall permanently post a notice in a prominent place advising all employees to notify the Commission in the event of a dangerous discharge for which a notification is required.
- (6) Employers shall advise all appropriate employees who may cause or be adversely affected by such a discharge of the emergency notification procedure.

### SECTION 809 SAMPLING AND ANALYSES

**809.1 Monitoring Point.** Dischargers of industrial wastes into the Commission's sewerage system shall be required to construct and maintain at their expense a suitable monitoring structure downstream from any pretreatment technology, process, storage facility, or other approved works, to facilitate observation, measurement, and sampling of wastes. Monitoring structures shall be constructed in a manner and location approved by the Commission that are accessible at all times for sampling. Industrial Users shall install equipment, as specified by the Commission, for the purpose of measuring flow or wastewater characteristics or any other equipment necessary to determine compliance with these regulations. The Commission shall reserve the right to require restricted discharges during peak flows, designate certain wastewater to specific sewers; relocate and /or consolidate points of discharge; separate domestic and industrial waste streams.

**809.2 Monitoring Point Alternative.** In the event that no monitoring facility is required, the monitoring point shall be considered to be the nearest downstream manhole or the

discharge point(s) inside the Industrial User's facility that are representative of the Industrial User's discharge, except as shall otherwise be stated in a Discharge Authorization Permit.

**809.3 Reporting Procedure.** All analyses, including sampling techniques, submitted in support of any application, report, evidence or required by any permit or order shall be performed in accordance with 40 CFR Part 136 and amendments thereto. Where 40 CFR Part 136 does not include sampling or analytical techniques for the pollutant in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed using validated analytical methods or any other sampling and analytical procedures, including procedures suggested by the Commission or other parties, approved by the Administrator. Additional monitoring beyond permit requirements shall be submitted to the Commission if collected at the Industrial Waste Monitoring Point (IWMP) designated by the Commission.

**809.4 Reporting Timeframe.** In the event self-monitoring indicates a violation of one or more parameters, the Industrial User shall report the violation to the Commission within 24-hours of becoming aware of the violation. This reporting requirement shall not be satisfied by means other than direct communication with Commission personnel (i.e., telephone recording system messages or electronic mail messages shall not satisfy this notification requirement). The violation data and the explanation for the violation shall be submitted within 7-days of becoming aware of the violation.

## **SECTION 810 PENALTIES**

**810.1 Prosecution.** Any violator of these Regulations may be prosecuted by the Commission under the provisions of Section 21, Chapter 122 of the Acts of 1918 of the General Assembly of the State of Maryland and subsequent amendments thereto. Each day of a violation shall constitute a separate offense, and applicable penalties shall be applied to each offense.

**810.2 Service Termination.** The Commission may terminate water and sewer service to any premises in order to prevent any actual or threatened discharge of any wastes that present an endangerment to the POTW, the environment, or to the health and welfare of any person(s).

**810.3 False Representation.** Persons who make any false statements, representation, or certification in any application, record, plan, or other document filed or required to be maintained pursuant to these regulations; or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under these regulations; or who withholds, omits, or fails to report information requested or required; shall be prosecuted.

**810.4 Suspension and Revocation.** Industrial Users subject to the requirements of a Discharge Authorization Permit may have their Discharge Authorization Permit suspended or revoked for failure to comply with the requirements contained therein.

**810.5 Notice of Violation.** In the event an Industrial User violates established limits, reporting requirements, notification requirements, or other pretreatment requirements, a written documentation of the violation shall be issued to the user (e.g. Notice of Violation, letter, directive, etc.).

**810.6 Monetary.** The Commission may assess administrative penalties up to \$1,000 for each violation stated in an Administrative Order, not to exceed \$50,000. A civil citation with associated fines as well may be issued for violations of any provision of this code in accordance with the Commission's Enforcement Response Plan.

## **SECTION 811 PUBLIC NOTICE OF VIOLATIONS**

**811.1 General.** The Commission shall publish annually in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdiction(s) served by the Commission a list of Industrial Users who by definition are in significant noncompliance during the previous 12 months with applicable pretreatment requirements.

**811.2 Conditions for Non-Compliance.** For the purpose of this Section a Significant Industrial User (or any Industrial User which violates Sections 811.2.3, 811.2.4 and 811.2.8) shall be in significant noncompliance if its violation meets 1 or more of the following criteria:

**811.2.1 Exceeding Discharge Limits.** Chronic violations of wastewater discharge limits, defined here as those in which 66-percent or more of all of the measurements taken during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l).

**811.2.2 Exceeding Technical Review Criteria.** Technical Review Criteria (TRC) violations, defined here as those in which 33-percent or more of all the measurements for each pollutant parameter taken during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil and grease, and TRC=1.2 for all other pollutants except pH).

**811.2.3 POTW Pass-Through.** Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Commission determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of POTW personnel or the general public).

**811.2.4 Endangerment.** Any discharge of a pollutant that has caused imminent endangerment to human health, welfare, or to the environment or has resulted in the Commission's exercise of its emergency authority under 40 CFR 403.8(f)(1)(vi)(B) to halt or prevent such a discharge.

**811.2.5 Failure to Meet Compliance Dates.** Failure to meet, within 90-days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.

**811.2.6 Failure to Submit Documentation.** Failure to provide within 30-days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, certification statements, plans, representative data and reports on compliance with compliance schedules or other information requested by the Commission; or failure to notify the Commission of modifications to processes, wastewater constituents, and pretreatment systems.

**811.2.7 Accurate Reporting.** Failure to accurately report noncompliance.

**811.2.8 Other Violations.** Any other violation or group of violations, which may include a violation of Best Management Practices, which the Commission determines may adversely affect the operation or implementation of the local pretreatment program.

## **SECTION 812 LIABILITY FOR EXPENSES**

**812.1 Repair Reimbursement.** The property owner, tenant, or Industrial User shall reimburse the Commission for the cost of any work or repair made necessary by the neglect or action of the property owner, tenant, or Industrial User resulting from the discharge of an industrial waste.

**812.2 Activity Reimbursement.** The property owner, tenant, or Industrial User shall reimburse the Commission for all costs associated with investigations, monitoring, analyses, or enforcement actions resulting from violation(s) of Commission requirements or standards.

## SECTION 813 NOTICE

**813.1 Immediate Notification.** In the event of any accident, negligence, slug loading, or other occurrence which may result in a violation of pretreatment standards, permit conditions, or could cause a problem with the collection systems or treatment processes, the Industrial User shall immediately notify the Commission and any applicable outside jurisdiction, of the incident. The notification shall include location of discharge(s), type, concentration and volume of waste, and corrective action being taken.

**813.2 Written Notification.** Within 5-days following an accidental discharge, the User shall submit to the Commission (and any applicable outside jurisdiction) a detailed written report describing the cause of the discharge and the measures to be taken by the User to prevent similar future occurrences. Such notification shall *not* relieve the User of any expense, loss, damage, or other liability which may be incurred as a result of the discharge, nor shall such notification relieve the User of any fines, civil penalties, or other liability which may be imposed by this regulation or other applicable law.

