

NOTICE OF INTENT TO ADOPT REGULATIONS

WSSC Water is Seeking Public Comment on Proposed Changes to the WSSC Plumbing and Fuel Gas Code

WSSC Water is proposing amendments to adopt the 2021 International Plumbing Code and the 2021 International Fuel Gas Code and also make some technical and administrative modifications to the 2018 WSSC Plumbing and Fuel Gas Code. The proposed changes have been preliminarily reviewed by the WSSC Plumbing and Fuel Gas Board and are being released for public comment.

In addition, the proposed changes are being coordinated with interested stakeholders; including the Maryland National Capital Building Industry Association, the Apartment and Office Building Association of Metropolitan Washington, the Restaurant Association of Maryland, the Washington Suburban Master Plumbers Association, the Mechanical Contractors of America - Metropolitan Washington chapter, the Association of Air Conditioning Professionals, the American Society of Plumbing Engineers, Washington Gas and governmental agencies; including Prince George's County Departments of Permitting, Inspections and Enforcement and the Montgomery County Departments of Permitting Services.

The proposed draft follows this Notice of Intent. Additions are in **bold** and deletions are surrounded by brackets [].

WSSC Water intends to adopt these new regulations following a public comment period. Written comments will be accepted until October 26, 2021 by emailing Christopher Imhof, Technical Standards Engineering Manager christopher.imhof@wsscwater.com.

Any other questions can be referred to,

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WASHINGTON SUBURBAN SANITARY COMMISSION

2021[2018] WSSC PLUMBING AND[&] FUEL GAS CODE

[Including Amendment #1]
Effective Date: **TBD**[March 1, 2019]

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,[24-801,]
25-101, 25-105, 29-101, 29-102, 29-103, 29-105, 29-107

Business Occupations and Professions Article:

Sections[§§] 12-305, 12-307

Environment Article:

Section[§] 9-332

Explanation of Formatting:

Additions and revisions between this version of the *Code* and the previous *Code* are indicated with a thick vertical line in the right margin (as shown to the right).

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

[In addition to the margin indicators, additional or revised language features blue colored text to detail the referenced changes.]

Words and terms defined in Section 203, Additional Definitions, are *italicized* where they appear in the *Code* text and the Section 203 definition applies.

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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 Water Plumbing and Fuel Gas Code,” hereinafter referred to as “this Code.”

101.2[3] Adoption of Model Codes

101.2[3].1 International Codes

101.2[3].1.1 International Plumbing Code (IPC). The **2021**[2018] 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[3].1.2 International Residential Code (IRC). The *Commission* is no longer using the IRC to regulate *Group R-3 occupancies*. Refer to adopted versions of the IPC and IFGC as well as Chapters 3 **and**[&] 4 of this **C**[c]ode.

101.2[3].1.3 International Fuel Gas Code (IFGC). The **2021**[2018] edition of the “*International Fuel Gas Code* ([hereinafter “IFGC[“]”), published by the International Code Council, Inc., are hereby adopted and incorporated herein by reference, and have the same force and effect as though fully set forth in this *Code*, subject to the additions, deletions or other modifications thereto set forth in Chapter 4 of this *Code*.

101.2[3].2 Referenced Codes and Standards. Other International Code volumes referenced in the IPC and the IFGC, and the standards referenced therein (IPC [-]Chapter **15**[13] “**Referenced Standards**” and IFGC [-]Chapter 8 “**Referenced Standards**”) *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].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[4] Scope. The provisions of this *Code shall* apply to **the following**:

- 1.[.]) **A**[a]ll classes of work usually performed by plumbers, gasfitters, **S**[s]ite **U**[-u]tility contractors, and sewer and drain cleaners; including the installation, alteration, repair, relocation, replacement, addition to, use or maintenance of plumbing, fuel gas, and **S**[s]ite **U**[-u]tility systems; and
- 2.[.]) Industrial and special wastes, generally on private property within the [Washington Suburban] **Sanitary District**[(WSSD)]. This *Code shall* also regulate sanitary and condensate vacuum collection systems.

101.3[4].1 Fuel Gas Systems. This *Code shall* apply to the installation of natural and [undiluted] liquefied petroleum **(LP-gas)**[(aka LP or propane)] as piping systems, natural and LP-gas utilization equipment and related accessories.

101.3[4].1.1 Fuel Gas Piping Systems. This *Code shall* cover piping systems for natural gas with an operating pressure of 125 psig (861 kPa gauge) or less and [liquefied petroleum] **LP-gas** with an operating pressure of 20 psig (137 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[4].1.2 Fuel Gas Utilization Equipment. Requirements for natural gas and **LP-gas**[liquefied petroleum gas] utilization equipment and related accessories *shall* include installation, combustion and ventilation air, venting, and connection to piping systems.

101.3[4].2 Systems and Equipment Outside of the Scope. This **C**[c]ode *shall* not apply to items listed in the current adopted version of the **IFGC**[International Fuel Gas Code,] Section 101.2.4 “**Systems, appliances and equipment outside the scope**”.

101.3[4].2.1 Items not included in the listed exceptions. Item number 13, temporary [propane/]LP-gas piping **for buildings under construction or renovation that is not part of the permanent piping system** and related appliances, *shall* be covered by this code.

SCOPE AND ADMINISTRATION

101.4[2] Purpose. The purpose of this *Code* is to provide minimum requirements and standards regarding plumbing and fuel gas systems for the protection of **property and the protection** of the public health, safety and welfare. The purpose of this *Code* is not to create or otherwise establish or designate any particular class or group of *persons* who will or should be especially protected.

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

SECTION 102 APPLICABILITY

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

102.1.1 Supersedes. Notwithstanding 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 provisions contained within **the Commission**[WSSC] Standard Procedures or other internal policies or procedures.

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:**

1. []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.[;or]
2. []The matter is not specifically governed by the **Chapter 5 "Cross-Connection Control Backflow Prevention" or Chapter 8 "Industrial and Special Waste"**. [Cross-Connections Control Program (Chapter 5), the Fats, Oils & Grease Program (Chapter 8) or the Industrial Discharge Control Program (Chapter 8).]

