WASHINGTON SUBURBAN SANITARY COMMISSION

2021 WSSC Plumbing and Fuel Gas Code

Effective Date: April 1, 2023

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:
Sections 17-403, 17-404, 17-406, 23-101, 24-101, 24-102, 24-103, 24-104, 24-105, 24-106, 24-201, 25-101, 25-105, 26-102, 26-204, 29-101, 29-102, 29-103, 29-104, 29-105, 29-107

Business Occupations and Professions Article:
Sections 12-305, 12-307

Environment Article:
Sections 9-332

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CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

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

101.2 Adoption of model codes

101.2.1 International Codes

101.2.1.1 International Plumbing Code. The 2021 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.

101.2.1.2 International Residential Code. The Commission does not use the International Residential Code (hereinafter "IRC") to regulate Group R-3 occupancies. Refer to adopted versions of the IPC and IFGC as well as Chapters 3 and 4 of this Code.

101.2.1.3 International Fuel Gas Code (IFGC). The 2021 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 thereto set forth in Chapter 4 of this Code.

101.2.2 Referenced codes and standards. Other International Code Council volumes referenced in the IPC and the IFGC, and the standards referenced therein (IPC Chapter 15 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.

101.2.3 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.

101.3 Scope. Except as provided in Sections 101.3.2 and 101.3.3 of this Code, the provisions of this Code shall apply to the following:

- **a.** 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 within the Sanitary District; and
- **b.** Industrial and special wastes, generally on-property within the Sanitary District. This Code shall also regulate sanitary and condensate vacuum collection systems.

101.3.1 Fuel gas systems. This Code shall apply to the installation of natural and liquefied petroleum gas (LP-gas) piping systems, natural and LP-gas utilization equipment and related accessories.

101.3.1.1 Fuel gas piping systems. This Code shall cover piping systems for natural gas with an operating pressure of 125 pounds per square inch gauge (psig) (862 kPa gauge) or less and LP-gas with an operating pressure of 20 psig (140 kPa gauge) 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.

101.3.1.2 Fuel gas utilization equipment. Requirements for natural gas and LP-gas utilization equipment and related accessories shall include installation, combustion and ventilation air, venting, and connection to piping systems.

101.3.2 Plumbing systems outside of the scope. County and state health and environmental officials shall regulate private sewage disposal systems and private wells and well drilling.

101.3.3 Fuel gas systems outside of the scope. Except as provided in item 101.3.3.1 of this section, this Code shall not apply to items listed in the IFGC Section 101.2.4, "Systems, appliances, and equipment outside the scope".

101.3.3.1 Items not included in the listed exceptions. Item number 13, temporary LP-gas piping and related appliances for buildings under construction or renovation that is not to become part of the permanent piping system, shall be covered by this Code.

101.4 Purpose. The purpose of this Code is to provide minimum requirements and standards for the public safety, health, comfort, or convenience in the construction, operation, maintenance, expansion, relocation, replacement, renovation, and repair of plumbing and fuel gas systems within the Sanitary District. 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.

101.5 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 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.

102.1.1 Supersedes. Not withstanding the provisions set forth in Section 102.2, the latest approved version of this Code shall supersede all previously adopted versions. Where applicable, the provisions of this Code shall also supersede any previously related regulations.

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 following requirements are met:

- **a.** 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; and
- **b.** The matter is not specifically governed by Chapter 5, "Cross-Connection Control Backflow Prevention", or Chapter 8, "Industrial and Special Waste", of this Code.

102.3 Maintenance.

102.3.1 General. All plumbing and fuel gas systems, site utility systems, industrial and special waste 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 or proprietor or any of these shall be responsible for maintenance of work or systems regulated by this Code on property. To determine compliance with this provision, the Code Official shall have the authority to require any system to be 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 Right of access. In the discharge of its duties, the Commission and its duly authorized agents shall have the right of access to customer's premises, at reasonable hours, for the purpose of inspecting the customer's sewer connections, reading meters, examining fixtures and pipes, observing the manner of using water, and for any other purpose which is proper and necessary in the conduct of the Commission's business. This includes operation of fire hydrants and other water outlets and access to and through sewer manholes and cleanouts.

102.3.3 Building water and sewer services. Building water and sewer services shall be maintained by the property owner from the building to the service connection located at the property line, edge of public right-of-way, or edge of easement and right-of-way granted to the Commission, 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. Failure to comply with written notification may result in further notice of violation and additional penalties. The Commission may enforce repairs by injunction.

102.3.5 Accessibility to Commission structures. Outside 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 Commission personnel to any Commission structures or to an inside Commission water meter.

102.3.6 Sewer stoppages.

102.3.6.1 Property owner's responsibility. The property owner shall employ, at the property owner's sole 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 Commission 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 Responsibility of Master Plumber or Sewer and Drain Cleaner. The following requirements shall be the responsibility of the WSSC-Licensed Master Plumber or the WSSC-Licensed Sewer and Drain Cleaner when attempting to clear a stoppage in a building sewer. Throughout Section 102.3.6.2 the references to a WSSC-Licensed Sewer and Drain cleaner shall apply to both the WSSC-Licensed Master Plumber and the WSSC-Licensed Sewer and Drain Cleaner.

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

102.3.6.2.2 System entry. Sewer and drain 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 cleanout. Where a Commission property line cleanout exists, the WSSC-licensed Sewer and Drain Cleaner shall first attempt to locate, open, and determine through visual means if the Commission service connection is stopped up. If confirmed, the WSSC-Licensed Sewer and Drain cleaner shall notify the property owner and the Commission's Emergency Call Center of the findings. The Emergency Call Center will dispatch a Commission crew or a Commission authorized contractor. If the visual inspection of the property line cleanout does not indicate a stoppage, the WSSC-Licensed Sewer and Drain Cleaner shall access the sewer through the most favorable cleanout or access point located on-property.

102.3.6.2.3 Video inspection. Where video technology is utilized and an off-property issue is evident, the Commission shall be notified under Section 102.3.6.2.5 and a copy of the video recording shall be retained and forwarded to the Commission in conjunction with the required notification per Section 102.3.6.2.5.

102.3.6.2.4 Extent of cleaning operation, soft stoppages. In the case of a soft stoppage and an intact service connection, the WSSC-Licensed Sewer and 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 WSSC-Licensed Sewer and Drain Cleaner shall notify the Commission under Section 102.3.6.2.5.

102.3.6.2.5 Commission notification. If an obstruction causing a stoppage is located in the Commission's service connection, the WSSC-Licensed Sewer and 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 WSSC-Licensed Sewer and Drain Cleaner shall notify the Commission by telephone immediately. The WSSC-Licensed Sewer and Drain Cleaner shall also inform the Commission of what the WSSC-Licensed Sewer and Drain Cleaner believes caused the obstruction e.g., a soft stoppage, broken or misaligned piping, roots, grease, debris, or other cause.

102.3.6.2.6 Equipment problems. If the sewer and drain cleaning equipment becomes lodged in any portion of the sewer system, the WSSC-Licensed Sewer and Drain Cleaner shall retrieve the equipment. Under no circumstances shall the project site be abandoned until the sewer and 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 WSSC-Licensed Sewer and Drain Cleaner shall reimburse the Commission for its expenses in retrieving the sewer and drain cleaning equipment. If the service connection is defective, and the defect caused the sewer and drain cleaning equipment to become lodged, the WSSC-Licensed Sewer and 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 WSSC-Licensed Sewer and 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 condition and the integrity of the service connection.

102.3.6.3.2 Defective connection. If the WSSC-Licensed Sewer and 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 backcharge to the WSSC-Licensed Sewer and 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 to the Commission for the cost of the WSSC-Licensed Sewer and 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 Enforcement related to off-property matters. The enforcement of matters that pertain to Sections 102.3.6.1 and 102.3.6.2 and relate to all off-property and right-of-way matters, such as sewer lateral sections under Commission ownership and responsibility, shall be under the authority of the applicable Commission Utility Services Division and not under the authority of the Regulatory Services Division.

102.3.8 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.

102.3.9 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.

102.3.10 Maintenance and tagging of backflow preventers. See Section 508.3.1, "Maintenance, testing, and tagging of backflow preventers".

102.3.11 Alternative pipe restoration methods. See Sections 302.6.12, 302.7.9 and 302.7.10.

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 meet the provisions for new construction, unless such work is done in the same manner and arrangement as was in the existing system and is not hazardous and is approved.

102.5 Change in occupancy. It is 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 structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that 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 that relates to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures are not mandatory for existing buildings or structures identified and classified by the state or a local jurisdiction as historic buildings when the 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 or structures.

102.7 Moved buildings. Except as provided in 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 Property and buildings owned by the Federal Government. Property and buildings owned by the Federal Government that are within the outer boundaries of the Sanitary District shall not require permits or inspections.

102.8.1 Leased property. Properties and buildings where the Federal Government is the lessee and not the owner shall require permits and inspections according to this Code.

102.8.2 Voluntary request for plan review. When work is to be performed at property or buildings owned by the Federal Government, construction documents may be submitted to the Commission for plan review.

102.8.3 Voluntary request for permits and inspections. The Federal Government may apply for a permit and obtain inspections from the Commission. When the Federal Government owns the property where the plumbing or gasfitting work is to be performed, and the work is to be performed by employees of the Federal Government, the Federal Government shall comply with Section 118.5 of this Code. When the Federal Government owns the property where the plumbing or gasfitting work is to be performed, and the work is to be performed by a contractor of the Federal Government, the contractor shall be licensed by the Commission.

102.8.4 Regulatory compliance. With the exception of Section 102.8.4.1, when a property or building owned by the Federal Government has a service connection to a Commission water or sewer main, the Federal Government shall meet the applicable requirements of the Commission's pretreatment program, Chapter 8 of this Code, "Industrial and Special Waste", the Commission's Cross-Connection Control Program, and Chapter 5 of this Code, "Cross-Connection Control Backflow Prevention".

102.8.4.1 Exception. Where practical difficulties prevent the Federal Government from strictly complying with Section 102.8.4, the Commission may grant modifications to the Federal Government, provided the modifications shall conform to the intent and purpose of the Commission's pretreatment program, Chapter 8 of this Code, "Industrial and Special Waste", the Commission's Cross-Connection Control Program, and Chapter 5 of this Code, "Cross-Connection Control Backflow Prevention". The details of any modification shall be recorded in a memorandum of understanding between the Commission and the Federal Government.

102.8.4.2 Cross-connection control. The Commission shall issue a special license to each federal property for the sole purpose of submitting and tracking backflow prevention assembly test reports. No other permit or inspection activities will be allowed under this license. See Chapter 5, "Cross-Connection Control Backflow Prevention", for requirements.

102.8.3 Federal property application requirements. Federal property improvement projects shall apply for hydraulic planning analysis. Application is required for meters, service connections, and Commission system extensions. Application, site utility plans, and plumbing plans are required for the Commission 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. Changes to this Code made 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 this 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.

102.11 Application of references. Reference to chapter section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this Code or adopted codes.

SECTION 103 COMMISSION FUNCTIONS

103.1 General. The Commission is authorized by the 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 Commission created to carry out this function shall be known as the Regulatory Services Division. 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 an individual charged by the Commission with the administration and enforcement of this Code.

103.3 Qualifications for inspection staff. Code Officials directly associated with inspections, including interpretation and enforcement of the Code on a technical level, administration, and document review shall as a minimum, be qualified as a WSSC-Licensed Master Plumber and WSSC-Licensed Master Gasfitter.

SECTION 104 DUTIES AND POWERS OF THE COMMISSION

104.1 General. The Commission and its Code Officials shall have the authority to render interpretations of this Code.

104.1.1 Guide to Code Consistency. The Commission may create guidelines in order to clarify and improve the consistency of the application of its provisions. Any guidelines are to be used in conjunction with the Code and not as a substitute for Code. The Code Official alone possesses the authority and responsibility for interpreting the Code.

104.2 Applications and permits. The Commission shall receive applications, review construction documents 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 enforce compliance with the provisions of this Code.

104.3 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 to monitor or reinspect 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 at the expense of the owner or applicant.

104.4 Right of entry. Whenever it is necessary to perform an inspection to enforce the provisions of this Code, whenever a Code Official has reasonable cause to believe that there exists in any building or upon any premises any violations of this Code, or to inspect a Commission inside water meter or a backflow preventer, 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.

Wheren 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 inspection and examination pursuant to this Code.

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

104.6 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.

104.7 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 a person registered with or licensed by the Commission and the public, under any circumstance.

104.8 Liability. The Code Official, member of the WSSC Plumbing and Fuel Gas Board, or other Commission employee charged with the creation 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.

104.8.1 Defense. Any suit instituted against any Commission employee because of an act performed by that Commission 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 under the provisions of this Code.

SECTION 105 APPROVAL

105.1 Modifications (waivers). Wheren practical difficulties involved in carrying out the provisions of this Code arise, the Chief Code Official or the Chief Code Official's designee shall have the authority to grant a modification for individual cases, upon request of the owner or the owner's authorized agent, provided that the Chief Code Official or the Chief Code Official's designee shall first find special individual reasons that make application of the strict letter of this Code impractical, that the modification is in conformity with the intent and purpose of this Code, and that the 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 Division.

105.1.1 Request. A modification request shall be submitted on the official Code Modification Request form. The form shall be signed by the owner and by the WSSC-Licensed Master Plumber or Gasfitter, or a Maryland Professional Engineer.

105.1.2 Indemnification. The owner or the owner's legal representative shall sign the hold harmless agreement section of the modification request form, indemnifying the Commission and its employees from and against all losses and liabilities that may result from the granting of the modification request.

105.1.3 Future editions. This Code incorporates by reference the current editions of many nationally recognized codes and standards. Revised and updated editions of the incorporated codes and standards shall not automatically become part of this Code. However, the Chief Code Official or the Chief Code Official's designee may consider amendments to published editions of referenced codes and standards not yet adopted by the Commission as evidence supporting a request for a modification.

105.2 Alternative materials, design and methods of construction 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. Where the alternative material, design or method of construction is not approved, the Code Official shall respond in writing, stating the reasons why the alternative was not approved.

105.2.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this Code, shall consist of valid research reports from approved sources.

105.2.2 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.

105.2.3 Submittal. The Maryland Professional Engineer 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.

105.2.4 Technical data. The Maryland Professional Engineer shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that its performance meets the intent of this Code.

105.2.5 Construction documents. The Maryland Professional Engineer shall submit construction documents per Section 110 of this Code for the alternative engineered design. The construction documents shall include floor plans and riser diagrams 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.

105.2.6 Design approval. Where the Chief Code Official or the Chief Code Official's designee 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 Chief Code Official or the Chief Code Official's designee shall notify the Maryland Professional Engineer in writing, stating the reasons for disapproval.

105.2.7 Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of Section 108 of this Code.

105.3 Required testing. Wherever 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 Product and material acceptance.

105.4.1 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.

105.4.2 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.

105.4.3 Damaged materials. Defective or damaged products, materials, equipment, or apparatus shall not be installed or maintained.

105.4.4 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.

105.4.5 Material and equipment reuse. Materials, equipment and devices shall not be reused unless reconditioned, tested, placed in good and proper working condition, and approved.

SECTION 106 PERMITS

106.1 Required permits.

106.1.1 General. Any owner, owner's 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 performed, 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 Permit, or under a Site Utility Permit. Any person may pay permit fees; however, a permit will remain inactive until a WSSC-Licensed Master Plumber or Gasfitter is added to the permit via the Commission's electronic permit system. See Section 106.4.2.

106.1.2 Permit selection tables. Permit Selection Tables 106.1.2.A and 106.1.2.B are a culmination of requirements throughout this section.

106.1.3 Electronic permit application and required document submittals. All permit applications, fees, and required documents shall be submitted through ePermitting unless directed otherwise by a Code Official.

106.1.4 Required inspections. The licensee, or homeowner in the case of homeowner's permit, shall be responsible to ensure that all work is inspected and approved in accordance with Section 108 of this Code.

106.1.4.1 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, general. 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. Exemption from the permit requirement shall not preclude the licensee from obtaining permits and inspections if so desired.

106.2.1 Exempt work, plumbing.

106.2.1.1 Repairing leaks. Except as provided in Sections 106.2.1.3 through 106.2.1.6, the following plumbing work shall be exempt from the requirement for a permit, 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.

106.2.1.2 Plumbing maintenance. Except as provided in Sections 106.2.1.3 through 106.2.1.6, the following plumbing work shall be exempt from the requirement for a permit: 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 prevention 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.

106.2.1.3 Testing and rebuilding of testable backflow prevention assemblies. The testing and rebuilding of testable backflow prevention assemblies shall not be exempt**.** The testing and replacement shall only be performed by a WSSC-Licensed Cross-Connection Technician and requires the submission of a completed WSSC Water Backflow Prevention Assembly Test Report to the Commission's online Cross-Connection Test Report System.

106.2.1.4 Ten-percent rule, pipe replacement. Replacement of more than 10-percent of the existing piping for a system within the building footprint shall not be exempt.

106.2.1.5 Repairs and replacement of buried systems. Repairs and replacement of buried piping or equipment shall not be exempt. Examples of repair work requiring a permit shall include building sewer, building water service, grinder pump (low pressure sewer system) replacement, and site utility water and sewer piping.

106.2.1.6 Repairs and replacement of grease abatement systems. Repairs and replacement of grease abatement piping and equipment, including the removal and reinstallation of plumbing fixtures and equipment shall not be exempt.

106.2.2 Exempt work, fuel gas. The following fuel gas work shall be exempt from the requirement for a permit,

106.2.2.1 Gas appliance maintenance. With the exception of work that alters the condition of a previous approval or render such equipment unsafe, the following fuel gas work shall be exempt from the requirement for a permit, the replacement, repair, or adjustment of gas controls, burners, or minor components, or of luminous or portable appliances.

106.2.2.2 Natural gas utility meter relocation. For a Group R-3 occupancy, the relocation of utility gas meter and associated utility equipment from inside of building to outside as part of gas utility maintenance, initiated by the gas utility, provided the following requirements are met,

106.2.2.2.1 Code provisions. The relocation shall meet all provisions set forth in this Code.

106.2.2.2.2 Licensed gasfitter. The work shall be performed by WSSC-Licensed Journeyman or Master Gasfitters.

106.2.2.2.3 Maximum number of joints. Excluding the equipment connector, a maximum of 12 joints in the new and disturbed piping are allowed.

106.2.2.2.4 Concealed piping. The new piping and any disturbed piping shall not be concealed.

106.2.2.2.5 Developed length. The developed length of the new piping shall not exceed 15 feet (4572 mm).

106.2.3 Exempt work, federal property. For exemptions for federal property, see Section 102.8.

Table 106.1.2a

Required Plumbing Permit[1]

Description	Long Form (LFP)	Short Form[2] (SFP)	No Permit Required
New or replacement structure; complete renovation	Required	No	
Modification, addition, alteration, extension, relocation	Required	No	
Demolition, remove fixtures or equipment & rough piping (capping off at active inside mains or risers)	Likely[3, 14]	Likely[4, 14]	
Fixture removal & cap exposed rough-ins for future re-use	No	No	NR
Installation of plumbing fixture or plumbing appliance for first time on existing full rough, including water.	Allowed	Required[2]	
Replace existing plumbing fixture or appliance, of same kind and location, no alteration of rough-ins [11]	Allowed	Allowed	NR
New or replacement WSSC inside water meter, submeter, or special utilization meter (e.g. mixed-use, laundromat, etc.)	Required	No	
New, replacement, or relocation of a private water meter	Allowed	Allowed	NR
Installation of new building water service or building sewer (Includes Minor Site Utility Systems, but not service connections or Standard Site Utility Systems[5])	Required	No	
Replacement, relocation or repair of building water service or building sewer utilizing existing service connections	Allowed	Required[2]	
Cap-off of building water service and/or building sewer at property line for building razing (demolition)[6]	No	Required[2]	
Installation, replacement or retrofit of non-SDC equipment or appurtenance with water connections, but no fuel gas connection [12]	Allowed	Required[2]	
Replacement of water distribution or DWV piping for Group R-3 occupancy (residential)	Allowed	Required[2]	
Replacement of commercial water distribution or DWV piping if less than or equal to ten (10) percent of a system or sub-system[7]	Allowed	Required[2]	
Replacement of commercial water distribution or DWV piping if greater than ten (10) percent of a system or sub-system[7]	Required	No	
Minor Localized Interior Plumbing Repairs (spot repairs); fixing leaks, obstructed, or damaged piping[11]	Allowed	Allowed	NR
Replace existing grinder pump or sewage ejector pump[13]	Allowed	Required[2]	
Installation or relocation of testable backflow assemblies or non-testable backflow devices[8]	Required	No	
Replacement of testable backflow assemblies[8]	Allowed	Required[2]	
Testing of testable backflow assemblies[8]	No	No	NR
Replacement of non-testable backflow devices[9]	Allowed	Allowed	NR
General re-inspection fee or to repost lost tag (groundwork, close-in, gas, or final)[10]	No	Required[2]	
Additional Inspection Fee where groundworks, close-in or final was previously finalized, reopen category for more inspections[10]	No	Required[2]	
Replacement of existing grease interceptor with equivalent[15]	Allowed	Allowed	
Modification, addition, alteration, extension, relocation of grease interceptor or FOG system	Required	No	

Required = the lowest level of permit required
Allowed = item may have permit optionally issued at this level where a lesser permit is required or where no permit is required, this will allow for numerous items to be consolidated under one permit and/or to facilitate an optional inspection where an inspection otherwise is not required by code.
No = cannot use this type of permit for the scope of work described
NR = No Permit Required for the scope of work described
Likely = See corresponding footnotes below
1 - See Section 106 for details and conditions for all required permits and Exempt Work.
2 - See Section 106.7.1 for limitations - Generally, a SFP shall only be used for one (and only one), inspection type and limited to three inspectable items. Also see footnote 10.
3 - A Long Form Fixture Credit Permit may be needed to account for existing plumbing fixtures prior to removal and demolition where existing water or sewer services were installed after the commencement of System Development Charges (SDC - circa 1993) or where the scope of future construction, including fire protection, will trigger an upgrade of the Water or Sewer Service Connections; or the WSSC water meter.
4 - Where SDC fixture credit is not needed per footnote 3, a SFP may be used to facilitate inspection of inside demolition and cap-offs, especially needed in cases of partial demolition in an occupied building.
5 - Service Connection Permits (for connection to WSSC mains in public rights of ways) and Standard Site Utility System Permits (for large diameter on-site mains) shall follow permit requirements set forth in the Development Services (DS) Code.
6 - Cap-off is a temporary action used to facilitate the razing (demolition) of a structure. An abandonment is a permanent condition where water or sewer service connections are disconnected at their respective mainline. Abandonments are required to be executed under a Service Connection Permit in accordance with the DS Code.
7 - See Section 106.2.1.4
8 - See Sections 106.2.1.3 and 508
9 - A replacement/rebuild tag is required per Section 508.3.1.2.1
10 - The assessment of a reinspection Fee, see Section 109.7
11 - See Section 106.2.1.3
12 - New installations are limited to residential appurtenances (such a solar pre-heaters); New commercial installations shall require a long form permit
13 - Where a grinder pump system discharges to a WSSC pressure sewer system, the pump shall be an exact repalcement, manufacture and model unless an alternate is approved by WSSC Engineering.
14 - See Section 504.8.
15 - Equivalent is a grease interceptor with the same manufacturer, model, flow rate as original; or a Commission approved model with the same flow rate.

Table 106.1.2b

Required Fuel Gas Permit[1]

Description[3, 13]	Long Form (LFP)	Short Form[2] (SFP)	No Permit Required
New or replacement structure; complete renovation	Required	No	
Modification, addition, alteration, extension, relocation; for Group R-3 occupancy (one or two family dwelling, SFH or TH)	Allowed	Required[2]	
Modification, addition, alteration, extension, relocation; for other than R-3 (multi-unit buildings, commercial, industrial)	Required	No	
Demolition, remove appliances & rough piping (capping off at active mains or risers)[12]	Allowed	Required[2]	
Appliance removal & cap exposed rough-ins for future re-use[4]	No	No	NR[4]
Installation of gas appliance or equipment for first time on existing full rough[5]	Allowed	Required[2]	
Replace existing gas appliance of same kind, load, and location; less than or equal to 450,000 Btu/h; no pipeline alteration.	Allowed	Required[2]	
Replace existing gas appliance of same kind, load, and location; greater than 450,000 Btu/h; no pipeline alteration.	Required	No	
Minor localized gas or venting repairs (spot repairs); fixing leaks, obstructed, or damaged piping	Allowed	Required[2]	
Gas appliance maintenance; replacement, repair or adjuctment of gas controls, burners, pilot assemblies[4]	No	No	NR[4]
Temporary Piping (typically for construction heaters) with three or fewer outlets	Allowed	Required[2]	
Temporary Piping (typically for construction heaters) with four or more outlets; plans review required[6]	Required	No	
Move and reconnect temporary/construction heaters to other outlets on previously approved temporary piping system[4]	No	No	NR[4]
Chimney or vent Lining; common vent or vent connector replacement[7]	Allowed	Required[2]	
Gas utility meter relocation, initiated by the gas company for system enhancement, bound by the limits of the twelve joint rule[8]	No	No	NR[4]
Gas utility meter relocation, initiated by the property owner (typically due to construction conflict)[9]	Allowed	Required[2]	
Pressure testing after service interuption; meter pulled due to fire, structural damage, leak(s), etc. (i.e. emergency Inspection)	Allowed	Required[2]	
Reconnection of appliances after service interuption; new appliance shut-off valves and/or appliance connectors[10]	Allowed	Required[2]	
General reinspection fee; repost lost tag (groundwork, close-in, gas, or final)[11]	No	Required[2]	
Additional inspection fee where groundworks, close-in or final was previously finalized, reopen category for more inspections[11]	No	Required[2]	

Required = the lowest level of permit required
Allowed = item may have permit optionally issued at this level where a lesser permit is required or where no permit is required; this will allow for numerous items to be consolidated under one permit and/or to facilitate an optional inspection where an inspection otherwise is not required by code.
No = cannot use this type of permit for the scope of work described
NR = No Permit Required for the scope of work described
Likely = See corresponding footnotes below
1 - See Section 106 for details and conditions for all required permits and Exempt Work.
2 - See Section 106.7.1 for limitations - Generally, a SFP shall only be used for one (and only one), inspection type and limited to three inspectable items. Also see footnote 10.
3 - All descriptions include underground (after the point of delivery), where applicable, unless noted otherwise.
4 - Although this work described does not require a permit, it shall only be performed by a WSSC-Licensed Journeyman or Master Gasfitter. Or in the case of appliance maintenance, a factory certified technician may perform these minor troubleshooting tasks.
5 - Original rough-in was sized to accommodate specific appliance and load; at discretion of the WSSC plumbing inspector - original supporting documentation or new plans review may be required.
6 - Initial/First time connection for each heater shall be inspected and approved; this inspection is covered under the Long Form Permit
7 - Re-lining or replacing venting components is covered under appliance permit where applicable. Stand alone permit needed when peformed by different contractor under separate contract.
8 - See Section 106.2.2.2 - Where the gas company, or their contractor, goes outside the scope of Sections 106.2.2.2 and 402.4.2, an applicable permit and inspection is required.
9 - Plans review is required for commercial work with 4 or more appliances; also required for large scale residential systems at the WSSC Plumbing Inspectors discretion
10 - Within 10 business days of restoring a system (after interuption and subsequent testing), a permit and inspection is required for re-connected appliances utilizing replacement appliance shut-off valves and/or replacement appliance connectors
11 - The assessment of a reinspection fee, see Section 109.7
12 - Cap-off is a temporary action used to facilitate the razing, demolition, or remodeling of a structure. Applies to gas distribution piping after the point of delivery; typically onsite to isolate an area; or one or more buildings from the remaining system.
13 - Gas Appliances with potable water connections or requiring backflow prevention shall require a combination plumbing/gas permit; alternately, the work may represented by two permits - one plumbing and one gas.

106.3 Permit application. Each permit application shall be filed with the Commission on a Commission approved permit application form. All permit applications shall include the following: property owner's and owner's agent's name, address, and contact information; the address and property description where the work will be performed, and a complete description of work to be performed. The application shall be electronically validated by the authorized permit applicant. A permit application shall not be a permit, and the submission of an application shall not confer permission to proceed with the work.

106.3.1 Foundation or sub-slab permits. When a county issues a "foundation only" building permit, the Commission may issue a permit to install sub-slab ground works. The permit applicant shall submit construction documents and plans under Section 110 and shall include load factors for, and adequate identification of, future above slab piping, fixtures, and equipment in order to determine the adequacy of pipe sizing as well as waste and venting configurations served by and routing to the sub-slab piping. Where applicable, the owner shall submit a hold harmless agreement, for a project to commence before final water and sewer connection design approval and issuance.

106.4 Requirements for permit applicants. Application for a permit, to install all or part of any plumbing or fuel gas system, shall be made by an authorized permit applicant. The applicant shall meet all qualifications established by this Code and by other applicable law. The full name and address of the applicant shall be stated in the application.

106.4.1. Authorized permit applicants. The following shall be authorized permit applicants,

106.4.1.1. Authorized registered users. Authorized registered users includes principal Master Plumbers or Gasfitters or their proxy who have registered with the Commission's ePermitting system. Principal Master Plumbers or Gasfitters or their proxy can apply for Long Form Permits, Short Form Permits, Fixture Credit Permits, or schedule inspections on those permits.

106.4.1.2. Registered users. Registered users includes persons who have registered with the Commission's ePermitting system. Registered users can apply for Long Form Permits.

106.4.2 Purchase of permits security policy. Any person may pay permit fees; however, a permit will remain inactive until a WSSC-Licensed Master Plumber or Gasfitter is added to the permit via the Commission's electronic permit system.

106.5 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.

106.5.1 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. The 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.

The Code Official shall have the authority to issue a permit for the construction of a part of a plumbing or fuel gas 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 own risk, without assurance that the permit for the entire system shall be granted.

106.5.2 Validity. The issuance of a permit shall be a license to proceed with the work. The issuance of a permit or approval of construction documents shall not be construed as authority to violate, cancel or set aside any of the provisions of this Code or of other law of the jurisdiction. Except as approved under Section 105, a permit presuming to give authority to violate or cancel the provisions of this Code shall not be valid.

The issuance of a permit based on 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.

106.5.3 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 the following:

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

106.6 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.

106.6.1 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 a progress inspection or final inspection within 18-months from the date of the last performed inspection.

106.6.1.1 Re-activation. Before the original permitted work can be recommenced, the current minimum Long Form Permit fee must be paid as a reissue 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.

106.6.2 Commission submeter permit application. The applicant shall be responsible to provide accurate account information including name, address, billing account number, and main water meter identification.

106.6.3 Minor site utility permit. A WSSC-Licensed Master Plumber shall secure a Long Form Permit before the construction of a minor site utility system.

106.7 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 be used for the direct replacement of all testable backflow prevention assemblies if the following requirements are met:

- **a.** The existing location and application meet the requirements of this Code.
- **b.** The new testable backflow prevention assembly shall be listed to the same standard as existing.
- **c.** The new testable backflow prevention assembly shall be installed per manufacturer's installation instructions.

106.7.1 Limitations. A Short Form Permit for a singular inspection shall be limited to 3 inspection items. Inspection items include inspectable items selected on permit application. Gas appliances shall be limited to 450,000 Btu/h (131 KW) each. Only one address or one occupancy unit shall be listed on each permit. Only one inspection shall be performed for each permit.

106.7.2 Timely inspection. 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.

106.7.3 Obstructed process. If the property owner or agent of the owner obstructs or refuses to allow the licensee to schedule the inspection required under Section 106.7.2, the licensee shall promptly notify the Commission in writing. The notification shall occur within 15 days of installation and shall include the property owner or owner agent's name and mailing address, project address, phone number, email address, permit number, and documentation of attempts to schedule the inspection.

106.7.4 Expiration. A Short Form Permit shall expire and be cancelled by the Commission if not activated within six months from the date of purchase, without benefit of refund.

106.7.4.1 Failed inspection. Active Short Form Permits shall expire 60 days after the date of a disapproved inspection.

106.7.4.2 Reuse or refund. A Short Form Permit inspection scheduled in error shall not be reused or refunded.

106.8 Permit release and transfer

106.8.1 Licensee request. The Commission may issue a permit release upon the licensee's written request to be released from permit to the Commission's Permit Services Section.

106.8.2 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 previous licensee of the transfer.

106.8.3 Transition inspection. Prior to any work being performed by the permit transferee (new licensee) the transferee may schedule and shall stand a transition inspection to verify the extent of the work performed by transferer at the time of transfer. When no work has been performed on the original permit beyond the last approved inspection, a transition inspection shall not be necessary.

106.8.4 Fee refund. See Section 109.5.

106.9 Work by homeowners. Homeowners may perform the following plumbing work in their own residential unit as provided in this section.

106.9.1 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.

106.9.2 Work allowed under a homeowner permit. Except for work identified in Section 106.9.5, a homeowner may perform most classes of work normally performed by a licensed plumber if the conditions for a homeowner permit set forth in Sections 106.9.3 and 106.9.4 are satisfied.

106.9.3 Conditions for a homeowner permit.

106.9.3.1 Building type. The premises shall be a Group R-3 occupancy.

106.9.3.2 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 or septic systems or both.

106.9.3.3 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 the applicant is 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, reinspection when required due to failed inspections, reinspection fees, and other administrative requirements normally required of licensed plumbers.