## SECTION 814 HAULED WASTES

**814.1 Applicability.** The regulations in this subsection shall pertain to companies, individuals or partnerships hereinafter referred to as Waste Haulers, engaged in the business of transportation and disposal of domestic wastes or grease from food service establishments. These regulations shall also apply to businesses as deemed appropriate by the Commission including, but not limited to, grease interceptor cleaning, buses, carpet cleaning and mobile food service companies.

### 814.1.1 Waste Hauler Permits.

**814.1.1.1 Waste Hauler Discharge Permit.** Individuals, partnerships, or corporations engaged in the cleaning of septic tanks, holding tanks or grease interceptors shall apply for a **Waste Hauler Discharge Permit** for *each* truck used in *discharging* wastes at the waste disposal sites designated by the Commission.

**814.1.1.2 Zero Discharge Permit.** Individuals, partnerships, or corporations engaged in the cleaning of grease interceptors within the WSSC service area shall apply for a **Zero Discharge Permit** if they elect to dispose of this waste at a waste disposal site outside of the Commission's jurisdiction. A Zero Discharge Permit is *not* an authorization to discharge at the Commission's disposal sites.

**814.1.2 Terms and Conditions.** Waste Haulers shall comply with all conditions for issuance of a Waste Hauler Discharge Permit or a Zero Discharge Permit as established by the Commission. Upon receiving a permit, the Waste Hauler shall comply with all permit conditions.

Discharge of waste without a Waste Hauler Discharge Permit shall be prohibited. (Recreational vehicles shall be *exempt* from obtaining a Waste Hauler Discharge Permit.)

The cleaning of grease interceptors within the WSSC service area without the appropriate permit shall be prohibited. (Food Service Establishments that self-clean flow-based grease interceptors *shall not* be required to obtain a permit).

**814.1.3 Non-Domestic Wastes.** Wastes from wastewater treatment plants or non-domestic sources shall not be discharged at the designated disposal sites unless specifically authorized in writing by the Commission. The contents of grease abatement systems at FSEs are considered domestic wastewater for the purposes of this section,

**814.1.4 Point of Discharge.** Discharge of waste at any place in the sewer collection system other than those designated by the Commission shall be prohibited.

**814.2 Permit Suspension, Termination, or Denial.** The Waste Hauler Discharge Permit or Zero Discharge Permit may be suspended, terminated, or denied for good cause including, but not limited to, the following:

**814.2.1 Non-Compatible Wastes.** Information indicating that the permitted discharge poses a threat to the collection system, treatment system, or Commission personnel

**814.2.2 Permit Violations.** Violation of any terms or conditions of the Waste Hauler Discharge Permit or Zero Discharge Permit.

**814.2.3 Misrepresentation.** Obtaining a Waste Hauler Discharge Permit or Zero Discharge Permit by misrepresentation or failure to disclose fully, all relevant facts.

**814.2.4 Failure to Obtain a Permit.** Cleaning a grease interceptor or discharging any waste to the collection system without first securing the appropriate permit.

**814.2.5 Discharge of Non-Domestic Wastes.** The unauthorized discharge of waste from non-domestic sources at a Commission disposal site.

**814.2.6 Denying Access by the Commission.** Denying Commission personnel access to a vehicle or its contents for purposes of collecting a sample and/or obtaining instrument readings (i.e. % LEL, pH, H<sub>2</sub>S, etc.).

**814.2.7 Failure to Provide Records.** Failure to provide paper records as described in section 814.3.3.

**814.2.8 Other Licenses and Permits.** Failure to obtain or maintain appropriate current hauling licenses or permits from Federal, State, or local agencies.

**814.2.9 Fats, Oils, and Grease Discharges.** Discharge of greasy wastewater at non-designated disposal sites.

**814.2.10 Misconduct.** Use of abusive language, threats, mischievous or criminal acts directed toward a WSSC Code Official, or Commission personnel, while they are performing their official duties.

**814.2.11 Outstanding Judgments.** Failure to render monetary payment to WSSC for judgments obtained by WSSC against Waste Haulers.

### 814.3 Permit Conditions

**814.3.1 Disposal Sites.** *Only* disposal sites designated by the Commission shall be used for the discharge of waste from a permitted vehicle into the Commission's sewer system.

**814.3.2 Permit Conditions.** Waste Haulers shall comply with *all* permit conditions.

**814.3.3 Requests for Information.** The Commission, or its representative, may request information concerning the nature or origin of the contents of any permitted vehicle. The permittee shall be required to comply with all such requests including information concerning the name, address, date of the waste pick-up, disposal points, volumes, and waste characteristics. This information shall be in the possession of the driver at the time of discharge. The Commission may also request additional information related to the use of its designated waste disposal sites.

**814.3.4 Permit Transferability.** Permits shall *not* be transferable without approval from the Commission. The permittee shall notify the Commission immediately if their State license plate or registration has changed on any of their permitted vehicles.

**814.3.5 Mixed Wastes and Multi-Use Vehicles.** The Commission shall reserve the right to refuse acceptance of any load. Dischargers may be required to cease unloading operations at any time. Permitted tank trucks may not be used to transport potable water and they shall not be allowed to make any connection to the Commission's water supply system. In the case of composite loads, any part of the load that is restricted or prohibited shall make the *entire* load unacceptable for discharge.

**814.3.6 Sampling.** Upon request, any permitted vehicle shall provide Commission personnel with access to the wastewater contained in the vehicle. Commission personnel may characterize the waste through the collection of samples and/or readings in a manner and number as specified by the Commission.

**814.3.7 Notifications of Spills and Clean-up.** The waste haulers shall notify WSSC immediately, via phone, of all spill occurrences followed by filing, in-writing within 7

days, a report detailing the reason for the spill, the areas impacted, clean-up activities, and whether the spill reached any environmentally sensitive area such as parks, residential, commercial or institutional areas, streams, rivers, lakes, ponds or storm drain. Any corrective actions taken to avoid the occurrences of the spills in future should also be a part of this reporting. In the case where the spill occurs at a FSE, a copy of this report shall also be provided to the owner of the grease interceptor.

**814.3.8 Additional Conditions.** The Commission reserves the right to establish permit conditions in addition to those appearing in these regulations.

#### **814.4 Penalties**

**814.4.1 Civil Citations.** Any violation of the above conditions and those specified in this Code, shall be cause for issuance of a State of Maryland civil citation (\$250.00-\$1000.00) and/or suspension or revocation of all permits assigned to the permittee upon written notice of such violation. Such violations may be cause for legal prosecution by the Commission under provisions of this Code. The following violations shall be addressed with a civil citation, including but not limited to:

- (1) Discharging without a hose.
- (2) Discharging without a permit.
- (3) Unauthorized transfer of permit.
- (4) Creating unsanitary conditions through spillage of wastes.
- (5) Failure to comply with grease interceptor cleaning procedures.

**814.4.2 Permit Revocation.** The discharge of any *unapproved* waste from a non-domestic source at a Commission disposal site shall result in the immediate revocation of *all* discharge permits held by the permittee.