102.3 Maintenance.

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

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

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

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

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

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

102.3.6 Sewer Stoppages.

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

102.3.6.2 Master Plumber's or **Sewer and Drain Cleaner's** Responsibility. The following requirements *shall* be the responsibility of the *Master Plumber* or the [Licensed]**Sewer and Drain Cleaner** when attempting to clear a *stoppage* in a *building sewer*. [(Note:]Through[-]out this section the references to a **Sewer and D[d]rain C[c]leaner** *shall* apply to both the [Licensed]*Master Plumber* or **Sewer and** [Licensed]*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 Clean[-]out. Where a **Commission**[WSSC] property line clean[-]out exists, the **Sewer and D[d]rain C[c]leaner** *shall* first attempt to locate, open, and determine through visual means if the **Commission**[WSSC] *service connection* is stopped up. If confirmed, the **Sewer and D[d]rain C[c]leaner** *shall* notify the property owner and the *Commission*[er]'s Emergency **C[c]all C[c]enter** of their findings. The **Emergency C[c]all C[c]enter** will dispatch a **Commission**[WSSC] crew or a **Commission**[WSSC] authorized contractor. If the visual inspection of the property line clean[-]out does not indicate a *stoppage*, the **Sewer and D[d]rain C[c]leaner** *shall* access the sewer through the most favorable clean[-]out or access point on-property.

102.3.6.2.3 Video Inspection. Where video technology is utilized and an off-property lateral or mainline issue is evident/verified, a copy of the video recording *shall* be retained and forwarded to **the Commission**[WSSC] in conjunction with the required ["commitment"/]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 **Sewer and D[d]rain C[c]leaner** *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 **Sewer and D[d]rain C[c]leaner** *shall* be required to notify the *Commission*.

102.3.6.2.5 Commission Notification. If an obstruction causing a *stoppage* is located in the *Commission's* *service connection*, the **Sewer and D[d]rain C[c]leaner** *shall* notify the *Commission's* Emergency Call Center by telephone, fax, or electronically within 72-hours. If the *stoppage* was not cleared the **Sewer and D[d]rain C[c]leaner** *shall* notify the *Commission* by telephone immediately. The **Sewer and D[d]rain C[c]leaner** *shall* also inform the *Commission*, in **their**[his or her] opinion, what the cause of the obstruction was e.g.,[i.e.] *soft stoppage*, broken/misaligned piping, roots, *grease*, debris, etc.

102.3.6.2.6 Equipment Problems. If the **sewer and drain** cleaning equipment becomes lodged in any portion of the sewer system, the **Sewer and D[d]rain C[c]leaner** *shall* retrieve the equipment. Under no circumstances *shall* the **project** [job]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 **Sewer and D[d]rain C[c]leaner** *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 **Sewer and D[d]rain C[c]leaner** *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 **Sewer and D[d]rain C[c]leaner** as originating in the *service connection*, the *Commission* *shall* initiate the following actions:

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

102.3.6.3.2 Defective Connection. If the **Sewer and D[d]rain C[c]leaner** could not relieve a *hard* or *soft stoppage* in a defective *service connection*, the *stoppage* *shall* be relieved, or the condition corrected by the *Commission*, without back [-]charge to the **Sewer and D[d]rain C[c]leaner**.

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102.3.6.3.3 Claim. If the *Commission* determines that the *stoppage* was caused by a defective *service connection*, the *Commission shall* instruct the property owner to submit a claim for the cost of the **Sewer and D[d]rain C[c]leaner'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 **r[R]ight[s]-of-w[W]ay** matters, such as sewer lateral sections under **Commission**[WSSC]'s ownership and responsibility, *shall* be under the authority of the applicable **Commission**[WSSC] Utility Services **Division**[office] 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 Backflow Preventers[ion Devices], Maintenance and Replacement.

102.3.10.1 Group R-3 Occupancies. In *Group R-3 occupancies* (one- and two-family residences), the owner *shall* have **Dual Check Valve with Atmospheric Vent (ASSE 1012)** and **Dual Check Backflow Preventer (ASSE 1024)** non-testable *backflow prevention devices* replaced or re[-]built every 5-years, with the starting date beginning on the date of FINAL plumbing inspection for the building. **T[Other t]estable backflow prevention assemblies[devices]** *shall* be tested annually by a **Cross-Connection**[WSSC-registered Certified *Backflow*] *Technician*, with the starting date beginning on the date of the latest test tag attached to each device.

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

102.3.11 Alternative Pipe Restoration Methods.

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

102.3.11.2 Water Piping. Products used in the final stage restoration process *shall* comply with NSF 61 standards. 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.

102.3.11.2.1 **Existing Backflow Preventers.** All existing *backflow prevention assemblies* and *devices shall* be regularly tested or replaced as required. [All un-protected hazards shall be abated by an appropriate level of backflow prevention, see Table 5.1.]

102.3.11.2.2 Unprotected hazards. All unprotected hazards shall be abated by an appropriate level of backflow prevention, see Table 5.1.

102.3.11.2.3[2] **Containment Backflow Preventer.** The building's domestic cold water main supply *shall* be outfitted with a *containment backflow prevention assembly or device*, commensurate with the *degree of hazard* (see **Section 502.3.3 and**[&] Table 5.1), prior to the on[-]set of any pipeline restoration activities located downstream of the initial water service main shut[-]off valve.

102.3.11.2.4[3] **Epoxy Lining Operating Temperatures.** Buildings restored with epoxy relining products listed for operating temperatures of less than 180°[degrees]F (**82°C**) *shall* be outfitted with the following items:

102.3.11.2.4[3].1 **Master Mixing Valve.** An **ASSE 1017 certified** 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 302.5.1**[501.1.4]. The potability of the water *shall* be maintained throughout the system.

102.3.11.2.4[3].2 **Signage.** The following signage *shall* be posted at the main water shut[-]off valve and at the water heater(s): “This building contains water piping retrofitted with an epoxy relining system which shall not be exposed to water temperatures exceeding 140 degrees F.”

[102.3.11.3 Sewer Piping. Sewer and Building Drain “trenchless” restoration shall meet this section and IPC 716. Existing piping shall be pre-qualified by flushing and video recording the pipeline prior to commencing work. Where the existing pipeline grade/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. Restored sewer piping shall be flushed and then flow 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.]

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*[be permitted] in the same manner and arrangement as in the existing system *and[,] is*[provided that such repairs or replacement are]not hazardous and [are]*approved*.