106.9.4 Additional applicant requirements.

106.9.4.1 Codebook. The applicant shall be required to have access to the current approved versions of the WSSC Plumbing and Fuel Gas Code and the International Plumbing Code.

106.9.4.2 Written test. The applicant shall be required to pass an exam appropriate to the proposed plumbing work. The exam shall include questions about basic trade knowledge of plumbing and basic code requirements. The test shall be open-book or with access to digital or online codes, shall have a time limit, and shall be administered by the Commission or its exam consultant. If the applicant does not score 70% or higher, then the applicant shall be permitted to re-take the exam one time.

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

106.9.4.4 Containment. The homeowner shall install or update a dual check backflow preventer (ASSE 1024) for containment of domestic water on premise.

106.9.5 Work not allowed. The following work may not be performed by homeowners:

106.9.5.1 Below grade piping. Below grade piping deeper than 4 feet (1,219 mm), including repair of water or sewer services, or piping that crosses other utilities.

106.9.5.2 Connection to Commission. Connection to a Commission water or sewer service connection**.**

106.9.5.3 Commission meters. The installation or replacement of a Commission meter.

106.9.5.4 Number of fixtures. Projects involving seven or more fixtures or appurtenances that require a permit and inspection.

106.9.5.5 Testable backflow prevention assemblies. Installation and testing of testable backflow prevention assemblies.

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

106.9.5.7 Prohibited work. Work located off-property, Commission-owned structures or appurtenances.

SECTION 107 TEMPORARY EQUIPMENT, SYSTEMS AND USES

107.1 General. The Code Official is authorized to issue a permit for temporary equipment, systems and uses. Temporary permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The Code Official is authorized to grant extensions for demonstrated cause.

107.2 Conformance. Temporary equipment, systems and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this Code and any other applicable code or AHJ as necessary to ensure the public health, safety and general welfare.

107.3 Temporary connection. The Code Official shall have the authority to authorize the temporary connection of:

- **a.** The building or system to the utility source for the purpose of testing plumbing systems; or
- **b.** 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 INSPECTIONS AND TESTING

108.1 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.

108.1.1 Federal property exempt. See Section 102.8.

108.2 Licensee responsibility.

108.2.1 General.

108.2.1.1 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.

108.2.1.2 Cancellations. The licensee shall be responsible for all inspection cancellations.

108.2.1.3 Approved plans on project site. On buildings requiring approved construction documents, a WSSC-Licensed Master Plumber or Gasfitter or WSSC-Licensed Journeyman Plumber or Gasfitter shall be present at the project 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. The WSSC-Licensed Plumber or Gasfitter shall have the approved construction documents printed and provided on the project site for the inspector's use to document the project's progress and incremental inspection results.

108.2.1.4 Licensee supervision. All Commission principal licensees 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 principal licensee shall attend the inspection.

108.2.1.5 Gas connection. Fuel gas piping may be connected to the service meter assembly, twin-stage regulator or second stage pressure regulator, but shall not be activated until the Commission's fuel gas close-in inspection has been approved.

108.2.1.6 Concealment. No piping shall be covered or concealed before inspection and approval by the Code Official, except as set forth in Sections 108.2.1.10 and 108.2.1.11. Only an approval sticker or tag, signed by the Code Official, shall indicate an approved installation.

108.2.1.7 Tests. Tests that are required on piping systems shall be made ready for inspection verification before the arrival of the Code Official to the project site.

108.2.1.8 Tags provided by Commission. As a courtesy, the Commission may provide tags, such as hose bibb maintenance tags, testable backflow prevention assembly test tags and non-testable backflow prevention device notice tags, to Commission customers and their contracted plumbers. As such, they are not permitted to be used outside of the Sanitary District. Any abuse of this privilege may lead to the courtesy being revoked.

108.2.1.9 Failed inspections. For Short Form Permits, installations that fail inspection shall be corrected and a resinpection fee shall be paid and scheduled under Section 109.7. For Long Form Permits, installations that fail inspection shall be corrected, the Code Official may require a resinpection fee shall be paid and scheduled under Section 109.

108.2.1.10 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 authorized by the Code Official. Self-inspected work shall be subject to inspection by the Code Official at any time.

108.2.1.11 Self-certification, gasfitting work. With the exception of Section 108.2.1.11.1, gasfitting work shall not be self-certified.

108.2.1.11.1 Exception for self-certification, gasfitting work. Subject to preapproval 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.

108.2.1.12 Minor site utility systems. Minor site utility systems shall be recognized as building sewer and building water service and shall require a plumbing permit, shall be installed according to this Code, and shall be installed by a WSSC-Licensed Master Plumber. These systems shall be inspected in accordance with the approved plan and this Code.

108.2.1.13 Site utility systems. For site utility systems, not minor site utility systems, the plumber's responsibility shall begin at and include the final connection to site utility system on the approved site utility system. Site utility piping shall be installed and inspected under provisions set forth in the approved site utility system plan and within the Development Services Code.

108.2.2 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:

108.2.2.1 Permits, general. Upon completion of each work phase, and before concealment where applicable.

108.2.2.2 Short Form Permit. Subject to Sections 106.7.2 and 106.7.3, an inspection shall be completed within 10 business days of installation and before concealment where applicable.

108.2.2.3 Site Utility Permit. Before the plumbing final inspection.

108.2.3 Jobsite entry and access. The licensee shall be responsible for ensuring entry and access to the project site or inspection location. The inspection may be cancelled by the Code Official and a reinspection fee required if the following requirements are not met:

108.2.3.1 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.

108.2.3.2 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 (203 mm) 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 the lot and block posting.

108.2.3.3 Vehicle access. The licensee shall provide vehicular access to within 200 feet (60 m) of the inspection location.

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

108.2.3.5 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.

108.2.3.6 License responsibility. The licensee shall alert the Code Official to any unique known or concealed hazards that may pose risk to the Code Official, other personnel, or result in property damage.

108.3 Code Official responsibility and inspection criteria.

108.3.1 Timely inspections. In general, the Code Official shall provide a timely inspection following established procedures on installations that have been properly permitted and scheduled in advance.

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

108.3.3 Inspection stickers. The Code Official shall notify the licensee of inspection status through the posting at the project site of a signed sticker or tag, specific to the work installed, indicating passed/"approved" or failed/"disapproved" inspection status.

108.3.4 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. A failed inspection shall be recorded in the Commission's ePermitting system. The reasons for failure or code sections with which work is in noncompliance shall be listed on the sticker. Failed inspections shall be charged a reinspection fee according to Sections 108.2.1.9 and 109.7.

108.3.5 Partial inspections. On larger installations, a "partial" sticker shall be posted at the project site indicating that part of a construction phase has passed inspection. The approval plans shall be made available at the project site for similar notation.

108.3.6 Inspection result notification. Except as provided for in Sections 108.3.3 and 108.3.4, 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.

108.3.7 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 the Chief Code Official's designee. Examples of emergencies include the following: fuel gas repairs where building occupants are without heat in extremely cold weather, fuel gas repairs in multi-family complexes, water service repairs in freezing weather, and repairs to deeply buried piping in highly populated areas or where project site conditions pose an imminent threat to public safety.

108.4 Inspections by work phase. Each phase of plumbing or fuel gas installation shall require inspections as outlined below.

108.4.1 Required plumbing inspections.

108.4.1.1 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 trenching, bedding, depth, slope, appurtenances and materials. Outdoor low pressure sewer system located on private property shall be considered as part of the building sewer inspection.

108.4.1.2 Water service. With the exception of Section 108.4.1.2.1, 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, 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 the Commission's Development Services Code.

108.4.1.2.1 Well service line. A Maryland licensed well driller may install a well service line from a well casing to the main water service valve, including pressure tank and controls without a plumbing permit or inspection.

108.4.1.3 Groundwork. A groundwork inspection shall include drainage and vent piping below grade inside of buildings, the building drain, and below grade water distribution systems. Critical inspection factors shall include the following: trenching; bedding; slope; sizing; piping tie-downs, hangers, and supports; materials; sewage ejectors; capping or plugging; and required tests. If a water distribution system is installed below grade, it shall be scheduled as a WATER GROUNDWORK inspection.

108.4.1.4 Close-in. A close-in inspection shall include all water and sewer rough-in. Critical inspection factors shall include slope, piping support, sizing, materials, built-in fixtures, fixture carriers, capping or plugging, piping protection, and required tests. Where applicable, a hung groundwork (building drain and building drain branches that are installed overhead or anywhere above the slab due to the building drain exiting the building through the foundation wall rather than below the slab and footing) shall be installed as a part of the close-in inspection. A field fabricated shower liner or a lined floor for any other purpose shall not require a close-in inspection. The installer shall be responsible for the integrity and leak tight nature of the installer's installation. The installation shall meet IPC Section 421.5 and the applicable manufacturer's installation instructions; testing requirements set forth in this Code and within the applicable manufacturer's instructions shall be followed by the installer and are not subject to inspection by a Code Official.

108.4.1.5 Final. A final inspection shall include all required plumbing fixtures and appliances, appurtenances, and gas appliances; hot water to fixtures; fixtures clean, undamaged, secure, and operating properly; no leaks; no water hammer; mechanical equipment properly installed; backflow preventers in place; and all tests completed. On factory-built housing or in buildings with factory-built plumbing cores, the installation shall have a state of Maryland inspection sticker. With the exception of modular buildings, a smoke test in presence of the Code Official shall be required, see IPC Section 312.4. For modular buildings, a peppermint test in the presence of the Code Official shall be required for the drainage and venting system. Consult with Code Official for peppermint test procedures.

108.4.1.6 Meter pick-up authorization. On buildings requiring an inside meter setting 1 1/2-inch or larger, a separate /inspection shall be scheduled for meter pick-up authorization. Critical inspection factors shall include the following: sizing in accordance with the permit and Commission's right-sizing policy, freeze protection, required area and access, provisions for testing, release of Commission-owned systems; and adherence to Commission standard details.

108.4.1.7 System development charge inspections. The applicant is responsible for accuracy of the plumbing permit, including the listing of the proposed fixtures on permit application and permit amendments. The Code Official may revise the permit before permit issuance and may direct applicant to submit permit amendment for permit changes required after issuance of permit. A final inspection shall not be approved by the Code Official unless the permit accurately reflects completed work and all required fees are paid.

108.4.2 Required gas inspections. All gasfitting 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.

108.4.2.1 Gas 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 the following: 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 sizing; materials and supports; clearances; existing masonry vents cleaned or relined, if required; and installation in accordance with the manufacturer's installation requirements.

108.4.2.2 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 the following: 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.

108.4.2.3 Temporary LP-gas service. Gas supply systems that are designed and installed for use with natural gas, but will be operated temporarily with LP-gas, shall be tested and inspected in the same manner as natural gas.

108.5 Minor site utility systems. Minor site utility water and sewer piping and appurtenances shall be installed by a WSSC-Licensed Master Plumber. These systems shall be inspected in accordance with procedures outlined in Sections 108.4.1.1 and 108.4.1.2 and any conditions set forth on the approved minor site utility plan.

108.6 Emergency inspections. See Section 108.3.7.

108.7 Special plumbing inspections. Special inspections of alternative engineered design plumbing systems shall be conducted in accordance with Sections 108.7.1 and 108.7.2.

108.7.1 Periodic inspection. The Maryland Professional Engineer 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.

108.7.2 Written report. The Maryland Professional Engineer 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.

108.8 Testing. 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. Tests shall be made by the licensee and observed by the Code Official.

108.8.1 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.

108.8.2 Apparatus and labor for tests. Apparatus, equipment, instruments, material and labor required for testing an installation or part of an installation shall be furnished by the licensee.

108.8.3 Reinspection 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 reinspection fees paid where applicable. See Section 109.7.

108.9 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 authority having jurisdiction (AHJ) is involved, it shall be the duty of the Code Officials involved to coordinate their inspections and administrative orders with other AHJs 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.

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

SECTION 109 FEES

109.1 Payment of 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.

109.1.1 Insufficient funds. In cases where funds are insufficient in check and electronic fund transfers, the applicant shall pay for associated costs incurred by the Commission in addition to the required fees. The Commission reserves the right to require the applicant to pay with cash only for a period of 180 days after the date it receives notice of that funds were insufficient in check or electronic fund transfers.

109.2 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.

109.2.1 Accuracy of fixture count. The permit applicant is required to submit an accurate fixture count on permit applications. The Commission is not responsible for the accuracy of fixture count at the time of issuance of permit.

109.2.2 Interpretation of fixture codes and descriptions. The permit applicant and licensee are responsible for properly representing the building use and the delineation of plumbing fixtures and equipment, for both residential and for non-residential use. Applicants shall refer questions regarding fixture codes and descriptions, or SDC fees to permit services.

109.3 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 penalties and under Section 115.

109.4 Related fees. The payment of the fee for the construction, alteration, removal or demolition for work done in connection to or concurrently with the work authorized by a permit shall not relieve the applicant or holder of the permit of other fees that are prescribed by law.

109.5 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:

109.5.1 Erroneous payment. The full amount of any fee paid that was erroneously paid or collected.

109.5.2 Permit cancelled. With the exception of Short Form Permits, when no work has been performed and no inspections have taken place and a permit is cancelled, all Commission inspection fees and SDC fees shall be refunded to the payee less the Commission's permit refund fee for current fiscal year. Short Form Permit fees shall not be refunded.

109.6 System development charge fixture credit. In cases where a building is being demolished or renovated, an SDC fixture credit shall be allowed for existing plumbing fixtures that will be removed. Before the credit is issued, a fixture credit permit shall first be obtained and the fixtures to be removed shall be verified by the Code Official.

109.7 Reinspection fees. Reinspection requests shall not be scheduled until the fee for reinspection is paid.

109.7.1 Procedures. For Short Form Permits, the licensee shall pay reinspection fee and reschedule inspection. For Long Form Permits, the licensee, or homeowner in the case of homeowner's permit, shall purchase a Short Form Permit for the purpose of paying reinspection fee and scheduling inspection. The original Long Form Permit and the additional reinspection Short Form Permit purchased for reinspection shall be scheduled for inspection at the same time.

SECTION 110 CONSTRUCTION DOCUMENTS

110.1 Construction documents. With the exception of Section 110.1.1, construction documents, plans, engineering calculations, diagrams and other such data shall be submitted electronically to the Commission's ePlan review system with each application for a Long Form Permit or for a Short Form Permit when required by the Code Official. 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.

110.1.1 Waive submission of construction documents. 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 the following,

a. Group R-3 occupancy

b. Commercial work that meets all of the following,

i. With 10 or fewer cumulative proposed plumbing and gas fixtures on permit.

ii. With 3 or fewer proposed gas fixtures on permit, served by a dedicated source, with an input rating of less than 200,000 Btu/h (58 KW) each.

iii. Without FOG abatement.

iv. Without industrial or special waste.

If a project has a cumulative total of more than 10 items, an authorized permit applicant shall not be allowed to use multiple permits in order to meet the requirements of the exception to Section 110.1.

110.1.2 Engineered design required. The Code Official may require construction documents, plans, computations, and specifications to be prepared and designed by a Maryland Professional Engineer. Where fixtures, equipment, or processes are outside the scope of standard loading factors prescribed in this Code, such as commercial or industrial laundries and laundromats, an engineered design shall be required, and the documents, plans and specifications shall be sealed and signed by a Maryland Professional Engineer. In any case, where the design has been sealed and signed, the engineer shall be proficient in mechanical, plumbing, and fuel gas design; specifically, water, drainage, fuel gas, appliance venting, or ventilation and make-up air, as applicable.

110.1.2.1 Submission of construction documents for engineered design required. When the Code Official requires construction documents to be prepared by a Maryland Professional Engineer under Section 110.1.2, the Code Official may require the construction documents to be submitted by the engineer. The Code Official may also require that any technical based inquiries related to project be made by the engineer, principal master, or a licensee.

110.1.3 Electronic submittal required. Design plans and other required supporting documentation shall be submitted to the Commission in accordance with applicable electronic submittal and related checklist protocols.

110.2 Retention of construction documents. Electronic records of approved construction documents shall be retained by the Code Official until final inspection approval of the work covered therein. The WSSC-Licensed Plumber or Gasfitter shall have the approved construction documents printed and provided on the project site for the Code Officials use to document the project progress and incremental inspection results. The approved construction documents shall be kept on the site of the building or work at all times which the authorized work is in progress.

SECTION 111 NOTICE OF APPROVAL

111.1 Approval. After the prescribed tests and inspections indicate that the work authorized by a permit complies in all respects with this Code, a notice of approval shall be issued by the Code Official.

111.1.1 Revocation. The Code Official is authorized to, in writing, suspend or revoke a notice of approval issued under the provisions of this Code wherever the notice is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise or portion thereof is in violation of any ordinance or regulation or any of the provisions of this Code.

SECTION 112 CONNECTION TO THE COMMISSION'S SYSTEMS AND METERING

112.1 Service connections, general. A newly constructed building located on a property which abuts a public water or sewer main shall connect to those public water or sewer systems or both. Any property that does not abut a public water or sewer main may connect to a private well for water supply or private sewage disposal system (septic system) if the property is categorized by the respective county's water or sewer category maps, and the property is permitted by the respective county's health department. Any property that is not categorized or permitted by the respective county for private water or sewage disposal shall apply for a system (main line) extension or a non-abutting connection to the public water or sewer system. This section supersedes Sections 602.3 and 701.2 of the IPC.

112.1.1 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.

112.1.1.1 Water service connection, minimum size. The minimum size new water service connection for Group R-3 occupancies shall be 1 1/2-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.

112.1.1.2 Design consideration. New water service connections may be designed as 1-inch provided the future load can be predetermined and where no segment of the building's domestic or fire sprinkler system shall exceed 1-inch. except for pipe stem lots and flag lots, these criteria must be met for all models and all lots; and the entire Commission system extension project must be designed uniformly.

112.1.2 Non-abutting service connections. Service connections to a property not abutting directly on a Commission water or sewer main may be allowed under certain conditions, see WSSC Development Services Code for qualifying factors for non-abutting service connections.

112.1.3 Service connection in easement. If the property to be served is to be connected to a Commission water or sewer main located in an easement or right-of-way granted by Commission, the services shall be provided under the following conditions:

112.1.3.1 Responsibility. All necessary excavation, backfill, and restoration within easement or right-of-way granted by Commission shall be the responsibility of the WSSC-Licensed Master Plumber.

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

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

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

112.1.5 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.

112.1.5.1 Water abandonment. If an existing water connection is not reused, it shall be disconnected at the main through an abandonment permit at the expense of the property owner.

112.1.6 Existing sewer connection. If a property line cleanout does not exist, new buildings that use a previously unused existing sewer service connection, and existing buildings where the building sewer is replaced shall install a property line cleanout within 1-foot of the property line, or at the edge of the public right-of-way, or Commission easement. The base connection shall be a combination wye and one-eighth bend fitting lying on its back. The cleanout cover assembly shall conform with Commission Standard Detail S-5.1 or S-5.2.

112.1.6.1 Sewer abandonment. Existing sewer connections not being reused shall be disconnected at the main through an abandonment permit at the expense of the property owner.

112.1.7 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 Section prior to the first plumbing permit. Where applicant built permits are for abandonment of water or sewer service connections, or both, the applicant built package is required at the time the applicant built package is submitted for new service.

112.2 Service connections. Except as provided in Section 112.2.1, only one water and only one sewer service connection is permitted to serve a lot or parcel, or a group of lots and parcels that are under single ownership.

112.2.1 Additional connections allowed or required. After approval from the Commission, additional service connections shall be allowed or required as follows:

112.2.1.1 Detached Group R-3 occupancy buildings. For a detached Group R-3 occupancy building located on common tract of land with the same owner, if the detached building is converted wholly or in part, subdivided under different ownership and sold, it is required to have separate water and sewer service connections prior to the sale.

112.2.1.2 Group I-2, condition 2 facilities. Group I-2, Condition 2 facilities shall have not fewer than two water service pipes under Section 609.2 of the IPC.

112.2.1.3 Superstructures. In buildings that are more than 420 feet (128 m) in building height, not fewer than two separate water service connections and separate piping on property are required in accordance with Section 403.3.2 of the IBC.

112.2.1.4 Additional water services. The Code Official may approve additional water services for buildings, complexes or campuses with a significant domestic water or fire sprinkler system demand. The Code Official may approve additional water services for buildings, complexes, or campuses that have special uses that require more than one water service. Supporting documentation is required to demonstrate that a single service is not practical

or where the local fire protection design official is requiring redundant service. Where separate services are approved, metering arrangements shall generate a single Commission account.

112.2.1.5 Layout restrictions. Additional water or sewer service connections may be allowed where physical site features or appurtenances, including the imposing footprint of the building itself, create unyielding obstacles.

112.2.1.6 Sewer serviceability. To facilitate the greatest amount of gravity sewer service, additional sewer service connections shall be allowed for buildings, complexes or campuses where deemed practical and beneficial. Consideration shall be given to the depth, serviceability, and structural impact of long, inside runs of building drain.

112.2.1.7 Imminent subdivision and sale. Separate service connections are required when subdivision and sale of a large tract of land has begun or as a condition of a governmental action. Consideration shall be given to mainline water and sewer extensions needed to facilitate the required service connections.

112.2.1.8 Condominiums or cooperative ownership properties. Condominiums or cooperative ownership properties that abut a public water main, are townhouses, and use a NFPA 13D or 13R type fire sprinkler system may be served with individual Commission water service connection outfitted with an outside meter or curb valve.

112.2.2 Shared service connections serving multiple property owners. Other than in a Group R-3 occupancy, a shared service connection may be allowed when multiple properties or buildings**,** are under separate ownership but located on a common tract of land. The arrangement must be recorded in a Shared Site Utility System Agreement and approved by a Code Official. The following conditions shall be required for approval by Commission:

112.2.2.1 Recordation. Recordation of the necessary covenants and easements for maintenance of the shared site utility system.

112.2.2.2 Outside water meter. An accessible outside water meter for each water service connection. All Commission water meters serving the shared site utility system shall be billed to a single account.

112.2.2.3 Design. When authorized, the site utility system shall be designed with the fewest number of service connections.

112.2.2.4 Private meter. Further division of water and sewer billing obligations shall be a private matter between the property owners, lessees, and tenants and may be accomplished through private meters.

112.2.3 Covenants. Where multiple properties or buildings under single ownership are served by water and sewer services connections as allowed or required, a covenant shall be submitted for the Commission's approval. The covenant shall require the property owner to notify the Commission before any subdivision or sale of any or all of the properties covered by the covenant. If the property is subdivided or sold, the covenant may require the property owner to obtain separate water and sewer connections or enter into a Shared Site Utility System Agreement.

112.3 Right-of-way or easement. A property owner shall have a recorded right-of-way or easement if the property owner's water service, sewer service or site utility system is installed, under, over or through any property owned by another person.

112.4 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. Combination water service is the preferred method of supplying domestic water and fire sprinkler systems.

112.4.1 Detached Group R-3 occupancies. Connection to the potable water supply shall be made in accordance with provisions set forth in Section 112.2.1.8 And Chapter 6, "Installation of Commission Water Meters", Sections 603.2.2 and 604.3.2.

112.4.2 Other than Group R-3 occupancies.

112.4.2.1 Systems without fire hydrants. For systems without fire hydrants for other than Group R-3 occupancies, if the water service is to serve a fire sprinkler system with no private fire hydrants and with inside meters, the fire sprinkler water is not required to be metered.

112.4.2.2 Systems with fire hydrants. For systems with fire hydrants for other than Group R-3 occupancies, if the water service is to serve private fire hydrants or other fire sprinkler systems or both and an outside metering scheme is permitted and employed, the meter type utilized shall be FM meter.

112.4.2.3 Existing monitored systems. The Commission shall not require fire sprinkler systems or fire hydrants to be monitored, this includes systems with existing monitoring.

112.4.2.4 Water supplied to fire protection systems or private hydrants. Water supplied to fire sprinkler systems or private fire hydrants shall not be used for any purpose other the firefighting or periodic system flushing and testing

required by a county or local fire protection official. Any other unofficial or unauthorized use shall constitute theft of service and be subject to prosecution under Section 110 of this Code.

112.4.3 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.

112.5 Metering.

112.5.1 General. The Commission shall determine meter size, type, and metering schemes for all Commission Meters. water meters shall be sized based on plumbing hydraulic load, as set forth in Section 602.3. Unless the Code Official approves an exception, oversized meters shall be prohibited. Commission meters may not be used to measure hot water distribution piping systems, plumbing fixtures individually, or groupings of fixtures individually.

112.5.1.1 Existing metering schemes. Except where prohibited under this Code, a property may continue to use its existing metering scheme. If a property is altered or new buildings erected, the Commission may approve the continued use of an existing metering scheme for existing or new buildings.

112.5.1.1.1 Conversion to condominium (Prince George's County only). In accordance with State Law, where a property use is being converted to condominium or cooperative ownership of residential units, the owner shall install a Commission furnished individual meter for each individual dwelling unit and for the common areas. Refer to Sections 112.5.8.2 and 112.5.8.3 for details.

112.5.2 Location. Unless approved for location inside the building, water meters shall be set adjacent to the property line or, where applicable, at the edge of a public right-of-way or Commission easement and right-of-way. Water meter settings and vaults shall be constructed in accordance with Commission Standard Details.

112.5.3 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 Chapter 6.

112.5.4 Protection. The building owner is responsible for protecting Commission water meters 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.

112.5.5 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.

112.5.6 Exceptions. With the exception of Sections 112.5.6.1 and 112.5.6.2, all water provided by Commission shall be metered.

112.5.6.1 Water supplied to fire protection systems and private fire hydrants. Water supplied to fire protection systems and private fire hydrants for the purpose of fire protection is not required to be metered by the Commission.

112.5.6.2 Maintenance of fire hydrants. Water used in the maintenance of fire hydrants, including repair, testing, flushing, and flow tests, is not required to be metered by the Commission.

112.5.7 Meter settings and installation. The Commission or its designee shall install all outside meters. Outside meter settings for 3/4-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 1 1/2-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".

112.5.8 Multi-Unit Buildings. In accordance with State Law, the Commission shall require individual metering of residential dwelling units within a multi-unit condominium or cooperative ownership property located in Prince George's County. For all other multi-unit properties, the Commission shall allow either a master meter or individual meters. Where individual meters are optioned, design and installation shall meet the provisions set forth in Sections 112.5.8.2 and 112.5.8.3 below. Where required solely by the owner, unit private meters shall be furnished, installed, and maintained by the property owner.

112.5.8.1 Mixed-use buildings. With the exception of buildings using individual meters, where mixed-use buildings are served by a single water service connection or multiple service connections forming into a single system on property, a minimum of 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. For mixed-use properties located in Prince George's County, each residential dwelling unit must be separately metered.

112.5.8.1.1 Live and work units. In 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.

112.5.8.1.2 Inside meters. When a mixed-use building is allowed or required by other sections of this Code to be served by inside meters, the required meters, one or more to register only residential unit water consumption and one or more to register only commercial unit water consumption, shall be installed inside in accordance with Sections 112.5.8.2 and 112.5.8.3, as well as Chapter 6 of this Code.

112.5.8.1.3 Outside meters. When a mixed-use building is allowed or required by other sections of this Code to be served by an outside meter application, the two or more required meters shall be installed in accordance with Chapter 6 and as follows: One meter shall be installed outside on the water service connection to register all consumption on-property. Other meters shall be installed inside to register the commercial unit water consumption only so that the difference between the outside meter and the inside meter readings represents the residential unit water consumption at the building. This arrangement is not permitted where individual residential dwelling unit metering is either required or chosen.

112.5.8.2 Individual meters. Where individual meters for multi-unit properties is used, each residential dwelling unit shall be supplied with an individual cold water main supply pipe, Commission meter, and separately billed account. Collectively, all building piping, including any other water uses throughout the building shall be arranged as follows:

112.5.8.2.1 No combination of master and individual meters. No combination of master meters with individual unit meters is permitted (not allowed as an option and will not be supported by the Commission billing system).

112.5.8.2.2 Common areas. Common areas shall be independently metered with a separate account, individual meter, and shut-off valve.

112.5.8.2.3 Submeters. For buildings with individual meters, an individual meter shall be used in lieu of a submeter for determining sewer credits. An individual meter for each use and may not be arranged as a submetered use to any other dwelling unit or use within the property.

112.5.8.2.4 Additional separate metering. Where commercial units (mixed-use buildings) are included, additional metering is required separate from the residential dwelling units and common areas or amenities. See also Section 112.5.8.1. This section may be satisfied by using one meter for all commercial units. Where individual commercial unit metering is optioned, design and installation shall comply with Section 112.5.8.3.

112.5.8.3 Centralized meter room. In all cases where individual multi-unit metering is utilized, a centralized meter room or rooms shall be provided following the provisions set forth in Section 604 and as detailed as follows:

112.5.8.3.1 Small buildings. Buildings up to three floors or 25,000 gross square feet (2,322 square meters) shall be outfitted with a central meter room, equipped with a lockable door accessible directly from the exterior of the building.

112.5.8.3.2 Large buildings. Buildings greater than three floors or 25,000 gross square feet (2,322 gross square meters) shall be outfitted with a central meter room, equipped with a lockable door. Additional central meter rooms are subject to Commission approval and will be considered on a per wing, floor, or area basis. Where direct access is practical, it shall be provided.

112.5.8.3.3 Floor drains. Each meter room shall contain one or more floor drains with a minimum sizing as follows:

1 – 6 meters	=	2-inch floor drain
7 – 12 meters	=	3-inch floor drain
13 meters or greater	=	4-inch floor drain

112.5.8.3.4 Shutoff valve. One shutoff valve within each individual meter piping assembly shall be a tamper resistant and lockable type ball valve. Where an NFPA 13D or 13R fire sprinkler system is utilized, the lockable valve shall be downstream of the fire sprinkler supply tee and serve only the main domestic water.

112.5.8.3.5 Identification. Each individual meter piping assembly shall be identified with an affixed permanent tag, placard, or label depicting the unique unit, suite, or address served by that meter. All related distribution piping, including concealed piping, shall also be identified or labeled every 25 feet (7,620 mm) and within 5 feet (1,524 mm) of each side of a floor or wall penetration.

112.5.8.3.6 Required locked doors. Where central meter rooms open directly to the outdoors, the locking mechanism shall be a four-digit combination lock and the lock code shall be the same for all buildings within a complex. The lock code shall be provided to the Commission's Meter Services personnel during the initial meter setting and verification work order and updated lock codes shall be communicated promptly to the Commission's Customer Services Department.

112.5.8.3.7 Exception. Properties that abut a public water main, are constructed as row-style townhomes (one unit from bottom to top) and use an NFPA 13D or 13R type fire sprinkler system may be served with individual Commission Water Service Connection outfitted with an outside meter or curb valve with inside meter.

112.5.9 Commission submeter. Except as provided in Section 112.5.8.2.3 and as otherwise allowed by law, where water furnished by the Commission is used for purposes where none of the water that passes through the submeter enters the Commission's sewerage system, the owner may request the installation of a Commission submeter. See Public Utilities Article, Section 25-502 through 25-504.

112.5.9.1 Piping arrangement. In cases where a Commission submeter is the same size as the corresponding Commission inside main meter, the piping shall be designed and installed to accommodate each meter in parallel to the other and each meter shall be sized per Table 602.1. Commission submeters shall be installed on the upstream, potable side of an isolation type backflow preventer.

112.5.9.2 Established credits. The following represents established credit values for various submeter applications where all or a portion of the registered water consumption does not discharge to the Commission sanitary sewer system:

112.5.9.2.1 Irrigation. 100% sewer credit for irrigation, outdoor hose bibbs, wall hydrants, yard hydrants, and similar outdoor only water uses.

112.5.9.2.2 Cooling towers with discharge permit. 100% sewer credit for cooling towers with an approved discharge permit from the Maryland Department of the Environment. No provisions for any portion of the submetered water to be discharged to the sanitary sewer system including auto-mechanical blow-off for the introduction of fresh water and chemical or disinfection treatments.

112.5.9.2.3 Cooling towers to sanitary sewer. 73% sewer credit for cooling towers with drain or any mechanical loop piping routed to sanitary sewer including auto-mechanical for the introduction of fresh water and chemical or disinfection treatments.

112.5.9.2.4 Laundries. 25% sewer credit for commercial and industrial laundries.

112.5.9.2.5 Requested credit. A commercial, industrial, or multi-residential property may request a Commission submeter and credit based on a formula determined by the Commission. The formula determined by the Commission shall be consistent with manufacturers' engineering standards for the class of equipment using the separately metered water supplied by the Commission; or industry standards for the class of operations using the separately metered water supplied by the Commission. Customer may be required to provide engineering analysis to Commission. Application for sewer credit shall be submitted to the Commission's Customer Relation Department for review and approval.

112.5.10 Sewer-only accounts. When a building classification other than Group R-3 occupancy 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. At the Commission's discretion, Group R-3 occupancies served as above shall be billed based on a flat rate or using an effluent meter.

112.5.11 Fire hydrant meters. The Commission may authorize use of a fire hydrant meter to applicants requiring water for temporary use. Fire hydrant meters shall have backflow prevention according to Section 506.7.1. Fire hydrant meter use shall be restricted to temporary or seasonal applications including 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.

112.6 Containment. All buildings shall have containment backflow preventer installed on the outlet side of the water meter, before water uses within the premise, as cited in Section 502.3 of this Code. Backflow preventers shall be maintained by the owner as cited in Section 102.3.10.

SECTION 113 STOP WORK ORDER

113.1 Authority. Where the Code Official finds any work regulated by this Code being performed in a manner contrary to the provisions of this Code or in a dangerous or unsafe manner, the Code Official is authorized to issue a stop work order.