## **SECTION 815 FEES**

**815.1 Scope.** The Commission shall establish charges and fees that shall include but not be limited to:

**815.1.1 Commission Pretreatment Program.** Fees for reimbursement of costs of setting up and operating the Commission's Pretreatment Program.

**815.1.2 Monitoring Activities.** Fees for monitoring, inspection, and surveillance activities.

**815.1.3 Permits.** Fees for permit applications;

**815.1.4 Legal.** Legal fees; and

**815.1.5 Other.** Other fees as the Commission may deem necessary to carry out the requirements contained herein.

**SECTION 816**  
**UPSET PROVISION**  
(Categorical Industrial Users only)

**816.1 Scope.** An upset, as defined by the Federal general pretreatment regulations in 40 CFR Part 403, is an exceptional incident in which there is *unintentional and temporary* non-compliance with categorical pretreatment standards because of factors beyond the reasonable control of the Industrial User. An upset shall not include non-compliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

**816.2 Upset Defense.** An upset may be used as an affirmative defense to an action brought for noncompliance with categorical pretreatment standards only if the Industrial User demonstrates, through properly signed contemporaneous logs, or other relevant evidence, that includes the following:

**816.2.1 Specific Cause.** An upset occurred and the Industrial User can identify the specific cause(s) of the upset.

**816.2.2 Prudent Operation.** The permitted facility was, at the time, being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures.

**816.2.3 Timely Reporting.** The Industrial User has submitted the following information to the Commission within 24-hours of becoming aware of the upset; if this information is provided orally, a written submission shall follow within 5-days: A description of the indirect discharge and cause of noncompliance; the period of noncompliance, including exact dates and times, or if not corrected, the anticipated time that the noncompliance is expected to continue; steps being taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

**816.2.4 Burden of Proof.** In any enforcement proceeding, the Industrial User seeking to establish the occurrence of an upset shall have the burden of proof.

**816.2.5 Legal Remedy.** Industrial Users shall have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with categorical pretreatment standards.

**816.2.6 Temporary Shutdown.** The Industrial User shall control production or all discharges to the extent necessary to maintain compliance with categorical pretreatment standards upon reduction, loss, or failure of its treatment facility until the facility is restored, or an alternative method of treatment is provided. This requirement shall apply in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

## **SECTION 817 BYPASS PROVISION**

**817.1 Emergency Limits.** Bypass of an Industrial User's treatment facility shall be *prohibited* unless it is unavoidable to prevent loss of life, personal injury, or severe property damage; or no feasible alternative exists, such as the use of auxiliary treatment facilities.

**817.2 Essential Maintenance.** The Industrial User may allow any bypass to occur which shall not cause pretreatment standards or requirements to be violated, but only if it also is for essential maintenance to assure efficient operations. If bypass is needed for maintenance, the Industrial User shall notify the Commission of necessary maintenance within 24-hours. Industrial User shall submit data documenting that standards were being met and shall submit written a report within 30-days of the event.

### **817.3 Notice**

**817.3.1 Written Notice.** If an Industrial User knows in advance of the need for a bypass, the User shall submit prior written notice to the Commission, a minimum of 10-days before the date of the bypass.

**817.3.2 Verbal Notice.** An Industrial User shall submit verbal notice of an unanticipated bypass that exceeds applicable pretreatment standards to the Commission within 24-hours from the time the Industrial User becomes aware of the bypass. A written submission shall also be provided within 5-days of the time the Industrial User becomes aware of the cause. The written submission shall include the duration of the bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass. The Commission may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

**817.4 Exceptions.** The Commission shall take enforcement action against an Industrial User for a bypass unless:

**817.4.1 Unavoidable.** The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

**817.4.2 No Alternatives.** There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition shall not be satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.

**817.4.3 Notices Submitted.** The Industrial User submitted notices as required cited in Section 817.3.

**817.5 Commission Authorization.** The Commission may approve an anticipated bypass, after considering its adverse effects, if the Commission determines that it shall meet the 3 conditions cited in Section 817.4.

## **SECTION 818 FOOD SERVICE ESTABLISHMENT DISCHARGE REQUIREMENTS**

**818.1 Applicability.** The regulations in this Section shall apply to establishments where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars, or any other commercial operation that has the potential to discharge grease laden wastewater; hereafter referred to as Food Service Establishments (FSE).

**818.2 Permit Required.** All Food Service Establishments (FSE) shall apply to the Commission for a FSE Wastewater Discharge Permit. Existing FSEs shall apply for a Discharge Permit within 30 days of receiving an application. Failure to return the completed application shall subject the FSE to enforcement action. New FSEs shall obtain a Discharge Permit prior to discharging.

**818.2.1 FSE Wastewater Discharge Permit Requirements.** The FSE Wastewater Discharge Permit contains requirements necessary for the Commission to assess and ensure compliance with these Regulations. The FSE Wastewater Discharge Permit shall, at a minimum, contain the following:

- (1) Best Management Practices (BMPs) for controlling FOG discharges
- (2) Grease abatement system operations and maintenance standards, when applicable

- (3) On-site record keeping requirements (see Section 808.1.3)
- (4) Statement of non-transferability.
- (5) The FSE Wastewater Discharge Permit may contain other conditions as deemed appropriate by the Commission to ensure compliance with all applicable regulations.

**818.2.2 FSE Wastewater Discharge Permit Modifications.** The Commission may modify the FSE Wastewater Discharge Permit for good cause including, but not limited to, the following:

- (1) To incorporate any new pretreatment standards or requirements.
- (2) To address significant alterations or additions to the FSE's operations since the time of FSE Wastewater Discharge Permit issuance.

**818.2.3 Permit Transferability.** The FSE Wastewater Discharge Permit shall not be reassigned or transferred without prior written approval by the Commission.

**818.2.4 Discharge Fee.** Issuance and validity of the FSE Wastewater Discharge Permit shall be conditional on payment by the FSE of the annual Discharge Fee as determined by the Commission. Failure to pay the Discharge Fee shall render the FSE Wastewater Discharge permit invalid.

**818.2.5 Other Permits.** Food Service Establishments shall maintain the required County Health Department permits at all times. Failure to maintain health department permits may render the FSE Wastewater Discharge permit invalid.

**818.3 Inspections.** All Food Service Establishments are subject to routine inspections as determined by the Commission. (see also Section 807)

**818.4 Grease Abatement System Installation and Maintenance Requirements, General.** When directed by the Commission, FSEs shall install and maintain a WSSC approved grease abatement system that meets or exceeds minimum requirements cited in Section 302.10.

**818.4.1 Wastewater Discharge Permittee/Property Owner's Responsibility.** Grease Abatement Systems shall be maintained in efficient operation at all times by the owner/operator at the owner's/operator's expense.

**818.4.2 25% Rule.** It shall be the Permittee's/Property Owner's responsibility to ensure that the accumulation of FOG and solids does not exceed 25% of the liquid retention capacity of the Grease Abatement System. If a grease abatement system is specifically designed to function properly with FOG and solids accumulation

greater than 25%, the allowable accumulation of FOG and solids may be adjusted by WSSC on a case-by-case basis.