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

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

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

102.8 Special Exception, Federal Property. Pursuant to federal regulation or written agreement, where property is owned by the **F[f]ederal G[g]overnment** and where buildings are being erected or improved, plumbing, fuel gas and/or **S[s]ite U[u]tility** systems *shall* not require **Commission**[WSSC]permits or inspections. For requirements on the **F[f]ederal G[g]overnment**, see Section 102.8.3[below].

102.8.1 Exemption Not Applicable. This exemption does not apply to property or buildings under lease or condominium ownership. This exemption [also]does not restrict the **F[f]ederal G[g]overnment** from securing permits and scheduling inspection in cases where the **Federal G[g]overnment** desires the *Commission’s* inspection of plumbing, fuel gas, or **S[s]ite U[u]tility** systems.

102.8.1.1 Voluntary Request for Permits and Inspections. Where work is be performed by federal agency staff and permits and inspections by **the Commission**[WSSC] are desired, each federal agency or campus *shall* register per Section 118[3].5. Where contract work will be performed on federal property and permits and inspections by **the Commission**[WSSC] are desired, contracting firms *shall* be registered per Section 118[3].1.

102.8.2 Regulatory Compliance. This exemption does not exempt the **F[f]ederal G[g]overnment** from compliance with other specific provisions of this **C[c]ode**: Chapter 5 – “Cross-Connection Control **Backflow Prevention**”; Chapter 8 – “**Industrial and Special Waste**”[Discharge Control (Pretreatment)]; or Section[s] 302.10 – **Amendment of IPC Chapter 10 – “Traps, Interceptors and Separators”, Section 804 – “Prohibited Discharges” and Section 818 – “Food Service Establishment Discharge Requirements”**[Fats, Oil & Grease Program].

102.8.2.1 Cross-Connection Control. The *Commission shall* issue a special license to each federal property for the sole purpose of submitting and tracking **B[b]ackflow Prevention Assembly T[t]est R[r]eports**. No other permit or

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inspection activities will be allowed under this license. See Chapter 5 –[for] “Cross-Connection[/] **Control B[b]ackflow P[p]revention”** for requirements.

102.8.3 Federal Property Application Requirements. Federal property improvement projects are required to apply for hydraulic planning analysis so **the Commission**[WSSC] can evaluate existing and projected water and sewer flow demands. Application is required for *meters, service connection*, and/or **Commission**[WSSC] system extension.

Application, *S[s]ite U[u]tility* plans, and plumbing plans are required in order for **the Commission**[WSSC] to determine applicable *System Development Charges*. In all cases, the **F[f]ederal G[g]overnment** is responsible for all fees and charges associated with these *Commission* business functions.

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

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

102.11 Other Laws. The provisions of this *Code* shall not be deemed to nullify any provisions of local, state or federal law.

102.12 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*.

SECTION 103 COMMISSION FUNCTIONS

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

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

103.3 **Qualifications for Inspection Staff.** *Code O[o]fficials* directly associated with **inspections, including** [daily] interpretation and enforcement of **the Code**[plumbing and fuel gas codes] on a technical level, [including] administration, **and** document review[, and field inspection]; shall as a minimum, be qualified as a **Master Plumber/Gasfitter**[licensee in the plumbing and fuel gas trades].

SECTION 104 DUTIES AND POWERS OF THE COMMISSION

104.1 General. The *Commission* and its *Code Officials* shall **have the authority to render interpretations of this Code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this Code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this Code.** [enforce all of the provisions of this *Code*, and shall act on any question relative to the installation, alteration, repair, maintenance or operation of all systems, devices and equipment governed by this *Code* except as otherwise specifically provided for by law.

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

104.2[3] 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 [generally] enforce compliance with the provisions of this *Code*.

104.3[4] Inspections. A *Code Official* shall make all the required inspections, or *shall* accept reports of inspection by *approved* agencies or individuals. All reports of such inspections *shall* be in writing and be certified by a responsible officer of such *approved* agency or by the responsible individual. The *Commission* shall retain the right at its discretion, to monitor or re[-]inspect any inspection reported by other approval agencies or individuals. The *Commission* shall be authorized to engage such expert opinion as deemed necessary to report on unusual technical issues that arise.

104.4[5] Right of Entry. Whenever it is necessary to perform an inspection to enforce the provisions of this *Code*, or whenever a *Code Official* has reasonable cause to believe that there exists in any building or upon any premises any violations of this *Code*, the *Code Official* shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the *Code Official* by this *Code*. If such building or premises is occupied, the *Code Official* shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the *Code Official* shall first make a reasonable effort to locate the owner or other *person* having charge or control of the building or premises and request entry. If entry is refused, or if the owner or the owner's agent cannot be located, the *Code Official* shall have recourse to any remedy provided by law to secure entry.

Where[n] the *Code Official* shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, the owner, occupant, proprietor, or *person* having charge or control of any building or premises *shall* promptly permit entry by the *Code Official* for the purpose of inspection and examination pursuant to this *Code*.

104.5[6] Identification. A *Code Official* shall carry proper identification when inspecting structures or premises in the performance of duties under this *Code*.

104.6[7] Notices and Orders. A *Code Official* shall issue all necessary notices or orders to ensure compliance with this *Code*. Where deemed inadequate, a system *shall* be provided, altered, or repaired as directed, and in a timeframe indicated by, a Notice of Violation (NOV) served upon the property owner, occupant, proprietor, or operator.

104.7[8] Commission Non-Interference. The *Commission* shall have no responsibility nor *shall* the *Commission* pass judgment in any financial matters or other business-related controversy between the registered *person* and the public, under any circumstance.

104.8[9] Liability. The *C[c]ode O[official]*, member of the WSSC Plumbing and Fuel Gas Board, or other employee charged with the creation and/or enforcement of this *C[c]ode*, while acting for the *Commission* in good faith and without malice in the discharge of the duties required by this *C[c]ode* 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[9].1 Defense. Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this *C[c]ode* *shall* be defended by the *Commission* until the final termination of the proceedings. The *C[c]ode O[official]* or any subordinate *shall* not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this *C[c]ode*.