113.2 Issuance. The stop work order shall be in writing and shall be posted at the job site and given to the owner of the property, the owner's authorized agent or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

113.3 Emergencies. Where an emergency exists, the Code Official shall not be required to give a written notice prior to stopping the work.

113.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to actions and penalties per Section 115.

113.5 Removal of stop work order. Work shall only resume when stop work order is removed by a Code Official.

113.5.1 Procedures. The licensee shall purchase a Short Form Permit for the purpose of scheduling inspection for removal of stop work order. If the project has an original Long Form or Short Form Permit, the additional Short Form Permit for removal of stop work order shall be scheduled for inspection at the same time.

SECTION 114 APPEAL OF CODE OFFICIAL DECISIONS

114.1 Applicability of section. With the exception of license actions, this section shall apply to decisions of the Code Official.

114.1 Application for appeal. Any person shall have the right to appeal a decision of the Code Official to the Chief Code Official 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.

114.2.1 Chief Code Official decision. The Chief Code Official shall affirm, modify, or reverse the decision of the Code Official. This decision shall be provided to the appellant in writing within 20 days from the Commission's receipt of the appeal.

114.3 Appeal of Chief Code Official decision. Any person shall have the right to appeal a decision of the Chief Code Official under this section to the WSSC Plumbing and Fuel Gas Board (hereinafter the "Board"). An appeal from the Chief Code Official's decision shall be filed with the Commission in writing within 20 days after the decision was issued.

114.2 Notice of meeting. The Board shall meet, upon notice from the chairperson, within 45 days of the filing of an appeal or at stated periodic meetings.

114.3 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.

114.4 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.

114.5 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.

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

114.5.2 Administration. The Chief Code Official shall take immediate action in accordance with the resolution of the Board.

SECTION 115 VIOLATIONS AND PENALTIES

115.1 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 perform sewer and drain cleaning; or cause same to be done, in conflict with or in violation of any of the provisions of this Code.

115.2 Notice of violation. A Code Official shall serve a Notice of Violation (NOV) 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. The person responsible includes the property owner, the property owner's agents and contractors, and the licensed or unlicensed persons. The timeframe for corrective actions cited in a NOV shall be met as directed. The timeframe for corrective actions is not contingent on the disposition of any civil citation.

115.2.1 Failure to comply. Failure to comply with a Notice of Violation (NOV) or other enforcement action, within the specified timeframe, is a separate violation of this Code and may be subject to progressive enforcement action including civil citation, stop work order, termination of service, and may be grounds for license action.

115.2.2 Abatement of violation. The imposition of the penalties provided in this section 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 use of the plumbing, fuel gas, or site utility systems on or about any premises.

115.3 Civil citations. Pursuant to Section 29-101, Public Utilities Article, Annotated Code of Maryland, a Code Official who is authorized by the Commission to issue civil citations may issue civil citations to any person violating any provision of this Code.

Upon delivery of a civil citation by the Commission, the person who violated any provision of this Code shall pay to the Commission a civil fine in the amount of:

1. For a first violation of a provision of this Code, $250;
2. For a second violation of the provision, $500;
3. For a third violation of the provision, $750; and
4. For a fourth or subsequent violation, $1,000.

The progression of civil citation issuance will continue until a period of 12 months without violation of the provision.

115.4 Stop work order. Where the Code Official finds any work regulated by this Code being performed in a manner contrary to the provisions of this Code or in a dangerous or unsafe manner, the Code Official is authorized to issue a stop work order. See Section 113.

115.5 Termination of water, sewer or gas service. A property owner is subject to termination of water, sewer, or gas service where any of the following conditions exist and progressive enforcement actions were unsuccessful, or where imminent danger to life exist. For termination of gas service, the Code Official shall refer to gas utility. See also Sections 115.2.1 and 115.10.4:

115.5.1 Without required authorization. The property owner engaged in work without required authorization, including work without a license or work without a permit.

115.5.2 Inspections. The property owner engaged in work and the required inspections for permitted work have not been scheduled.

115.5.1 Uncooperative or untimely. The property owner has been uncooperative or untimely in to rectify unauthorized work.

115.6 License denials, reprimands, suspensions and revocations, grounds.

115.6.1 General. Subject to the hearing provisions of Section 115.7 of this Code, and in any order depending upon the circumstances, the Board may deny a license to an applicant, reprimand any licensee, or suspend or revoke a license if the Board determines that the applicant or licensee:

115.6.1.1 Fraudulently or deceptively obtain license. Fraudulently or deceptively obtains or attempts to obtain a license for the applicant or licensee or for another;

115.6.1.2 Fraudulently or deceptively use. Fraudulently or deceptively uses a license;

115.6.1.3 Gross negligence, incompetence, or misconduct. Is guilty of gross negligence, incompetence, or misconduct while providing plumbing, gasfitting, or sewer and drain cleaning services or assisting in providing plumbing, gasfitting, or sewer and drain cleaning services;

115.6.1.4 Violating Code. Is guilty of violating the Commission's plumbing and fuel gas regulations adopted under Title 17, Subtitle 4 of the Public Utilities Article of the Annotated Code of Maryland while providing plumbing, gasfitting, or sewer and drain cleaning services or assisting in providing plumbing, gasfitting, or sewer and drain cleaning services;

115.6.1.5 Unfair or deceptive practice. Is guilty of an unfair or deceptive trade practice, as defined in Section 13-301 of the Commercial Law Article of the Annotated Code of Maryland;

115.6.1.6 Felony or misdemeanor. Under the laws of the United States or of any state, is convicted of:

- **a.** A felony; or
- **b.** A misdemeanor that is directly related to the fitness and qualification of the applicant or licensee to provide plumbing, gasfitting, or sewer and drain cleaning services;

115.6.1.7 Failure to control. Fails to train and control adequately any person who, while under the direction and control of the Master Plumber or Master Gasfitter, sells or gives estimates for providing plumbing or gasfitting services or provides or assists in providing plumbing or gasfitting services;

115.6.1.8 Failure to maintain insurance. Fails to maintain the liability insurance required under Section 118.8;

115.6.1.9 Failure to comply. Fails to comply with a notice of violation within the specified deadline. See Section 115.2.1.

115.6.1.10 Performs work outside of scope of license. As the holder of a Master Plumber, Master Gasfitter, Master Plumber/Gasfitter, Journeyman Plumber license, Journeyman Gasfitter license, Apprentice Plumber license, Apprentice Gasfitter license, or Sewer and Drain Cleaner license performs plumbing, gasfitting, or sewer and drain cleaning services outside the scope of that license;

115.6.1.11 Allows or permits work outside of scope of license. Knowingly allows or permits another licensee to perform plumbing, gasfitting, or sewer and drain cleaning services outside the scope of that individual's license;

115.6.1.12 Other provisions. Violates any other provision of this Code; or

115.6.1.13 Any regulation adopted. Violates any regulation adopted under this Code.

115.6.2 Penalty. Instead of or in addition to reprimanding a licensee or suspending or revoking a license under Section 115.6.1, the Board may impose a penalty payable to the Commission not exceeding $5,000 for each violation. To determine the amount of the penalty imposed under this subsection, the Board shall consider:

- **a.** The seriousness of the violation;
- **b.** The harm caused by the violation;
- **c.** The good faith of the licensee; and
- **d.** Any history of previous violations by the licensee.

115.6.4 Convicted. The Board shall consider the following facts in the denial, suspension, or revocation of a license or the reprimand of a licensee when an applicant or licensee is convicted of a felony or misdemeanor described in Section 115.6.1.6:

- **a.** The nature of the crime;
- **b.** The relationship of the crime to the activities authorized by the license;
- **c.** With respect to a felony, the relevance of the conviction to the fitness and qualification of the applicant or licensee to provide plumbing services;
- **d.** The length of time since the conviction; and
- **e.** The behavior and activities of the applicant or licensee before and after the conviction.

115.7 Denials, reprimands, suspensions, and revocations, hearings.

115.7.1 Opportunity for hearing. Except as otherwise provided in Section 10-226 of the State Government Article, before the Board takes any final action under Section 12-312 of this subtitle, it shall give the individual against whom the action is contemplated an opportunity for a hearing.

115.7.2 Notice. The Board shall give notice and hold the hearing in accordance with Title 10, Subtitle 2 of the State Government Article.

115.7.3 Oaths. The Board may administer oaths in connection with any proceeding under this section.

115.7.4 Failure or refusal to appear. If, after due notice, the individual against whom the action is contemplated fails or refuses to appear, nevertheless the Board may hear and determine the matter.

115.7.5 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 115.6.1 as a non-licensee.

115.8 Judicial review. Any person aggrieved by a final decision of the Board in a contested case, as defined in Section 10-202 of the State Government Article, may take an appeal as allowed in Sections 10-222 and 10-223 of the State Government Article.

115.9 License reinstatement.

115.9.1 Suspension. Following the term of any license suspension, the license shall be reinstated, provided that the licensee meets all of the requirements of Section 118 of this Code for the particular type of license.

115.9.2 Revocation. Following the term, if any, of any license revocation the license may be reinstated, provided that the licensee passes the required Commission examination and otherwise qualifies for the particular type of license in accordance with the requirements of Sections 118 of this Code.

115.10 Unsafe installations.

115.10.1 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.

115.10.2 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.

115.10.3 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 115.2 shall be given. In cases of immediate danger to life or property, the order to disconnect shall be effective immediately without such notice.

115.10.4 Authority to disconnect service utilities. A Code Official shall have the authority to authorize disconnection of water, sewer or gas service to any building, structure or system regulated by this Code to eliminate an immediate danger to life, property, environment, health hazard or the Commission's systems. Where possible, the owner and occupant of the building, structure or service system shall be notified of the decision to disconnect utility service before taking such action. If not notified before disconnection, the owner or occupant of the building, structure or service systems shall be notified in writing, as soon as practical thereafter.

115.10.5 Reconnection 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.

115.11 Unlicensed work subject to civil liability and criminal prosecution. Where a person willfully advertised, solicited, contracted or performed plumbing, gasfitting, site utility, sewer and drain cleaning, or waste hauling services without a license or permit, the person may be subject to civil liability and criminal prosecution under Maryland Law.

SECTION 116 THEFT OF COMMISSION SERVICES

116.1 Intent to obtain services without payment.

116.1.1 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.

116.1.2 Evidence. Unless otherwise allowed by law or by prior written permission of the Commission, a person that 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.

116.2 Intent to divert services.

116.2.1 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 or sewer usage or both.

116.2.1.1 Meter bypass valve. A meter bypass valve associated with an inside or outside Commission water meter shall only be opened by authorized Commission personnel or by written permission from Commission customer relations or utility services personnel. Unauthorized opening of a meter bypass valve shall constitute prima facie evidence of theft of service.

116.2.2 Illegal sewer connection or discharge. Unless allowed by this Code, 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. Examples of illegal sewer connections or discharges include: storm water or ground water from any source, air conditioning condensate, outdoor pool and deck drains, building foundation drains or foundation sump pumps. See IPC Section 314.2 and amendments in Chapter 3 of this Code.

116.2.2.1 Outdoor swimming pools, decorative fountains or interactive water features. In order for outdoor swimming pools, decorative fountains or interactive water features to discharge to the Commission sanitary sewer system, there shall include a raised curb, other peaked topographic feature, or a diverting trench drain which only allows direct rainfall to enter the feature and all other surface or subsurface waters to be directed away from said feature and not be able to reach the sanitary sewer.

116.2.2.2 Openings. Entrances and exits to parking and service garages, vehicle washing facilities, loading docks, and any other similar openings shall protect inside sanitary drains from receiving storm waters by incorporating an overhang equal to or exceeding 1 foot (304 mm) horizontal per 5 feet (1,524 mm) of vertical opening and where applicable, a diverting trench drain for downward sloping ramps, entrances, and exits.

116.2.3 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 or sewer services without it being measured or registered on a meter.

116.2.4 Test meter. If a test 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 117 PLUMBING AND FUEL GAS BOARD

117.1 Duties.

117.1.1 Code advisory role. The WSSC Plumbing and Fuel Gas Board shall be responsible for reviewing and recommending to the Commission the 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 under Section 17-403 of the Public Utilities Article .

117.1.2 Hearings and appeals. The Board shall serve as a hearing authority in cases set forth in Section 115.7, “Denials, Reprimands, Suspensions, and Revocations, Hearings"; Section 114.3, “Appeal of Chief Code Official Decisions”; and requests for exceptions for trade qualifications and exams in Section 118, “Licenses and Registration”, when referred by or denied by the Chief Code Official.

117.1.3 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.

117.2 Voting membership. The Board shall consist of seven voting members. Except for an appeal originating from a decision of the Chief Code Official, the Chief Code Official of the Commission shall be a permanent voting member of the Board. The General Manager of the Commission must appoint 6 voting members who shall not be current employees of the Commission. Of the 6 appointed members:

- **a.** One must be a WSSC-Licensed Master Plumber and Gasfitter representing the large commercial or large volume residential sector;
- **b.** One must be a WSSC-Licensed Master Plumber representing a local plumbing trade association;
- **c.** One must be a WSSC-Licensed Master Gasfitter representing a local HVAC trade association;
- **d.** One must be a Maryland Professional Engineer with experience and understanding of plumbing and fuel gas systems;
- **e.** One must be 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; and
- **f.** One must be 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.

117.2.1 Alternate members. The General Manager of the Commission 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.

117.3 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.

117.4 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 118 LICENSES AND REGISTRATION

118.1 Licensee. A licensee, as defined in Chapter 2 of this Code, is the holder of a Commission issued license.

118.2 Principal licensee. Each person that performs plumbing, gasfitting, or sewer and drain cleaning in the Sanitary District shall register one individual with the Commission as its principal licensee. The principal licensee shall be a Master Plumber, Master Gasfitter, Master Plumber/Gasfitter, or Sewer and Drain Cleaner. Permits shall only be issued to a principal licensee, or homeowner for homeowner permit. Sewer and Drain Cleaners cannot be issued a plumbing or gasfitting permit, see Section 106.4.

118.2.1 One principal licensee per firm. A licensee may only be the registered principal licensee for one firm or corporation, and a firm or corporation may only register one individual as its principal licensee for each type of license.

118.2.2 Non-principal licensees. WSSC-Licensed Master Plumbers, Master Gasfitters, Master Plumber/Gasfitters, and Sewer and Drain Cleaners not registered as a principal licensee shall be licensed as non-principal licensees. Non-principal licensees shall not be eligible for permit issuance, shall not portray themselves as the principal licensee for any firm or corporation, and shall perform work only under the direction and control of a principal licensee.

118.3 Who is not licensed. The Commission shall not license any firm or corporation, other than indirectly through control of the principal licensee per Sections 118.2.1 or 118.4.

118.4 Firms with multiple divisions. If a firm or corporation has multiple operating branches, divisions, or geographic locations, principal licensee requirements shall be determined as follows:

118.4.1 Single name. If all branches or divisions operate under a single corporate or advertised name, representation by one principal licensee shall be required.

118.4.2 Multiple names. With the exception of different names due to geographical location, if each branch or division of a firm or corporation operates under its own advertised name, different than the firm or corporate name of which it is a part, then each such branch or division shall be required to be represented by its own principal licensee.

118.5 Institutional license required. Any public agency or utility, institution, industrial or commercial establishment, or similar entity that carries out the act of plumbing or gasfitting or both in-house ("in-house" means done internally within organization) throughout its campus or within their building or both shall be represented by a WSSC-Licensed Master Plumber, Gasfitter, or Plumber/Gasfitter, as applicable. The licensee shall register as the principal licensee for the entity and shall also comply with Section 118.2.1.

118.5.1 Institutional Employment. A WSSC-Licensed 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 outside of that employment, shall not carry on the business of plumbing or gasfitting within the Sanitary District unless licensed and registered by the Commission.

118.5.2 Federal property exempt. See Section 102.8.

118.6 Licenses.

118.6.1 Apprentice Plumber.

118.6.1.1 Authorization for work. 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 WSSC-Licensed Master Plumber/Gasfitter on the project site; or under the direction and control of a WSSC-Licensed Journeyman Plumber or Journeyman Plumber/Gasfitter on the project site who is under the direction and control of a WSSC-Licensed Master Plumber or Master Plumber/Gasfitter.

118.6.1.2 Qualifications. Qualification for this entry level position to the plumbing trade does not require references or the passage of any exam.

118.6.2 Apprentice Gasfitter.

118.6.2.1 Authorization for work. 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 project site; or under a WSSC-Licensed Journeyman Gasfitter or WSSC-Licensed Journeyman Plumber/Gasfitter on the project site who is under the direction and control of a WSSC-Licensed Master Gasfitter or Master Plumber/Gasfitter.

118.6.2.2 Qualifications. Qualification for this entry level position to the gasfitting trade does not require references or the passage of any exam.

118.6.3 Apprentice Plumber/Gasfitter.

118.6.3.1 Authorization for work. 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 project site; or under a WSSC-Licensed Journeyman Plumber/Gasfitter on the project who is under the direction and control of a WSSC-Licensed Master Plumber/Gasfitter.

118.6.3.2 Qualifications. Qualification for this entry level position to the plumbing and gasfitting trades does not require references or the passage of any exam.

118.6.4 Journeyman Plumber.

118.6.4.1 Authorization for work. 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 WSSC-Licensed Master Plumber/Gasfitter.

118.6.4.2 Qualifications. In order to qualify for the journeyman plumber exam, applicants shall meet the following requirements:

118.6.4.2.1 Work experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of a minimum of 7,500 hours of work experience in the plumbing trade as an apprentice under the direction and control of a WSSC-Licensed Master Plumber or WSSC-Licensed Master Plumber/Gasfitter (or equivalent work experience approved by Code Official).

118.6.4.2.2 Formal training. Applicants 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.

118.6.4.2.3 Cross-connection certification. As a prerequisite for taking the journeyman plumber exam, applicants shall have a certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor, or a certificate of completion for a cross-connection and backflow prevention training program from another jurisdiction or state that is acceptable to the Commission. The certificate of completion must be issued within 3-years before the date of application.

118.6.4.2.4 References. Applicants shall provide a minimum of 3 references. References shall be from employers or persons acquainted with the applicant's trade qualifications and character.

118.6.4.2.5 Exam. See section 118.7.

118.6.5 Journeyman Gasfitter.

118.6.5.1 Authorization for work. A Journeyman Gasfitter license shall authorize the licensee to provide gasfitting services under the direction and control of a WSSC-Licensed Master Gasfitter or WSSC-Licensed Master Plumber/Gasfitter.

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

118.6.5.2.1 Work experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of a minimum of 3,750 hours of work experience in the gasfitting trade as an apprentice under the direction and control of a WSSC-Licensed Master Gasfitter or WSSC-Licensed Master Plumber/Gasfitter (or equivalent work experience approved by Code Official).

118.6.5.2.2 Formal training. Applicants 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.

118.6.5.2.3 References. Applicants shall provide a minimum of 3 references. References shall be from employers or persons acquainted with the applicant's trade qualifications and character.

118.6.5.2.4 Exam. See Section 118.7.

118.6.6 Journeyman Plumber/Gasfitter.

118.6.6.1 Authorization for work. 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 WSSC-Licensed Master Plumber/Gasfitter; and gasfitting services under the direction and control of a WSSC-Licensed Master Gasfitter or WSSC-Licensed Master Plumber/Gasfitter.

118.6.6.2 Qualifications. See Sections 118.9.2 and 118.10.2.

118.6.7 Master Plumber.

118.6.7.1 Authorization for work. A Master Plumber license shall authorize the licensee to provide plumbing and sewer and drain cleaning services.

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

118.6.7.2.1 Work experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of a minimum of 3,750 hours of work experience in the plumbing trade as a journeyman plumber under the direction and control of a WSSC-Licensed Master Plumber or WSSC-Licensed Master Plumber/Gasfitter (or equivalent work experience approved by Code Official).

118.6.7.2.2 Cross-Connection certification. As a prerequisite for taking the Master Plumber exam, applicants shall have a certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor, or a certificate of completion for a cross-connection and backflow prevention training program from another jurisdiction or state that is acceptable to the Commission. The certificate of completion must be issued within 3-years before the date of application.

118.6.7.2.3 References. Applicants shall provide a minimum of 3 references. References shall be from employers or persons acquainted with the applicant's trade qualifications and character.

118.6.7.2.4 Exam. See Section 118.7.

118.6.8 Master Gasfitter.

118.6.8.1 Authorization for work. A Master Gasfitter license shall authorize the licensee to provide gasfitting services.

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

118.6.8.6.1 Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of a minimum of 3,750 hours of work experience in the gasfitting trade as a journeyman gasfitter under the direction and control of a WSSC-Licensed Master Gasfitter or WSSC-Licensed Master Plumber/Gasfitter (or equivalent work experience approved by Code Official).

118.6.8.6.2 References. Applicants shall provide a minimum of 3 references. References shall be from employers or persons acquainted with the applicant's trade qualifications and character.

118.6.8.6.3 Exam. See Section 118.7.

118.6.9 Master Plumber/Gasfitter.

118.6.9.1 Authorization for work. A Master Plumber/Gasfitter license shall authorize the licensee to provide plumbing, sewer and drain cleaning, and gasfitting services.

118.6.9.2 Qualifications. See Sections 118.12.2 and 118.13.2.

118.6.10 Sewer and Drain Cleaner.

118.6.10.1 Authorization for work. A master plumber or a sewer and drain cleaner shall be authorized to provide sewer and drain cleaning services of drainage systems regulated by the Commission. Sewer and drain cleaning 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, WSSC-Licensed Master Plumber/Gasfitter, or WSSC-Licensed Sewer and Drain Cleaner. Additional work shall be regulated and restricted as follows:

118.6.10.1.1 Fixture removal access. When a licensee is engaged in sewer and drain cleaning activity only, a Sewer and Drain Cleaner license shall allow the licensee to remove and reset a plumbing fixture for access to the drainage system .

118.6.10.1.2 Plumbing and gasfitting 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 gasfitting business.

118.6.10.1.3 Master Plumber. A WSSC-Licensed Master Plumber or WSSC-Licensed Master Plumber/Gasfitter shall not be required to hold a Sewer and Drain Cleaner license in order to engage in sewer and drain cleaning service.

118.6.10.2 Qualifications.

118.6.10.2.1 Work experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of a minimum of 3,750 hours of work experience in the sewer and drain cleaning business under the direction and control of a WSSC-Licensed Sewer and Drain Cleaner, WSSC-Licensed Master Plumber, or WSSC-Licensed Master Plumber/Gasfitter for a minimum of 3750-hours of work experience in the trades. Proof of work experience shall be supported by written statements from one or more employers of the applicant.

118.6.10.2.1.1 Journeyman plumber. A WSSC-Licensed Journeyman Plumber or WSSC-Licensed Journeyman Plumber/Gasfitter shall be considered a qualified applicant in lieu of the work experience required in Section 118.6.10.2.1.

118.6.10.2.2 References. Applicants shall provide a minimum of 3 references. References shall be from employers or persons acquainted with the applicant's trade qualifications and character.

118.6.11 Cross-Connection Technician.

118.6.11.1 Authorization for work. A Cross-Connection Technician license shall authorize the licensee to certify the installation and testing of mechanical cross-connection control assemblies.

118.6.11.2 Qualifications. In order to qualify for the Cross-Connection Technician license, applicants shall meet the following requirements:

118.6.11.2.1 Eligible persons. Only a WSSC-Licensed Master Plumber, WSSC-Licensed Master Plumber/Gasfitter, WSSC-Licensed Journeyman Plumber, or WSSC-Licensed Journeyman Plumber/Gasfitter shall be eligible for licensing as a Cross-Connection Technician.

118.6.11.2.2 Cross-connection certification. All Cross-Connection Technician applicants shall have certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor or have a certificate of completion for a 32-hour cross-connection and backflow prevention training program from another jurisdiction or state that is acceptable to the Commission.

118.6.11.2.3 Recertification limit. A Cross-Connection Technician license shall be valid for a period of 3-years. Individuals shall be required to have a certificate of completion for an 8-hour recertification program instructed by an approved cross-connection and backflow prevention certified course instructor or pass an 8-hour cross-connection and backflow prevention training program from another jurisdiction or state that is acceptable to the Commission. Individuals who allow their certification to lapse shall immediately cease all Cross-Connection Technician license related activities. If recertification is not obtained within 12 months of the certificate expiration date, the individual shall be required to complete a cross-connection and backflow prevention training program that meets the requirements of Section 119.

118.6.12 Non-licensed worker. A non-licensed person, such as a helper or laborer, shall not provide or assist in providing plumbing, gasfitting, or sewer and drain cleaning work. A non-licensed person shall only perform classes of work that support plumbing and gasfitting work. Examples include excavating, backfilling, cutting and drilling of the structure, carrying materials and equipment, cleaning up, painting, patching, and similar classes of support work.

118.6.13 Minor work not requiring a licensee. A person shall not be required to be a licensee to perform minor plumbing and gas appliance maintenance services within the scope of Section 106.2.1.2, “Plumbing maintenance”, and Section 106.2.2.1, “Gas appliance maintenance.”

118.7 Exam.

118.7.1 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.

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

118.7.3 Passing score. A passing score of no less than 70% shall constitute successful completion of the exam.

118.7.4 Reexamination. Applicants shall be permitted to retake the exam every 30 days until a passing score has been obtained.

118.8 Insurance requirements and warranty.

118.8.1 Coverage parameters.

118.8.1.1 Proof of coverage. Before registration as the master principal licensee, or sewer and drain cleaner principal, 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 the Commission listed as the certificate holder.

118.8.1.2 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.

118.8.1.3 Minimum insurance coverage. The minimum insurance requirement shall be a commercial general liability policy with a combined aggregate limit for bodily injury and property damage of $1,000,000.

118.8.2 Premium obligations.

118.8.2.1 Insurance company. The insurance company issuing policies of insurance shall be licensed for business in the state of Maryland.

118.8.2.2 Licensee responsibility. The principal licensee shall be responsible for submitting an updated certificate of insurance before the policy expiration date. Failure to do so shall result in lapse of registration.

118.8.3 Insurance cancellations. A minimum of 30 days written notification to the Commission 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.

118.8.4 Insurance conditions.

118.8.4.1 Scope. All policies and certificates of insurance shall be obtained before the issuance of a Commission license or permit.

118.8.4.2 Purpose. The applicant shall satisfy the insurance requirements in Section 118.8 before the Commission may issue a license to a principal licensee.

118.8.4.3 Protection. The insurance requirements in this section are minimum requirements. Insurance requirements shall not be construed by anyone to indicate that they are sufficient or adequate under all circumstances.

118.8.5 Warranty. On all work requiring a permit, the licensee shall warrant, at a minimum, 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.

118.8.5.1 Sewer and water service. The building sewer and the building water service shall be warranted for 3-years from date of final inspection.

118.8.5.2 All other work. All other work shall be warranted for 1-year from date of final inspection.

118.4.5.3 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 106.7.3.

118.9 License registration.

118.9.1 License registration procedure.

118.9.1.1 Registration. To be licensed by the Commission, applicants shall register with the Commission after trade and examination qualifications are satisfied per Sections 118, as applicable. Required work experience as an apprentice or a journeyman begins at the time of registration.

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

118.9.1.3 Referral evidence. For all prospective licensees, except apprentices, 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.

118.9.1.4 Four-year registration, master license, original license. Master license applicants passing the Commission exam shall renew their license every 4-years.

118.9.1.5 Two-year registration, journeyman license. Journeyman license applicants shall renew their license every 2-years.

118.9.1.6 Lifetime registration, apprentice license. Apprentice license applicants shall be issued an apprentice license without an expiration date. Apprentices are not required to renew their license.

118.9.1.7 Two-year registration, master license, reciprocal license. Master plumbers, master gasfitters, and master plumber/gasfitters registering under the reciprocity provisions of Section 118 shall be required to renew their Commission license every 2-years. Expiration will be set to occur one month after expiration of the original license.

118.9.1.8 Two-year registration, sewer and drain cleaner license. Sewer and drain cleaners shall renew their license every 2-years.

118.9.2 Registration card. A licensee shall be required to carry the license registration card when performing plumbing, gasfitting, 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 Commission license registration card is lost or destroyed, the licensee shall apply for a new license registration card within 5 business days.

118.9.3 Change of business or licensee status. If a principal licensee changes their business affiliation, goes out of business, or is deceased, or if the firm or corporation for which they are the principal licensee changes its name, the respective registration as principal licensee shall immediately expire. 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.

118.9.4 Lapse of registration. Lapse of registration shall render a Commission license invalid. No work regulated by this Code shall proceed until registration is current.

118.9.4.1 Plumber or Gasfitter. If a licensee fails to renew the 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 qualify in accordance with the provisions set forth in Section 118. Otherwise, only the appropriate registration fee shall be required if all other requirements of this Code are shown to be satisfied.

118.9.4.2 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 qualify in accordance with the provisions set forth in Section 118. Otherwise, only the appropriate registration fee shall be required if all other requirements of this Code are shown to be satisfied.

118.10 License display and advertisement requirements.

118.10.1 Vehicle displays. Each company-owned vehicle used to provide plumbing, fuel gas, or sewer and drain cleaning services shall display information as follows:

118.10.1.1 Name. Company or firm name.

118.10.1.2 Number. WSSC license registration number of the principal licensee (e.g. WSSC #12345).

118.10.1.3 Both sides. Required information shall appear on both sides of the vehicle.

118.10.2 Advertisement. Each printed, audio, video, or computerized advertisement of any type shall clearly contain the applicable words “WSSC-Licensed Master Plumber/Gasfitter”, “WSSC-Licensed Master Plumber”, “WSSC-Licensed Master Gasfitter”, or “WSSC-Licensed Sewer and Drain Cleaner” along with the current valid WSSC registration number (license number).

118.11 Licensee contact information. Licensees shall be responsible for keeping address, email, and telephone information current with the Commission. A valid email address is required for license registration. Address, email, and phone number corrections and changes shall be transmitted in writing or performed electronically through the Commission’s ePermitting system. Email and telephone information shall be for individual and not general contact information for business. Address shall be personal address, with the exception of business owners (licensees who own their business may use business address).

118.12 Reciprocity of licenses.

118.12.1 Master Plumber or Master Gasfitter, with license from a jurisdiction having reciprocity with Commission. The Commission shall reciprocate at the master licensee level with a jurisdiction where the applicant has passed a plumbing exam, gasfitting exam, or combination plumbing and 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:

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

118.12.1.2 Good standing. Present a letter of good standing from the reciprocating jurisdiction or licensing agency.

118.12.1.3 Cross-connection training. Master Plumber applicants shall have a certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor or have a certificate of completion for a cross-connection and backflow prevention training program from another jurisdiction or state, that is acceptable to the Commission, within 3-years prior to application.

118.12.1.4 Exam verification. Master Gasfitter applicants shall present a validated Commission exam verification form from the reciprocating jurisdiction or licensing agency, verifying that the applicant has passed a separate master gasfitter exam.

118.12.1.5 License and registration. Satisfy the requirements set forth in Sections 118.1 and 118.9.

118.12.1.6 License invalidation. A Commission 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.

118.12.2 Master Plumber or Master Gasfitter, with license from a jurisdiction not having reciprocity with the Commission. Applicants shall qualify for the exam as a WSSC-Licensed Master Plumber or Master Gasfitter upon satisfaction of the following conditions:

118.12.2.1 Original license. Present a current Master Plumber or Master Gasfitter license issued by the jurisdiction or licensing agency.

118.12.2.2 Work experience. Applicants shall furnish satisfactory proof of work experience that is equivalent to the combined work experience requirements for a WSSC-Licensed Master License and a WSSC-Licensed Journeyman license. Work experience requirements for the original license shall be considered satisfactory proof of work experience.

118.12.2.3 Good standing. Present a letter of good standing from the jurisdiction or licensing agency.

118.12.2.4 Cross-connection training. Master Plumber applicants shall have a certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor or have a certificate of completion for a cross-connection and backflow prevention training program from another jurisdiction or state, that is acceptable to the Commission, within 3-years prior to application.

118.12.2.4 License and registration. Satisfy the requirements set forth in Sections 118.1 and 118.9.

118.12.2.5 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.

118.12.3 Journeyman Plumber or Journeyman Gasfitter, with license from a jurisdiction having reciprocity with the Commission. The Commission shall reciprocate at the journeyman licensee level with a jurisdiction where the applicant has passed a plumbing exam, gasfitting exam, or combination plumbing and gasfitting 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:

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

118.12.3.2 Good standing. Present a letter of good standing from the reciprocating jurisdiction or licensing agency.

118.12.3.3 Cross-connection training. Journeyman Plumber applicants shall have a certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor or have a certificate of completion for a cross-connection and backflow prevention training program from another jurisdiction or state, that is acceptable to the Commission, within 3-years prior to application.

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

118.12.3.5 License and registration. Satisfy the requirements set forth in Sections 118.1 and 118.9.

118.12.3.6 License invalidation. A Commission 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.

118.12.4 Journeyman Plumber or Journeyman Gasfitter, with license from a jurisdiction not having reciprocity with the Commission. Applicants shall qualify for the exam as a WSSC-Licensed Journeyman Plumber or Journeyman Gasfitter upon satisfaction of the following conditions:

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

118.12.4.2 Work experience. Applicants shall furnish satisfactory proof of work experience that is equivalent to the combined work experience requirements for a WSSC-Licensed Journeyman license. Work experience requirements for the original license shall be considered satisfactory proof of work experience.