**818.4.3 Maintenance Interval.** The minimum maintenance and cleaning frequency for Volume-Based Grease Interceptors shall be quarterly or by the "25% rule", whichever is more stringent. The maintenance and cleaning for Flow-Based Grease Interceptors shall be conducted pursuant to manufacturers' recommendations or by the "25% rule," whichever is more stringent. Deviation from required maintenance intervals less frequent than minimums determined by the Commission shall be approved by the Commission in writing.

**818.5 Waste Hauler.** A valid WSSC Waste Hauler Permit is required for all Waste Haulers performing pumping and cleaning services on Grease Abatement Systems located in the WSSC service area. Pumping and disposal of the contents shall be performed in accordance with conditions of the waste hauler discharge permit cited in Section 814.

**818.6 Use of Additives.** The introduction into the plumbing system of any surfactant, solvent, emulsifier, free enzymes or material that allows the grease to pass from the grease abatement system into the collection system is prohibited.

**818.6.1** Use of a biological additive may be conditionally allowed with WSSC's approval if the product manufacturer or distributor can demonstrate to the satisfaction of the WSSC that:

- (1) The additive will not interfere with the normal operation of the grease interceptor.
- (2) The additive will not interfere with operations of the receiving wastewater treatment plant.
- (3) The use of the additive does not increase the potential for FOG to be discharged to the sanitary sewer.
- (4) The only active ingredients are bacterial products.
- (5) The use of the additive will not cause foaming in the sanitary sewer.
- (6) The pH of the additive is between 6 and 10.

**818.6.2** The use of an additive will not substitute for the need for proper cleaning or maintenance of the grease abatement device and cannot be used as justification for altering the cleaning frequency.

**818.6.3** Additives that are added to drain lines that do not connect to a grease abatement device are not impacted by this restriction.

**818.6.4** Normal kitchen and dish cleaning products are not considered additives for the purpose of this section.

**818.7 On-Site Plumbing System Maintenance.** The on-site plumbing system for commercial and multi-unit residential properties shall be maintained by, and at the expense of the property owner; including cleaning of the system due to grease related discharges. All jetted material must be removed at the nearest downstream manhole. Chemical cleaning of sewer lines is prohibited, except in conjunction with a jetting operation.

**818.8 Violations.**

**818.8.1** Failure to properly maintain a grease abatement system or to present records of maintenance; removal and/or tampering with the flow control device; or failure to comply with any condition of a FSE wastewater discharge permit shall be a violation of this Code, and shall subject the permittee to penalties and other enforcement action as provided for in the Commission's FSE Enforcement Response Plan.

**818.8.2** Repeated violations for failure to clean or maintain a flow-based grease interceptor may result in a requirement to install a volume-based interceptor as provided for in the Commission's FSE Enforcement Response Plan.

**818.8.3** Repeated violations for failure to clean or maintain a volume-based grease interceptor will subject the FSE to increased enforcement as provided for in the Commission's FSE Enforcement Response Plan.

**CHAPTER 9**  
**WATER RE-USE SYSTEMS**  
**NON-POTABLE WATER DERIVED FROM**  
**VARIOUS SOURCES**

**SECTION 901**  
**GENERAL**

**901.1 Scope.** Subject to outside approvals pursuant to 901.2 of this Code, this Chapter shall provide provisions to facilitate certain non-potable water uses in non-residential applications only. Such uses may include, but are not limited to, toilet and urinal flushing, mechanical systems and equipment cooling. Certain applications of non-potable water (e.g., irrigation [sub-surface, drip or spray], general hose bibb applications or automatic and/or self service vehicle washing operations) may require additional provisions to ensure safety. This Code does not provide plumbing fixture guidelines for such applications; approvals and provisions shall be provided by the authority having jurisdiction.

**901.1.1 Exceptions.** This chapter is not applicable to process water recycling which is unique to, and self contained within, a specific water utilizing process such as, but not limited to, vehicle washing, laundering, ice melt, or similar uses. These regulations also do not apply to residential use of rain barrels for outside irrigation, where the system does not come in contact with the building's plumbing system.

**901.2 Additional Outside Jurisdiction Requirements.** All *centralized non-potable water* use projects and *decentralized non-potable water* use projects must *first* be authorized by the the appropriate county agencies (authority having jurisdiction). The appropriate authority having jurisdiction is responsible for oversight of the design, operation, maintenance, monitoring, recordkeeping and reporting requirements of the non-potable water projects. This includes establishing safe-minimum water quality standards for *each intended non-potable water application* and monitoring for compliance with the standards. At all times, in addition to the local county standards, all applicable federal and state water quality standards shall be met.

**901.3 Definitions.** In addition to the definitions included in Chapter 2 of this code, the following definitions are specifically applicable to the provisions of this Chapter 9, Water Re-Use Systems.

**901.3.1 Non-Potable Water.** Water which is *not reliably* safe for drinking, personal use or culinary related utilization.

**901.3.2 Centralized Non-Potable Water Systems.** Non-potable water that is treated and distributed from a central location, e.g., a wastewater treatment plant

**901.3.3 Decentralized Non-Potable Water Systems.** Non-potable water that is collected, treated and used on location.

**901.3.4 Water Re-Use Systems.** Varieties of water recycling from the following sources: wastewater treatment plant effluent; graywater; rainwater; ground water; condensate; process and equipment discharge.

**901.3.4.1 Reclaimed Water.** Enhanced wastewater effluent produced at a *centralized* municipal wastewater treatment plant, resulting in recycled water suitable for various, yet specific non-potable uses.

**901.3.4.2 Graywater System.** A *decentralized* water re-use system that employs on-site treatment of the discharge from specific plumbing fixtures such as bathtubs, showers, lavatory sinks, clothes washers, laundry tubs/trays, etc. thereby producing recycled water for various specific non-potable uses.

**901.3.4.3 Rainwater Harvesting System.** A *decentralized* water re-use system that employs on-site treatment of captured rainwater from rooftop and similar elevated decking areas thereby producing recycled water for various specific non-potable uses.

**901.3.4.4 Groundwater Re-Use System.** A *decentralized* water re-use system that employs on-site treatment of captured groundwater from foundation drainage systems thereby producing recycled water for various specific non-potable uses.

**901.3.4.5 Condensate Re-Use System.** A *decentralized* water re-use system that employs on-site treatment of captured condensate from refrigeration and air conditioning systems thereby producing recycled water for various specific non-potable uses.

**901.3.4.6 Process Water Re-Use System.** A *decentralized* water re-use system that employs on-site treatment of captured process wastewater from various systems thereby producing recycled water for various specific non-potable uses.

**901.3.5 Blackwater.** A sanitary sewer flow containing human waste such a fecal matter or urine, or kitchen waste water.

**901.3.6 Non-Residential Building or Occupancy.** The classification non-residential shall apply to any building type or occupancy that does not meet the parameters of a Group R-3 occupancy as set forth in the International Building Code. Group R-3 classifications include single family homes and row style townhomes (single dwelling unit from bottom floor to top floor). All other building types or occupancies shall be deemed non-residential.

**901.4 Limitations.** WSSC and this code do not regulate the production and safety of non-potable water or ensure that non-potable water quality standards are being met.