SECTION 105 APPROVAL

105.1[5] Modifications (Waivers). Where[n] practical difficulties involved in carrying out the provisions of this *Code* arise, the *Commission* shall have the authority to grant a modification for individual cases, **upon request of the owner or the owner's authorized agent**, provided that the *Chief Code Official* shall first find special individual reasons that make the strict letter of this *Code* impractical, that the modification is in conformity with the intent and purpose of this *Code*, and that such modification does not lessen health, life or fire safety requirements or cause damage to the *Commission's* systems. Records of action granting modifications *shall* be maintained by the *Commission's* Regulatory Services Division[Group].

105.1[5].1 Request. A modification request *shall* be submitted on the official Modification Request form. The form *shall* be signed by the Owner and by the *Master Licensee*[Plumber/Gasfitter] or **Registered Design Professional**[Engineer].

105.1[5].2 Indemnification. The owner or **their**[his or her] legal representative *shall* sign the hold [-]harmless agreement section of the modification request form, indemnifying the *Commission* and/or its employees from and against all losses and liabilities that *may* result from the granting of the modification request.

105.1[5].3 Future Editions. This *Code* incorporates by reference the current editions of many nationally recognized codes and standards. Revised and updated editions of such codes and standards *shall* not automatically become part of

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this *Code*. However, the *Code Official* may consider such amendments to published editions of referenced codes and standards not yet adopted by the *Commission* as evidence supporting a[n] **request**[application] 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.[]

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

105.2.2[4.1] Design Criteria. An alternative engineered design shall conform to the intent of the provisions of this *Code*, and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's installation instructions.

105.2.3[4.2] Submittal. The *R*[registered] *D*[design] *P*[professional] shall indicate on the permit application that the plumbing system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the *approved* installation.

105.2.4[4.3] Technical Data. The *R*[registered] *D*[design] *P*[professional] shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that its performance meets the intent of this *Code*.

105.2.5[4.4] Construction Documents. The *R*[registered] *D*[design] *P*[professional] shall submit **Construction Documents per Section 110**[to the Code Official two complete sets of signed and sealed construction documents] for the alternative engineered design. The construction documents shall include floor plans and a riser diagram for the work. Where appropriate, the construction documents shall indicate the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.

105.2.6[4.5] Design Approval. Where the *Chief Code Official* determines that the alternative engineered design conforms to the intent of this *Code*, the plumbing or fuel gas system shall be *approved*. If the alternative engineered design is not *approved*, the *Code Official* shall notify the *R*[registered] *D*[design] *P*[professional] in writing, stating the reasons for disapproval.

105.2.7[4.6] Inspection and Testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of Section 108[7] of this *Code*.

105.3 Required Testing. Where[never] 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 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[1] Product and Material Acceptance.

105.4[1].1 Standards. Except as otherwise provided for in this *Code*, products and materials shall conform at least to the standards cited in this *Code*, which shall be considered minimum standards, when used in the construction, installation, alteration, or repair of plumbing and fuel gas systems or parts of these systems. The inclusion or listing of a product or material although indicated as *approved* for purposes of these regulations, does not infer unqualified endorsement as to its selection or serviceability in any or every installation.

105.4[1].2 Materials Handling. Products and materials installed in plumbing and fuel gas systems *shall* be handled and installed as to avoid damage so that the quality of the product or material *shall* not be impaired.

105.4[1].3 Damaged Materials. Defective or damaged products, materials, equipment, or apparatus *shall* not be installed or maintained.

105.4[1].4 Materials Installation. All products and materials used *shall* be installed in strict accordance with the standards and listings under which the materials are accepted or *approved*, including the appendices of the standards, and in strict accordance with the manufacturer's instructions.

105.4[1].5 Material and Equipment Reuse. Materials, equipment and devices *shall* not be reused unless reconditioned, tested, placed in good and proper working condition, and *approved*.

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, *S[s]ite U[u]tility*, 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**[done], *shall* first make application to the *Commission* and obtain the required permit for the work. All work identified in this *Code*, except for ["Exempt Work"] set forth in Section 106.2, *shall* be installed under a Long Form or Short Form Plumbing/Gasfitting **P[p]ermit**, or under a *S[s]ite [-]U[u]tility P[p]ermit*.

106.1.2 Permit Selection Tables. Permit Selection Tables 106.1.2.a and 106.1.2.b **are**[are featured on pages 40 – 43. Content is] a culmination of requirements throughout this Section.

106.1.3 Electronic Permit Application and Required Document Submittals. [In general, after the announced and published "go live" date for WSSC's electronic permitting system, ePermitting,]**A[a]ll** permit applications, fees, **and** required documents[, including plans,] *shall* also be submitted through *ePermitting* unless directed otherwise by a [WSSC]*Code Official*.

106.1.4 Required Inspections. [It shall be]**T[t]he L[l]icensee['s]** **shall be** responsible[ility] to ensure that all work is inspected and *approved* in accordance with Section 108[7] 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. [The following work *shall* be exempt from the requirement for a permit.] Exemption from the permit requirement of this *Code* *shall* not be deemed to grant authorization for any work to be done in violation of the provisions of this *Code* or any other laws. **The following work *shall* be exempt from the requirement for a permit:**

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

106.2.2 Ten-Percent Rule, General. Within the building envelope including below grade, if less than 10-percent(nominal) of the existing piping for a system, sub-system, or fixture group is replaced, a permit and inspection *shall* not be required. This *shall* not preclude the *L[l]icensee* from obtaining permits and inspections for such work if so desired.

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

106.2.2.2 Repairs Below Grade. Repairs to outdoor piping below grade *shall* not be exempt work, and *shall* require a permit and inspection. Examples of repair work requiring a permit *shall* include, but *shall* not be limited to: *Building sewer, building water service, grinder pump(Low Pressure Sewer System)* replacement, and *S[s]ite U[-u]tility* water and sewer piping.

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

106.2.2.4 Repairs to Grease Abatement Systems. Repairs to *grease abatement systems* and equipment *shall* not be exempt work, and *shall* require a permit and inspection.

106.2.3 Plumbing Maintenance. The clearing of *stoppages* in fixture branches; the repairing of incidental leaks in pipes, valves or fixtures; the removal and reinstallation or replacement of existing plumbing fixtures, residential type plumbing appliances including electric water heaters, non-testable *backflow 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.

106.2.3.1 Testing and Rebuilding of Testable Backflow Preventers. Testing and rebuilding of testable *backflow prevention*[ers] **assembles** is exempt of a required permit but *shall* only be performed by a [WSSC registered]*Cross-Connection Technician* and requires the submission of a completed WSSC **Water B**[b]ackflow **P**[p]revention[er] **Assembly T**[t]est **R**[r]eport to the **Commission's**[WSSC] online **Cross-Connection Test Report System**[Cross-Connection Control and Backflow Prevention Office].