118.12.4.3 Good standing. Present a letter of good standing from the jurisdiction or licensing agency.

118.12.4.4 Cross-connection training. Journeyman plumber applicants shall have a certificate of completion for a 32-hour cross-connection and backflow prevention training program instructed by an approved cross-connection and backflow prevention certified course instructor or have a certificate of completion for a cross-connection and backflow prevention training program from another jurisdiction or state, that is acceptable to the Commission, within 3-years prior to application.

118.12.4.5 License and registration. Satisfy the requirements set forth in Sections 118.1 and 118.9.

118.12.4.6 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.

SECTION 119 CROSS CONNECTION/BACKFLOW PREVENTION CERTIFICATION TRAINING PROGRAM

119.1 Certified training program. A program shall be eligible for approval by the Commission if the program meets the following:

119.1.1 Certified instructor.

119.1.1 Qualifications. In order to qualify to be a certified instructor, an individual shall have a certificate of competition from an instructional certification program sponsored by an organization recognized by the Chief Code Official, including the university of Florida TREEO center (TREEO), American Society of Sanitary Engineering (ASSE) instructor accreditation certification, and University of Southern California Foundation for Cross Connection Control and Hydraulic Research (FCCC&HR). Certified instructors shall maintain instructor certification by meeting the requirements of TREEO, ASSE, and FCCC&HR, which shall include completion of instructor recertification training or any other institution specific requirement as necessary to maintain a current certification.

119.1.2 Course materials. The course materials shall include a cross connection/backflow prevention training manual prepared by one of the following, TREEO, ASSE, or FCCC&HR or approved by Chief Code Official.

119.1.3 Course curriculum. At a minimum, the course curriculum shall include training in the following:

- **a.** Introduction to backflow prevention
- **b.** Hazards of cross connection/backflow
- **c.** Laws of backflow prevention
- **d.** Responsibilities of certified technician
- **e.** The methods, mechanisms, and installation techniques for the prevention of backflow
- **f.** Field testing
- **g.** Field reports
- **h.** Troubleshooting
- **i.** Repair of a backflow occurrence
- **j.** Recertification

119.1.4 Facility. The instructional certification program shall be conducted at a facility that provides adequate space and a suitable training environment.

119.1.4.1 Inspection accessibility. A Code Official shall be granted access for inspect of the facility during normal business and class hours.

119.1.4.2 Apparatus. At a minimum, the facility shall be equipped with the following training apparatus:

- **a.** A test kit.
- **b.** One of each mechanical cross connection control device and assembly necessary for compliance with ASSE 1011, 1012, 1013, 1015, 1019, 1020, 1022, 1024, 1035, and 1056.
- **c.** Mechanical cross-connection control assembly set up for field testing.

119.2 Certificate. The certified instructor shall issue a certificate of competition to each individual who successfully completes the program with the following:

- **a.** The name and signature of the certified instructor.
- **b.** The name of the certified Cross-Connection Technician to whom the certificate is issued.
- **c.** A statement that the course constitutes a 32-hour cross connection/backflow prevention certification program approved by the Commission.

d. The date of completion or certification.

119.3 Pocket identification card. The certified instructor shall issue a pocket identification card that includes: the name of the certified cross-connection technician to whom it is issued, the title “Certified Cross-Connection Technician” and the dates which the certification is valid.

119.3 Recertification offer. The certified training program shall offer recertification every 3 years.

119.4 List of certified instructors. RSD shall keep a list of certified instructors.

119.5 Authorization for work. Completion of a Commission approved cross connection/backflow prevention certification program does not authorize an individual to install, test, or certify mechanical cross-connection control assemblies.

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 Section 101.3) and the definitions set forth in the Public Utilities Article of the Annotated Code of Maryland, the definitions set forth in Section 203 of this Code and Chapter 2 of the IPC and Chapter 2 of IFGC apply to the provisions of this Code. Definitions in Chapter 2 of this Code shall apply to this Code, and adopted model codes, and supersede the definitions in the IPC and IFGC.

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 Section 801.2 specifically apply to the provisions of Chapter 8, ”Industrial and Special Waste” of this Code.

SECTION 202 ACRONYMS

AHJ. Authority Having Jurisdiction

ANSI. American National Standards Institute

ASME. American Society of Mechanical Engineers

ASSE. American Society of Sanitary Engineering

ASTM. American Society for Testing and Materials

AVB. Atmospheric Vacuum Breaker

AWWA. American Water Works Association

CAN/CSA. CSA standards adopted as Canadian national standards

CCTR. Cross-Connection Test Report

CSA. CSA group: product certification and standards development

DCDA. Double Check Detector Assembly

DCVA. Double Check Valve Assembly

DFU. Drainage Fixture Units

FBGI. Flow-Based Grease Interceptor

FM. Factory Mutual

FOG. Fats, Oil, and Grease

FSE. Food Service Establishment

GRD. Grease Removal Device

HCVB. Hose Connection Vacuum Breaker

IBC. International Building Code

ICC. International Code Council

IFGC. International Fuel Gas Code

IPC. International Plumbing Code

IRC. International Residential Code

MOSHA. Maryland Occupational Safety and Health Act

MSU. Minor Site Utility

NFPA. National Fire Protection Association

NOV. Notice of Violation

NSF. National Sanitation Foundation

OSHA. Occupational Safety and Health Administration

PDI. Plumbing and Drainage Institute

PVBA. Pressure Vacuum Breaker Assembly

RPBA. Reduced Pressure Backflow Assembly

RPDA. Reduced Pressure Detector Assembly

RSD. Regulatory Services Division

SDC. System Development Charge

SU. Site Utility

SVBA. Spill-resistant Vacuum Breaker Assembly

UL. Underwriters Laboratory

USC. University of Southern California

VBGI. Volume-Base Grease Interceptor

WSFU. Water Supply Fixture Units

WSSC. Washington Suburban Sanitary Commission

SECTION 203 ADDITIONAL DEFINITIONS

"**Abut**" means to touch or to be adjacent to something along one side.

"**Air gap (drainage system)**" means the unobstructed vertical distance through the free atmosphere between the outlet of the waste pipe and the flood level rim of the receptacle into which the waste pipe is discharging.

"**Air gap (water distribution system)**" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level rim of the receptacle.

"**Applicant built service connection**" means an applicant-built permit is for service connection that will be constructed or abandoned and financed by the owner or their designees.

"**Approved**" means acceptable to the Code Official as meeting an applicable standard, specification, requirement, or as suitable for proposed use.

"**Auxiliary water supply**" means any water supply on or available to the premises that does not come from the Commission's approved public potable water supply. auxiliary water supply may include water from another water purveyor's public potable water supply; any natural source, such as a well, lake, spring, river, stream, or harbor ; or used waters, reclaimed waters, recycled waters, or industrial fluids.

"**Backflow**" means 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**" means an assembly, device, or method that prohibits backflow.

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

"**Backsiphonage**" means a type of backflow where the upstream pressure to a piping system is reduced to a sub atmospheric pressure.

"**Board**" means the WSSC Plumbing and Fuel Gas Board.

"**Building sewer**" means that part of the drainage system, including appurtenances, that extends from the end of the building drain and continues to the point of connection at the Commission service connection, right-of-way service connection, inlet to a private sewage disposal system (septic tank), or other point of disposal.

"**Building water service**" means the part of water service that begins at the point of connection to the Commission service connection, right-of-way service connection, well casing, or other source of supply and continues to the main water service valve.

"**Chief Code Official**" means the manager of the Commission's Regulatory Services Division.

"**Code**" means the WSSC Plumbing and Fuel Gas Code.

"**Code Official**" means any individual charged by the Commission with the administration and enforcement of this Code. Code Officials includes inspectors, investigators, plans reviewers, support specialist, permit agents, meter personnel, Commission police, Utility Services Division personnel and any related supervisors.

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

"**Containment**" means the appropriate type or method of backflow prevention 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.

"**Cooking appliance**" means any appliance, regardless of heat source, capable of contributing to grease-laden wastewater discharges from a food service establishment including the following: stove tops, ranges, ovens, grills, fryers, rotisseries, woks, kettles, and braising pans.

"**Cross-connection**" means any physical connection or a potential arrangement between any part of a potable water system and any other environment containing substances in a manner that, under any circumstances, would allow such substances to enter the potable water system or cause pollution or contamination of potable water system.

"**Cross-connection control**" means a program to eliminate, monitor, protect and prevent cross-connections from allowing backflow.

"**Cross-connection technician**" means the holder of a Commission issued license for a Cross-Connection Technician.

"**Customer**" means 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, water utilizing equipment, or drainage system.

"**Degree of hazard**" means an actual or potential threat of contamination or pollution, classified as either high hazard or low hazard, to a potable water system.

"**Domestic hot water**" means hot water supplied to residential type plumbing fixtures including showers, bathtubs, lavatory sinks, residential type kitchen sinks, and residential type clothes washers 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.

"**ePermitting**" means the Commission's electronic permitting application system.

"**ePlan review**" means the Commission's electronic plan review system.

"**Fat**" means fats, oils, and grease of organic (animal or plant) origin, see FOG.

"**Flow-based grease interceptor**" means a grease interceptor with design based on flow rate, with two subcategories; mechanical flow-based grease interceptor and passive flow-based grease interceptor.

"**Flow control device**" means a device installed upstream of or within the interceptor, having an orifice that controls the rate of flow through the flow-based grease interceptor.

"**FOG**" means fats, oils, and grease of organic, animal or plant, origin. FOG is common in FSEs, sources and examples of FOG include meat, fish, fish oil, lard, tallow, nuts, certain nut oils, plant/vegetable oils, dairy products, soups, gravies, certain condiments, mayonnaise, salad dressings, sauces, pastas, poultry, waxes, butter and margarine. Also referred to as grease-laden.

"**Food service establishment**" means 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.

"**Grease**" means fats, oils, and grease of organic (animal or plant) origin or oils and grease of petrochemical origin. For grease of organic origin, see fog. Oils and grease of petrochemical origin are commonly used as lubricants and fuels, including heating oil, and motor and machine oil.

"**Grease abatement systems**" means a plumbing system designed to collect and remove fog from FSE, including waste and vent piping, waste receptors, plumbing fixtures, and grease interceptors

"**Grease interceptor**" means a plumbing appurtenance designed to remove FOG from FSE wastewater, with two subcategories; volume-based grease interceptor and flow-based grease interceptor.

"Grease removal device (GRD)" see mechanical-flow based grease interceptor.

"**Grinder pump**" means sewage pump that macerates waste during the pumping operation.

"**Group R-3 occupancies**" means residential where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two dwelling units
Attached one- and two- family dwellings and townhouses
Care facilities that provide accommodations for five or fewer persons receiving care
Congregate living facilities (nontransient) with 16 or fewer occupants
Boarding houses (nontransient)
Convents
Dormitories
Fraternities and sororities
Monasteries
Congregate living facilities (transient) with 10 or fewer occupants
Boarding houses (transient)
Lodging houses (transient) with five or fewer guest rooms and 10 or fewer occupants

"**Guarded domestic hot water delivery outlet**" means faucets and other delivery outlets that incorporate a form of scald prevention or tempering as required by this Code, items include bathtubs, showers, bidets, public hand washing facilities.

"**High hazard**" means a cross-connection or potential cross-connection that may result in contamination.

"**Isolation**" means backflow preventer installed to protect against backflow at individual cross-connections.

"**Licensee**" means the holder of a Commission issued license.

"**Low hazard**" means a cross-connection or potential cross-connection connection that may result in pollution.

"**Low pressure sewer system**" means a collection system of small-diameter pipes in the public right-of-way through which wastewater is forced by pressure from individual customers' grinder pumps. Low pressure sewer system are public systems and usually have more than one customer. Formerly known as a grinder system.

"**Mechanical flow-based grease interceptor**" means a flow-based grease interceptor with integral mechanical FOG removal features. also referred to as a grease removal device.

"**Meter**" means a device used to measure water or wastewater for determining billing or other accountable purpose.

"**Detector check meter**" means a meter that is installed in a bypass arrangement with a DCDA (ASSE 1048) or RPDA (ASSE 1047) and used to measure a portion of water used in a fire sprinkler system.

"**Domestic meter**" means a meter that is used to measure all water use and consumption other than fire sprinkler system.

"**Effluent meter**" meter means a meter that is used to measure wastewater flow

"**Fire hydrant meter**" means a meter that is connected to a fire hydrant to measure water use for temporary or seasonal applications.

"**Hose bibb meter**" means a meter that is used to measure water-only use, including, in multi-unit buildings with a dedicated branch to an outdoor only and entire properties that are not connected to a Commission sewer service line.

"**Master meter**" means a meter used to measure all flow domestic and fire sprinkler water.

"**FM meter**" means an FM approved meter.

"**Private meter**" means a meter that is not owned by and not maintained by the Commission.

"**Sewer-only meter**" means a meter that measures domestic water consumption, originating from a source other than a Commission water service line, for purposes of establishing sewer billing charges.

"**Submeter**" means a secondary meter installed in series and downstream of a domestic meter or master meter to determine water consumption to determine sewer credit.

"**Minor site utility**" means a site-utility design of less complexity or developed length that is waived from the site-utility document review process as outlined in the WSSC Development Services Code.

"**Miscibility**" means the ability for two or more liquids to fully dissolve in each other to form a uniform, undivided blend. These liquids can be further characterized as fully miscible; partially miscible; and immiscible.

"**Misconduct**" means the 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.

"**Mixed-use building**" means a building with both dwelling and commercial units.

"**Non-guarded domestic hot water delivery outlet**" means 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 and 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**" means 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.

"**Non-testable backflow prevention device**" means a mechanical non-testable apparatus which is designed to protect against backflow.

"**Off-property**" means water and sewer lines and appurtenances that are located in an easement granted to the Commission or a public right-of-way and are responsibility of the Commission or municipality.

"**On-property**" means water and sewer lines and appurtenances that are located on private property and are the responsibility the property owner.

"**Oil**" means refer to fats, oils, and grease of organic (animal or plant) origin or oils and grease of petrochemical origin. For oil of organic origin, see FOG. Oils and grease of petrochemical origin are commonly used as lubricants and fuels, examples include heating oil, and motor and machine oil.

"**Oil and sand interceptor**" means a plumbing appurtenance designed to remove solids, sand, and grit; and oil and grease of petrochemical origin from wastewater.

"**Original license**" means a license that is obtained through Commission exam and not obtained through reciprocity.

"**Passive flow-based grease interceptor**" means a flow-based grease interceptor without integral mechanical fog removal features.

"**Permittee**" means the person responsible as indicated on a permit.

"**Person**" means 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.

"**Provide gasfitting services**" means installation, maintenance, extension, alteration, and removal of piping, gas-fired equipment, appliances, or appurtenances in connection with a natural gas or LP-gas supply system downstream of the point of delivery.

"**Provide plumbing services**" means installation, maintenance, extension, alteration, and removal of piping, plumbing fixtures, plumbing appliances, plumbing appurtenances, or other plumbing apparatus.

"**Provide sewer and drain cleaning services**" means the clearing of stoppages in drainage piping.

"**Point of delivery means**", for natural gas systems, 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, valve shall be considered to be downstream of the point of delivery.

"**Point of delivery**" means, for LP-gas systems, the outlet of the second-stage pressure regulator, twin stage regulator, or regulator that provides utilization pressure, exclusive of line gas regulators, in the system.

"**Principal licensee**" means a licensee that registers with the Commission as the primary licensee representing themselves or a group of persons.

"**Private**" means in the classification of plumbing fixtures, applies to fixtures within bathroom groups located in residences, apartments, condos, hotels, motels and similar installations in buildings where the plumbing fixtures are intended for utilization by occupants and their guests, and to fixtures within private portions of public spaces.

"**Public**" or "**public utilization**" means in the classification of plumbing fixtures, applies to fixtures that are not private. Examples include fixtures in general toilet rooms of schools, gymnasiums, hotels, airports, bus and railroad stations, public buildings, bars, public comfort stations, office buildings, stadiums, stores, restaurants and other installations where a number of fixtures are installed so that their utilization is similarly unrestricted.

Public handwashing facility:

"**Public hand washing facility**" means 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.

"**Public hand washing facility**" includes patient service areas, wash fountains, detention center including cells, classroom sinks, and general hand sinks.

"**Rebuild**" means, for a testable backflow prevention assembly, removal and replacement of all or selected assembly components.

"**Rebuild**" means, for a non-testable backflow prevention device, removal and replacement of all internal device components.

"**Reciprocal license**" means a license that is obtained thru reciprocity with an original license.

"**Reprimand**" means 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.

"**Residential**" means any building type or occupancy that meets the parameters of a Group R-3 occupancy as set forth in the International Building Code.

"**Revocation**" means 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 , generally in years.

"**Right-of-way**" means an area dedicated by plat or deed for public use such as a street or road.

"**Sanitary District**" means the Washington Suburban Sanitary District, as described in Chapter 805 of the acts of the General Assembly of 1981. Generally, the entirety of Montgomery and Prince George's counties, Maryland, excluding certain incorporated city limits and federal properties.

"**Service connection**" means 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, edge of a public right-of-way, or edge of an easement and right-of-way granted to the Commission, whichever is closer to the building that the lateral service pipe serves.

"**Shared site utility system agreement**" means a recorded arrangement approved by the Commission where a shared service connection is allowed to serve multiple properties or buildings, other than Group R-3 occupancies, that are under separate ownership but located on a common tract of land.

"**Site utility**" means a system of privately-owned, operated, and maintained water or sewer mains located on private property.

"**Soap test**" means as prescribed in this Code, any liquid producing visible bubbles or changing appearance, when applied to a leaking pipe.

"**Stoppage**" means a clog or obstruction in a building sewer or drain that cannot be readily relieved by a sewer and drain cleaner.

"**Hard stoppage**" means a clog or obstruction in a building sewer or drain that cannot be readily relieved by a sewer and drain cleaner, utilizing proper-sized and type rotating drain cleaning equipment.

Examples of a hard stoppage include root intrusions, broken or misaligned pipe, a solidified mass that cannot be dislodged, and permanent objects in the pipe.

"**Soft stoppage**" means 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 sewer and drain cleaner, utilizing proper-sized and type rotating drain cleaning equipment.

"**Suspension**" means 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 , but less serious than that which would warrant a revocation of their license.

"**System development charge**" means an impact fee established by Section 25-401 and 25-405 of the Public Utilities Article, Annotated Code of Maryland, to recover cost of growth related facilities within the Sanitary District.

"**Testable backflow prevention assembly**" means a mechanical testable apparatus which is the entire backflow prevention unit, including not only the mechanism that actually prevents backflow, but also the shutoff valves and test cocks.

"**Townhouse**" means a single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with a yard or public way on not less than two sides.

"**Ventilated space**" means 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 7 square inches (4,516 square mm) and where no dimension is smaller than 3 inches (76 mm).

"**Visible ready access area**" means 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**" means a grease interceptor design based on volume and retention time.

"**Water dispenser**" means a plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. This definition includes a freestanding apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

"**Water re-use systems**" means a system that collects non-potable water and uses it for potable water uses in non-residential buildings.

"**WSSC Water**" means the brand name for the Washington Suburban Sanitary Commission, see Commission.

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CHAPTER 3 ADOPTION OF INTERNATIONAL PLUMBING CODE

SECTION 301 GENERAL

301.1 Adoption. The 2021 edition of the International Plumbing Code (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, and their accessory structures.

301.3 Availability for Review. At least one copy of the aforesaid IPC shall be filed in the Office of the Secretary of the Commission 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 or 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 (152 mm) below the frost line and not less than 12 inches (304 mm) below grade. In Prince George's County and Montgomery County, exterior water supply system piping shall be installed not less than 30 inches (762 mm) 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 (457 mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 24 inches (609 mm) 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 Drain. 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 Drain down pits prohibited. 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. Fixture traps shall not be removed and they shall be filled with non-toxic (glycerin based) anti-freeze.

305.4.2.4 Hose bibb maintenance tag. 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 any specific installation and 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 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 (344 kPa). 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 108. Subject to Section 105.4.4, testing for plastic piping systems shall follow a two-step process in winter months:

- **a.** The system shall be air tested with 5 psi (34 kPa) before wall close-in by the plumbing contractor using a safe and reliable method, see manufacture's recommendations and requirements. Air tests are prohibited if not approved by the manufacturers of all components and materials in the system being tested, including pipe, fitting, and solvent manufacturers. Plumber shall provide material specifications sheets and installation manuals to plumbing inspector. Do not leave air pressure charged on an unmanned project and no other work may be performed on premises during an air test.
- **b.** Then, after permanent heat is available and before final inspection, the plumbing contractor shall fill the water supply 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 (34 kPa) of air or not less than a 10 foot (3,048 mm) head of water and maintaining such pressure for 15 minutes.

302.3.7 IPC Section 312.10.2, Testing, is hereby AMENDED by removing the requirement for test gauges to comply with ASSE 1064, all to read 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-resistant 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 or CSA B64.10.1.

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 before 1965.

302.3.10 IPC Section 314.2.1, Condensate disposal, is hereby AMENDED by replacing language for plumbing systems with sanitary systems, all to read as follows:

(IPC as amended)

314.2.1.1 Condensate discharge. Condensate drains shall not directly connect to any sanitary drain, waste or vent pipe. Condensate drains shall not discharge into a fixture other than a floor sink, floor drain, trench drain, mop sink, hub drain, standpipe, utility sink, laundry sink or approved receptor. Except where discharging to grade outdoors, the point of discharge of condensate drains shall be located within the same occupancy, tenant space or dwelling unit as the source of the condensate.

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

302.4.1 IPC Section 405.3, Setting, is hereby AMENDED by ADDING Section 405.3.6 to establish a maximum height for specialty sinks and similar, all to read as follows:

(IPC as amended)

405.3.6 Front rim elevation. Unless specifically designed or approved otherwise, specialty sinks, such as food service compartment sinks, shall be installed with the front rim elevation of the sink not greater than 36 inches (914 mm) above finished floor.

302.4.2 IPC Section 406.3, Waste Connection, is hereby AMENDED to CLARIFY washing machine waste lines do not have to connect to a 3 inch (76 mm) 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.

302.4.3 IPC Section 410.4, Substitution, is hereby AMENDED by MODIFYING Section 410.4 to allow substitution of water dispensers for drinking fountains, all to read as follows:

(IPC as amended)

410.4 Substitution. Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies where drinking fountains are required, water dispensers shall be permitted to be substituted for any required drinking fountain. If water dispensers are substituted for more than 50% of the required quantity

of drinking fountains for any floor or building area, the property owner is responsible for providing cups to users, free of charge.

302.4.4 IPC Section 412.1, Approval, is hereby AMENDED by MODIFYING Section 412.1 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, all to read as follows:

(IPC as amended)

412.1 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 used to deliver domestic hot water, such as temperature control or 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 through 501.1.4 to provide scope of applicability and parameters for minimum and maximum water temperature for domestic hot water, all to read 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. Guarded domestic hot water delivery outlets incorporate a form of scald prevention or tempering to safeguard the user from scalding while allowing higher water temperatures in distribution piping.

501.1.2.2 Storage temperature. Water Storage at 140°F (60°C) or greater.

501.1.2.3 Master mixing valve. 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 (52°C).

501.1.2.4 Intent. 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 (48°C), not including draw down and recovery. Where an ASSE 1017 master thermostatic mixing valve is not used, hot water storage temperatures shall not exceed 125°F (52°C).

501.1.4 Maximum delivery temperature. In general, domestic hot water temperature shall be limited to 140°F (60°C) at any point of delivery from the distribution system. Where guarded domestic hot water delivery outlets are not used (older construction), hot water delivery temperatures shall not exceed 125°F (52°C).

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, all to read 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 Section 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 Section 501.1.4. The potability of the water shall be maintained throughout the system.

302.5.3 IPC Section 501, GENERAL, is hereby AMENDED by ADDING Sections 501.11 and Table 501.11, to provide guidelines for minimum sizing criteria for storage and instantaneous type water heaters, all to read as follows:

(IPC as amended)

501.11 Water heater sizing. Storage type water heating appliances, serving singular residential units, are recommended to meet the minimum sizing criteria as shown in Table 501.11. For all other occupancies, an adequate capacity of hot water shall be provided to meet peak demand. Where instantaneous water heating is used, sizing of the water heater(s) shall be based on hot water demand as established under IPC Appendix E; use Tables E103.3(2) and E103.3(3) to establish the minimum required hot water gpm flow.

First Hour Rating[1]

Number of Bathrooms	1 to 1.5			2 to 2.5				3 to 3.5			
Number of Bedrooms	1	2	3	2	3	4	5	3	4	5	6
First Hour Rating, Gallons	42	54	54	54	67	67	80	67	80	80	80

[1] The first hour rating is found on the "Energy Guide" label

Table 501.11

302.5.4 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 uses or occupancies, all to read as follows:

(IPC as amended)

601.5 Futures, dead ends, dormant systems, and seasonal uses or occupancies. Provisions shall be provided to isolate unused or stagnant sections of water distribution piping. Examples of unused or stagnant sections of water distribution piping include 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. Provisions shall be made as follows:

601.5.1 Isolation valve. Each unused system or segment shall be provided with a valve within 12 inches (305 mm) of where the stagnant system or segment connects to an active potable water line, main or riser.

601.5.2 Flushing port. Within 12 inches (305 mm) downstream of the required isolation valve, each unused system or segment shall be provided with a flushing port to facilitate the independent flushing or disinfection of the stagnant section before operating the isolation valve and commissioning that system or segment.

601.5.3 Backflow preventer. As an alternate to the flushing port, a dual check backflow preventer (ASSE 1024) shall be installed within 12 inches (305 mm) downstream of the isolation valve.

601.5.4 Testable backflow assemblies. See Section 508.2 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. Before initial use or after a period of stagnation, any system described in Section 601.5 shall be determined potable through flushing, disinfection and testing, as needed, before 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, all to read as follows:

(IPC as amended)

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 washes, showers, and drenching stations shall never be supplied with non-potable water.

302.6.3 IPC Section 603, WATER SERVICE, is hereby AMENDED by ADDING Sections 603.3, to provide provisions that will enable non-metallic water services constructed under this Code to be locatable, all to read as follows:

(IPC as amended)

603.3 Tracer wire. Non-metallic water services connecting to public or private supply systems shall be locatable. At a minimum, an insulated, solid, copper tracer wire, 10 awg minimum, and suitable for direct burial or an equivalent product shall be used. The wire shall be installed in the same trench as the water service within 12 inches (305 mm) of the pipe, from the building wall to the point where the pipeline connects to a public system (typically at the property line or a mainline right-of-way), or to a private system to the point of transition (typically the pitless adapter at the well casing).

603.3.1 Wire exposure. Where the water and sewer share a trench, the wire(s) may be routed to the terminus of the building sewer cleanout; when separated, rout the wire to the property-line valve box or well casing; or for outside meter only applications, a terminal post shall be installed. In all cases, the wire shall be adequately exposed for future use by location detection equipment operators as follows:

603.3.1.1 Cleanout above grade. Where the cleanout terminates 6 inches (152 mm) above grade, the end of the wire shall be held in place by the cleanout cap or cover assembly.

603.3.1.2 Cleanout paved area. Where the cleanout terminates in paved areas, the end of the wire shall remain exposed within the void between the pipe and the cleanout access assembly.

603.3.1. Termination with exposed appurtenance. Where water and sewer are in separate trenches, the tracer wire shall wrap twice around the property-line valve box and the end of the wire left tucked inside the tightly fastened cover or is secured to the well casing in an approved manner.

603.3.1.4 Termination without exposed appurtenance. Where water and sewer are in separate trenches, without an exposed appurtenance, a terminal stake shall be installed within 2 feet (609 mm) of the foundation wall directly above where the water service enters the structure.

302.6.4 IPC Section 603, WATER SERVICE, is hereby AMENDED by ADDING Sections 603.4 and 603.5, to provide provisions limiting the length of underslab piping in coordination with provisions of National Fire Protection Association

(NFPA) regarding accessibility of fire sprinkler system water services for maintenance and to specify the means of piping restraint, all to read as follows:

(IPC as amended)

603.4 Limit of underslab piping. For commercial applications where the water service conveys water for fire sprinkler system, the water service shall be routed vertical and penetrate the lowest relative slab within 5 feet (1,524 mm) of the outside wall which it passed under.

603.5 Restraint. For piping systems greater than 2 inches (609 mm) in diameter, restraint of the terminal end of horizontal piping and the final vertical spool section shall be as follows:

603.5.1 Through-wall. Through-wall applications require an engineered design (stamped and signed by a Maryland Professional Engineer), which may be part of a site utility or minor site utility plan. Piping shall not be restrained by anchoring to a cinder block wall or similar construction incapable of withstanding the horizontal surge pressures expected.

603.5.2 Restraining final service elbow. Restraining the final water service elbow (which directs the line vertical through the slab), with strapping, rods, retaining gland or other proprietary means of restraint shall require an engineered design (stamped and signed by a Maryland Professional Engineer), which may be part of a site utility or minor site utility plan.

603.5.3 Blocking. Blocking of the final water service elbow shall conform to the dimensions included in Commission Standard Detail B/1.0 and re-orient the block 90 degrees (1.57 rad) in relation to the elbow. Do not allow the concrete to impede the installation or service of the gland bolts or strapping and rodding.

603.5.4 Vertical spool. Unless part of an alternate engineered design (stamped and signed by registered design professional), the final vertical spool section shall be restrained to the final vertical elbow by strapping and rodding. The number and size of rods shall be per Table 603.5.4.

NFPA 24 Table 10.8.3.1.2.2 Rod Number - Diameter Combinations

Nominal Pipe size (in.)	5/8 in. (15.9 mm)	3/4 in. (19.1 mm)	7/8 in. (22.2 mm)	1 in. (25.4 mm)
4	2	-	-	-
6	2	-	-	-
8	3	2	-	-
10	4	3	2	-
12	6	4	3	2
14	8	5	4	3
16	10	7	5	4

Note: This table has been derived using pressure of 225 psi (15.5 bar) and design stress of 25,000 psi (172.4 mPa)

Table 603.5.4

302.6.5 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 all to read 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. Water service connections (Commission main to property line) for Group R-3 occupancies shall be sized per Section 604.1.3 below.

604.1.2.2 Meter and service pipe. 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 Distribution pipe. Table E201.1 "Distribution Pipe" column is used 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 Other segments. 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 Fire sprinkler system size. 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 Limitations. 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 or fixture use.

604.1.3.3 3/4-inch service connections. A 3/4-inch service connection is limited to 25 WSFUs as determined by table E103.3(2).

604.1.3.4 1-inch service connections. A 1-inch service connection is limited to 50 WSFUs as determined by table E103.3(2).

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

604.1.4 Engineered Designs. Plans Review validation and approval required.

302.6.6 IPC Section 604, DESIGN OF BUILDING DISTRIBUTION SYSTEM, is hereby AMENDED by ADDING Section 604.7.1 and 604.8.3, to provide provisions that will identify the property owner or their design and construction team to be the final responsible party when determining the need for a booster pump or a pressure reducing valve, all to read as follows:

(IPC as amended)

604.7.1 Insufficient pressure. The property owner or their design and construction team shall be the final responsible party for determining if a booster pump system is needed to supplement a building water distribution system's inadequate pressure. Booster pumps shall not be allowed to overcome undersized piping.

604.8.3 Excessive pressure. The property owner or their design and construction team shall be the final responsible party for determining if a pressure reducing valve or pressure regulator valve is needed to restrict the building water distribution system's pressure to 80 psi (551 kPa) or less per IPC Section 804.8.

302.6.7 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 all to read 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 or 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 or ingestion shall meet NSF Standards 61-Annex G and 372.

302.6.8 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, all to read as follows:

(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 fixtures. See amended Section 302.3.3 (added IPC Section 305.4.2) for winterization requirements.

302.6.9 IPC Section 607.2.1, Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems, is hereby DELETED and REPLACED, to remove restrictions on controls that would require systems to turn off circulation pumps and heat trace systems when there is no demand or when desired temperature is reached, is all to read as follows:

(IPC as amended)

607.2.1 Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems. Heated-water circulation systems shall be in accordance with Section 607.2.1.1. Heat trace temperature maintenance systems shall be in accordance with Section 607.2.1.2. Automatic controls, temperature sensors and pumps shall be in a location with access. Manual controls shall be in a location with ready access.

607.2.1.1 Circulation systems. Heated-water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermo-syphon circulation systems shall be prohibited. Controls for circulating hot water system pumps may automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is not a demand for hot water. For systems that use cold water pipe for recirculation, the controls shall limit the temperature of the water entering the cold water piping to not greater than 104°f (40°c). Circulation pumps may run continuously.

607.2.1.1.1 Demand recirculation controls. Demand recirculation water systems shall have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture, or sensing the flow of hot or tempered water to a fixture fitting or appliance.

607.2.1.2 Heat trace systems. Electric heat trace systems shall comply with IEEE 515.1. Controls for such systems shall be able to automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy. Heat trace may be arranged to be turned off automatically when there is not a demand for hot water.

302.6.10 IPC Section 609.2.1 Tracer, is hereby deleted in its entirety. See Section 302.6.3 for water service tracer wire requirements.

302.6.11 IPC Section 608, Protection of potable water supply, is hereby deleted, see Chapter 5, "Cross-Connection Control Backflow Prevention", of this Code for requirements regarding protection of potable water supply.