## SECTION 902 PERMIT

**902.1 Permit.** The installation of *Water Re-Use Systems* shall require a Long Form Permit where any such system utilizes any one of the following conditions:

**902.1.1 Potable Water Connection.** Any connection regardless of intended use: manual or automatic feed; emergency back-up or routine supplementation.

**902.1.2 Sanitary Drainage Connection.** Any connection, whether direct or indirect.

**902.1.3 Use Within the Building.** Any utilization of non-potable water within the building, including but not limited to, toilet and urinal flushing; mechanical system make-up; equipment cooling; etc.

**902.1.4 Shared Space.** Where any Water Re-Use System or associated collection and/or distribution piping shares space with any other plumbing or mechanical system components.

**902.2 Plans Review Required.** Design plans, as required per 904.1 below, shall be submitted along with the required permit application for WSSC review.

## SECTION 903 BACKFLOW PREVENTION AND METERING

**903.1 Required Backflow Assembly.** The interconnection between a potable water distribution system and a water re-use system shall be protected against backflow with an ASSE 1013 RPZA backflow assembly or equivalent. The interconnection shall be limited to whole system supply connection(s) and not permitted on a per fixture or a per equipment basis.

**903.2 Required WSSC Meter.** In general, water re-use systems shall be metered to account for discharges to the sanitary sewer as follows:

**903.2.1 Standard Details.** Sewer use meters shall be installed following WSSC Standard Details.

**903.2.2 Location.** Where possible, the meter shall be located downstream of the water treatment process. The meter shall be located within a pressurized section of the water re-use treatment system and downstream of a 100 micron filter.

**903.2.3 Treatment Waste and Backwash.** Liquid waste or backwash generated from the non-potable water treatment process shall be:

**903.2.3.1** Directed back to the head of the treatment process, where possible; or

**903.2.3.2** Metered and discharged to the sanitary sewer.

**903.2.3.3** All discharges to the Sanitary Sewer System must comply with the WSSC Regulations outlined in Chapter 8, Industrial and Special Waste.

**903.2.3.4** Where these conditions cannot be met, the waste shall be hauled away and properly disposed of.

**903.2.4 Exception for Graywater Systems.** Where graywater or similar systems receive the waste stream from plumbing fixtures or equipment that is served with WSSC metered water, additional sewer use metering is not required.

## **SECTION 904 SYSTEM DESIGN**

**904.1 General.** Water Re-Use Treatment Systems and associated collection and distribution piping shall be designed by a registered professional engineer.

**904.1.1 Construction Documents.** Design plans shall include plan views, including exterior tanks and associated piping, complete elevation schematics, and corresponding equipment schedules. Zoom and scale shall be adequately enlarged to facilitate a clear understanding of all equipment, appurtenances and flow direction.

**904.2 Sources.** The sources of water for water re-use systems shall include, but are not limited to, as follows:

**904.2.1 Graywater.** Bathtubs, showers, lavatory sinks, clothes washers and laundry trays.

**904.2.2 Rainwater.** Rooftop drainage systems; elevated patios, decks, and similar.

**904.2.3 Groundwater.** Subsurface foundation drain systems and similar.

**904.2.4 Condensate.** Refrigeration and air conditioning condensate.

**904.2.5 Clear Process Waste.** Equipment cooling, steam recovery, ice melt, fire pump test, and similar “clear” process waste.

**904.3 Prohibited Sources.**

**904.3.1 Blackwater.** Urine, fecal waste, kitchen waste, and similar.

**904.3.2 Blood Borne Waste.** Hospitals, Laboratories, Morgues.

**904.3.3 Industrial Waste.** Untreated industrial waste.

**904.3.4 Surface Water.** At grade surface run-off or at grade ponded/standing water

**904.3.5 Vehicle Generated Waste.** Parking lots, decks, or garages; vehicle service centers; vehicle washing operations; and similar.

**904.4 Reclaimed Water.** Treated wastewater treatment plant effluent differs from other water re-use systems in that the treatment process is performed at the municipal level, offsite from the use. It is then piped to the property in a municipal utility approved manner, but then is distributed and utilized on property as required of other water re-use systems described in this code. Uses for reclaimed water are limited to the uses set forth by the Maryland Department of the Environment. This use is synonymous with *centralized non-potable water* systems.

**904.5 Minimum Water Quality Standard.** It is the responsibility of the appropriate State and County Government Agencies to establish water quality standards. At a minimum, non potable water produced for plumbing, mechanical and industrial process as allowed by this Code, shall meet the parameters set forth by the Maryland Department of the Environment – Class IV effluent water quality standard, or other equivalent standards established by local authorities.

**904.6 Collection Piping.** All collection piping within a building shall be designed and installed in accordance with IPC Chapters 3, 7, 9 & 10 and this Code. Marking and labeling shall be required of all collection piping, above and below grade, whether under gravity flow or pump pressure conditions.

**904.6.1 Graywater Collection Piping.** Graywater collection piping systems and associated collection reservoirs/sumps shall be protected from the sanitary sewer system by segregation, an air gap or a backwater valve.

#### **904.7 Distribution Piping.**

**904.7.1 Design and Installation.** All distribution piping shall be designed and installed in accordance with IPC Chapter 3 & 6 and this code.

**904.7.2 Marking and Labeling.** All piping *and* pipe covering shall be marked and labeled pursuant to IPC Section 608.8. Fixture and equipment supply shut-off valves shall be tagged to alert service technicians of the origin and nature of the non-potable water.

**904.7.3 Potable Water Back-up.** Potable water shall be interconnected in adequate supply and volume to support the fixture demand in the event of system failure or removal. See 903.1.

**904.7.4 Water Coloring.** Non-potable water does not require coloring. Where coloring is specified by the designer, caution shall be used to ensure permanent staining of fixtures will not occur.

**904.8 Storage Tanks.**

**904.8.1 Construction.** When installed above or below grade, storage tanks shall be constructed to withstand internal and external forces whether the tank is empty or full.

**904.8.2 Drain and Overflow.** The drain and overflow of a storage tank to the sanitary sewer is only allowed for graywater systems and similar (e.g.; reclaimed water and process water), where upstream processes utilized WSSC metered water. All other “un-metered” discharges (e.g., rain water, condensate, and groundwater) shall be routed to the storm water system in accordance with relevant standards.

**904.8.3 Air Gap or Backwater Valve.** Where possible, an air gap shall be provided between the drain/overflow of a storage tank and its sanitary drain receptor. In lieu of an air gap, a backwater valve may be installed downstream of a storage tank directly discharging to the sanitary sewer to protect the tank from any possible back-up within the building drainage system. When directly connected, both drain and overflow shall discharge into a vented trap. Whether direct or indirect, traps serving such storage tanks shall include automatic trap priming devices.

**904.8.4 Storm Sewer Connection.** When applicable, water re-use collection piping, tanks, drains and overflows shall be protected from storm sewer backflow by air gap or a backwater valve(s).

**904.9 Roof Washer System.** Rainwater harvesting systems shall be outfitted with debris excluders or similar devices. It is recommended that roof washing systems be designed to automatically divert a sufficient volume of initial rainfall to effectively clean the roof or collection surface of undesired debris and contaminants.