106.2.3.2 Grease Abatement Systems. For *grease abatement systems*, the removal and reinstallation of existing plumbing fixtures and equipment *shall* require a permit and inspection.

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 (Landlord) 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 appurtance with water connections, but no fuel gas connections	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	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 (GW, Close-in, Gas, or Final) ¹⁰	No	Required ²		
Additional Inspection Fee where Ground Works, Close-In or Final was previously finalized, reopen category for more inspection	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 106.9.1 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 106.2.2
8 - See Sections 106.2.3.1 and 508
9 - A Replacement/Rebuild Tag is required per Section 508.3.1.2.1
10 - The assessment of a SFP for re-inspection fee or other purpose is at the sole discretion of the Plumbing Inspector, see 106.7.6; 106.9.2; 107.2.1.8; and 107.3.4
11 - See Section 106.2.3
12 - New installations are limited to residential appurtenances (such as 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 replacement, manufacture and model unless an alternate is approved by
14 - See Section 504.8 [Where systems or equipment and the corresponding BFP(s) are removed, a SFP is required for the inspector to verify the complete divestment. The actual BFPs shall be present or their pertinent information (make, size, serial number, hazard served, etc.), must be provided to the inspector so the active BFP tracking record can be updated in WSSC's BFP tracking system.]

Table 106.1.2b
Required Fuel Gas Permit¹

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 Btuh; no pipeline alteration.	Allowed	Required ²	
Replace existing gas appliance of same kind, load, and location; greater than 450,000 Btuh; 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 adjustment 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	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 interruption; meter pulled due to fire, structural damage, leak(s), etc. (i.e. emergency inspection)	Allowed	Required ²	
Reconnection of Appliances after service interruption; new appliance shut-off valves and/or appliance connectors ¹⁰	Allowed	Required ²	
General Re-Inspection Fee; Repost Lost Tag (GW, Close-in, Gas, or Final) ¹¹	No	Required ²	
Additional Inspection Fee where Ground Works, Close-In or Final was previously finalized, reopen category for more inspection	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 106.9.1 for limitations - Generally, a SFP shall only be used one (and only one), inspection type and limited to three inspectable items. Also see footnote 11.
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 registered 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 performed by different contractor under separate contract
8 - See 106.2.5 - Where the gas company, or their contractor, goes outside the scope of 106.2.5 or 402.4.2, an applicable permit and inspection is required.
9 - Plans Review is required for commercial work with 4 or more appliances; PR also required for large scale residential systems at the WSSC Plumbing Inspectors discretion
10 - Within 10 business days of restoring a system (after interruption 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 SFP for re-inspection fee or other purpose is at the sole discretion of the Plumbing Inspector, see 106.7.6; 106.9.2; 107.2.1.8; and 107.3.4
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 be represented by two permits -one plumbing & one gas.

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

106.2.5 Special Exception, Natural Gas Utility Companies. Gas Utility personnel or their subcontractors *may* perform a limited *house line* alteration for a Group R-3 occupancy without a permit. This *house line* alteration *shall* only be allowed when the gas meter is relocated from inside to outside as part of the utilities' system maintenance. The scope of work *shall* be subject to the following limits and parameters:

106.2.5.1 Code Provisions. The installation *shall* meet all provisions set forth in this *Code*.

106.2.5.2 **Journeyman or Master Gasfitter.** The work *shall* be performed by [WSSC licensed]*Journeyman* [Gasfitters]or *Master Gasfitters*.

106.2.5.3 **Twelve Joint Rule.** The work is limited to the parameters of the Twelve Joint Rule, as set forth in Section 402.4.3.

106.2.5.4 **Relocations.** *Meter* relocations and similar *house line* relocations initiated by the property owner are not subject to this exception.

106.2.5.5 **Short Form Permit.** Work exceeding the limits of the Twelve Joint Rule or those initiated by the property owner *shall* require a Short Form P[p]ermit and an *approved* inspection as required by this C[c]ode.

106.2.6 Federal Property Exempt. See Section[s] 102.8.

Exemption from the permit requirements 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 or ordinances of this jurisdiction.

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

106.3.1 Foundation or Sub-Slab Permits. At the discretion of a *Code Official*, certain large scale projects *may* present and obtain a separate initial permit to install sub-slab Ground Works in conjunction with a County issued 'Foundation Only' building permit. Construction documents/plans submission required under **Section 110**[6.5] *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 ["I]hold [-]harmless["] agreement[statement], for a project to commence prior to final water and sewer connection design approval and issuance.

106.4 Authorized Permit Applicant. Application for a permit *shall* be made by a [WSSC registered]**Master Plumber, Master Gasfitter, or Master Plumber/Gasfitter**[licensee], the L[l]icensee's authorized representative (proxy) or a State of Maryland R[r]egistered **Design Professional**[Engineer], to install all or part of any plumbing or fuel gas system. The applicant *shall* meet all qualifications established by this *Code* and/or by other applicable law. The full name and address of the applicant *shall* be stated in the application.

106.4.1 Purchase of Permits Security Policy. Only the *Master Plumber/Gasfitter*, their registered representatives (proxies) or State of Maryland registered Professional Engineer will be able to purchase Long Form or Short Form Permits. The identity of the L[l]icensee, proxy or engineer will be validated using the *Commission's* database, along with photo identification such as a driver's license. Although a registered Professional Engineer *may* apply and purchase a permit on behalf of a property owner, no work *shall* commence and the permit will remain inactive until a registered *Master Plumber/Gasfitter* is added to the permit, via **the Commission**[WSSC]'s electronic permit system.

106.5[6] Permit Issuance. The application, construction documents and other data filed by an applicant for a permit *shall* be reviewed by the *Code Official*. If the *Code Official* finds that the proposed work conforms to the requirements of this *Code*, and that the fees published by the *Commission* have been paid, a permit *shall* be issued to the applicant.

106.5.1[4] Approved Construction Documents[(Approved Plans)]. When the *Commission* issues a permit where construction documents[/plans] are required, the construction documents[/plans] *shall* be endorsed in writing and stamped "APPROVED" by the *Code Official*[/plans reviewer]. Such *approved* construction documents/plans *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[/plans].