302.6.12 IPC Section 614 Alternative pipe restoration methods, is hereby added, all to read as follows:

(IPC as amended)

614 Alternative pipe restoration methods.

614.1 General. This section shall govern the alternative pipe restoration methods for existing domestic water piping, including cured-in-place-pipe (CIPP) and pipe relining systems

614.2 Permitting. A permit and inspections are required.

614.3 Installation. Alternative pipe restoration methods shall be installed in accordance with the manufacturer's instructions restorations. Restored water piping systems shall be labeled or permanently tagged at the main service valve, riser valves, and on exposed piping at 10-foot (3,048-mm) 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.

614.4 Materials. Products used in the final stage restoration process shall comply with NSF 61 standards.

614.5 Existing backflow preventers. All existing backflow preventers shall be regularly tested or replaced as required.

614.6 Unprotected hazards. All unprotected hazards shall be abated by an appropriate level of backflow prevention, see Chapter 5 and Table 5.2 of WSSC Plumbing and Fuel Gas Code.

614.7 Containment backflow preventer. The building's domestic cold water main supply shall be outfitted with a containment backflow preventer, commensurate with the degree of hazard (see Section 502.3.3 and Table 5.2 of WSSC Plumbing and Fuel Gas Code), before the onset of any pipeline restoration activities located downstream of the initial water service main shutoff valve.

614.8 Epoxy lining operating temperatures. Buildings restored with epoxy relining products listed for operating temperatures of less than 180°F (82°C) shall be outfitted with the following items:

614.8.1 Master mixing valve. An ASSE 1017 certified master thermostatic mixing valve shall be provided to safeguard the temperature of the water delivered from the potable domestic hot water distribution system. See Section 302.5.1. The potability of the water shall be maintained throughout the system.

614.8.2 Signage. The following signage shall be posted at the main water shutoff valve and at the water heater: "This building contains water piping retrofitted with an epoxy relining system which shall not be exposed to water temperatures exceeding 140 degrees F."

614.9 Pressure Testing. The replacement piping system as well as the connections to the replacement piping shall be tested in accordance with Section 312.

302.7 Amendment of IPC CHAPTER 7, "SANITARY DRAINAGE"

302.7.1 IPC 703, Building sewer, is hereby AMENDED by ADDING Section 703.5.1, to allow certain private sewers to pass under or through another building on the same site and of the same ownership, all to read as follows:

(IPC as amended)

703.5.1 Serviceability and segregation. Where certain site conditions, elevations or obstructions exist, Building Sewers and site utility Sewers may pass under or through an adjacent or other building on the same site when both are under the same ownership. In order to establish serviceability and segregation the following parameters shall apply:

703.5.1.1 Two manholes required. Manholes, meeting Commission standard details, shall be provided on the exterior, before the subject sewer entering the building, and on the exterior, after the subject sewer exits the building. Additional manholes or cleanouts shall be required within the building where spacing requirements of IPC Section 708.1.1 dictate.

703.5.1.2 Material. Piping material for the entire referenced run of piping shall comply with IPC Table 702.2.

703.5.1.3 Segregation. The referenced sewer shall run through or under the subject building without any interconnections with the subject building's drain or sewer until reaching at least the most downstream manhole referenced in amended IPC Section 703.5.1.1.

302.7.2 IPC 703, BUILDING SEWER, is hereby AMENDED by ADDING Section 703.7, to provide provisions that will enable building sewers constructed under this Code to be locatable, all to read as follows:

(IPC as amended)

703.7 Tracer wire. Building sewer piping that discharges to public or private systems shall be locatable. At a minimum, an insulated, solid, copper tracer wire, 10 awg minimum, and suitable for direct burial or an equivalent product shall be utilized. The wire shall be installed in the same trench as the sewer within 12 inches (305 mm) of the pipe from the terminal end of the building sewer cleanout (at the building wall) to the point where the gravity building sewer connects to a public system (typically at the property line or a mainline right-of-way), or to a private system to the point of transition (typically the inlet of a septic tank). For a building pressure sewer, the tracer wire shall run from within 30 inches (762 mm) of the building wall to the access opening of the property-line valve box.

703.7.1 Wire exposure. At the terminus of the building sewer cleanout or the property-line valve box, the wire shall be adequately exposed for future use by location detection equipment operators as follows:

703.1.1 Cleanout above grade. Where the cleanout terminates 6 inches (152 mm) above grade, the end of the wire shall be held in place by the cleanout cap or cover assembly.

703.1.2 Cleanout paved area. Where the cleanout terminates in paved areas, the end of the wire shall remain exposed within the void between the pipe and the cleanout access assembly.

703.1.3 Wire termination. For pressure sewer applications, the tracer wire shall wrap twice around the property-line valve box and the end of the wire left tucked inside the tightly fastened cover.

302.7.3 IPC 708.1, Cleanouts required, is hereby AMENDED by ADDING to the Exception under Section 708.1.1, to codify cleanout equivalents, all to read as follows:

(IPC as amended)
Exceptions:

1. Horizontal fixture drain piping serving a non-removable trap shall not be required to have a cleanout for the section of piping between the trap and the vent connection for such trap provided the trap is at least 2" diameter, not serving a kitchen sink, and provided such horizontal drain piping does not exceed the distances specified in Table 909.1.
2. Cleanouts shall not be required for fixture drains or fixture branches serving up to 7 fixtures. This exception is limited to 40 feet (12,192 mm) of developed length of piping as measured from a readily accessible and removable P-trap or a water closet flange. This exception does not cover fixture branches serving one or more urinals.

302.7.4 IPC 708.1, Cleanouts required, is hereby AMENDED by MODIFYING the requirement for manholes to include pipelines of 6 inches (101 mm) diameter, all to read as follows:

(IPC as amended)
IPC 708.1.2 Building sewers. Building sewers shall be provided with cleanouts located not more than 100 feet (30,480 mm) apart measured from the upstream entrance of the cleanout. For building sewers 6 inches (153 mm) and larger, manholes shall be provided and not located more than 100 feet (30,480 mm) from the junction of the building drain and building sewer, at each change of direction and at intervals or not more than 400 feet (122 m) apart. Manholes and manhole covers shall be of approved type.

302.7.5 IPC 708.1, Cleanouts required, is hereby AMENDED by MODIFYING Section 708.1.3 to require all building sewer cleanouts be installed outside, all to read as follows:

(IPC as amended)
708.1.3 Building drain and building sewer junction. The junction of the building drain and the building sewer shall be served by a cleanout that is located at the junction. The cleanout piping shall extend from the wye fitting connection to grade, terminating outside of the structure. In un-paved areas, the cleanout shall extend 6 inches (152 mm) above grade; in paved areas, access shall comply with Commission Standard Detail S5.1 or S5.2.

302.7.6 IPC Section 708.1, Cleanouts required, is hereby AMENDED by ADDING as new Sections 708.1.11 and 708.1.11.1, requirements for a property line cleanout, all to read as follows:

(IPC as amended)
708.1.11 Property line. Commission sewer service connections with a vertical riser, shall be connected to by the plumber in accordance with Commission Standard Details S-5.0. The cleanout cover assembly shall be installed by the plumber in accordance with Commission Standard Detail S-5.1 or S-5.2.

708.1.11.1 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 Commission service connection located at the property line or edge of right-of-way. The cleanout cover assembly shall conform with Commission Standard Detail S-5.1 or S-5.2. See Section 112.1.6.

302.7.7 IPC Section 708.1.10, Access, is hereby AMENDED by MODIFYING to include a height restriction to facilitate safe and practical servicing of drain lines, all to read as follows:

(IPC as amended)

708.1.10.3 Usable access. Cleanout openings shall not exceed 36 inches (762 mm) 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.

302.7.8 IPC Section 714, BACKWATER VALVES, is hereby AMENDED by MODIFYING Section 714.1 to recognize private manholes and by ADDING Section 715.6, to specify marking and labeling requirements for backwater valve access, all to read as follows:

(IPC as amended)

714.1 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).

302.7.9 IPC Section 716 REPLACEMENT OF UNDERGROUND BUILDING SEWERS AND BUILDING DRAINS BY PIPE-BURSTING METHODS, is hereby deleted and replaced, all to read as follows:

(IPC as amended)

SECTION 716 REPLACEMENT OF UNDERGROUND BUILDING SEWERS AND BUILDING DRAINS BY PIPE-BURSTING METHODS

716.1 General. This section shall govern the replacement of existing building sewer and building drain piping by pipe-bursting methods.

716.2 Applicability. The replacement of building sewer and building drain piping by pipe-bursting methods shall be limited to gravity drainage piping of sizes 6 inches (152 mm) and smaller. The replacement piping shall be of the same nominal size as the existing piping.

716.3 Pre-installation inspection. The existing piping sections to be replaced shall be pre-qualified by flushing and inspected internally by a recorded video camera survey. Where the existing pipeline slope is unsatisfactory, pipe-bursting, relining, or other forms of trenchless reconstruction cannot be utilized. Open trench replacement with adequate bedding of over-excavated areas is required. The survey shall include notations of the position of cleanouts and the depth of connections to the existing piping.

716.4 Permitting. A permit and inspections are required.

716.5 Prohibited Applications. Where review of the pre-installation recorded video camera survey reveals that piping systems are not installed correctly or defects exist, relining shall not be permitted. The defective portions of piping shall be exposed and repaired with pipe and fittings in accordance with this Code. Defects shall include, backgrade or insufficient slope, complete pipe wall deterioration or complete separations such as from tree root invasion or improper support. Where the existing pipeline slope is unsatisfactory, pipe-bursting, relining, or other forms of trenchless reconstruction cannot be utilized. Open trench replacement with adequate bedding of over-excavated areas is required.

716.6 Pipe bursting materials.

716.6.1 Pipe. The replacement pipe shall be made of high-density polyethylene (HDPE) and shall have a standard dimension ratio (SDR) of 17. The pipe shall be in compliance with ASTM F714.

716.6.2 Pipe fittings. Pipe fittings to be connected to the replacement pipe shall be made of high-density polyethylene (HDPE) and shall be in compliance with ASTM D2683.

716.7 Installation.

716.7.1 Cleanouts. Where the existing building sewer or building drain did not have cleanouts meeting the requirements of this Code, cleanout fittings shall be installed as required by this Code.

716.8 Post-installation inspection. The completed replacement piping section shall be inspected internally by a recorded video camera survey. Restored sewer piping shall be flushed and then flow a minimum one gpm of clean water while video recording as a final inspection requirement. Copies of the video recordings for both required video inspections shall be provided to the Code Official. The video survey shall be reviewed and approved by the Code Official before pressure testing of the replacement piping system.

716.9 Pressure testing. The replacement piping system as well as the connections to the replacement piping shall be tested in accordance with Section 312.

302.7.10 IPC Section 717 RELINING BUILDING SEWERS AND BUILDING DRAINS, is hereby deleted and replaced, all to read as follows:

(IPC as amended)

717 RELINING BUILDING SEWERS AND BUILDING DRAINS

717.1 General. This section shall govern the relining of existing building sewers and building drainage piping.

717.2 Applicability. The relining of existing building sewers and building drainage piping shall be limited to gravity drainage piping 4 inches (102 mm) in diameter and larger. The relined piping shall be of the same nominal size as the existing piping.

717.3 Preinstallation requirements. Prior to commencement of the relining installation, the existing piping sections to be relined shall be descaled and cleaned.

717.3.1 Preinstallation recorded video camera survey. The existing piping sections to be replaced shall be pre-qualified by flushing and inspected internally by a recorded video camera survey. Where the existing pipeline slope is unsatisfactory, pipe-bursting, relining, or other forms of trenchless reconstruction cannot be utilized. Open trench replacement with adequate bedding of over-excavated areas is required. The survey shall include notations of the position of cleanouts and the depth of connections to the existing piping.

717.4 Permitting. A permit and inspections are required.

717.5 Prohibited applications. Where review of the pre-installation recorded video camera survey reveals that piping systems are not installed correctly or defects exist, relining shall not be permitted. The defective portions of piping shall be exposed and repaired with pipe and fittings in accordance with this Code. Defects shall include, backgrade or insufficient slope, complete pipe wall deterioration or complete separations such as from tree root invasion or improper support. Where the existing pipeline slope is unsatisfactory, pipe-bursting, relining, or other forms of trenchless reconstruction cannot be utilized. Open trench replacement with adequate bedding of over-excavated areas is required.

717.6 Relining materials. The relining materials shall be manufactured in compliance with applicable standards and certified as required in Section 303. Fold-and-form pipe reline materials shall be manufactured in compliance with ASTM F1504 or ASTM F1871.

717.7 Installation. The installation of relining materials shall be performed in accordance with the manufacturer's installation instructions, applicable referenced standards and this Code.

717.7.1 Material data report. The installer shall record the data as required by the relining material manufacturer and applicable standards. The recorded data shall include but is not limited to the location of the project, relining material type, amount of product installed and conditions of the installation.

717.8 Post-installation inspection. The completed replacement piping section shall be inspected internally by a recorded video camera survey. Restored sewer piping shall be flushed and then flow a minimum one gpm of clean water while video recording as a final inspection requirement. Copies of the video recordings for both required video inspections shall be provided to the Code Official. The video survey shall be reviewed and approved by the Code Official before pressure testing of the replacement piping system.

717.9 Pressure testing. The replacement piping system as well as the connections to the replacement piping shall be tested in accordance with Section 312.

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

302.8.1 IPC 801, GENERAL, is hereby AMENDED by ADDING as new Section 801.3, air gap (drainage) dimensions:

(IPC as amended)
IPC 801.3 Air gap(drainage) dimensions. Air gap shall be at least double the diameter of the drainage pipe measured vertically above the top of the rim of the vessel. In no case shall it be less than 1 inch (25 mm). Special conditions may require more stringent requirements.

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, all to read as follows:

(IPC as amended)
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 (50 mm) diameter pipe for gravity flow or 50 gpm of pump flow; this may require the installation of a surge tank.

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

302.8.2 IPC 802.1, Indirect Waste, is hereby AMENDED by MODIFYING Sections 802.1.7 and 802.1.8, to remove air break as an acceptable means of indirect connection, all to read as follows:

(IPC as amended)
802.1.7 Commercial dishwashing machines. The discharge from a commercial dishwashing machine shall be through an air gap into a waste receptor in accordance with Section 802.2

802.1.8 Food utensils, dishes, pots and pans sinks. Sinks, in other than dwelling units, used for the washing, rinsing or sanitizing of utensils, dishes, pots, pans or service ware used in the preparation, serving or eating of food shall discharge indirectly through an air gap to the drainage system.

302.8.3 IPC Section 802.3, Waste receptors, is hereby AMENDED by MODIFYING language to prohibit indirect waste connections in areas that are not ready visible, all to read as follows:

(IPC as amended)
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, all to read 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.

302.9.2 IPC Section 903.1.1, Roof extension unprotected, is hereby AMENDED by COMPLETING minimum vent extension dimension above a roof, all to read as follows:

(IPC as amended)
Section 903.1.1, Roof extension unprotected. Open vent pipes which extend through a roof shall be terminated at least 12 inches (304 mm) above the roof or 6 inches (152 mm) 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 (2,133 mm) 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, all to read as follows:

(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:

- **a.** The connection to the drain is in accordance with Section 905.3;
- **b.** An accessible clean-out shall be provided, and labeled, to service the horizontal run of vent;
- **c.** The horizontal run of the vent shall slope at 2% minimum toward the drain;
- **d.** Each vent shall be routed to a minimum of 6 inches (152 mm) above the highest flood rim before interconnecting with other vents or terminating outdoors;
- **e.** 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 909.1, Distance of trap from vent, is hereby AMENDED by MODIFYING Section 909.1, to clarify that Table 909.1 does not represent maximum slopes as it pertains to the parameters contained in the slope column, all to read as follows:

(IPC as amended)

909.1 Distance of trap from vent. Each fixture trap shall have a protecting vent located so that the slope and the developed length in the fixture drain from the trap weir to the vent fitting are within the requirements set forth in Table 909.1. The slope in a fixture drain from the trap weir to the vent fitting (trap arm) may exceed the values in Table 909.1, but shall not exceed 1/2 inches (38 mm) per foot (304 mm) (4%) and the provisions stated in Section 909.2 shall also be adhered to.

302.9.5 IPC 909.2, Venting of fixture drains, is hereby AMENDED by MODIFYING Section 909.2, to allow certain fittings to be used in venting applications, all to read as follows:

(IPC as amended)

IPC 909.2 Venting of fixture drains. The total fall in a fixture drain due to pipe slope shall not exceed the diameter of the fixture drain, nor shall the branch opening of the vent connection fitting serving a fixture drain, except for water closets, be below the weir of the trap.

IPC 909.2.1 Long Pattern Fittings. Long pattern fittings such as a tee-wye, combination wye and eighth bend, double tee-wye, or double combination wye and eighth bend shall be an acceptable vent connection fitting transitioning a horizontal trap arm to a vertical fixture drain or fixture branch drain.

IPC 909.2.2 Rolled fittings. When connecting trap arms or wet vented fixture branches to a horizontal drain and vent system such as a wet vent, circuit vent or combination waste and vent, long pattern fittings, as referenced in 909.2.1, may have the branch "rolled-up" such that the branch is between 22-1/2 degrees (0.39 rad) - 45 degrees (0.78 rad) above the horizontal plane. The corresponding 22-1/2 or 45 degree fitting used, to re-establish the horizontal plane for the trap arm, shall be considered the branch opening in reference to trap arm slope and connection provisions of this section. Excluding fittings and socketed fitting make-ups, the maximum piping used to create the rolled connection shall not exceed two pipe diameters in length.

302.9.6 IPC Section 918, AIR ADMITTANCE VALVES, is hereby AMENDED by ADDING specific subsections to Section 918, to codify key components of manufacturer's instructions and provide additional parameters to ensure safe practices, all to read 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.

302.9.6 IPC Section 918.8, Prohibited installations, is hereby amended by modified to prohibited installations for air admittance valves, all to read as follows:

(IPC as amended)

918.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8 of IPC. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves shall not be used to vent sumps or tanks except where the vent system for the sump or tank has been designed by an engineer. Air admittance valves shall not be installed on outdoor vent terminals for the sole purpose of reducing clearances to gravity air intakes or mechanical air intakes.

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 1002.4.1.5 Fixture drain connection for trap priming, is hereby deleted in its entirety.

302.10.2 IPC Section 1003, TRAPS, INTERCEPTORS, AND SEPARATORS, is hereby DELETED in its entirety and REPLACED with new Section 1003, all to read as follows:

SECTION 1003 INTERCEPTORS

1003.1 General.

1003.1.1 Where required. Interceptors shall be provided to prevent the discharge of substances harmful or hazardous to the building drainage system, the public sewer, the private sewage disposal system or the sewage treatment plant or processes, see Section 804.

1003.1.2 Approved construction documents. The location, size and piping details shall require plan approval prior to installation.

1003.1.3 Manufacturer's installation requirements. Each interceptor shall be installed in accordance with the manufacturer's instructions and the requirements of this section.

1003.1.4 Access. Access shall be provided to each interceptor for inspection, service, and maintenance.

1003.1.5 Maintenance. Interceptors shall be cleaned on a regular basis and according to manufacturer's recommendations and this section to allow proper operation.

1003.1.6 Venting of interceptors. Interceptors shall be designed so as not to become air bound where tight covers are utilized. Each interceptor shall be vented where subject to a loss of trap seal. Interceptors shall be vented per manufacturer's instructions.

1003.1.7 Temperature rating. Where the wastewater temperature will be greater than 140°F (60°C), the interceptor material shall be rated for the highest temperature of the wastewater.

1003.2 Grease abatement systems.

1003.2.1 Applicability. The regulations in this section shall apply to food service establishments (FSE), as defined in Chapter 2 of this Code.

1003.2.2 Where required. Grease abatement systems shall be provided to prevent the discharge of FOG 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, see Section 804.

1003.2.1.2 Fixtures and equipment. A grease abatement system shall be required for the drainage from fixtures and equipment with potential grease-laden wastewater. Fixtures and equipment shall include, but not be limited to: 1, 2, 3, and 4 compartment sinks; pot sinks; pre-rinse sinks; soup kettles or similar devices; fresh meat cutting and prepping; wok stations; mop and service sinks; floor drains; trough drains; floor sinks; open site drains; dump sinks receiving waste products; automatic hood wash units; and dishwashers.

1003.2.1.2.1 Compartment sinks. Single and multi-compartment sinks which are subject to a variety of preparation or clean-up activities shall be abated accordingly. Only such sinks located in areas exclusively used for produce preparation may route to sanitary unabated as determined by the Code Official, also see Section 1003.4.2.

1003.2.1.2.2 Elevated flood rim level. Where any kitchen drainage located within critical areas has been permitted to discharge to the sanitary drainage system, without being routed to a grease abatement system, receiving fixtures such as floor sinks, open site drains, receptors and similar drains, shall be installed with the receiving fixture's flood rim level located a minimum of 1 inch (25 mm) above finished floor. Receiving fixtures shall be installed in a manner that maintains cleanability between flood rim level and finished floor and precludes creating an unsanitary condition. Where approved, floor drains, trough drains and similar, within non-critical areas, may route directly to the sanitary drainage system as indicated on the approved plans.

1003.2.1.2.3 Fish scale interceptor. Seafood prep sinks shall discharge through a local scale interceptor prior to entering any portion of the drainage system or grease abatement system.

1003.2.3 Where not required - Conditional variance (existing FSEs only).

1003.2.3.1 Conditional variance. 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, dishwashing practices, the miscibility of the discharge, the volume of flow, the type of pipe, the proximity of the pipeline to designated hot spots, history of sanitary sewer overflows or basement backups and the potential for FOG discharge based upon the menu regardless of actual FSE practices.

1003.2.3.2 Revocation of variance. The conditional variance can be revoked due to an increase in the sewer service areas maintenance for FOG, an actual blockage or a sanitary sewer overflow attributed to the FSEs FOG discharge.

1003.2.3.3 Wastewater discharge permit. 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.

1003.2.4 Prohibited connections.

1003.2.4.1 Soil pipe. Waste from bathrooms, restrooms, toilet facilities or similar fixtures conveying human waste shall connect directly to the building sanitary drain, and shall not connect through any grease abatement system.

1003.2.4.2 Signage. Where fixtures not generally subject to FOG 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").

1003.2.4.3 Food waste disposers. Food Waste Disposers shall not be installed on any fixture that requires grease abatement. The discharge from food waste disposers shall route directly to the sanitary drainage system and not pass through the required grease abatement system.

1003.2.4.4 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, FOG must be separated prior to the wet basin.

1003.2.5 Responsibility. Property owners of commercial properties, or their official designee(s), shall be responsible for the installation and maintenance of grease abatement systems serving multiple FSEs that are located on a single parcel.

1003.2.6 Maintenance of grease interceptors. Grease interceptors shall be maintained per Section 818.4 and according to manufacturer's recommendations.

1003.2.7 Flow-based grease interceptors.

1003.2.7.1 General.

1003.2.7.1.1 Discharge to flow-based grease interceptors. Flow-based grease interceptors shall receive waste only from fixtures and equipment that allow FOG to be discharged.

1003.2.7.1.2 Manufacturer specifications. Flow-based grease interceptors shall conform to PDI-G 101, ASME A112.14.3, or ASME A112.14.4 and shall be installed in accordance with manufacturer's specifications.

1003.2.7.1.3 Restrictions. The following restrictions shall apply to the selection of flow-based grease interceptors:

1003.2.7.1.3.1 Quantity of interceptors. A maximum of two flow-based grease interceptors shall be installed per FSE kitchen or food preparation location.

1003.2.7.1.3.2 Number of connections. FSEs utilizing flow-based grease interceptors shall be limited to four grease-laden fixtures, equipment, or drains; whether one or two flow-based grease interceptors are employed.

1003.2.7.1.3.3 Number of appliances. Any FSE use of flow-based grease interceptors shall be limited to four cooking appliances; whether one or two flow-based grease interceptors are employed.

1003.2.7.1.3.4 Exceeds physical capacity. Any condition where fog generation potential, emulsification (e.g., Dishwasher), or grease storage capacity exceeds the physical capabilities of a flow-based grease interceptor.

1003.2.7.1.3.5 FSE design. Where FSE designs exceed one or more of the above parameters, the design shall incorporate a volume-based grease interceptor.

1003.2.7.1.4 Flow control device. A manufacturer required flow control device shall be installed, sized to match the interceptors flow rate, and shall be accessible for inspection, cleaning and maintenance. The flow control device shall be installed in accordance with the manufacturer's instructions.

1003.2.7.1.5 Screen or strainer. Solids screens or strainers with a maximum of 1/8 inch (3 mm) perforations shall be provided to capture the solids discharge from all sinks, such as pre-rinse stations or dish and pot washing sinks or located at floor sinks and receptors to minimize the solids discharged to flow-based grease interceptors.

1003.2.7.2 Location and installation.

1003.2.7.2.1 Location. 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 grease interceptors shall not be installed below grade or slab, including within a vault or manufacturer's recess or receiver box. Mechanical flow-based grease interceptors may be partially recessed in a manner that allows all electronic components to remain 1 inch (25 mm) above finished floor.

1003.2.7.2.2 Interceptor access. Flow-based grease interceptors shall be located in a visible ready access area and readily accessible for daily maintenance, servicing and inspection by the user and the Commission. The user is responsible for providing the necessary access for inspection at their expense.

1003.2.7.2.2.1 Failure to provide access. Failure to provide access for inspection, upon request, shall be a code violation.

1003.2.7.2.3 Visible inspection. Upon removal of the interceptor's main access cover(s), the inlet and outlet chambers and 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 inspections ports shall be field installed into the inlet or outlet or both piping as needed. Inspection ports shall meet Commission details.

1003.2.7.2.4 Clearance. Clearance above flow-based grease interceptors as well as solid sediment strainers shall be sufficient to fully open lid and easily remove internal components.

1003.2.7.2.5 Flow control device access. The flow control device shall be accessible for maintenance.

1003.2.7.2.6 Tampering. Tampering or otherwise bypassing or preventing a flow control device to function either by advisement from any person or actual physical change by any person shall be a violation requiring a civil citation.

1003.2.7.3 Sizing.

1003.2.7.3.1 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 sized utilizing Table 1003.c.

1003.2.7.3.2 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. The length of individual indirect waste lines shall be limited to the provisions of the IPC Section 802.3. An indirect manifold is an extension of the sum of all indirect waste lines served and therefore is limited to accumulative internal surface area allowed for all indirect waste lines served.

1003.2.7.3.2.1 Single indirect fixture. 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.

1003.2.7.3.2.2 Multiple indirect fixtures. 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 or drains, 1/2 of the tail piece flow rates for the next two highest flowing fixtures or drains, and 1/4 of the tail piece flow rates for each subsequent fixtures or drains shall be used (see Table 1003.b).

1003.2.7.3.3 Direct and indirect fixtures. Flow-based grease interceptors serving both indirectly and directly connected sinks, fixtures or drains shall be sized based on a proper combination of the methods listed above.

1003.2.7.3.4 Minimum interceptor size. The minimum size flow-based grease interceptor shall be 25 gpm.

Diameter of Tail Piece Pipe (inches)	Flow Rate (GPM)
3/4	12
1	20
1-1/4	30
1-1/2	40
2	65

Note: Maximum deflection, per fitting, in a 3/4-inch tailpiece, shall be 45 degrees (0.78 rad)

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

Fixture/Drain Number	Flow Rate Factor
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

Notes: Each tub/basin of multi-compartment sinks shall be counted as individual fixtures.
For commercial dishwashers, use published or calculated flow rate, do not reduce drain/tail piece.

Table 1003.b - Multiple Indirect Connection Flow Factor

Drain Diameter (inches)	Flow Rate (gpm)
1-1/4	8
1-1/2	15
2	20
3	45

Notes: Examples of directly connected fixtures mop/service sinks, receptors (no tail pieces)
For hose reels, hand sinks and similar, use published or calculated flow rate.

Table 1003.c - Flow Rates for Directly Connected Fixtures

1003.2.8 Volume-based grease interceptors.

1003.2.8.1 General.

1003.2.8.1.1 Discharge to volume-based grease interceptors. Volume-based grease interceptors shall receive the discharge of the entire kitchen and shall be sized accordingly.

Exception: Where food waste disposers are allowed by this Code, Section 1003.2.4.3, the discharge shall route directly to the sanitary drainage system and not pass through the required grease abatement system.

1003.2.8.1.2 Commission specifications. Volume-based grease interceptors shall be designed and installed in accordance with current Commission details and specifications.

1003.2.8.1.3 Precast concrete interceptors. Precast concrete interceptors shall conform to the structural requirements contained in ASTM 1613 standard specification for precast concrete interceptor tanks.

1003.2.8.2 Location and installation.

1003.2.8.2.1 Location general. 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.

1003.2.8.2.1.1 Indoor installation. Where an outdoor location is not possible or is impractical, volume-based grease interceptors may be installed indoors within 20 feet (6096 mm) of an accessible service entrance, unless otherwise approved.

1003.2.8.2.2 Accessways for concrete volume-based grease interceptors. Manhole access or alternate accessways shall be traffic bearing to SHA rating H20 and the vertical accessways shall be of minimum size as follows:

1003.2.8.2.2.1 Cover. For all volume-based grease interceptors, the manhole frame and cover or other access cover shall have a minimum dimension of 22 inches (558 mm).

1003.2.8.2.2.2 Accessway dimension (up to 26 inches). For tank burial depth (top of tank to grade) of 26 inches (660 mm) or less, the remainder of the accessway shall have a minimum dimension of 24 inches (609 mm).

1003.2.8.2.2.3 Accessway dimension (27 inches to 60 inches). For tank burial depth of 27 inches (685 mm) to 60 inches (1 524 mm), the remainder of the accessway shall have a minimum dimension of 30 inches (762 mm) (36 inches (914 mm) or greater preferred).

1003.2.8.2.2.4 Accessway dimension (greater than 60 inches). Tank burial depths greater than 60 inches (1 524 mm) shall be engineered for the specified depth and the accessways shall have a minimum dimension of 36 inches (914 mm) (48 inches (1219 mm) preferred).

1003.2.8.2.3 Accessways for other than concrete volume-based grease interceptors. Manhole access or alternate accessways shall be traffic bearing to SHA rating H20 and the vertical accessways shall be of minimum size be 20 inches (508 mm)

1003.2.8.2.4 Manhole and cleanout access. Manholes and cleanouts shall be readily accessible for convenient inspection and maintenance. The discharge or outlet piping of a volume-based grease interceptor shall be serviceable from a downstream manhole or a two-way cleanout shall be installed accordingly. A two-way cleanout consists of two individual cleanouts installed in series with each capable of cleaning out the other, a single two-way cleanout fitting is prohibited.

1003.2.8.2.5 Clearance. Volume-based grease interceptor shall have a clearance height of not less than 7 feet 6 inches (2286 mm) above the manhole or access. No structures shall be placed directly upon or over the interceptor.

1003.2.8.2.6 Depth. All volume-based grease interceptors shall be installed at a maximum depth of 12 feet (3 657 mm); 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 20 feet (6096 mm).

1003.2.8.2.7 Above grade. Volume-based grease interceptors installed above grade shall be designed and installed to meet the following provisions:

1003.2.8.2.7.1 Internal loading. Engineered to withstand all conditions imposed by internal loading from empty through over-filled (where tank and piping are subject to a discharge stoppage and over-filled to a recognized overflow point).

1003.2.8.2.7.2 Hydrostatic test. Constructed and sealed in a manner that shall withstand the required hydrostatic test of 10 feet of head above the access cover elevation.

1003.2.8.2.7.3 Minimum temperature. Located in an area capable of maintaining a minimum of 50°F (10°C).

1003.2.8.2.7.4 Access. If a new volume-based grease interceptor must be installed with access higher than 5 feet (1,524 mm) above finished floor or grade, the building owner shall install an OSHA approved permanent platform at the interceptor to provide access for workers.

1003.2.8.3 Sizing. The volume of the interceptor shall be determined by using table 1003.c. 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. The DFUs shall be calculated using tables in IPC.

Drainage Fixture Units[1] (DFUs)	Interceptor Volume (Gallons)
8	500
21	750
35	1 000
90	1 250
172	1 500
216	2 000
307	2 500
342	3 000
428	4 000
576	5 000
720	7 500
2112	10 000
2640	15 000

(from 2015 Uniform Plumbing Code Table 1014.3.6*)

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Notes: 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. 1,600 Gallon Interceptor equals 181 DFUs.

Table 1003.d - Volume-Based Grease Interceptor Sizing

1003.3 Oil and sand interceptors.

1003.3.1 General. The provisions of Section 1003.2 shall only apply to drainage routed to the sanitary sewer. Portions of or entire systems where drainage is routed to a storm drainage system, or to grade, shall carry the appropriate storm water discharge permit issued by the jurisdiction having authority and shall not be bound by the provisions of this section. 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.

1003.3.1. Commission specifications. Volume-based oil and sand interceptors shall be designed and installed in accordance with current Commission details and specifications.

1003.3.1.2 Precast concrete interceptors. Precast concrete interceptors shall conform to the structural requirements contained in ASTM 1613 standard specification for precast concrete interceptor tanks.

1003.3.2 Location and installation. Location and installation shall meet the requirements of Section 1003.2.8.2

1003.3.3 Size. The minimum size of volume-based oil and sand interceptors size shall be determined by application as follows:

Small volume-based oil and sand interceptor – 500 gallons (1,892 liters)

Large volume-based oil and sand interceptor – 1,500 gallons (6,056 liters)

1003.2.3.1 Engineered sizing. Manufactured mechanical interceptors or interceptors utilizing other means of abatement shall be submitted as an engineered design. Plan submittal shall include calculations, manufacturer's guidelines, and engineer's seal and signature. Subject to Commission plans review approval.