**904.10 Combination Systems.** Multiple sources may be utilized to provide make-up to a single non-potable water treatment systems as follows:

**904.10.1 Collection System Segregation.** Each type of source water shall be independently routed to the treatment and storage components, unless otherwise approved by the code official.

**904.10.2 Metering.** Prior to joining source waters together for treatment, metering of all “non-metered” source waters shall be accomplished. Source waters shall be filtered through a minimum of a 100 micron filter.

**904.10.3 Overflow and Backwash.** Collection overflows and filtration backwash water shall be routed to their required corresponding collection systems (e.g.: rainwater to storm sewer; graywater to sanitary sewer. etc.)

## SECTION 905 DISCLOSURE AND SIGNAGE

**905.1 Distribution Piping.** Distribution piping and supply shut-off valves shall be marked, labeled and tagged in accordance with Section 904.7.2.

**905.2 Commercial, Industrial and Institutional Restrooms.** Each restroom in these various occupancies shall have, at a minimum, one disclosure sign posted in a conspicuous location. The lettering shall be highly visible and a minimum of a ½” in height on a contrasting background with the following text: *Caution: Non-Potable Water Used for Toilet and Urinal [where applicable] Flushing*”

**905.3 Water Re-use Equipment Room.** In all water re-use equipment rooms there shall be a disclosure sign, or signs as needed. Each sign provided shall have highly visible lettering a minimum of a ½” in height on a contrasting background with the following text: *“This building utilizes a water re-use system that produces non-potable water for [describe use]. Prior to commencing any plumbing or mechanical work on premises, by law you must consult with the system operator.”*

## SECTION 906 OPERATIONS AND MAINTENANCE

**906.1 Approved Operators.** Water Re-use Systems shall be operated and maintained by qualified technicians. Licensing and qualification credentials for technicians, if any, will be established by the county government agency having jurisdiction.

**906.2 Operation, Maintenance, Recordation & Reporting.** Operation, maintenance, recordation & reporting shall be performed consistent with the approvals to operate the system granted by the jurisdiction having authority as described in Section 901. Failure to properly operate, maintain, record and/or report the system shall constitute a violation of this Code and the water re-use system may be subject to a shut-down order requiring a disconnection of the system and supplying all related plumbing fixtures with potable water.

**906.3 Minimum Water Quality.** When minimum required water quality standards cannot be met, the water re-use systems shall be completely by-passed and supplied with potable water through an adequately sized interconnection. Distribution piping shall be purged and disinfected as needed.

**906.4 System Shut-down and Removal.** Long term shut down or removal of a water re-use system shall be done under a Short Form Permit. Collection piping shall be re-routed directly to the sanitary or storm water systems as applicable. Interconnection between the treatment system and the potable water mains *shall be* permanently divorced. Existing distribution piping shall be purged and disinfected as needed. Re-activation requires the same approvals as a new system.

**906.5 Conveyance of Non-Potable Water System During Changes in Ownership and/or Building Occupancy.** The new owner or tenant shall be notified of all the details related to the non-potable water system including: operations, maintenance, monitoring, recordkeeping and reporting documents. All responsibilities shall be officially transferred to, and carried-out by, the new owner/tenant and the jurisdiction having authority shall be notified of the changes in ownership.

**906.6 Detailed Guidelines.** The Environmental Protection Agency's 2012 Water Reuse Guidelines and the 2011 National Sanitation Foundation – NSF/ANSI 350 may be utilized for additional detailed guidelines for design, operation, maintenance and monitoring requirements of the non-potable water systems.



# APPENDIX A

## RESIDENTIAL SYSTEM DEVELOPMENT CHARGE

Rates Effective July 1, 1999

Fixture Code Revisions Effective May 1, 2007

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
R0	Bathtub (Residential)	3.00	\$ 264	1.60	\$ 184	\$ 448
<b>4B</b>	<b>BFP - Testable</b>	-	\$ -	-	\$ -	\$ -
<b>4C</b>	<b>BFP - Non-Testable</b>	-	\$ -	-	\$ -	\$ -
R1	Bidet	1.00	\$ 88	1.40	\$ 161	\$ 249
RW	Clothes Washer Standpipe/Box	2.00	\$ 176	1.60	\$ 184	\$ 360
RR	Clothes Washer (water only)	2.00	\$ 176			\$ 176
R2	Dishwasher (Residential)	1.00	\$ 88	1.60	\$ 184	\$ 272
68	Ejector Pump	-	\$ -	-	\$ -	\$ -
<b>F3</b>	<b>Faucet - Pot Filler</b>	<b>1.00</b>	<b>\$ 88</b>	-	<b>\$ -</b>	<b>\$ 88</b>
R5	Floor Drain (primed)	-	\$ -	-	\$ -	\$ -
GP	Grinder Pump - Unknown Type	-	\$ -	-	\$ -	\$ -
R7	Hose Bibb	3.00	\$ 264	-	\$ -	\$ 264
RP	Hose Bibb on Well	-	\$ -	-	\$ -	\$ -
R9	Humidifier (Residential type)	-	\$ -	-	\$ -	\$ -
RA	Ice Maker (Residential type)	-	\$ -	-	\$ -	\$ -
RC	Instant Hot	-	\$ -	-	\$ -	\$ -
RH	Lawn Sprinkler - 3/4" Water Supply	4.00	\$ 352	-	\$ -	\$ 352
RI	Lawn Sprinkler -1" & Larger Water Supply	10.00	\$ 880	-	\$ -	\$ 880
MO	Modular Unit	-	\$ -	-	\$ -	\$ -
RJ	Pool Fill	4.00	\$ 352	-	\$ -	\$ 352
RK	Sauna (with water) / Steamer	0.50	\$ 44	-	\$ -	\$ 44
RL	Shower Stall	2.00	\$ 176	1.40	\$ 161	\$ 337
RM	Sink (Bar)	1.00	\$ 88	1.40	\$ 161	\$ 249
RN	Sink (Kitchen)	2.00	\$ 176	1.60	\$ 184	\$ 360
RF	Sink (Laundry Tray)	2.00	\$ 176	1.60	\$ 184	\$ 360
RG	Sink (Lavatory)	1.00	\$ 88	0.90	\$ 104	\$ 192
RB	Water Closet (Flush Tank 1.6 gpf)	2.00	\$ 176	2.00	\$ 230	\$ 406
WS	Water Conditioner	-	\$ -	-	\$ -	\$ -
60	Water Heater - Not Gas	-	\$ -	-	\$ -	\$ -
8F	Gas - Boiler (under 200K)	-	\$ -	-	\$ -	\$ -
XB	Gas - Boiler (200K+)	-	\$ -	-	\$ -	\$ -
VP	Gas - Cooking Equipment	-	\$ -	-	\$ -	\$ -
87	Gas - Dryer	-	\$ -	-	\$ -	\$ -
VQ	Gas - Generator	-	\$ -	-	\$ -	\$ -
VN	Gas - Heater (Construction)	-	\$ -	-	\$ -	\$ -
8T	Gas - Heater (Decorative)	-	\$ -	-	\$ -	\$ -
6A	Gas - Heater (Pool)	-	\$ -	-	\$ -	\$ -
<b>8N</b>	<b>Gas - Heating Equipment</b>	-	<b>\$ -</b>	-	<b>\$ -</b>	<b>\$ -</b>
<b>85</b>	<b>Gas - Lab Burner</b>	-	<b>\$ -</b>	-	<b>\$ -</b>	<b>\$ -</b>
8G	Gas - Other	-	\$ -	-	\$ -	\$ -