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At the *Commission's* discretion and direction, the *Code Official shall* have the authority to issue a permit for the construction of a part of a plumbing or fuel gas system before the entire construction documents[/plans] 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 *L[.]licensee shall* proceed at **their**[his or her] own risk, without assurance that the permit for the entire system *shall* be granted.

106.5.2[6.1] Validity. The issuance of a permit or approval of construction documents *shall* not be construed to be a permit for, or an approval of, any violation of any of the provisions of this *Code* or of other law of the jurisdiction. **A[No]** 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**[upon] construction documents and other data *shall* not prevent the *Code Official* from requiring the correction of errors in construction documents and other data, or from preventing building operations being carried on when in violation of this *Code* or of other *Commission* regulations.

106.5.3[6.2] Permit Invalidation. Subject to applicable State law, the *Commission may* suspend, revoke, or invalidate a permit or approval issued under the provisions of this *Code* in case of any false statement or misrepresentation of fact in the application or on the construction documents upon which the permit or approval was based.

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

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

106.6[8] Long Form Permit. A Long Form **P[p]**ermit *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 **Commission**[WSSC] *customer* account; and for a new, or the relocation of a, testable or non-testable *backflow preventer*, residential or commercial.

106.6[8].1 Expiration. A Long Form **P[p]**ermit *shall* expire if the work authorized by the permit does not pass an inspection within 18-months from the date of issuance of the permit, or if the work authorized by the permit does not pass another progress inspection or final inspection within 18-months from the last performed inspection.

106.6[8].1.1 Re-activation. Before the original permitted work can be recommenced, the current minimum **L[l]**ong **F[f]**orm **P[p]**ermit fee must be paid as a re[-]issue fee. In addition, the current amount for inspection fees and *System Development Charges (SDC)* *shall* be due for additional fixtures and the difference in *SDC* is due for existing permitted fixtures based on the originally permitted fee.

106.6[8].2 Commission Sub-Meter Permit Application. The applicant *shall* be responsible to provide accurate account information including name, address; billing account number and main water *meter* ID and serial number. Applicable only to non-residential properties.

106.6[8].3 Minor Site [-]Utility Permit. A [WSSC registered] *Master Plumber shall* secure a **L[l]**ong **F[f]**orm **P[p]**ermit prior to the construction of a **M[m]**inor **S[s]**ite **U[u]**tility system.

106.7[9] Short Form Permit. A Short Form **P[p]**ermit *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 **P[p]**ermit *may* also be used for the direct replacement of all testable *backflow prevention*[ers] **assemblies** provided the existing location and application are acceptable under this *Code*, *assembly* listings, and manufacturer's installation instructions.

106.7[9].1 Limitations. A Short Form **P[p]**ermit for a singular inspection *shall* be limited to 3 items, fixtures, or appliances. *Private meters* and tees for future gas appliances *shall* be considered as items. Gas appliances *shall* be limited to 450 [,]000 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[9.3] Activation. A Short Form **P[p]**ermit *shall* be activated through the scheduling of the inspection upon completion of the work.

106.7.2[9.3].1 Present During Work. [WSSC] Short Form Permits *shall* be on the **project** [job]site at the time of installation.

106.7.2[9.3].2 Timely Activation. All required inspections, including new or replacement gas appliances, *shall* be scheduled for inspection to occur as soon as practical, but not to exceed 10 business days from the date of installation.

106.7.2[9.3].3 Obstructed Process. If the property owner or agent of the owner obstructs or refuses to allow the *L[licensee]* to schedule the inspection required under **Section 106.7.2[9.3].2**, the *L[licensee]* shall promptly notify the **Commission**[WSSC] in writing. The notification shall occur within 15 days of installation and it shall include: property owner or owner agent's name; mailing address, **project**[job] address, phone number(s), email address, permit number, and documentation of attempts to schedule the inspection.

106.7.3[9.4] Expiration. A Short Form **P**[permit] shall expire if not activated four [(4)] months from the date of purchase, without benefit of refund.

106.7.3[9.4].1 Failed Inspection. Active Short Form **P**[permits] shall expire 60 days from the date of a disapproved inspection.

106.7.3[9.4].2 Reuse or Refund. A Short Form **P**[permit] scheduled in error shall not be reused or refunded. [

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

106.8[10] Permit Release and Transfer

106.8[10].1 Licensee Request. The *L[licensee]* may be released from completing work that has been authorized under a permit by submitting a written request to the **Commissions'**[WSSC] Permit Services **Section**[Unit].

106.8[10].2 Owner Request. Transfer of a permit prompted by a property owner shall require a written request by the owner to the **Commission**. The request shall include the owner's name, property address, and owner's phone number. The **Commission** shall notify the original *L[licensee]* of the transfer.

106.8[10].3 Transition Inspection. Prior to any work being performed by the permit transferee (new *L[licensee]*), and at the transferee's discretion, the transferee shall schedule and shall stand a transition inspection to determine limits of responsibility. When no work has been performed on the original permit beyond the last *approved* inspection, a transition inspection shall not be necessary.

106.8[10].4 Fee Refund. See Section 109[6.7].5.

106.9[11] Work by Homeowners. Homeowners may perform the following plumbing work in their own residential unit as provided in this s[Section].

106.9[11].1 Work Not Requiring Permits. A homeowner may perform classes of plumbing work that do not require a permit as set forth in Section 106.2.

106.9[11].2 Work Allowed Under a Homeowner Permit. A homeowner may perform most classes of work normally performed by a **licensed** plumber, except those items set forth in Section 106.10[11].5, provided that the conditions for a **H**[homeowner] **P**[permit] have been satisfied in accordance with Sections 106.10[11].3 and 106.10[11].4.

106.9[11].3 Conditions for a Homeowner Permit.

106.9[11].3.1 Building Type. The premises shall be a *Group R-3 occupancy* (single family detached house or an attached row style house).

106.9[11].3.2 Separate Services. Building water and *building sewer* services shall be provided by separate *Commission service connections*, i.e. not shared with or serving any other property, or shall be provided by private well and/or septic systems.