1003.3.4 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 oil and sand interceptor. Parking garages with 40 or less spaces may be served by a small oil and sand interceptor; those with greater than 40 spaces shall be served by a large interceptor.

1003.3.5 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:

1003.3.5.1 Automatic vehicle washing. Automatic vehicle washing facilities shall have the equivalent of one large interceptor (1,500 gallon) per vehicle lane.

1003.3.5.2 Self-service vehicle washing. Self-service type vehicle washing facilities shall have the equivalent of one large interceptor (1,500 gallon) per eight wash bays. A single wash bay may be served by a small interceptor (500 gallon).

1003.3.6 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.

1003.3.6.1 Small volume-based oil and sand interceptor. Up to eight bays may be served by a small interceptor.

1003.3.6.2 Large volume-based oil and sand interceptor. Up to 24 bays may be served by a large interceptor.

1003.3.7 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 (500 gallon).

1003.4 Solids interceptors.

1003.4.1 Fish scale interceptor. Interceptor shall be listed for use as fish scale interceptor by manufacturer.

1003.4.2 Clothes washer discharge interceptor. Clothes washers shall discharge through an interceptor that is provided with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 1/2 inch (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system.

Exceptions:

1. Clothes washers in individual dwelling units shall not be required to discharge through an interceptor.
2. Up to three washers designed for use in individual dwelling units and installed in a location other than an individual dwelling unit shall not be required to discharge through an interceptor.

1003.4.3 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.

1003.4.4 Slaughterhouses. Slaughtering room and dressing room drains shall be equipped with approved interceptors. The interceptor shall prevent the discharge into the drainage system of feathers, entrails, and other materials that cause clogging.

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 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, "NON-POTABLE WATER SYSTEMS". IPC Chapter 13, Non-Potable Water Systems, is hereby DELETED in its entirety and replaced with a new Chapter 9 in this Code.

302.14 Amendment of IPC CHAPTER 14, "SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS". IPC Chapter 13, Subsurface Landscape Irrigation Systems, is hereby DELETED in its entirety and replaced with a new Chapter 9 in this Code.

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CHAPTER 4 ADOPTION OF INTERNATIONAL FUEL GAS CODE

SECTION GENERAL 401

401.1 Adoption. The 2021 edition of the International Fuel Gas Code (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 IPC applies to all occupancies including Group R-3 occupancies, and their accessory structures.

401.3 Availability for review. At least one copy of the aforesaid IFGC shall be filed in the Office of the Secretary of the Commission 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 this Code Section 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 304.6, Outdoor combustion air, is hereby AMENDED by ADDING Sections 304.6.3 and 304.6.4, to mandate certain minimum requirements for combustion and ventilation air, all to read as follows:

(IPC as amended)

304.6.3 Construction heaters, recirculating. Make-up, ventilation and combustion air shall be provided in accordance with manufacturer's instructions but in no case shall the total effective opening(s) be less than 3 square feet (278,709 square mm) for every 100,000 Btu/h (29 KW). where practical, one half of the required effective opening shall be provided within 12 inches (304 mm) of the top of the enclosure and the remaining half within 12 inches (304 mm) of the bottom of the enclosure. In all cases, there shall be a minimum of two openings located in separate areas of the structure, where one is as high as practical and the other as low as practical.

304.6.4 Construction heaters, non-recirculating. A means to provide ventilation and exhaust shall be provided in accordance with manufacturer's instructions but in no case shall the total effective opening(s) be less than 1.5 square feet (139,355 square mm) for every 100,000 btu/h. the required effective opening shall be provided, as close as practical, to within 12 inches (304 mm) of the top of the enclosure.

402.3.2 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, all to read as follows:

(IPC as amended)

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 Group R-3 occupancy containing one or more sleeping units or dwelling units follows:

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

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

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, all to read as follows:

(IPC as amended)

401.11 Private meters and gas utility submeters. Private meters and gas utility submeters shall be installed as follows:

401.11.1 Listing. Listed to ANSI B109.1 or B109.2.

401.11.2 Readily accessible. Shall be readily accessible.

401.11.3 Ventilated space. Shall be located in a ventilated space.

401.11.4 Required clearance. Located at least 36 inches (914 mm) form an ignition source.

401.11.5 Support and protection. Adequately supported and protected from physical damage, temperature extremes, corrosion, or excessive vibration.

401.11.6 Identification. 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.

401.11.7 Prohibited locations. Installations in bedrooms, bathrooms, buried and or located in a vault below grade or slab, or hazardous locations shall be prohibited.

402.4 Amendments of IFGC Chapter 4, "GAS PIPING INSTALLATIONS"

402.4.1 IFGC Section 401.5, Identification, is hereby amended by modifying Section 401.5, to include additional requirements for gas pipe identification.

(IFGC as amended)

401.5 Identification. All new installations of gas piping, both exposed and concealed, shall be identified in accordance with Sections 401.5.1 and 401.5.2.

401.5.1 Marking locations. Marking locations shall be as follows:

- **a.** The marking shall be spaced at intervals not exceeding 5 feet (1524 mm).
- **b.** **Exception:** for steel piping on the roof, the marking shall be spaced at intervals not exceeding 10 feet (3048 mm).
- **c.** The marking shall be at all changes of direction.
- **d.** The marking shall be on each side of a penetration through a partition, wall, floor, or ceiling.
- **e.** The marking shall be at every gas shutoff valve.

401.5.2 Marking color and size. The marking color and size shall be as follows:

- **a.** The marking shall be permanent. The marking shall be as follows:
  - **i.** Wrap-around labels
  - **ii.** Non-adhesive labels with bands or ties
  - **iii.** Adhesive labels
  - **iv.** Painted
  - **v.** Factory applied to piping
- **b.** The marking shall be a yellow field marked "GAS" in black letters.
- **c.** The length of yellow field and letter height shall be per table 401.5.2.
- **d.** Where nominal gas supply pressure is between 1 psi and 2 psi, marking shall include "medium pressure" or "medium press.".
- **e.** Where nominal gas supply pressure is greater than 2 psi, marking shall include "high pressure" or "high press."

Pipe Diameter	Length of Yellow Field	Letter Height
3/4” - 1-1/4” (19 mm - 32 mm)	8” (203 mm)	1/2” (13 mm)
1-1/2” - 2” (38 mm - 51 mm)	8” (203 mm)	3/4” (19 mm)
2-1/2” - 6” (64 mm - 152 mm)	12” (305 mm)	1-1/4” (32 mm)
8” - 10” (204 mm - 254mm)	24” (610 mm)	2-1/2” (64 mm)
OVER 10” (OVER 254 mm)	32” (813 mm)	3-1/2” (89 mm)

For pipes less than 3/4" in diameter, a permanently legible is allowed.

Table 401.5.2 – Gas pipe marking

402.4.2 IFGC Section 402 Pipe sizing, is hereby amended by adding Section 402.8 to include requirements for pipe size after point of delivery, all to read as follows:

(IFGC as amended)

402.8 Point of delivery pipe size. The first 2-feet of piping on outlet of point of delivery may be the same size as the point of delivery.

402.4.3 IFGC Section 403.5.5 corrugated stainless steel tubing, is hereby amended by adding Section 403.5.5.1 for the prohibition of non-arc resistant corrugated stainless steel tubing under the Public Safety Article, Section 12–206, Annotated Code of Maryland:

(IFGC as amended)

403.5.5.1 Non-arc-resistant CSST. Non-arc resistant corrugated stainless steel tubing “means” corrugated stainless steel tubing listed in accordance with ANSI LC 1/CSA 6, has the following marking: “CSA/ANSI LC 1 • CSA 6.26”, and does not have the words “arc-resistant”* or acronym “AR”.

403.5.5.2 Prohibition. Non–arc–resistant jacketed corrugated stainless steel tubing may not be used in:

a. The new construction of a customer–owned natural gas or LP-gas piping system in a building;
b. A natural gas or LP-gas piping system in a renovated property if the renovation affects more than 50% of the total square footage of the property; or
c. A natural gas or liquefied propane piping system that requires the addition of a new gas line to the gas piping system.

402.4.4 IFGC Section 404.3 Prohibited locations, is hereby amended by adding Section 404.3.1 to include requirements for underground pipelines after meter, all to read as follows:

(IFGC as amended)

404.3.1 Residential underground piping after service meter assembly. Per COMAR 20.55.09.07, residential underground piping after service meter assembly is prohibited unless the piping carries only to gas utilization equipment located outdoors.

If it is not possible to comply with this COMAR regulation, written permission shall be obtained from the Maryland public service Commission and submitted to Commission before placing the meter.

402.4.5 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. A maximum of 12 joints in the new and disturbed piping are allowed, excluding the equipment connector.
b. The new piping and any disturbed piping shall not be concealed prior to testing and passing inspection.

c. The developed length of the new piping shall not exceed 15 feet (4,572 mm).

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. Specialized leak detection equipment shall also qualify as a soap test.

402.4.6 IFGC Section 412, LIQUEFIED PETROLEUM GAS MOTOR VEHICLE FUEL-DISPENSING STATIONS, is hereby DELETED in its entirety.

402.4.7 IFGC Section 413, COMPRESSED NATURAL GAS MOTOR VEHICLE FUEL-DISPENSING STATIONS, is hereby DELETED in its entirety.

402.5.1 IFGC Sections 503, Venting of appliances, and 504, Sizing of category I appliance venting systems , are hereby AMENDED by MODIFYING Sections 503.5.5, 503.5.6, 504.2.9, 504.3.20 and specific related Tables to clarify the provisions relating to masonry chimneys and align with 2015 Department of Energy mandated increases in water heater efficiencies, all to read as follows:

(IFGC as amended)

503.5.5 Size of chimneys. Delete methods 2 and 3.

503.5.6 Inspection of chimneys. Delete the exception.

504.2.9 Chimney and vent locations. Tables 504.2(1), 504.2(2), and 504.2(5) shall be used only for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. Where vents extend outdoors above the roof more than 5 feet (1 524 mm) higher than required by Figure 503.6.4, and where the vents terminate in accordance with Section 503.6.4, Item 2, the outdoor portion of the vent shall be enclosed as required by this section for vents not considered to be exposed to the outdoors or such systems shall be engineered. A Type B vent shall not be considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulted to a value or not less than R8.

Table 504.2(3) in combination with Table 504.2(6) shall be used for clay-lined interior and exterior masonry chimneys, provide that all of the following are met:

1. Vent connector is a Type B double wall.
2. Vent connector length is limited to 18 inches (457 mm) for each inch (25 mm) of vent connector.
3. The appliance is draft hood factory-equipped without a damper or draft inducer.
4. The input rating is less than the maximum capacity given by Table 504.2(3).
5. For a water heater, the outdoor design temperature is not less than 5°F (-15°C).
6. For any appliance, the input rating is greater than the minimum capacity given by Table 504.2(6).

504.3.20 Chimney and vent locations. Tables 504.3(1), 504.3(2), and 504.2(5) shall be used only for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. Where vents extend outdoors above the roof more than 5 feet (1,524 mm) higher than required by Figure 503.6.4, and where the vents terminate in accordance with Section 503.6.4, Item 2, the outdoor portion of the vent shall be enclosed as required by this section for vents not considered to be exposed to the outdoors or such systems shall be engineered. A Type B vent shall not be considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulted to a value or not less than R8.

Table 504.3(6a), 504.3(6b), 504.3(7a) and 504.3(7b) shall be used for clay-lined interior and exterior masonry chimneys, provided that all of the following are met:

1. Vent connectors are Type B double wall.
2. Not less than one appliance is draft hood factory-equipped and no appliance is equipped with a damper or draft inducer.
3. The combined appliance input rating is less than the maximum capacity given by Table 504.3(6a) for NAT+NAT or Table 504.3(7a) for FAN+NAT.

4. The total input rating for all appliances is greater than the minimum input rating given by Table 504.3(7a) for NAT+NAT or 504.3(7b) for FAN+NAT.
5. The vent connector sizing is in accordance with Table 504.3(3).

Tables 504.2(6), 504.3(6a), 504.3(6b), 504.3(7a) and 504.3(7b), re-title as INTERIOR AND EXTERIOR MASONRY CHIMNEY

Tables 504.2(6), 504.3(6b), and 504.3(7b), delete “Space-heating” from table headings.

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.

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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 and pollution caused by unprotected or improperly protected cross-connections (also referred to as backflow or backflow prevention). this includes the installation, alteration, repair, relocation, replacement, or maintenance of plumbing systems that use backflow preventers.

501.2 IPC Section 608. IPC Section 608 – Protection of potable water supply is DELETED, see Section 302.6.10 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 and pollution including from non-potable liquids, solids, or gases being introduced into the potable water supply through cross-connections or any other piping connections to the potable water system). Backflow preventer applications shall conform to Table 5.2, except as specifically allowed or required in Section 506.

501.5 Pollution or 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 cause pollution or contamination.

501.6 Prohibited arrangements. 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 and are prohibited.

SECTION 502 APPLICABILITY

502.1 Applicability. This Chapter applies to all occupancies, including Group R-3 occupancies, and their accessory structures.

502.2 Inspection priority ranking and facility hazard classification.

502.2.1 General. With the exception of Section 502.2.1.1, the Commission designates an inspection priority ranking to a customer's facility based on the facility type, water end use, and other cross-connection risks including low pressure vulnerability. The ranking is a numeric scale of odd number from 1 to 9; where rankings of 1 and 3 represent facilities with a high facility hazard classification and will equate to the higher tier of the program's base fee. Rankings of 5, 7, & 9 represent moderate and low facility hazard classifications and will equate to the lower tier of the program's base fee. See table 5. For a representation of inspection priority ranking number.

502.2.1.1 Exception. Group R-3 occupancies, individually metered condominiums, and individually metered apartments are exempt from inspection priority ranking and facility hazard classification.

<table>
<tr><td>Facility Hazard Classification</td><td colspan="2">High Hazard[1,3]</td><td colspan="2">Moderate Hazard</td><td>Low Hazard</td></tr>
<tr><td>Inspection Priority Ranking</td><td>1</td><td>3</td><td colspan="2">5</td><td>7</td><td>9</td></tr>
<tr><td rowspan="20">Facility Type</td><td>Hospital</td><td>Dentist</td><td colspan="2" rowspan="2">Building or property with one or more higher hazard water uses</td><td rowspan="3">Building or property with only a low hazard fire sprinkler system (No Chemicals)</td><td rowspan="3">Building or property without a water use requiring a testable backflow preventer</td></tr>
<tr><td>Urgent Care W/ Surgery</td><td>Urgent Care W/O Surgery</td></tr>
<tr><td>Laboratory</td><td rowspan="2">Doctor W/WUE[2]</td><td>Grocery</td><td>Retail</td></tr>
<tr><td>Industrial Processing</td><td>Dry Cleaners</td><td rowspan="2">Office Building[3]</td><td>Church</td></tr>
<tr><td>Concrete Plant</td><td rowspan="2">Auto Vehicle Washing</td><td>Schools</td><td>Assembly Hall</td><td rowspan="16">Existing fire sprinkler systems shall be protected in one of two ways:
1.) Single check valve rebuilt or replaced every five years
2.) Testable backflow preventer tested annually; owner responsible for hydraulic analysis</td><td rowspan="16">These facilities will be inspected on same frequency as 5s and 7s.</td></tr>
<tr><td rowspan="2">Comm/Ind Laundry</td><td>Food Service</td><td>Banks</td></tr>
<tr><td>Stadium</td><td rowspan="2">Multi-Unit Residential</td><td>Library</td></tr>
<tr><td rowspan="2">Food Processing</td><td>Airport</td><td>Police Station</td></tr>
<tr><td rowspan="2">Photo/Film Processing</td><td rowspan="2">Vehicle Service[3]</td><td>Day Care</td></tr>
<tr><td>Bottling Plant</td><td>Theater</td></tr>
<tr><td>Nursing Home</td><td rowspan="2">Commercial Printing</td><td rowspan="2">Hotel/Lodge/ Motel/Inn[3]</td><td>Warehouse</td></tr>
<tr><td>Birthing Center</td><td rowspan="2">Mobile Home Park</td></tr>
<tr><td>Veterinarian</td><td rowspan="2">Commercial Pool[4]</td><td rowspan="2">Salon/Spa/ Barber</td></tr>
<tr><td>Funeral Home</td><td>Camp Ground</td></tr>
<tr><td>Morgue</td><td>Golf Courses</td><td>Auto Dealer[3]</td><td>Cemetery</td></tr>
<tr><td>Animal Shelter</td><td>Assisted Living</td><td>Drug Store</td><td rowspan="2">Doctor w/o WUE</td></tr>
<tr><td rowspan="5"></td><td>Marina</td><td>Fire House</td></tr>
<tr><td rowspan="2">Correctional Facility</td><td rowspan="2">Racket/Tennis Club</td><td>Laundromat</td></tr>
<tr><td>Ball Fields</td><td rowspan="4"></td></tr>
<tr><td>Crematorium</td><td>Barn/Stable</td><td>Ice Rink</td></tr>
<tr><td>University/ College</td><td colspan="2" rowspan="3"></td></tr>
<tr><td>Radiologist/ MRI/ X-Ray</td></tr>
<tr><td>Nursery</td></tr>
</table>

Notes:

1 - Facilities classified as high hazard (inspection priority ranking of 1 or 3) will be inspected twice as often as facilities classified as low hazard (inspection prirority ranking of 5, 7, or 9)

2 - WUE = Water Utilizing Equipment

3 - Subject to further evaluation by Code Official

4 - Commercial pools - other than a pool accessory to a single detached dwelling unit

Table 5.1

502.3 Containment and 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 isolation assemblies or devices, as applicable. Containment backflow preventers shall be installed immediately downstream of the branch that serves the fire sprinkler system. For buildings served by an outside meter, the branches to fire and domestic shall be installed within 5 feet (1,524 mm) of where the main water service enters the building. New facilities, regardless of hazard classification, shall not have separate service lines for fire sprinkler system and domestic use; building water services shall be sized for a combination

of fire sprinkler system and domestic water usage. Fire sprinkler system 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 isolation assemblies in all facilities shall remain in service, be tested annually and repaired, rebuilt or replaced as otherwise needed to ensure compliance with this Code. Devices shall be replaced or rebuilt every five years. Where any of the following conditions present as part of a design-retrofit or upgrade, containment and isolation assemblies or devices for these facilities shall meet the same requirements as cited under 502.3.1 above:

- **a.** Replacement, upgraded, or relined Water Service.
- **b.** Replacement or relining of a minimum of 50 percent of the water distribution piping; or the remodeling or adding of 25 percent or more to an existing plumbing system.
- **c.** Where a residential water service connection or water service 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 the Commission. the Commission shall require a containment backflow assembly if high degree of 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 backflow prevention of federal property. Containment backflow preventers are required for federal properties proximate to each water service connection. RPBA (ASSE 1013) backflow prevention assembly shall be installed above grade and protected from freezing and other physical damage per Section 507.6.2. Backflow Prevention Assembly 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 Prevention Assembly Test Reports for isolation 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 Prevention Assembly 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 the Commission 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 the customer's own expense, shall purchase, install, operate, test and maintain approved backflow preventers as directed by the Commission. The customer shall immediately correct any malfunction of a backflow preventer revealed by periodic testing or observation. Testable backflow prevention assemblies shall be tested annually or as otherwise directed by the Commission. Non-testable backflow prevention devices shall be replaced or rebuilt every five years.

503.3 WSSC-Licensed Cross-Connection Technician. The customer shall be responsible for hiring a Cross-Connection Technician (who is employed by a WSSC-Licensed Master Plumber) to test, maintain, and certify the installation of testable 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 preventers.

503.6 Change of use. The customer shall immediately contact the Commission when the use of the customer's property changes. The Commission shall then reassess the degree of hazard classification of the property and determine if an inspection is warranted.

503.7 Removal of backflow preventers. The customer shall notify the Commission in writing of any backflow preventers that have been removed.

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 Code 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. Unless otherwise approved by the Commission, it shall be the Cross-Connection Technician's responsibility to safeguard the design, material or operational characteristics of an assembly during repair or maintenance.

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 the Commission and to the customer.

504.3.1 Preservation of backflow assembly identification. Where testable backflow prevention assemblies are installed in areas with certain atmospheres that are detrimental to the manufacturer's identification plate, the owner or their agent shall record the assembly's critical identifying information to include serial number, make, and model number. This information shall be affixed to the assembly at the time of inspection by one of the following methods or as approved by a Code Official:

504.3.1.1 Engraving. Engraving of the required information an inert material, such as plastic, and secured to the assembly.

504.3.1.2 Label. Creation of a label with legible print or type, inserted in a durable, transparent and sealable plastic bag or sleeve and securing to the assembly.

504.4 Cross-Connection Test Reports.

504.4.1 Documentation. Any work completed by a Cross-Connection Technician to achieve satisfactory test results for a customer shall be documented on a Commission Backflow Prevention Assembly Test Report. All test reports shall have an assigned test report number.

504.4.2 Cross-Connection Test Report System. The Cross-Connection Test Report System is the Commission's online program used for the purchase and submission of cross-connection test reports.

504.4.3 Purchase. All test reports must be purchased online from the Cross-Connection Test Report System.

504.4.4 Submittal deadline. The backflow prevention assembly test report shall be submitted to the Commission within 30 days of a successful test.

504.4.5 Responsibility. The principal licensee shall be responsible for submitting timely Backflow Prevention Assembly Test Reports.

504.5 Replacement parts. Cross-Connection Technicians shall be responsible for ensuring that original manufacturer parts are used in the repair or rebuild of backflow preventers.

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 the Commission. See Section 113.7.

504.8 Removal of backflow preventers. Where systems or equipment and the corresponding backflow preventers are removed, a short form permit is required for the Code Official to verify the complete divorcement. The actual backflow preventers shall be present or their pertinent information (make, size, serial number, hazard served, etc.) must be provided to the Code Official.

SECTION 505 SELECTION OF BACKFLOW PREVENTERS

505.1 Approved standards. Backflow preventers shall conform to standards listed in this Code.

505.2 Other standards. Backflow preventers manufactured to other standards may also be installed, provided written approval is first obtained from the Commission. 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 those listed in Table 5.2 shall be subject to field verification of degree of hazards and conditions by the Commission.

Applicable Standards	Backflow Preventer or Method	Type of Protection	Degree of Hazard	Installation Dimensions and Position	Pressure Condition	Comments	Applications
ASME A112.1.2	Air Gap	Backsiphonage and backpressure	High	Air gap shall be at least double the diameter of the supply pipe measured vertically above the top of the rim of the vessel. In no case shall it be less than 1 inch (25 mm).	Continuous	See bypass arrangements	Lavatory, Sink, or Bathtub Spouts Pot Fillers Residential Type Dishwashers Residential Type Clothes Washers Residential Type Refrigerator/Ice Maker
ASSE 1001, CSA B64.1.1	Pipe Applied Vacuum Breaker	Backsiphonage	High	6 inches above highest outlet Vertical position only No downstream valves	Intermittent	Outside of Fume Hood or Similar Environments	Goosenecks and appliances not subject to back pressure or continuous pressure
ASSE 1011, ASME A112.21.3, CSA B64.2, CSA B64.2.1	Hose Connection Vacuum Breaker	Backsiphonage	High	Locked on hose bibb threads	Intermittent	Yard hydrant supply requires auxiliary or additional protection	Hose Bibb, Wall Hydrant and Sill cock
ASSE 1012, CSA B64.3	Dual Check Valve with Atmospheric Vent	Backsiphonage and backpressure	Low	Any accessible position Drain piped to floor or by air gap over a receptor (Horizontal only)	Continuous	Drain/vent outlet shall be between 3 & 9 o'clock See note[1]	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

Table 5.2 - Application of Backflow Preventers

Applicable Standards	Backflow Preventer or Method	Type of Protection	Degree of Hazard	Installation Dimensions and Position	Pressure Condition	Comments	Applications
ASSE 1013, AWWA C511, CSA B64.4, CSA B64.4.1	Reduced Pressure Principle Backflow Preventer	Backsiphonage and backpressure	High	Inside building 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) Outside building 18 inches to 24 inches (centerline to grade) Orientation Horizontal installation, Vertical installation allowed for approved models Relief Valve Drain piped to air gap over a receptor Area Shall Be Suitable for Uncontrolled Discharge For Residential Outdoors Only	Continuous	Valves per Section 507.5 Valves See Section 507.3.1 See note[2]	Chemical or Biological Systems Chilled Water / Cooling Tower Commercial Boiler / Heat Exchanger utilizing Toxic Heat Transfer Fluid[3] 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 Commerical Clothes Washer Commercial/Industrial Laundry Vehicle or Train Wash System Hose Bibb(s) in Hazardous Area
ASSE 1014, ASME A112.18.3	Backflow Prevention Devices for Hand-Held Showers	Backsiphonage and backpressure	Low	The device should be only installed in areas where spillage of water will not cause damage	Intermittent	Hand-held showers shall provide backflow protection in accordance with ASME A112.18.1/CSA B125.1, or shall be protected against backflow by a device complying with ASME A112.18.3 or ASSE 1014	Hand-Held Showers

Table 5.2 - Application of Backflow Preventers (continued)

Applicable Standards	Backflow Preventer or Method	Type of Protection	Degree of Hazard	Installation Dimensions and Position	Pressure Condition	Comments	Applications
ASSE 1015, AWWA C510, CSA B64.5, CSA B64.5.1	Double Check Valve Assembly	Backsiphonage and backpressure	Low	Inside building 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) Outside building 18 inches to 24 inches (centerline to grade) Orientation Horizontal or Vertical Installation	Continuous	Valves per Section 507.5 Valves See note[2]	Fire Sprinkler without Chemical Additive, Wash Down Rack, Culinary Pressure Cooker & Industrial Food Steamer (1" or larger), Commercial Domestic Water - Low and Moderate Containment
ASSE 1019, ASME A112.21.3, CSA B64.2.2	Vacuum Breaker Wall Hydrants	Backsiphonage	High	Mounting Height Minimum 6 inches above grade	Intermittent	Integral to Hydrant	Wall Hydrants
ASSE 1020, CSA B64.1.2	Pressure Type Vacuum Breaker	Backsiphonage	High	Mounting Height Minimum of 12 inches above highest outlet, Maximum 60 inches to floor/grade Orientation Vertical only Location Area Shall Be Suitable for Uncontrolled Discharge Residential Outdoors Only	Continuous	See note[2] Valves per Section 507.5 Valves	Residential Lawn Sprinklers
ASSE 1022	Backflow Preventer for Carbonated Beverage Machines	Backsiphonage and backpressure	Low	Orientation Vertical or horizontal Pipe Material No copper pipe downstream of backflow preventer	Continuous	See note[1]	Carbonated Beverage System or Equipment Non-Carbonated Beverage System or Equipment

Table 5.2 - Application of Backflow Preventers (continued)

Applicable Standards	Backflow Preventer or Method	Type of Protection	Degree of Hazard	Installation Dimensions and Position	Pressure Condition	Comments	Applications
ASSE 1024, CSA B64.6	Dual Check Valve	Backsiphonage and backpressure	Low	Any accessible position	Continuous	See note[1]	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 (less than 1 inch); Wok Range; Proofer; Eye Wash Station Clothes Dryer with Steamer Dental Model Trimmer Bidet without integral backflow
ASSE 1035, CSA B64.7	Laboratory Faucet Backflow Preventer	Backsiphonage	High	6 inches above downstream piping, Area suitable for discharge	Intermittent	---	Chemical faucets, Hose sprays on faucets not meeting standards, Miscellaneous faucet applications

Table 5.2 - Application of Backflow Preventers (continued)

Applicable Standards	Backflow Preventer or Method	Type of Protection	Degree of Hazard	Installation Dimensions and Position	Pressure Condition	Comments	Applications
ASSE 1047	Reduced Pressure Detector Assembly	Backsiphonage and backpressure	High	Inside building 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) Outside building 18 inches to 24 inches (centerline to grade) Orientation Horizontal installation, Vertical installation allowed for approved models Relief Valve Drain piped to air gap over a receptor Area Shall Be Suitable for Uncontrolled Discharge For Residential Outdoors Only	Continuous	Yard hydrant supply requires auxiliary or additional protection	Fire Sprinkler with Chemical Additive and where Detector Meter is needed
ASSE 1048	Double Check Detector Assembly	Backsiphonage and backpressure	Low	Inside building 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) Outside building 18 inches to 24 inches (centerline to grade) Orientation Horizontal or Vertical Installation	Continuous	See note[2]	Fire Sprinkler without Chemical Additive and where Detector Meter is needed
ASSE 1052, ASME A112.21.3, CSA B64.2.1.1	Dual Check Vacuum Breakers	Backsiphonage and Low-Head[4] backpressure	High	Hose Bibb Dual Check Vacuum Breaker	Intermittent	---	Miscellaneous Hose Bibb Connection
ASSE 1055	Chemical Dispensers with Integral Backflow Protection	Backsiphonage	High	Minimum of 12 inches above outlet and stored concentrate	Intermittent	---	Janitorial Product Dispensing

Table 5.2 - Application of Backflow Preventers (continued)

Applicable Standards	Backflow Preventer or Method	Type of Protection	Degree of Hazard	Installation Dimensions and Position	Pressure Condition	Comments	Applications
ASSE 1056, CSA B64.1.3	Spill-Resistant Vacuum Breaker	Backsiphonage	High	Mounting Height Minimum of 12 inches above highest outlet, Maximum 60 inches to floor/grade Orientation Vertical only	Continuous	Valves per Section 507.5 Valves	Soap dispensers Specialty sinks Cleaning equipment Emergency Drenching Hose Pet Groom/Treatment station/tub/shower
ASSE 1081	Backflow Preventer with Intermediate Atmospheric Vent and Pressure-Reducing Valve	Backsiphonage and backpressure	Low	Any accessible position Drain piped to floor or by air gap over a receptor (Horizontal only)	Continuous	Drain/vent outlet shall be between 3 & 9 o'clock See note[1]	Residential Boilers

NOTES

[1]A dated test tag shall be attached to or hung nearby all ASSE 1012, ASSE 1022, ASSE 1024 and ASSE 1081 devices, see Section 508.3.1.2.1. The Commission provides tags, see Section

[2]A dated test tag shall be attached to or hung nearby all ASSE 1013, ASSE 1015, ASSE 1020, ASSE 1047, ASSE 1048, and ASSE 1056 assemblies, see Section 508.3.1.1.1. the Commission provides tags, see Section 108.2.1.8.

[3]Double wall heat exchanger required for domestic hot water production where toxic heat transfer fluid is utilized.

[4]Low-head backpressure does not exceed that generated by an elevated hose equal to or less than 3 m (10 ft) in height.

Table 5.2 - Application of Backflow Preventers (continued)

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 prevention in accordance with ASME A112.18.1.

506.1.1 Fixture outlet alteration. Other than a lab sink faucet spout, a water outlet such as a fixture faucet, shall not be altered beyond its original intent. The use of a wye-branch fitting or other manifold type assembly shall not be used to serve multiple systems, equipment, appurtenances, etc. Each usage shall be provided with an individual water rough-in, provided with a shut-off valve per IPC Section 606.2, and protected against backflow commensurate with the degree of hazard for that use.

506.2 Appurtenances, appliances and apparatus. All 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 prevention against backflow and contamination of the water supply system. Water pumps, filters, softeners, tanks and all other appliances, appurtenances and devices that convey potable water shall be constructed of certain materials and contain components that maintain the potability of the water and protect against contamination.

506.3 Water service piping. Water service piping shall be protected in accordance with the IPC 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 used 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 5.2 and the hydrants are permanently identified as non-potable water 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 RPBA (ASSE 1013) 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 degree of hazard. A DCVA (ASSE 1015) 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 RPBA (ASSE 1013) backflow prevention assembly shall be installed at the interconnection.

506.6.3 used waters and industrial fluids. For used waters and industrial fluids, an air gap separation or a RPBA (ASSE 1013) shall be installed where there is a high degree of hazard.

506.7 Fire hydrant meters and backflow preventers for temporary or seasonal use.

506.7.1 General. The Commission may authorize use of a fire hydrant meter to applicants requiring water for temporary use as follows:

506.7.1.1 Small fire hydrant meter. A Commission small fire hydrant meter (3/4-inch) shall include an integral HCVB (ASSE 1011) non-testable backflow prevention device.

506.7.1.2 Large fire hydrant meter. For a Commission large fire hydrant meter (3 inch), the applicant shall provide a RPBA (ASSE 1013) testable backflow prevention assembly. The testable backflow prevention assembly must carry a satisfactory testable backflow prevention assembly test tag current within six months. The testable backflow prevention assembly shall be located within 20 feet (6,096 mm) of the fire hydrant meter, ahead of any water take-offs, and the inlet piping or hose shall not be concealed.

506.7.2 Fire hydrant 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, 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 where a fire sprinkler system is specified, multiple water systems may be established in parallel as follows:

506.8.1 Fire sprinkler systems. Fire sprinkler systems shall be the first supply branch. This branch may be ahead of an inside domestic meter and shall have a backflow preventer commensurate with degree of hazard.

506.8.2 Irrigation. Irrigation branch shall be downstream of an inside meter. This branch shall be ahead of pressure reducing station, if applicable, and shall have a backflow preventer commensurate with degree of hazard.

506.8.3 Domestic. Domestic branch shall be downstream of an inside meter and shall have a containment backflow preventer commensurate with degree of hazard.

506.8.4 Non-potable water system. Non-potable water system branch shall be downstream of an inside meter, and shall have an RPBA (ASSE 1013) containment backflow preventer.