**RESIDENTIAL SDC**

<b>XX</b>	<b>Gas - Paint Booth</b>	-	\$ -	-	\$ -	\$ -
9D	Gas - Test	-	\$ -	-	\$ -	\$ -
8D	Gas - Water Heater (under 200K)	-	\$ -	-	\$ -	\$ -
XD	Gas - Water Heater (200K+)	-	\$ -	-	\$ -	\$ -

Dwelling Unit Type	SDC Water Charge	SDC Sewer Charge	SDC Combined Charge
Apartment (per unit)	\$ 896	\$ 1,140	\$ 2,036
1 - 2 Toilets / Residential Dwelling Unit	\$ 1,344	\$ 1,710	\$ 3,054
3 - 4 Toilets / Residential Dwelling Unit	\$ 2,240	\$ 2,850	\$ 5,090
5 Toilets / Residential Dwelling Unit	\$ 3,135	\$ 3,991	\$ 7,126
6 or More Toilets / Residential Dwelling Unit	Per Fixture Basis		

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- Fixture unit values shown in this chart shall be used **only** for calculating System Development Charges. For system design and hydraulic calculations, use the fixture unit values shown in the International model codes.
- For fixtures not listed, the Code Official shall use the value of a fixture with similar flow characteristics.

## APPENDIX B

### NON-RESIDENTIAL SYSTEM DEVELOPMENT CHARGE

Rates Effective July 1, 1999

Fixture Code Revisions Effective May 1, 2007

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
7N	Backwash Surge Tank (2" max. drain)	-	\$ -	3.00	\$ 345	\$ 345
79	Baptistry	10.00	\$ 880	3.00	\$ 345	\$ 1,225
01	Bathtub	10.00	\$ 880	2.00	\$ 230	\$ 1,110
<b>4B</b>	<b>BFP - Testable</b>	-	\$ -	-	\$ -	\$ -
<b>4C</b>	<b>BFP - Non-Testable</b>	-	\$ -	-	\$ -	\$ -
15	Bidet	1.00	\$ 88	2.00	\$ 230	\$ 318
7M	Booster Pump	-	\$ -	-	\$ -	\$ -
96	Clothes Washer Standpipe/Box	3.00	\$ 264	3.00	\$ 345	\$ 609
9W	Clothes Washer (Water Only)	3.00	\$ 264	-	\$ -	\$ 264
4V	Cooling Tower (Water Supply 1" & smaller)	10.00	\$ 880	-	\$ -	\$ 880
4U	Cooling Tower (Water Supply 1-1/4" & larger)	75.00	\$ 6,600	-	\$ -	\$ 6,600
4W	Dental Cuspidor to OSD	0.25	\$ 22	-	\$ -	\$ 22
4X	Dental Cuspidor w/drain	0.25	\$ 22	0.50	\$ 58	\$ 80
77	Dip Well	0.25	\$ 22	-	\$ -	\$ 22
03	Dishwasher (Residential Type)	1.00	\$ 88	2.00	\$ 230	\$ 318
44	Dishwasher (Commercial)	2.00	\$ 176	4.00	\$ 460	\$ 636
7F	Disposal (Commercial 2")	4.00	\$ 352	3.00	\$ 345	\$ 697
71	Disposal (Commercial 3")	4.00	\$ 352	5.00	\$ 575	\$ 927
DS	Drain to Storm	-	\$ -	-	\$ -	\$ -
18	Drinking Fountain	0.25	\$ 22	0.50	\$ 58	\$ 80
68	Ejector Pump	-	\$ -	-	\$ -	\$ -
1B	Emergency - Eye Wash	0.25	\$ 22	-	\$ -	\$ 22
1A	Emergency - Shower	3.75	\$ 330	-	\$ -	\$ 330
<b>F1</b>	<b>Faucet - Commercial Kitchen</b>	<b>4.00</b>	<b>\$ 352</b>	-	\$ -	<b>\$ 352</b>
<b>F2</b>	<b>Faucet - Hand Sink</b>	<b>1.00</b>	<b>\$ 88</b>	-	\$ -	<b>\$ 88</b>
<b>F3</b>	<b>Faucet - Pot Filler</b>	<b>1.00</b>	<b>\$ 88</b>	-	\$ -	<b>\$ 88</b>
<b>F4</b>	<b>Faucet - Service Sink</b>	<b>2.00</b>	<b>\$ 176</b>	-	\$ -	<b>\$ 176</b>
FH	Fire Hydrant	-	\$ -	-	\$ -	\$ -
73	Fire Sprinkler Connection	-	\$ -	-	\$ -	\$ -
UX	Floor Drain (primed)	-	\$ -	-	\$ -	\$ -
UM	Floor Drain (not primed)	-	\$ -	-	\$ -	\$ -
FV	Flush Valve	5.00	\$ 440	-	\$ -	\$ 440
8F	Gas - Boiler (under 200K)	-	\$ -	-	\$ -	\$ -
XB	Gas - Boiler (200K+)	-	\$ -	-	\$ -	\$ -
VP	Gas - Cooking Equipment (All)	-	\$ -	-	\$ -	\$ -
87	Gas - Dryer	-	\$ -	-	\$ -	\$ -
VQ	Gas - Generator	-	\$ -	-	\$ -	\$ -
VN	Gas - Heater (Construction)	-	\$ -	-	\$ -	\$ -