106.9[11].3.3 Ownership. The applicant shall provide proof, such as property records, that the applicant is the bona fide owner of the premises. The applicant shall sign an affidavit indicating that they are the bona fide owner and occupant of the premises; and that the premises is not being built or remodeled for sale or for rent. The affidavit shall state that all work shall be performed by the applicant in strict compliance with this *Code* and *approved* drawings including: All inspections, tests, re[-]inspections when required due to failed inspections, re[-]inspection fees, and other administrative requirements normally required of licensed plumbers.

106.9[11].4 Additional Applicant Requirements

106.9[11].4.1 Codebook. Depending on the type of work to be performed, the applicant shall be required to obtain the current *approved* versions of the *WSSC Plumbing and Fuel Gas Code* and the *International Plumbing Code*.

106.9[11].4.2 Written Test. The applicant shall be required to pass a written test appropriate to the proposed plumbing work. The test shall include questions about general trade knowledge of plumbing and basic **C**[code]

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requirements. The test *shall* be open-book, *shall* have a time limit, and *shall* be administered by the *Commission* or its exam consultant. The applicant *shall* be permitted to re-take the written test one time, if it is failed.

106.9[11].4.3 Drawings. The applicant *shall* submit floor plans and/or riser diagrams for approval, as directed by the *Code Official*, and *shall* install the work in accordance with this approval.

106.9[11].4.4 Containment. The homeowner *shall* install or update a[n] **Dual Check Backflow Preventer (ASSE 1024)** [backflow preventer] for *containment* of domestic water on premise.

106.9[11].5 Work Not Allowed. The following work *shall* not be performed by homeowners:

106.9[11].5.1 **Below Grade Piping.** Below grade piping deeper than 4 feet (**1219 mm**), including repair of water or sewer services[deeper than 4 feet], or piping that crosses other utilities.

106.9[11].5.2 **Connection to Commission.** Connection to a *Commission* water or sewer *service connection*; or any installation, or replacement, of a **Commission**[WSSC] *Meter (Domestic, Sewer-Only, Water-Only, Sub-meter, etc.)* This work *shall* only be performed by a [WSSC-licensed]*Master Plumber*.

106.9[11].5.3 **Number of Fixtures.** Projects involving seven or more fixtures or appurtenances that require a permit and inspection.

106.9[11].5.4 **Backflow Prevention Assemblies.** Installation and testing of testable *backflow prevention assemblies*[devices].

106.9[11].5.5 **Gasfitting.** Gasfitting installations, including the installation or replacement of a gas-fired water heater or appliance.

106.9[11].5.2 **Prohibited Work.** Work on public property, *Commission*-owned structures or appurtenances.

SECTION 107 TEMPORARY EQUIPMENT, SYSTEMS AND USES[INSPECTIONS AND TESTING]

107.1 General. The *Code Official* is authorized to issue a permit for temporary equipment, systems and uses. Such 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 as necessary to ensure the public health, safety and general welfare.

107.3 Temporary Utilities. The *Code Official* is authorized to give permission to temporarily supply utilities before an installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in the *Code*.

107.4 Termination of Approval. The *Code Official* is authorized to terminate such permit for temporary equipment, systems or uses and to order the temporary equipment, systems or uses to be discontinued.

107.5[11] Temporary Connection. The *Code Official* shall have the authority to authorize the temporary connection of:

1. The building or system to the utility source for the purpose of testing plumbing systems; or
2. 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[VIOLATIONS AND PENALTIES]

108[7].1 General. Plumbing, fuel gas, and *S[s]ite U[-u]tility* 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 *C[c]ode* requirements.

108[7].1.1 Federal Property Exempt. See Section 102.8.

108[7].2 Licensee Responsibility.

108[7].2.1 General.

108[7].2.1.1 Scheduling. The *L[l]icensee* shall be responsible for scheduling all inspections, or ensuring that all inspections have been scheduled. Short *F[f]orm P[p]ermits* may be scheduled for inspection by the *L[l]icensee*, the

property owner, or the owner's agent; however, this accommodation *shall* not relieve the **L**[licensee] from the responsibility for scheduling the inspection, and ensuring inspection approval.

108[7].2.1.2 Cancellations. The **L**[licensee] *shall* be responsible for all inspection cancellations.

108[7].2.1.3 Approved Plans on **Project S**[Jobs]ite. On buildings requiring **approved construction documents**[a plans review], a [WSSC] **Master** [licensee] or a [WSSC] **Journeyman L**[licensee] *shall* be present at the inspection site, and *shall* provide the *approved* construction documents/[plans] including modifications. The **Master** or **Journeyman L**[licensee] *shall* be appropriately licensed for the scope of work being inspected; either plumbing, gasfitting, or both. [Where construction documents/plans were submitted electronically,] **T**[the **L**[licensee][d plumber or gasfitter] *shall* have the **approved construction documents**[set] printed and provided on the **project** site for the inspector's use to document the **project**[job]'s progress and incremental inspection results.

108[7].2.1.4 Licensee Supervision. All [registered] **Master L**[licensees] of record *shall* be available for consultation with the **Code Official** and for supervision of work installed under their license. When required by the **Code Official**, the **Master L**[licensee] *shall attend*[stand] the inspection.

108[7].2.1.5 Gas Connection. Fuel gas piping *may* be connected to the serving utility's **meter rack, 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[7].2.1.6 Concealment. No piping *shall* be covered or concealed prior to inspection and approval by the **Code Official**, except as set forth in Sections 108[7].2.1.9 and 108[7].2.1.10. Only an approval sticker or tag, signed by the **Code Official**, *shall* indicate an *approved* installation.

108[7].2.1.7 Tests. Tests that are required on piping systems *shall* be made ready for inspection verification prior to the [Code Official's] arrival **of the Code Official to** [on] the **project** [job]site.

108[7].2.1.8 Notification and Test Tags Provided. Notification and test tags, such as Hose Bibb Maintenance Tags, Testable **Backflow Prevention Assembly** Test Tags and Non-Testable **Backflow Prevention Device** Replace/Re[-]Build Tags, are provided as a courtesy to **Commission**[WSSC] *customers* and their contracted plumbers. As such, they are not permitted to be used outside of the [Washington Suburban] **Sanitary District**. Any abuse of this privilege *may* lead to the courtesy being revoked.

108[7].2.1.9 Failed Inspections. Installations that fail inspection *shall* be corrected and scheduled for re[-]inspection. A re[-]inspection consisting of one Short Form **P**[p]ermit *shall* be charged, at the discretion of the **Code Official**. See Section 108[7].3.4.