506.9 Automatic fire sprinkler systems.

506.9.1 Automatic residential fire sprinkler systems. On residential buildings equipped with an NFPA 13D or 13R 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 backflow preventer (ASSE 1024). Chemical additives shall be prohibited in residential fire sprinkler systems. No valve shall be installed on the tee branch supplying the fire sprinkler system.

506.9.2 Automatic commercial fire sprinkler systems. Where potable water is used to serve or supplement a fire sprinkler system, backflow preventer shall be as follows:

506.9.2.1 No chemical additives. DCVA (ASSE 1015).

506.9.2.2 With chemical additives. RPBA (ASSE 1013).

506.9.2.3 Limited system. Limited system up to 7 heads; no chemicals or pump, dual check backflow preventer (ASSE 1024).

506.9.2 exceptions to 506.9.1. The following are exceptions to Section 506.9:

506.9.2.1 As portion of water distribution system. Where fire sprinkler 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 if fire sprinkler system branch piping is less than 2 feet (609 mm) in length.

506.9.2.2 Isolation not required. Isolation or the water distribution system is not required for deluge, preaction or dry pipe systems.

506.10 Retrofits and existing commercial fire sprinkler systems. Existing commercial fire sprinkler systems shall be required to update or upgrade the backflow prevention as follows:

506.10.1 Ten head rule. Where more than ten sprinkler heads are added or relocated in conjunction with interior building renovations, a testable backflow prevention assembly corresponding to Section 506.10 shall be installed.

506.10.2 Single check valves. Older systems (untouched or retrofitting up to ten heads), using a single check valve for backflow prevention are not required to upgrade to a testable backflow prevention assembly provided all of the following conditions are met:

506.10.2.1 No chemical additives. No chemical additives are present or have ever been utilized.

506.10.2.2 Single check valves. Single check valves shall be replaced or rebuilt every five years. Replaced or rebuilt check valves shall be tagged, including the installation date or the expiration date; and the following statement: “For optimal performance and safety, WSSC Code requires that this device shall replaced or rebuilt every 5 years.”

506.10.2.3 Install Assembly. Where possible, a testable backflow prevention assembly per Section 506.10 shall be installed.

506.10.3 Unprotected systems. Unprotected systems shall be required to have a testable backflow prevention assembly installed per Section 506.10.

506.10.4 Hydraulic consideration. Where backflow prevention is added or upgraded, the owner or applicant, their design team, or their installing contractor shall be required to coordinate, permit, or coordinate and 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 and permit shall be required.

SECTION 507 INSTALLATION OF BACKFLOW PREVENTERS

507.1 Installation dimensions. Installation dimensions shall conform to Table 5.2. DCDA (ASSE 1048) and RPDA (ASSE 1047) shall be installed in accordance with the Commission's standard details for construction.

507.2 Accessibility.

507.2.1 General. Except those approved for seasonal removal or replacement, 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°F (20°C).

507.2.2 Backflow preventers above grade. If a new backflow preventer must be installed higher than 5 feet (1,524 mm) above finished floor or 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 (1,524 mm) above finished floor or grade, the building owner shall provide an OSHA approved platform or scaffold for maintenance and testing; or the owner shall contract a WSSC-Licensed 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. Adequately 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 RPBA (ASSE 1013) testable backflow prevention 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 (762 mm) of unobstructed space shall be provided in front of backflow prevention assemblies or devices for maintenance and testing. A minimum of 12 inches (304 mm) of unobstructed space shall also be provided behind 3-inch (76 mm) and larger backflow testable prevention assemblies or devices. A minimum of 6 inches (152 mm) of unobstructed space shall be provided behind 2 inch (50 mm) and smaller assemblies or devices. A minimum of 6 feet (1,828 mm) 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 (304 mm) 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 (12 mm) 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 (7,620 mm) 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 discernible 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 5.3.

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

Table 5.3 - Size of Pipe Identification

507.5 Valves.

507.5.1 Shutoff valves. Shutoff valves shall be required on the inlet and outlet of RPBAs (ASSE 1013), RPDAs (ASSE 1047), DCVAs (ASSE 1015), DCDAs (ASSE 1048), PVBAs (ASSE 1020) and SVBAs (ASSE 1056). Valves shall be factory affixed directly to the backflow prevention assembly body. A dedicated shutoff valve shall be installed on the inlet side of AVBS (ASSE 1001) to allow for periodic maintenance and intermittent operation of the device.

507.5.2 Requirements for ASSE 1013 and 1047 assemblies. Unless approved by the manufacturer, an RPBA (ASSE 1013) and an RPDA (ASSE 1047) shall not be installed in a vertical position.

507.5.3 Fire sprinkler systems. Backflow prevention assemblies for fire sprinkler systems shall be installed with UL listed and FM approved rated valves or with rising stem gate valves. Valves shall be indicator type and strainers shall not be installed on fire sprinkler systems.

507.5.4 Full-flow characteristic valves. Full-flow characteristic valves, either ball type or resilient seated gate type, shall be installed on all backflow prevention 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 Permanent piping. Piping to the inlet side of a testable backflow prevention assembly shall be permanent piping and shall not contain a means to later circumvent the required backflow prevention assembly. Unions may only be used on outdoor assemblies, to facilitate winterization.

507.6.3 Relief port piping. With the exception of Section 507.6.3.1, 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. Relief port piping shall not be reduced in size. Connection to relief port piping shall be made directly to an air gap basket approved by the assembly manufacturer. The relief port piping shall drain indirectly to approved waste receptor. Relief port piping shall not be manifolded with other drain piping.

507.6.3.1 Relief port shutoff system. Relief port piping shall not be reduced in size, unless provided with an approved engineered or manufactured means of flood protection, such as automatic shut-off and alarm.

507.6.4 Backflow preventers installed outside. Unless approved by the Commission, backflow preventers shall be installed inside the building. When installed outside of a 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 backflow preventer. Outdoor enclosures for backflow preventers shall comply with ASSE 1060, performance requirements for outdoor enclosures for fluid conveying components. Heat shall not be required if the backflow preventer is removed during the winter months. PVBAs and SVBAs may be winterized in place.

507.6.4.1 Unions required. Assemblies for seasonal application shall be installed with unions.

Exception: unions shall not be required if assembly is designed to allow the working components between the shutoff valves to be removed. The removed components shall be safely stored in a conditioned space.

507.6.5 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. Backflow preventers shall also be protected from freezing. Backflow preventers shall be installed outside of hazardous environment areas.

507.6.6 Common service. For new construction wherein a common service splits into separate fire and domestic lines inside the property, backflow preventers shall be located after the split with no backflow preventer required on the common service.

507.6.7 Pumps and other appliances. Water pumps, filters, softeners, tanks and all other devices that handle or treat potable water shall be protected against contamination.

507.6.8 Booster pumps. Booster pumps for fire sprinkler systems, domestic water, or local system or equipment enhancement shall be installed on the downstream side of the respective backflow preventers.

507.6.9 Reutilization prohibited. Water used 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 used for non-potable purposes.

507.6.10 Reuse of piping. Piping that has been used for any purpose other than conveying potable water shall not be used for conveying potable water.

507.6.11 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.

507.6.12 Temperature label. Testable backflow prevention assemblies with water supply temperatures that exceed the maximum water temperature as listed in Section 501.1.2.3 shall be labeled "Caution: Hot Water" with size of pipe identification as per IPC Section 608.9.2.2.

SECTION 508 TESTING AND MAINTENANCE OF BACKFLOW PREVENTERS

508.1 Replacement intervals for non-testable backflow prevention devices. Customers shall have non-testable backflow prevention devices rebuilt or replaced every five years.

508.2 Testing intervals for testable backflow prevention assemblies. Customers shall have testable backflow prevention assemblies tested as follows:

- **a.** On installation
- **b.** At least annually
- **c.** After repairs
- **d.** After relocation or replacement
- **e.** On responding to a reported backflow incident
- **f.** Before any reactivation or seasonal start-up of a dormant water use, including: irrigation systems, swimming pools, pool houses, decorative fountains, summer homes, etc.

508.3 Permits.

508.3.1 Maintenance, testing, and tagging of backflow preventers.

508.3.1.1 Testable assemblies. Rebuilding and testing of testable backflow prevention assemblies shall be exempt from a permit requirement but shall only be performed by a Cross-Connection Technician.

508.3.1.1.1 Field test and tag. Field tests shall be performed by a Cross-Connection Technician. Testable backflow prevention assemblies shall have an attached testable backflow prevention assembly test tag with the following information: the permit number (if applicable), the test date, the name and registration number of principal Master Plumber, the name and registration number of tester, the building address, the test report number, the backflow preventer serial number, and the differential pressure that the relief valve opened.

508.3.1.2 Non-testable backflow prevention devices. Replacing or rebuilding non-testable backflow prevention devices shall be exempt from a permit requirement and may be performed by the homeowner (residential only), a WSSC-Licensed Master Plumber or a WSSC-Licensed Journeymen Plumber. A notification tag shall be attached to device or hung nearby.

508.3.1.2.1 tag. Dual check valve with atmospheric vent (ASSE 1012), backflow preventers for carbonated beverage machine (ASSE 1022), dual check backflow preventers (ASSE 1024), and backflow preventer with intermediate atmospheric vent and pressure reducing valve (ASSE 1081) shall have an attached notification tag with the following information: installation date, replace or rebuild by date, and the words: "For optimal performance and safety this device is required by WSSC Code to be replaced or rebuilt every 5 years."

508.3.2 Long Form Permit. A Long Form Permit shall be required for a new installation, or to relocate an existing, testable backflow prevention assembly or a non-testable backflow prevention device, residential or non-residential occupancies.

508.3.3 Short Form Permit. A Short Form Permit may be used for the direct replacement of testable 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 or pursuant to agreement with the appropriate federal agency or both. Such facilities may be required to install an outside water meter setting, and to contain the property with backflow prevention, in close proximity to 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 testable 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 checked for accuracy annually and calibrated if so required. The calibration date shall be entered on the backflow preventer test report and there shall be a dated calibration sticker affixed to the test equipment. Only test equipment designed, constructed, and approved by the manufacturer for testing backflow prevention assemblies and approved by the Code Official shall be accepted for Commission reporting requirements.

508.5 Test reports.

508.5.1 General. Testing of testable backflow prevention assemblies requires the submission of a completed Commission backflow prevention assembly test report showing a passing test result.

508.5.2 Failed tests. In the event of a failed test, the cross-connection technician shall repair, rebuild or replace the testable backflow prevention assembly until a passing test result is obtained. If the property owner does not authorize repairs, the Cross-Connection Technician shall notify the Commission. Submission of a failed field test report is not considered notification.

508.5.4 License number. 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 license number of the WSSC-Licensed Master Plumber.

CHAPTER 6 COMMISSION 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 relate to Commission meters, and as outlined in this chapter, shall be 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 112, 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 THE COMMISSION'S 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. Emerging water meter technology not included in Table 602.1 shall be approved by the Commission before installation or implementation.

602.2 Location. The Commission shall determine the location, outside or inside of buildings, for all Commission water meters. See Section 112.5.

602.2.1 Group R-3 occupancy – outside meter required. For all service connections in Group R-3 occupancies, new or replacement, the following parameters shall determine where outside Commission meters are required:

- **a.** Where the on-property water service is 300 feet (91 m) or greater in length.
- **b.** In neighborhoods where a majority of the homes are served by outside meters and the water service connection is replaced or upgraded; and in similar neighborhoods for service to infill lots or previously demolished homes.
- **c.** When not meeting any condition above, but at the request of the property owner.

602.3 Size. Regardless of water service connection size, building water service size, or building piping 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. Plumbing hydraulic demand shall be estimated utilizing design criteria from IPC Section 604 and Appendix E; and IRC Section 2903.

602.4 Commission submeters. Commission submeters shall meet the following requirements: except as otherwise allowed by law, water passing through a Commission submeter shall not discharge into the sanitary sewage system.

- **a.** A Commission submeter shall be installed on the outlet side of the master meter.
- **b.** Where required, a Commission submeter remote reader wire shall be installed, and shall be tagged on both the outside and inside cable ends.
- **c.** The backflow preventer shall be installed on the outlet side of the Commission submeter.
- **d.** A Commission submeter shall not be connected to any portion of a fire sprinkler system.

WSSC METER APPLICATION CHART
(90% Maximum Flow Rate)

All Flow Characteristics[1,2,8]

27 gpm =	3/4-inch PD[3,4]	145 gpm =	2-inch PD
45 gpm =	1-inch PD[4]	288 gpm =	3-inch CMP
90 gpm =	1 1/2-inch PD		

Variable Flow[5,6,8]

450 gpm =	4" CMP
900 gpm =	6" CMP
1440 gpm =	8" CMP

Constant Flow[2,6,7,8]

		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 and II)

1. All meters, size 3/4-inch through 2-inch 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-inch or 1-inch 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 WSFUs 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 (bypass) on domestic hydraulic demand only.
7. Constant flow applications and those exceeding 3,000 WSFUs shall be metered with a Turbine Meter (TRB).
8. A larger meter shall be considered only on a case-by-case basis.

Table 602.1 - Water Meter Application Chart

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 112.5.7, meter settings and installation.

603.2 Building service valves.

603.2.1 First valve (water service shutoff valve). A full-flow building water service shutoff valve shall be installed within 3 feet (914 mm) of where the building water service enters the building.

603.2.2 Second valve (domestic isolation shutoff valve). When a NFPA 13D or 13R fire sprinkler system is specified, a second full-flow shutoff valve shall be installed to isolate domestic water from fire sprinkler system and to provide an uninterrupted fire sprinkler system 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 NFPA 13 fire sprinkler system is specified, a minimum of a DCVA (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 valve (domestic isolation shutoff valve) valve is recommended but not required. Irrigation supplies, hose bibs, and pressure reducing valves shall be installed after the first valve and after fire sprinkler tee, as applicable. Process water and non-potable water systems may be established in parallel to the domestic water branch; each branch shall contain a RPBA (ASSE 1013).

603.3 Outside meters size 3/4-inch through 2-inch.

603.3.1 Location. Meter settings size 3/4-inch through 2-inch shall be located in the public right-of-way or in a Commission easement and 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 Commission easement and right-of-way, at the edge of the right-of-way. The pigtail piping leaving the water meter shall extend between 2 feet (609 mm) and 3 feet (914 mm) 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 (914 mm) of the property line.

603.3.3.2 Limited access. 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, plumbers shall not enter meter settings.

603.3.3.3 Prohibited activity. Except as directed by the Code Official or as cited in this Code, Commission service connections, meter settings, or any portion thereof, shall not be removed, altered, or replaced.

603.3.3.4 Verification required. Before the final plumbing inspection, the plumber shall verify the following:

- **a.** That the correct size and type meter as shown on the plumbing permit has been installed;
- **b.** That the meter setting is the correct size and type for the meter; and
- **c.** The installation is complete and to grade.

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 before 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 right-of-way, in a Commission easement and right-of-way.

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°F (10°C), 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 isolation valve). A full-flow building water service valve shall be installed within 3 feet (914 mm) 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 NFPA 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.

604.3.3 Parallel systems. When a NFPA 13 fire sprinkler system is specified, the domestic water shall be protected against backflow commensurate with the requirements set forth in Chapter 5 of this Code. The supply for the fire sprinkler system shall tee off before the domestic meter assembly. Downstream of the domestic meter assembly, process water and non-potable water systems may be established in parallel to the domestic water branch; each branch shall contain a RPBA (ASSE 1013).

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.

604.3.4.1 Bypass valve requirement. The required bypass shut off valve within an individual meter piping assembly shall be a tamper resistant and lockable type ball valve.

604.4 Remote reader. Provisions for a Commission remote reader shall be provided for all inside Commission meters as follows:

604.4.1 Conduit size and fittings. Conduit size shall be per Commission standard details and shall have no fittings greater than 45 degrees (0.78 rad); fittings may not be insert type.

604.4.2 Conduit terminations. Conduit termination for remote reader shall be 18 inches (457 mm) to 48 inches (1219 mm) above grade; shall not terminate in a fenced or rear yard; and the preferred termination is along the front wall or sides near front corners. Conduit termination for meter shall be within 12 inches (305 mm) of meter.

604.4.3 Conductor cable. Conductor cable shall be supplied by the Commission; 2 feet (609 mm) 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 3/4-inch through 2-inch.

604.5.1 Water service connection. 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, the edge of the public right-of-way or Commission easement and 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. Unless directed by a Code Official, Commission service connections or any portion thereof, shall not be removed, altered, or replaced.

604.5.2.2 Curb valve depth. The maximum depth from finished grade to the curb valve shall be 60 inches (1524 mm); minimum depth shall be 42 inches (1066 mm).

604.5.2.3 Valve box required. A pre-manufactured cast metal valve or curb box shall be furnished and installed by the plumber at the property line, the edge of the public right-of-way or Commission easement and right-of-way, whichever is closer, 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-inch and smaller. 1 1/2-inch and 2-inch curb valves shall not be outfitted with an extension stem and guide.

604.5.2.3.1 Permanent marking required. Where a valve/curb valve is serving a property under any of the following conditions, the access assembly (curb valve box) top shall be permanently marked/labeled with the corresponding address (house/unit number):

- **a.** Multiple water service connections to multiple homes/units on a single lot/tract of property.
- **b.** Within 20 feet (6 096 mm) of an adjacent valve/curb valve access assembly.
- **c.** Any scenario where it may not be readily apparent to future service providers as to which home/unit is served by any given valve/curb valve. (e.g. Cul-de-sac, flag lots, etc.)

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 (609 mm) square or round, by 4 inches (101 mm) thick shall be provided to support the valve box. The concrete pad may be below finished paving.

605.5.2.5 NFPA 13D or 13R residential fire sprinkler connection. On residential buildings equipped with a NFPA 13D or 13R 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. Before final inspection, the plumber shall verify that (a) the top of the curb box is complete, operational, and flush with the permanent grade; and (b) the correct size and type of meter as shown on the plumbing permit has been installed. 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-inch meter or for any submeter located in a penthouse mechanical room. All other meter applications require test sleeves/piping according to Commission standard details.

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CHAPTER 7

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For provisions relating to design and construction of site utility systems (formerly Chapter 7), refer to the WSSC Development Services Code.

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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 industrial users that discharge non-domestic wastewater 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 within the Sanitary District and to persons outside the Sanitary District 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.

"**Administrator**" Means the administrator of the U.S. Environmental Protection Agency.

"**Authorized Representative**" means the following:

- **a.** Corporation. If the Industrial User is a corporation, authorized representative shall mean:
  - **i.** 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
  - **ii.** 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.
- **b.** Partnership Or Proprietorship. If the Industrial User is a partnership, or sole proprietorship, an authorized representative shall mean a general partner or proprietor, respectively.
- **c.** 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 the authorized representative's designee.
- **d.** Designee. If 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.
- **e.** 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 before or together with any reports to be signed by an authorized representative.

"**Best management practices (BMPs)**" means 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. BMPs 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.

"**Biochemical oxygen demand (BOD)**" means the measure of oxygen consumed in the biochemical oxidation of organic matter in 5 days at 20 degrees Celsius expressed in milligrams per liter (mg/l).

"**Bypass**" means the intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.

"**Categorical industrial user**" means any industrial user who is subject to categorical pretreatment standards.

"**Categorical pretreatment standard (categorical standard)**" means any regulation containing pollutant discharge limits promulgated by EPA in accordance with Sections 307(b) and (c) of the Clean Water Act which apply to a specific category of users and which appear in 40 CFR Chapter I, Sub-Chapter N, Parts 405-471.

"**Code of Federal Regulations (CFR)**" means a codification of the general and permanent rules published in the Federal Register by the Executive Department and agencies of the Federal government.

"**Chronic violations**" means 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).

"**Composite sample**" means a combination of individual samples collected at regular intervals over a time period not to exceed 24 hours in any given calendar day. the volume of each individual sample may be either proportional to the flow rate during the sample period (flow composite), or constant and collected at equal time intervals during the composite period (time composite).

"**Decontamination wastewater**" means wastewater generated as a result of decontamination activities performed after an industrial disaster, occupational exposure, natural catastrophe, warfare, act of terrorism, or similar event with chemical, biological or radiological substances; activity at hazardous waste sites; or chemical spill exposures.

"**Discharge authorization permit**" means 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.

"**Domestic wastes**" means waterborne wastes derived from ordinary living processes.

"**Effluent**" means the flow of liquid out of a fixture, pipe, process, or system.

"**Environmental Protection Agency (EPA)**" means the U.S. Environmental Protection Agency or, where appropriate, the Regional Water Management Division Director, or other duly authorized official of said agency.

"**Existing source**" means source of discharge, the construction of which commenced before 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 Clean Water Act.

"**Food Service Establishments (FSEs)**" means establishments where food is served to or provided for the public, with or without charge, including 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.

"**Garbage**" means the solid animal and vegetable waste resulting from domestic or commercial handling, storage, dispensing, preparation, cooking and serving of foods.

"**Grab sample**" means a sample taken from a wastestream without regard to the flow in the wastestream and over a time not to exceed 15 minutes.

"**Ground water**" means subsurface water occupying the zone of saturation, either confined or free.

"**Confined ground water**" means a body of ground water covered with a material impervious enough to sever free hydraulic connection with overlying ground water.

"**Free ground water**" means ground water in the zone of saturation extending down to the first impervious barrier.

"**Indirect discharge**" means 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.

"**Industrial User**" means 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. For the purposes of Chapter 8 the terms Industrial User and User will be used interchangeably.

"**Industrial wastes**" means liquid or liquid borne wastes resulting from the processes employed in industrial and commercial establishments.

"**Influent**" means the flow of a liquid into a fixture, pipe, process, or system.

"**Interference**" means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- **a.** Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal; and
- **b.** 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.

"**Lower Explosive Limit (LEL)**" means the minimum concentration of a particular combustible gas that can be ignited in air.

"**Industrial Waste Monitoring Port (IWMP)**" means 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.

"**Misconduct**" means the 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.

"**New source**" means:

"**Any premises"** means 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:

- **a.** The building, structure, facility or installation is constructed at a site at which no other source is located; or
- **b.** The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
- **c.** 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.

"**Construction site**" means 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 801.2.29.1.2 and 801.2.29.1.3 of this Section but otherwise alters, replaces, or adds to existing process or production equipment.

"**New source**" means construction of a new source as defined under this paragraph has commenced if the owner or operator has:

- **a.** Begun, or caused to begin as part of a continuous on-site construction program as follows:
  - **i.** Any placement, assembly, or installation of facilities or equipment; or
  - **ii.** 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
- **b.** 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.

"**Non-contact cooling water**" means water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

"**Non-domestic waste**" means the liquid wastes from industrial or commercial processes, trade or business; distinct from domestic wastes.

"**NPDES permit**" means a national Pollutant Discharge Elimination System Permit. NPDES Permits authorize the operation of COMMISSION wastewater treatment plants. NPDES Permits for Commission plants shall be issued by the State of Maryland.

"**Owner**" means a proprietor, person, or entity who owns or has exclusive rights of possession.

"**Person**" means 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.

"**Pass-through**" means 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).

"**pH**" means 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.

"**Pollutant**" means 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.

"**Pollution**" means the addition of sewage, industrial wastes, or other harmful or objectionable material to water. Sources of pollution includes privies, septic tanks, subsurface irrigation fields, seepage pits, sink drains, barnyard wastes, etc.

"**POTW**" means 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.

"**POTW treatment plant**" means that portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage.

"**Pretreatment**" means 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. Appropriate pretreatment technology includes control equipment, such as equalization tanks or facilities for protection against surges or slug loadings that might interfere with or otherwise be incompatible with the POTW. However, where wastewater from a regulated process is mixed in equalization facility with unregulated wastewater, wastewater from another regulated process, or a dilution flow, the effluent from the equalization facility must meet an adjusted pretreatment limit calculated in accordance with 40 CFR 403.6(e).

"**Pretreatment requirements**" means any substantive or procedural requirement related to Pretreatment, other than a National Pretreatment Standard, imposed on an Industrial User.

"**Pretreatment standards or standards prohibited**" means prohibited discharge standards, categorical Pretreatment Standards, state pretreatment standards, and local limits.

"**Prohibited discharges**" means absolute ban against the discharge of certain substance; these prohibitions appear in Section 804 of this Code.

"**Properly shredded garbage**" means 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.

"**RCRA**" means the resource Conservation Recovery Act.

"**Severe property damage**" means 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.

"**Significant Industrial User**" means an industrial User meeting the criteria as defined in 40 CFR 403.3, the criteria being:

- **a.** All Industrial Users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and
- **b.** 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
- **c.** 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
- **d.** Any Industrial User designated by the Commission 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 User, and in accordance with 40 CFR 403.8(f)(6), determine that such Industrial User is not a Significant Industrial User.

"**Slug discharge**" means 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. Also referred to as slug load or slug loadings.

"**Special wastes**" means wastes that require special treatment before entry into the normal plumbing system.

"**Storm water**" means any flow of water occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

"**Technical Review Criteria (TRC)**" means 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).

"**Toxic substances**" means substances that, when inhaled or ingested, can cause death or disease.

"**Total PCBs**" means the summation of all concentrations for Arochlor 1016, 1221, 1232, 1242, 1248, 1254, and 1260 that are above the reporting detection limit (RDL) or reporting limit (RL) of 0.001 mg/L. EPA analytical method 608 shall be used for all PCB analysis.

"**Upset**" means 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 noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

"**Wastewater**" means a 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.

"**Zero discharge categorical industrial user**" means a user which may be identified by the Commission as a Categorical Industrial User, as defined herein, which has voluntarily elected not to discharge any of its categorically regulated process wastewater to the POTW, but to dispose of the wastewater by other legal means.

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 (e.g. waste hauler) 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 Chapter I, Subchapter N Parts 405 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 405-471 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 this Code 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 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°F (60°C). In no case shall discharged waste raise the temperature at the treatment works influent greater than 104°F (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 waste streams with a closed cup flash point of less than 140°F (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.

Materials that can create a fire or explosion hazard include gasoline, kerosene, naphtha, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances determined to be a fire 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 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, decontamination wastewater, 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. Unless otherwise permitted in writing, an average daily flow greater than 2-percent of the average daily sewage flow at the wastewater treatment plant receiving the industrial waste.

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, endanger workers, or interfere with the operation of the Commission wastewater system or treatment plants.

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°F (4°C) and 140°F (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. Except at disposal sites designated by the Commission in conformance with the provisions cited in Section 814, any trucked or hauled pollutants.

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 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, or personnel.

804.1.20 Mercury. Except as otherwise provided in this section, any substance containing mercury in amounts greater than 0.03 mg/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.

Discharge Limitations[1,2]

Pollutants	Limit[3]
Inorganics (total)	**Concentration (mg/l)**
Arsenic	0.28
Cadmium	0.1
Chromium	7
Copper	2
Cyanide	0.4
Lead	0.35
Molybdenum	0.35
Nickel	3.4
Selenium	0.4
Silver	0.5
Zinc	4.2
Organics	**Concentration (mg/l)**
Tetrachloroethylene (Tetrachloroethene)	0.945
Trichloroethylene (Trichloroethene)	0.026
Total PCBs[4]	<0.001
Conventionals	**Concentration (mg/l) (except as indicated)**
Ammonia	190
Dissolved Solids	5,000
Suspended Solids	3,000
Total Solids	8,000
BOD (5-day, 20°C)	3,000
Total Phosphorous	8.0
Oil And Grease (Non-Polar, Petroleum)	250
Fats, Oil and Grease (FOG, Polar)[5]	200
pH[6]	6.0 - 10.0 Standard units
Temperature	140°F

Notes:

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. Unless otherwise specified in the permit, to determine compliance with numerical permit limitations 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 PCBs shall consist of the summation of all concentrations for Arochlor 1016, 1221, 1232, 1242, 1248, 1254, and 1260 that are above the reporting detection limit (RDL) or reporting limit (RL) of 0.001 mg/L. EPA analytical method 608 with a minimum RDL or RL of 0.001 mg/L shall be used for all PCB analysis.

5. Fats, wax, grease, or oils of animal or vegetable origin, whether emulsified or not. Any discharge capable of causing an obstruction 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. In the event that an Industrial User monitors their pH by collecting grab samples, a pH violation shall exist if greater than 6.25% of the grabs taken that day are less than 6.0 or greater than 10.0. The pH shall not be less than 5 for any period of time.

Table 804.1.9

SECTION 805 STORAGE OF PROHIBITED, TOXIC, OR HAZARDOUS SUBSTANCES

805.1 General. the Commission shall review and approve the storage of any materials that could:

- **a.** enter the Commission's sanitary sewers via discharge, accidental spill, or leakage;
- **b.** create a hazard or in any other way have a deleterious effect on the conveyance systems or treatment processes; or
- **c.** constitute a hazard to any individuals.

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 the owner's expense, suitable control structures or devices that may include dikes, dams, or sumps to prevent sudden or accidental waste discharges to the sanitary sewage system.

SECTION 806 DISCHARGE AUTHORIZATION PERMITS AND CATEGORICAL ZERO DISCHARGE 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 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.

The Commission may require Zero Discharge Categorical Industrial Users to submit a Discharge Authorization Permit Application and obtain a Categorical Zero Discharge Permit. Discharge Authorization Permit Applications shall be signed by an authorized representative of the Industrial User.

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 or a Categorical Zero Discharge 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 and Categorical Zero Discharge 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 and Zero Discharge Categorical Industrial Users shall comply with the terms, conditions and limitations of a Discharge Authorization Permit and Categorical Zero Discharge Permits, respectively. It shall be a violation of this Code for any person to violate any term, condition or limitation set forth in any 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 noncompliant discharge. The Discharge Authorization Permit shall at a minimum contain the following:

- **a.** Effective and expiration dates.
- **b.** Statement of non-transferability as specified in Section 806.7.
- **c.** Effluent limitations, including best management practices, based on applicable general pretreatment standards, categorical pretreatment standards, local limits, state and local law, or any of these.
- **d.** 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, state and local law, or any of these.
- **e.** 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.
- **f.** Requirement to control slug discharges, if determined by the Commission to be necessary.

g. 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 Categorical Zero Discharge Permit requirements. The Categorical Zero Discharge permit contains requirements necessary for the Commission to assess and ensure compliance with these Regulations. Permitted Zero Discharge Categorical Industrial Users shall take all reasonable steps to correct any adverse impact resulting from noncompliance with the Categorical Zero Discharge Permit. The Categorical Zero Discharge Permit shall at a minimum contain the following:

a. Effective and expiration dates.
b. Statement of prohibited discharge of categorically regulated process wastewater.
c. Statement of non-transferability as specified in Section 806.7
d. Reporting, notification, and record keeping requirement.
e. 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.
f. The Categorical Zero Discharge Permit may contain other conditions as deemed appropriate by the Commission to ensure compliance with all applicable pretreatment standards and requirements.

806.4 Discharge Authorization and Categorical Zero Discharge Permit modifications. The Commission may modify the Discharge Authorization or the Categorical Zero Discharge Permit for good cause including[, but not limited to,] the following:

a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements.
b. To address significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of Discharge Authorization Permit or Categorical Zero Discharge Permit issuance.
c. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge.
d. Information indicating that the permitted discharge poses a threat to the Commission's treatment plants, collection system personnel, or the receiving waters.
e. Violation of any terms or conditions of the Discharge Authorization Permit or the Categorical Zero Discharge Permit.
f. Misrepresentations or failure to fully disclose all relevant facts in the Discharge Authorization Permit application or in any required reporting.
g. Revision of or a grant of variance from categorical pretreatment standards under 40 CFR 403.13. To correct typographical or other errors in the Discharge Authorization Permit or the Categorical Zero Discharge Permit.
h. To reflect a transfer of the facility ownership or operation to a new owner or operator.

806.5 Discharge Authorization and Categorical Zero Discharge Permit Suspension or Termination. The Commission may terminate or suspend a Discharge Authorization Permit or a Categorical Zero Discharge Permit for good cause including the following:

a. Failure to notify the Commission in advance of significant changes to industry processes, pretreatment modifications, or wastewater characteristics.
b. Misrepresentation or failure to fully disclose all relevant facts in the Discharge Authorization Permit application.
c. Falsifying self-monitoring reports or certification statements.
d. Tampering with monitoring equipment.
e. Refusing to allow Commission personnel timely access to the facility premises and records.
f. Failure to comply with Discharge Authorization conditions, requirements or effluent limitations.
g. Failure to pay fines, permit renewal fees, or annual discharge fee.
h. Failure to meet compliance schedules.
i. Failure to complete a wastewater survey or the Discharge Authorization Permit application.
j. Failure to provide advance notice of the transfer of business ownership of a permitted facility.
k. Violation of any pretreatment standard or requirement, or any terms of the Discharge Authorization Permit, the Categorical Zero Discharge Permit, or these regulations.

806.5.1 Suspension or termination. Upon notification of suspension or termination of a Discharge Authorization Permit or Categorical Zero Discharge Permit by the Commission, the Industrial User shall cease all discharges of wastes regulated by the Discharge Authorization Permit.

806.5.2 Reinstatement. The Commission shall not reinstate or reissue a suspended or terminated Discharge Authorization Permit or Categorical Zero Discharge Permit until the Industrial User:

a. Completes a new Discharge Authorization Permit application and pays the associated fees.

b. Requests in writing that the existing Discharge Authorization Permit or Categorical Zero Discharge Permit be reinstated or reissued.

c. Identifies the steps taken to correct any violation that led to the suspension or termination of the existing discharge authorization permit categorical zero discharge permit.

d. Upon reviewing all of the required information provided, the Commission shall decide whether the Industrial User's request shall be approved.