**NON-RESIDENTIAL SDC**

8T	Gas - Heater (Decorative)	-	\$ -	-	\$ -	\$ -
6A	Gas - Heater (Pool)	-	\$ -	-	\$ -	\$ -
<b>8N</b>	<b>Gas - Heating Equipment</b>	-	<b>\$ -</b>	-	<b>\$ -</b>	<b>\$ -</b>
85	Gas - Lab Burner	-	\$ -	-	\$ -	\$ -
8G	Gas - Other	-	\$ -	-	\$ -	\$ -
XX	Gas - Paint Booth	-	\$ -	-	\$ -	\$ -
<b>8U</b>	<b>Gas - Sub-meter</b>	-	<b>\$ -</b>	-	<b>\$ -</b>	<b>\$ -</b>
9D	Gas - Test	-	\$ -	-	\$ -	\$ -
8D	Gas - Water Heater (under 200K)	-	\$ -	-	\$ -	\$ -
XD	Gas - Water Heater (200K+)	-	\$ -	-	\$ -	\$ -
GP	Grinder Pump - Unknown Type	-	\$ -	-	\$ -	\$ -
69	Grease Interceptor	-	\$ -	-	\$ -	\$ -
6D	Grease Recovery Device	-	\$ -	-	\$ -	\$ -
<b>6F</b>	<b>Grease Trap</b>	-	<b>\$ -</b>	-	<b>\$ -</b>	<b>\$ -</b>
9X	Hose Bibb (wall hydrant, etc.)	3.00	\$ 264	-	\$ -	\$ 264
RP	Hose Bibb on Well	-	\$ -	-	\$ -	\$ -
67	Humidifier (Residential Type)	-	\$ -	-	\$ -	\$ -
75	Ice Maker (Residential Type)	0.25	\$ 22	-	\$ -	\$ 22
04	Instant Hot	-	\$ -	-	\$ -	\$ -
BG	Irrigation System w/3/4" supply	10.00	\$ 880	-	\$ -	\$ 880
BH	Irrigation System w/1" supply	75.00	\$ 6,600	-	\$ -	\$ 6,600
BI	Irrigation System w/1-1/4" supply	160.00	\$ 14,080	-	\$ -	\$ 14,080
BJ	Irrigation System w/1-1/2" supply	270.00	\$ 23,760	-	\$ -	\$ 23,760
BK	Irrigation System w/2" supply	550.00	\$ 48,400	-	\$ -	\$ 48,400
M1	Mechanical Supply Closed Loop	-	\$ -	-	\$ -	\$ -
MO	Modular Building	-	\$ -	-	\$ -	\$ -
65	Oil/Sand Interceptor	-	\$ -	-	\$ -	\$ -
MH	On-Site Manhole	-	\$ -	-	\$ -	\$ -
DG	Receptor Drain 1-1/4"	-	\$ -	1.00	\$ 115	\$ 115
DH	Receptor Drain 1-1/2"	-	\$ -	2.00	\$ 230	\$ 230
50	Receptor Drain 2"	-	\$ -	3.00	\$ 345	\$ 345
51	Receptor Drain 3"	-	\$ -	5.00	\$ 575	\$ 575
52	Receptor Drain 4"	-	\$ -	6.00	\$ 690	\$ 690
54	Receptor Drain 6"	-	\$ -	6.00	\$ 690	\$ 690
FC	Pool Fill (1/2" supply)	4.00	\$ 352	-	\$ -	\$ 352
FD	Pool Fill (3/4" supply)	10.00	\$ 880	-	\$ -	\$ 880
FE	Pool Fill (1" supply)	75.00	\$ 6,600	-	\$ -	\$ 6,600
FF	Pool Fill (1-1/4" supply)	160.00	\$ 14,080	-	\$ -	\$ 14,080
FG	Pool Fill (1-1/2" supply)	270.00	\$ 23,760	-	\$ -	\$ 23,760
FI	Pool Fill (2" supply)	550.00	\$ 48,400	-	\$ -	\$ 48,400
5E	Pre-Treatment Unit	-	\$ -	-	\$ -	\$ -
97	Private Meter	-	\$ -	-	\$ -	\$ -
RU	Re-piping	-	\$ -	-	\$ -	\$ -
62	Roof Drain	-	\$ -	-	\$ -	\$ -
AC	Shell Permit Sewer Rough-In	-	\$ -	-	\$ -	\$ -
AB	Shell Permit Water Rough-In	-	\$ -	-	\$ -	\$ -
JH	Shower Stall (1-1/4" drain)	5.00	\$ 440	1.00	\$ 115	\$ 555
JI	Shower Stall (1-1/2" drain)	5.00	\$ 440	2.00	\$ 230	\$ 670

**NON-RESIDENTIAL SDC**

JJ	Shower Stall (2" drain)	5.00	\$ 440	3.00	\$ 345	\$ 785
WG	Shower, per head, gang/column	5.00	\$ 440		\$ -	\$ 440
26	Sink - Clinical (Flush Valve)	5.00	\$ 440	6.00	\$ 690	\$ 1,130
WL	Sink - Compartment (one faucet)	4.00	\$ 352		\$ -	\$ 352
WN	Sink - Compartment (two faucets)	8.00	\$ 704	-	\$ -	\$ 704
<b>4A</b>	<b>Sink - Hand</b>	<b>1.00</b>	<b>\$ 88</b>	<b>1.00</b>	<b>\$ 115</b>	<b>\$ 203</b>
21	Sink - 1-1/2" Drain	2.00	\$ 176	2.00	\$ 230	\$ 406
WA	Sink - Laundry Tray (with clothes washer)	6.00	\$ 528	3.00	\$ 345	\$ 873
47	Sink - Laundry Tray (without clothes washer)	3.00	\$ 264	2.00	\$ 230	\$ 494
20	Sink - Lavatory - Common	1.00	\$ 88	1.00	\$ 115	\$ 203
JS	Sink - Mop or Service (1-1/2" trap)	2.00	\$ 176	2.00	\$ 230	\$ 406
JT	Sink - Mop or Service (2" trap)	2.00	\$ 176	3.00	\$ 345	\$ 521
JU	Sink - Mop or Service (3" trap)	2.00	\$ 176	5.00	\$ 575	\$ 751
WO	Sink - Wash Fountain	4.00	\$ 352	3.00	\$ 345	\$ 697
YO	Spray - Hand Held	4.00	\$ 352	-	\$ -	\$ 352
12	Urinal	3.00	\$ 264	4.00	\$ 460	\$ 724
U2	Water Closet - Flush Tank (Non-public)	2.00	\$ 176	4.00	\$ 460	\$ 636
U4	Water Closet - Flush Tank (Public)	2.00	\$ 176	6.00	\$ 690	\$ 866
U3	Water Closet - Flush Valve (Non-public)	5.00	\$ 440	4.00	\$ 460	\$ 900
U5	Water Closet - Flush Valve (Public)	5.00	\$ 440	6.00	\$ 690	\$ 1,130
WS	Water Conditioner	-	\$ -	-	\$ -	\$ -
WT	Water Dispenser	0.50	\$ 44	-	\$ -	\$ 44
<b>60</b>	<b>Water Heater - Not Gas</b>	<b>-</b>	<b>\$ -</b>	<b>-</b>	<b>\$ -</b>	<b>\$ -</b>
WR	Water Supply Only 3/8"	2.00	\$ 176	-	\$ -	\$ 176
YE	Water Supply Only 1/2"	4.00	\$ 352	-	\$ -	\$ 352
YD	Water Supply Only 3/4"	10.00	\$ 880	-	\$ -	\$ 880
YC	Water Supply Only 1"	75.00	\$ 6,600	-	\$ -	\$ 6,600
YB	Water Supply Only 1-1/4"	160.00	\$ 14,080	-	\$ -	\$ 14,080
YA	Water Supply Only 1-1/2"	270.00	\$ 23,760	-	\$ -	\$ 23,760
WZ	Water Supply Only 2"	550.00	\$ 48,400	-	\$ -	\$ 48,400
WY	Water Supply Only 3"	1,500.00	\$ 132,000	-	\$ -	\$ 132,000
WX	Water Supply Only 4"	3,000.00	\$ 264,000	-	\$ -	\$ 264,000
WW	Whirlpool, Therapeutic (water only)	10.00	\$ 880	-	\$ -	\$ 880

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