806.6 Requests for Reconsideration

806.6.1 Time limit. Requests for reconsideration of any limitation, condition, or other requirement contained in a Discharge Authorization Permit or Categorical Zero Discharge Permit shall be filed within 15 days from the issuance of the Discharge Authorization Permit or Categorical Zero Discharge 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 or Categorical Zero Discharge Permit modification, suspension, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Discharge Authorization Permit or Categorical Zero Discharge Permit condition.

806.6.2 Submission of request. Any person seeking reconsideration of a Discharge Authorization Permit or Categorical Zero Discharge Permit limitation, condition, or other requirement shall submit a request for reconsideration in writing. the request shall be addressed to the regulatory services division and shall state in detail the limitation, condition, or other requirement of the discharge authorization permit or categorical zero discharge permit objected to, all reasons for the objection and the proposed alternative, if any.

806.6.3 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 or Categorical Zero Discharge Permit limitation, condition, or other requirement.

806.6.4 Final decision. The decision of the Chief Code Official or their designated agent on a request for reconsideration, permit modification or issuance of a Discharge Authorization Permit or Categorical Zero Discharge Permit shall be final and binding upon the parties.

806.6.5 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.

806.7 Transferability. Discharge Authorization Permits and Categorical Zero Discharge 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. The Commission determines the effective date of the transfer through the modification of the permit.

806.7.1 Advanced notice. Discharge Authorization Permits and Categorical Zero Discharge 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 Permit transfer. The notice to the Commission shall include a written certification by the new owner or operator which:

a. States that the new owner or operator or both have no immediate intent to change the facility's operations and processes.

b. Requested effective date of transfer.

c. Acknowledges full responsibility for complying with the existing Discharge Authorization Permit or Categorical Zero Discharge Permit.

806.7.2 Failure to provide advanced notice. Failure to provide advance notice of a transfer shall render the Discharge Authorization Permit or the Categorical Zero Discharge Permit void as of the date of facility transfer.

806.8 Discharge Authorization Permit and Categorical Zero Discharge Permit; re-issuance. An Industrial User with an expiring Discharge Authorization Permit or Categorical Zero Discharge Permit shall apply for a new permit by submitting a complete Discharge Authorization Permit application at least 90 days before the expiration of the Industrial User's existing Discharge Authorization Permit or Categorical Zero Discharge Permit. Renewal of the Discharge Authorization Permit or Categorical Zero Discharge 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 or Categorical Zero Discharge Permit.

806.9 Discharge Authorization Permit or Categorical Zero Discharge 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 before the date the discharge is intended to start.

806.10 Categorical Zero Discharge Permit; New Zero Discharging Categorical Industrial User. Any Industrial User required to obtain a Categorical Zero Discharge Permit shall submit the required Discharge Authorization Permit Application. A complete application shall be submitted to the Commission at least 90 days before the date the user intends to connect to the Commission's sewer system.

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 Sanitary District or in those portions of Montgomery and Prince George's Counties outside of the Sanitary District, while in the pursuit of their official duties cited in this Code including: 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 or sewer service or both.

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 or modifications 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 to the Commission. 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 and Zero Discharge Categorical Industrial Users shall submit to the Commission at least once every 6 months 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 or a Categorical Zero Discharge 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.

808.1.8.1 Additional sampling results. If a Significant Industrial User conducts additional monitoring beyond permit requirements at the Industrial Waste Monitoring Point (IWMP) designated by the Commission, the user shall submit the results of the additional monitoring to the Commission by the due date of the next periodic report submission.

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:

a. Description of discharge practices, including non-routine batch discharges.
b. Description of stored chemicals.

c. 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.

d. 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 measures and equipment for emergency response.

e. 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.

f. Employers shall advise all appropriate employees who may cause or be adversely affected by such a discharge of the emergency notification procedure.

808.1.10 Notice of potential problems. All categorical and noncategorical Significant Industrial Users shall notify the Commission immediately of all discharges that could cause problems to the POTW, including any slug loadings.

808.1.11 Hazardous waste discharge. Any User who commences the discharge of hazardous waste shall notify the Commission, the EPA Regional Waste Management Division Director, and State hazardous waste authorities, in writing, of any discharge into the POTW of a substance which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this Code, a permit issued thereunder, or any applicable Federal or State law.

808.1.11.1 Notification. Notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the User discharges more than one hundred (100) kilograms of such waste per calendar month to the POTW, the notification also shall contain the following information to the extent such information is known and readily available to the User: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following twelve (12) months. All notifications must take place no later than one hundred and eighty (180) days after the discharge commences. Any notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted meeting the criteria of Paragraph 808.1.2. The notification requirement in this paragraph does not apply to pollutants already reported under the reporting requirements of 40 CFR 403.12(b), (d), and (e).

808.1.11.2 Exemptions. Dischargers are exempt from the requirements of Paragraph 808.1.9, above, during a calendar month in which they discharge no more than fifteen (15) kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen (15) kilograms of non-acute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification. Subsequent months during which the User discharges more than such quantities of any hazardous waste do not require additional notification.

808.1.11.3 New substances. Pursuant to the adoption of new regulatory requirements under Section 3001 of the U.S. Resource Conservation and Recovery Act identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the User must notify the Commission, the EPA Regional Waste Management Waste Division Director, and State hazardous waste authorities of the discharge of such substance within ninety (90) days of the effective date of such regulations.

808.1.11.4 Certification. In the case of any notification made under Paragraph 808.1.11.1, the User shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.

808.1.12 Violation reporting timeframe. In the event self-monitoring indicates a violation of one or more parameters or pollutants as listed in Table 804.1.9, 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 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.

808.1.12.1 Resampling requirements. The Industrial User shall also repeat the sampling and analysis and submit the results of the repeat analysis to the Commission within 30 days after becoming aware of the violation. The Industrial User may not be required to perform repeat sampling if the Commission performs sampling at the

Industrial User at a frequency of at least once per month for the pollutant(s) in violation or if the Commission performs sampling at the Industrial User between the time when the initial sampling was conducted and the time when the user or the Commission receives the results of the initial sampling.

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 or consolidate or relocate and consolidate points of discharge; separate domestic and industrial waste streams.

809.2 Monitoring point alternative. Except as stated in a discharge authorization permit, 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 inside the Industrial User's facility that are representative of the Industrial User's discharge.

809.3 Sampling and Analysis Procedures. 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.

809.3.1 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 the same 24-hour calendar day 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 and grease the samples may be composited in the laboratory.

809.3.2 Composite sample. A sample formed by mixing discrete, individual samples taken at a continuous proportion to the discharge flow or at periodic points in time. For pollutants other than those identified in Paragraph 809.3.1, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling IS authorized by the Commission. Where time-proportional composite sample or grab sampling is authorized by the Commission, the samples must be representative of the discharge. The collection of discrete, individual samples for a composite sample cannot exceed 24 hours in any given calendar day.

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.

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 or a Categorical Zero Discharge Permit may have their 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 of general circulation that provides meaningful public notice within the jurisdiction 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 noncompliance. 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 interference and 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 any violation of this Code.

SECTION 813 NOTICE

813.1 Immediate notification. In the event of any discharges by 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 any discharge, 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 Code or other applicable law.

SECTION 814 HAULED WASTES

814.1 Applicability. This subsection shall apply to companies, individuals or partnerships hereinafter referred to as Waste Haulers, engaged in the business of transportation or disposal of domestic wastes or grease from food service establishments. These subsection shall also apply to businesses as deemed appropriate by the Commission including grease interceptor cleaning, buses, carpet cleaning and mobile food service companies.

The cleaning of grease interceptors within the Commission service area without the appropriate permit shall be prohibited. (Food Service Establishments (FSEs) that self-clean flow-based grease interceptors shall not be required to obtain a permit).

814.2 Definitions. In addition to the definitions generally applicable to the provisions of this Code (See Chapter 2), and this Chapter (see Section 801.2), the following definitions are specifically applicable to the provisions of this Section 814, Hauled Wastes.

"Holding tank" means a sealed tank that collects wastewater through an inlet, which temporarily stores the effluent for removal and transportation to a treatment facility. Commonly used for households, job trailers, portable restroom trailers and similar uses.

"**Non-domestic wastewater**" means the liquid wastes from industrial or commercial processes, trade or business; distinct from domestic wastes, including the contents of grease abatement systems at FSEs. 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.

"Point of discharge" means a discharge of waste at any place in the sewer collection system other than those designated by the Commission shall be prohibited.

"**Septic tank**" means is an underground chamber made of concrete, fiberglass, or plastic through which domestic wastewater flows for basic treatment. Settling and anaerobic processes reduce solids and organics, releasing the treated water into a drainfield where the water percolates underground.

"**Transfer tank**" means a tank, vessel, or container in a centralized location used to temporarily store hauled wastes from various sources or locations before being transferred for disposal or to a treatment facility.

814.3 Prohibited discharges. All hauled waste disposed at the waste disposal sites designated by the Commission must comply with Section 804 of this Code.

814.3.1 Prohibited sanitizers. The discharge of portable toilet sanitizers containing formaldehyde or 1,4-dichlorobenzene is prohibited.

814.3.1 Transfer tanks. The discharge of wastes from holding tanks used for the purpose of storing wastes collected and combined from various sources is prohibited.

814.4 Application. A person engaging in the cleaning of grease interceptors within the Sanitary District shall apply to the Commission for either a Waste Hauler Discharge Permit or a Zero Discharge Permit for each truck engaged in the cleaning of grease interceptors.

A PERSON engaging in the cleaning of septic tanks or holding tanks shall apply to the Commission for a Waste Hauler Discharge permit for each truck used in discharging wastes at the waste disposal sites designated by the Commission.

814.5 Waste hauler permits.

814.5.1 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.

814.5.1.1 Prohibited discharge. With the exception of Section 814.5.1.2, discharge of waste without a waste hauler discharge permit shall be prohibited.

814.5.1.21 Recreational vehicles. Recreational vehicles shall be exempt from obtaining a waste hauler discharge permit.

814.5.2 Zero Discharge Permit. Individuals, partnerships, or corporations engaged in the cleaning of grease interceptors within the Commission service area shall apply for a Zero Discharge Permit for each truck used in cleaning of grease interceptors within the Sanitary District, if they elect to dispose of this waste at a waste disposal site outside of the Commission's jurisdiction. Any waste collected by a vehicle with a Zero Discharge Permit shall be disposed of outside the Commission's jurisdiction and cannot be transferred to a vehicle with a Commission waste hauler discharge permit. A Zero Discharge Permit is not an authorization to discharge at the Commission's disposal sites.

814.5.3 Duration. The Waste Hauler Discharger Permit and the Zero Discharge Permit shall be issued for a specified time period not to exceed the current fiscal year. This permission shall be conditional on compliance with Waste Hauler Discharge and Zero Discharge Permit requirements, and this Code.

814.5.4 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.

814.6 Waste Hauler Discharge and Zero Discharge Hauler Permit requirements. The Waste Hauler Discharge and Zero Discharge Hauler permits contain requirements necessary for the Commission to assess and ensure compliance with these Regulations. Permitted haulers shall take all reasonable steps to correct any adverse impact resulting from noncompliance with either the Waste Hauler or Zero Discharge Hauler permit.

814.7 Requests for information. The Commission, or its representative, may request information concerning the nature or origin of the contents of any permitted vehicle. This information may be in the form of a manifest. 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 by completing and signing a Commission-approved manifest. this information shall be in the possession of the driver at the time of discharge and a copy of the manifest shall be placed in the appropriate receptacle provided by the Commission at the Commission waste disposal site at the time of each discharge. the Commission may also request additional information related to the use of its designated waste disposal sites.

If the permittee disposes a load of hauled waste from a food service establishment's grease interceptor at a location other than at waste disposal sites designated by the Commission, then the permittee must mail in the Commission-approved manifest within the time frame as specified in the permit conditions of the Waste Hauler Discharge Permit or Zero Discharge Permit.

814.8 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.

814.9 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 combined loads, any part of the load that is restricted or prohibited shall make the entire load unacceptable for discharge.

814.10 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 or obtaining instrument readings or both in a manner and number as specified by the Commission.

814.11 Notifications of spills and clean up. The waste haulers shall notify the Commission 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 the 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.

814.12 Acceptable service area. Only domestic or greasy wastewater originating from the following counties: Montgomery County, Prince George's County, Arlington County (VA), Fairfax County (VA), Loudoun County (VA), and the District of Columbia is allowed to be discharged at disposal sites designated by the Commission.

814.13 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.

814.14 Permit suspension, revocation, or denial. The Waste Hauler Discharge Permit or Zero Discharge Permit may be suspended, terminated, or denied for good cause including the following:

814.14.1 Non-compatible wastes. Information indicating that the permitted discharge poses a threat to the collection system, treatment system, or Commission personnel.

814.14.2 Permit violations. Violation of any terms or conditions of the Waste Hauler Discharge Permit or Zero Discharge Permit.

814.14.3 Misrepresentation. Obtaining a Waste Hauler Discharge Permit or Zero Discharge Permit by misrepresentation or failure to disclose all relevant facts.

814.14.4 Failure to obtain a permit. Cleaning a grease interceptor or discharging any waste to the collection system without first securing the appropriate permit.

814.14.5 Discharge of non-domestic wastes. The unauthorized discharge of waste from non-domestic sources at a Commission disposal site.

814.14.6 Denying access by the Commission. Denying Commission personnel access to a vehicle or its contents for purposes of collecting a sample or obtaining instrument readings (i.e. % LEL, pH, H_2S, etc.) or a combination of both.

814.14.7 Failure to provide records. Failure to provide paper records as described in Section 814.7.

814.14.8 Other licenses and permits. Failure to obtain or maintain appropriate current hauling licenses or permits from Federal, State, or local agencies.

814.14.9 Fats, oils, and grease discharges. Discharge of greasy wastewater at non-designated disposal sites.

814.14.10 Misconduct. Use of abusive language, threats, mischievous or criminal acts directed toward a Code Official, or Commission personnel, while they are performing their official duties.

814.14.11 Outstanding judgments. Failure to render monetary payment to the Commission for a settlement between the Commission and a waste hauler or a judgment obtained by the Commission against a waste hauler.

814.15 Penalties. In addition to permit action under Section 814.14, failure to comply with any permit conditions 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.

814.15.1 Civil citations. Any violation of Section 814 or a condition of any permit issued by the Commission shall be cause for issuance of a State of Maryland civil citation ($250.00-$1000.00). Such violations may be cause for legal prosecution by the Commission under provisions of this Code. The following violations, amoung others, shall be addressed with a civil citation:

- **a.** Discharging without a hose.
- **b.** Discharging without a permit.
- **c.** Unauthorized transfer of permit.
- **d.** Creating unsanitary conditions through spillage of wastes.
- **e.** Failure to comply with grease interceptor cleaning procedures.
- **f.** Failure to comply with requests for information or incomplete manifests.

814.15.2 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.

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 noncompliance with categorical pretreatment standards because of factors beyond the reasonable control of the Industrial User. An upset shall not include noncompliance 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 Bypass. With the exception of Sections 817.1.1 thru 817.1.3, bypass of an Industrial User's treatment facility shall be prohibited.

817.1.1 Bypass for 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 of determining essential maintenance. Industrial User shall submit data documenting that standards were being met and shall submit written report within 30 days of the event.

817.1.2 Unavoidable bypass. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

817.1.3 No alternatives for bypass. 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.

817.3 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 to enforcement actions. 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 under Section 817.3.

817.5 Commission authorization. The Commission may approve an anticipated bypass, after considering its adverse effects, if the Commission determines that the bypass 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 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. Food service establishments are referred to hereafter as FSEs. FSEs are a specially designated Industrial User.

818.1.1 Chapter 8 requirements. Notwithstanding the specific requirements in this section, all applicable regulations in Chapter 8 of this Code that relate to industrial users shall also apply to FSEs.

818.2 Permit required. All qualifying FSEs shall obtain or be issued a FSE Wastewater Discharge Permit. New and existing FSEs may be required to complete a fully signed permit survey to document their Discharge Permit. Failure to return a completed permit survey can subject the FSE to enforcement actions. If the Commission deems the FSE qualifies for a Discharge Permit, the FSE survey may also be used as the permit application requiring the FSE's Commission account number and a responsible party signature.

818.2.1 Issuance of discharge permit. To ensure the FSE is aware of requirements of this Code or other federal, state or Commission deadlines, the Commission reserves the right to issue a FSE Discharge Permit before receiving an FSE's completed permit survey.

818.2.2 Determination of discharge permit. The Commission shall make the determination that an FSE Discharge Permit is warranted under one or more of the following conditions:

- **a.** Before a new FSE opening with a valid health department permit.
- **b.** At the time of the Commission's full initial inspection of an open FSE.
- **c.** Upon receipt of a fully completed permit survey or application.

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 this Code.

818.2.3 Survey or application review. The Commission shall review the survey or application submitted by the FSE and may require additional information.

818.2.4 Duration. The FSE Wastewater Discharge Permit shall be issued for a period of one year with annual renewal. This permission shall be conditional on compliance with FSE Discharge Permit requirements and this Code.

818.2.5 FSE Wastewater Discharge Permit requirements. The FSE Wastewater Discharge Permit contains requirements necessary for the Commission to assess and ensure compliance with this Code. The FSE Wastewater Discharge Permit shall, at a minimum, contain the following:

- **a.** Best Management Practices (BMPs) for controlling FOG discharges
- **b.** Grease abatement system operations and maintenance standards, when applicable

c. On-site record keeping requirements (see Section 808.1.3)
d. Statement of non-transferability.
e. The FSE Wastewater Discharge Permit may contain other conditions as deemed appropriate by the Commission to ensure compliance with all applicable regulations.

818.2.6 FSE Wastewater Discharge Permit conditions.

The following conditions shall be effective in the permit:

a. The FSE shall meet all requirements of this Code.
b. The FSE shall maintain the required county health department permits at all times. Failure to do so may render the wastewater discharge permit invalid.
c. Duty to mitigate requirements
d. Duty to comply requirements
e. Duty to provide information requirements
f. Requests for reconsideration requirements
g. Confidentiality procedures
h. Permit modification, suspension, or termination procedures
i. Commission right of entry
j. Notification of changed discharge requirements
k. Records retention requirements
l. Falsifying information clause
m. Permit transferability procedure
n. Severability clause
o. Property rights clause
p. Extension of compliance dates procedures

818.2.7 FSE Wastewater Discharge Permit modifications. The Commission may modify the FSE Wastewater Discharge Permit for good cause including:

a. To incorporate any new pretreatment standards or requirements.
b. To address significant alterations or additions to the FSE's operations since the time of FSE Wastewater Discharge Permit issuance.

818.2.8 Permit transferability. The FSE Wastewater Discharge Permit shall not be reassigned or transferred without prior written approval by the Commission.

818.2.9 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.

818.2.10 Other permits. FSEs 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 FSEs are subject to routine inspections as determined by the Commission. (See Section 807)

818.4 Grease abatement system installation and maintenance requirements, general. When directed by the Commission, FSEs shall install and maintain a Commission 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 interceptor. If a grease intereptor 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 the Commission on a case-by-case basis.

818.4.3 Maintenance and inspection intervals. The minimum maintenance frequency for Volume-Based Grease Interceptors, including cleaning, shall be quarterly, or shall be determined by the manufacturers' recommendations, or by the Code Official's directive, or by Section 818.4.2, 25% Rule, whichever is more stringent. Volume-Based Grease Interceptors shall be internally inspected annually by a qualified inspection service to determine needs for additional cleaning or repair work or other maintenance activities. The minimum maintenance frequency Flow-Based Grease Interceptors, including cleaning, shall be determined by manufacturers' recommendations, or by the Code Official's

written directive, or by Section 818.4.2, ”25% Rule“, whichever is more stringent. Flow-based Grease Interceptors shall be inspected weekly so as to identify any operational or maintenance issues and to monitor compliance with the applicable maintenance requirements. Deviation from required maintenance intervals listed above shall be submitted to and approved or disapproved by the Commission in writing before implementation. The Commission shall maintain a list of all such approved deviations, and shall provide said list to MDE and EPA upon written request.

818.4.3.1 Maintenance documentation. The FSE, at all times, shall keep onsite written or electronic documentation of grease abatement system maintenance. This documentation must be in a format pre-approved by the Commission. For interceptors, a written or pre-approved electronic Commission grease hauler manifest record is required. For grease abatement system replacement, partial replacement, modification or additions/deletions, the FSE shall obtain prior Commission approval and all necessary plumbing permits.

818.4.3.2 Deviation. FSEs who deviate from the frequency of pumping or maintenance requirements of their Commission issued Maintenance Directive, without prior Commission approval, will be in violation and are subject to a civil citation at the discretion of the Code Official.

818.5 Notification of changed discharge. Any changes which affect the volume or characteristics of the wastewater discharge, including the addition of new production shifts, fixtures, or processes, shall be reported to the Commission in writing and approved at least 30 days before the proposed change. This notification shall also apply to the shutdown of any such processes, grease abatement systems, or facilities covered by a FSE discharge permit.

818.6 Waste hauler. A valid WSSC waste hauler discharge permit or zero discharge permit is required for all waste haulers performing pumping and cleaning services on grease abatement systems located in the Commission 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. It is a violation of this Code for an FSE to allow an unpermitted waste hauler to perform pumping or cleaning services on the FSE’s grease abatement system.

818.7 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.

818.7.1 Conditional allowance. Use of a biological additive may be conditionally allowed with the Commission’s approval if the product manufacturer or distributor can demonstrate to the satisfaction of the Commission that:

- **a.** The additive will not interfere with the normal operation of the grease interceptor.
- **b.** The additive will not interfere with operations of the receiving wastewater treatment plant.
- **c.** The use of the additive does not increase the potential for FOG to be discharged to the sanitary sewer.
- **d.** The only active ingredients are bacterial products.
- **e.** The use of the additive will not cause foaming in the sanitary sewer.
- **f.** The pH of the additive is between 6 and 10.

818.7.2 Additives not a substitute. The use of an additive will not substitute for the need for proper cleaning or maintenance of the grease and cannot be used as justification for altering the cleaning frequency.

818.7.3 Additive exception. Additives that are added to drain lines that do not connect to a grease abatement system are not impacted by this restriction.

818.7.4 Normal cleaning products. Normal kitchen and dish cleaning products are not considered additives for the purpose of this section.

818.8 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. Except in conjunction with a jetting operation, chemical cleaning of sewer lines is prohibited.

818.9 Violations.

818.9.1 Violations Include. Violations of the food service establishment shall include the following:

818.9.1.1 Grease abatement maintenance. Failure to properly maintain a grease abatement system

818.9.1.2 Records. Failure to keep or to present records of maintenance

818.9.1.3 Tampering flow control device. Unauthorized removal or tampering with the flow control device

818.9.1.4 FSE permit. Failure to present Food Service Establishment Discharge Permit

818.9.1.5 FSE wastewater permit. Failure to comply with any condition of a FSE Wastewater Discharge Permit

818.9.1.6 Waste hauler. Failure to use a permitted Waste Hauler for interceptor maintenance

818.9.1.7 Master plumber. Failure to use a WSSC-Licensed Master Plumber for correcting any and all enforcement actions that require plumbing work

818.9.1.8 Normal operation. Bypassing, tampering or otherwise preventing normal operation of a grease abatement system or grease interceptor.

818.9.1.9 Pass-through. Pass-through of observable and measurable amounts of FOG to the Commission's sewer service

818.9.2 Violation enforcement actions. Violations shall subject the FSE to penalties and other enforcement action as provided for in this Code and the Commission's FSE Enforcement Response Plan.

818.9.3 Repeated violations FBGI. Repeated violations for failure to clean or maintain a flow-based grease interceptor shall result in a requirement to install a volume-based grease interceptor as provided for in the Commission's FSE Enforcement Response Plan.

818.9.4 Repeated violations VBGI. 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

SECTION 901 GENERAL

901.1 Scope. Subject to outside approvals under Section 901.2 of this Code, this Chapter shall provide provisions to facilitate certain non-potable water uses in non-residential applications only. Uses may include toilet and urinal flushing, mechanical systems, equipment cooling irrigation (sub-surface, drip or spray), general hose bibb applications, or automatic or self-service vehicle washing operations. Additional authorities having jurisdiction may have additional requirements to ensure safety of water re-use systems, this includes plumbing fixture guidelines.

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 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 comingle with the properties 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 appropriate county agencies having jurisdiction. The appropriate agencies having jurisdiction are 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.

"Blackwater" means a sanitary sewer flow containing human waste such as fecal matter or urine, or kitchen waste water.

"Centralized non-potable water systems" means a system of non-potable water that is treated and distributed from a central location, e.g., a wastewater treatment plant.

"Decentralized non-potable water systems" means a system of non-potable water that is collected, treated and used on location.

"Non-potable water" means water which is not reliably safe for drinking, personal use or culinary related use.

"Non-residential building or occupancy" means 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 occupancy 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.

"Water re-use systems" means a variety of water recycling from the following sources: wastewater treatment plant effluent; graywater; rainwater; ground water; condensate; process and equipment discharge.

"Condensate re-use system" means 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 water uses.

"Graywater system" means 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 water uses.

"Groundwater re-use system" means 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 water uses.

"Process water re-use system" means 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 water uses.

"Rainwater harvesting system" means 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 water uses.

"Reclaimed water" means enhanced wastewater effluent produced at a centralized municipal wastewater treatment plant, resulting in recycled water suitable for various, yet specific non-potable water uses.

901.4 Limitations. The Commission 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 includes any one of the following conditions:

902.1.1 Potable water connection. Any connection to potable water systems regardless of intended use, including 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 toilet and urinal flushing, mechanical system make-up, and equipment cooling.

902.1.4 Shared space. Where any water re-use system or associated collection or distribution piping shares space with any other plumbing or mechanical system components.

902.2 Plans review required. Design plans, as required per Section 904.1 below, shall be submitted along with the required permit application for the Commission review.

SECTION 903 BACKFLOW PREVENTION AND METERING

903.1 Required testable backflow prevention Assembly. The interconnection between a potable water distribution system and a water re-use system shall be protected against backflow with an RPBA (ASSE 1013) backflow prevention 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 Commission meter. Water re-use systems shall be metered to account for discharges to the sanitary sewer as follows:

903.2.1 Standard details. Sewer-only meters shall be installed following the Commission 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 treatment system for water re-use 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 Redirected. Directed back to the head of the treatment process, where possible; or

903.2.3.2 Metered. Metered and discharged to the sanitary sewer.

903.2.3.3 Chapter 8. All discharges to the sanitary sewer system must comply with the Commission regulations outlined in Chapter 8, Industrial and Special Waste.

903.2.3.4 Hauled. Where these conditions cannot be met, the waste shall be hauled away and disposed of properly.

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 Commission metered water, additional sewer-only metering is not required.

SECTION 904 SYSTEM DESIGN

904.1 General. Treatment systems for water re-use 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 the following:

904.2.1 Graywater. Bathtubs, showers, lavatory sinks, clothes washers and laundry trays.

904.2.2 Rainwater. Rooftop drainage systems and 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 or 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 used 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 and 10 as adopted by 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 and 6 as adopted by 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 Section 903.1 of this Code.

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 systems that re-use effluent or wastewater (e.g., reclaimed water and process water), where upstream processes used Commission metered water. All other unmetered discharges (e.g., rain water, condensate, and groundwater) shall be routed to the storm water system in accordance with relevant standards.

904.8.3 Storage tank 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 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 water re-use storage tanks shall include automatic trap priming devices.

904.8.4 Storm sewer connection. When a water re-use system is connected to or discharges to storm sewer, the water re-use system collection piping, tanks, drains and overflows shall be protected from storm sewage backflow by air gap or backwater valve.

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 contaminates.

904.10 Combination systems. Multiple sources may be used to provide make-up to a single non-potable water treatment systems as follows:

904.10.1 Collection system segregation. unless otherwise approved by the Code Official, each type of source water shall be independently routed to the treatment and storage components.

904.10.2 Metering. Before joining source waters together for treatment, metering of all unmetered 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 1/2 inch (30.4 mm) in height on a contrasting background with the following text: caution: non-potable water used for toilet and urinal flushing" or a sign approved by Code Official.

905.3 Water re-use equipment room. In all water re-use system equipment rooms there shall be one or more disclosure signs, as needed. Each sign provided shall have highly visible lettering a minimum of a 1/2 inch (30.4 mm) in height on a contrasting background with the following text:

"This building utilizes a water re-use system that produces non-potable water for" ; and

describe use of water re-use system; and

"Prior to commencing any plumbing or mechanical work on premises, by law you must consult with the system operator."

or a sign approved by Code Official.

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 agency having jurisdiction.

906.2 Operation, maintenance, recordation and reporting. Operation, maintenance, recordation and 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 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 bypassed 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 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 or tenant and the jurisdiction having authority shall be notified of the changes in ownership or occupancy.

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.

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APPENDIX A

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
4B	BFP - Testable	-	$ -	-	$ -	$ -
4C	BFP - Non-Testable	-	$ -	-	$ -	$ -
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	-	$ -	-	$ -	$ -
F3	Faucet - Pot Filler	1.00	$ 88	-	$ -	$ 88
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	$ 880	-	$ -	$ 880
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	-	$ -	-	$ -	$ -

APPENDIX A - CONTINUED

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
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)	-	$ -	-	$ -	$ -
8N	Gas - Heating Equipment	-	$ -	-	$ -	$ -
85	Gas - Lab Burner	-	$ -	-	$ -	$ -
8G	Gas - Other	-	$ -	-	$ -	$ -
XX	Gas - Paint Booth	-	$ -	-	$ -	$ -
9D	Gas - Test	-	$ -	-	$ -	$ -
8D	Gas - Water Heater (under 200K)	-	$ -	-	$ -	$ -
XD	Gas - Water Heater (200K+)	-	$ -	-	$ -	$ -

Dwelling Unit Type	SDC Water	SDC Sewer	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		

1. Permits must accurately reflect every fixture code to be installed for all residential and apartment units, and renovation projects. Permits that do not reflect 100% fixture accuracy will fail inspection. Modifications to the permit must be made and "updated" in the Permits system prior to scheduling an inspection.
2. 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.
3. 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
79	Baptistery	10.00	$ 880	3.00	$ 345	$ 1,225
1	Bathtub	10.00	$ 880	2.00	$ 230	$ 1,110
4B	BFP - Testable	-	$ -	-	$ -	$ -
4C	BFP - Non-Testable	-	$ -	-	$ -	$ -
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	-	$ -	$ 64
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
3	Dishwasher (Residential Type)	1.00	$ 88	2.0	$ 230	$ 318
44	Dishwasher (Commercial)	2.00	$ 176	4.0	$ 460	$ 636
7F	Disposal (Commercial 2")	4.00	$ 352	3.0	$ 345	$ 697
71	Disposal (Commercial 3")	4.00	$ 352	5.0	$ 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
F1	Faucet - Commercial Kitchen	4.00	$ 352	-	$ -	$ 352
F2	Faucet - Hand Sink	1.00	$ 88	-	$ -	$ 88
F3	Faucet - Pot Filler	1.00	$ 88	-	$ -	$ 88
F4	Faucet - Service Sink	2.00	$ 176	-	$ -	$ 176
FH	Fire Hydrant	-	$ -	-	$ -	$ -
73	Fire Sprinkler Connection	-	$ -	-	$ -	$ -
UX	Floor Drain (primed)	-	$ -	-	$ -	$ -
UM	Floor Drain (not primed)	-	$ -	-	$ -	$ -
FV	Flush Valve	5	$ 440	-	$ -	$ 440

APPENDIX B - CONTINUED

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
8F	Gas - Boiler (under 200K)	-	$ -	-	$ -	$ -
XB	Gas - Boiler (200K+)	-	$ -	-	$ -	$ -
VP	Gas - Cooking Equipment (All)	-	$ -	-	$ -	$ -
87	Gas - Dryer	-	$ -	-	$ -	$ -
VQ	Gas - Generator	-	$ -	-	$ -	$ -
VN	Gas - Heater (Construction)	-	$ -	-	$ -	$ -
8T	Gas - Heater (Decorative)	-	$ -	-	$ -	$ -
6A	Gas - Heater (Pool)	-	$ -	-	$ -	$ -
8N	Gas - Heating Equipment	-	$ -	-	$ -	$ -
85	Gas - Lab Burner	-	$ -	-	$ -	$ -
8G	Gas - Other	-	$ -	-	$ -	$ -
XX	Gas - Paint Booth	-	$ -	-	$ -	$ -
8U	Gas - Sub-meter	-	$ -	-	$ -	$ -
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	-	$ -	-	$ -	$ -
6F	Grease Trap	-	$ -	-	$ -	$ -
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
4	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	-	$ -	-	$ -	$ -

APPENDIX B - CONTINUED

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
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
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
4A	Sink - Hand	1.00	$ 88	1.00	$ 115	$ 203
21	Sink - 1-1/2" Drain	2.00	$ 176	2.00	$ 230	$ 406
WA	Sink - Laundry Tray (with clothes washer)	6.00	$ 352	3.00	$ 345	$ 697
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

APPENDIX B – CONTINUED

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
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
60	Water Heater - Not Gas	-	$ -	-	$ -	$ -
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

1. Permits must accurately reflect EVERY fixture code to be installed for ALL residential and apartment units, and renovation projects. Permits that do not reflect 100% fixture accuracy will FAIL inspection. Modifications to the permit must be made and "updated" in the Permits system prior to scheduling an inspection.
2. 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.
3. For fixtures not listed, the Code Official shall use the value of a fixture with similar flow characteristics.