108[7].2.1.10 Self-Certification, Plumbing Work. When authorized in advance by the **Code Official**, the **L**[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 **L**[licensee]'s responsibility to ensure that all self-inspected work has been so authorized. Self-inspected work *shall* be subject to re[-]inspection by the **Code Official** at any time.

108[7].2.1.11 Self-Certification, Gasfitting Work. Gasfitting work *shall* not be self-certified.

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

108[7].2.1.12 Minor Site Utility Systems. **Minor S**[s]ite **U**[-u]tility systems *shall* be installed by a [WSSC registered] **Master Plumber**. These systems *shall* be inspected in accordance with the *approved* plan and this **Code**.

108[7].2.2 Inspection Timeframe. It *shall* be the **L**[licensee]'s responsibility to have work inspected in a timely manner and to ensure that the work has passed inspection as follows:

108[7].2.2.1 Permits, General. Upon completion of each work phase, and prior to concealment where applicable.

108[7].2.2.2 Short Form Permit. Subject to Sections 106.7.2[9.3].2 and 106.7.2[9.3].3, an inspection *shall* be completed within 10 business days of installation; and prior to concealment where applicable.

108[7].2.2.3 Site [-]Utility Permit. Prior to the plumbing FINAL inspection.

108[7].2.3 Jobsite Entry and Access. The **L**[licensee] *shall* be responsible for ensuring entry and access to the **project** [job]site or inspection location as follows:

108[7].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.

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108[7].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 lot/block posting.

108[7].2.3.3 Vehicle Access. The **L[.]licensee** *shall* provide vehicular access to within 200 feet (**60 m**) of the inspection location.

108[7].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[7].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 **L[.]licensee**.

108[7].3 Code Official Responsibility and Inspection Criteria.

108[7].3.1 Timely Inspections. In general, the *Code Official* *shall* provide a timely inspection following established procedures, usually the next working day, on installations that have been properly permitted and scheduled in advance.

108[7].3.2 Backlogged Inspections. Inspections that cannot be completed due to the *Code Official's* workload or weather conditions *shall* be backlogged on a priority basis and *shall* be automatically rescheduled by the *Code Official* for the next available workday.

108[7].3.3 Inspection Stickers. The *Code Official* *shall* notify the **L[.]licensee** of inspection status through the posting at the **project [job]site** of a signed sticker or tag, specific to the work installed, indicating passed/"APPROVED" or failed/"DISAPPROVED" inspection status.

108[7].3.4 Failed Inspections. A scheduled inspection for work that is not in compliance with this *Code* *shall* fail and *shall* be so designated by the posting of a red "DISAPPROVED" sticker. Reasons for failure or *Code* sections with which work is in non[-]compliance *shall* be listed on the sticker. Failed inspections *shall* be subject to a re[-]inspection fee. See Sections 109[6].7[.6 and 107.2.1.8].

108[7].3.5 Partial Inspections. On larger installations, a "PARTIAL" sticker *shall* be posted at the **project [job]site** indicating that part of a construction phase has passed inspection. The approval plans *shall* be made available at the **project [job]site** for similar notation.

108[7].3.6 Inspection Result Notification. The *Code Official* *shall* not be responsible for contacting the **L[.]licensee** when an inspection has failed, and the *Code Official* *shall* not be responsible for redesigning systems or preparing checklists.

108[7].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 **their[his/her]** designee. Examples of emergencies include, but *shall* not be limited to: Fuel gas repairs where building occupants are without heat in extremely cold weather, fuel gas repairs in multi-family complexes, water service repairs in freezing weather, and repairs to deeply buried piping in highly populated areas or where **project [job]site** conditions pose an imminent threat to public safety.

108[7].4 Inspections by Work Phase. Each phase of plumbing or fuel gas installation *shall* require inspections as outlined below.

108[7].4.1 Required Plumbing Inspections.

108[7].4.1.1 Sewer. *Building sewers* *shall* be inspected from the point of connection to the building drain to the point of connection at the *service connection*, septic tank, or other point of disposal. Critical inspection factors *shall* include, but not be limited to: Trenching, bedding, depth, slope, appurtenances and materials. Outdoor **Low Pressure Sewer System**[grinder pump systems] located on private property *shall* be considered as part of the *building sewer* inspection.

108[7].4.1.2 Water Service. *Building water services* *shall* be inspected from the service valve to the point of connection at the *service connection*, well casing, or other source of supply. Critical inspection factors *shall* include, but not be limited to: Trenching, bedding, depth, separation from other utilities, appurtenances, and materials. Mechanical joint water services *shall* be subject to additional requirements particular to that piping; see **the Commission's Development Services Code**[Chapter 7].

108[7].4.1.3 Groundwork. A GROUNDWORK inspection *shall* include, but not be limited to: Drainage and vent piping below grade inside of buildings, the building drain, and below grade water distribution systems. Critical

inspection factors *shall* include, but not be limited to,: Trenching; bedding; slope; sizing; piping tie-downs, hangers, and supports; materials; sewage ejectors; capping or plugging; and required tests. [NOTE:] If a water distribution system is installed below grade, it *shall* be scheduled as a WATER GROUNDWORK inspection.

108[7].4.1.4 Close-In. A CLOSE-IN inspection *shall* include all **water and sewer** rough-in[, including Fuel Gas]. Critical inspection factors *shall* include, but not limited to,: Slope, piping support, sizing, materials, built-in fixtures, fixture carriers, capping or plugging, piping protection, and required tests. Where applicable, a [“]hung groundwork[“] (**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 WSSC close-in inspection. The installer *shall* be responsible for the integrity and leak tight nature of **their**[his or her] installation. The installation *shall* meet IPC Section **421.5**[417.5] 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[7].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**[devices] 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. A peppermint test or a smoke test in the presence of the *Code Official* *shall* be required for the drainage and venting system, see IPC Section 312.4.

108[7].4.1.6 Meter Pick-Up Authorization. On buildings requiring an inside *meter* setting 1½-inch or larger, a separate inspection *shall* be scheduled for *meter* pick-up authorization. Critical inspection factors *shall* include, but not be limited to: Sizing in accordance with the permit and *Commission* right-sizing policy, freeze protection, required area and access, provisions for testing, [“]release[“] of *Commission*-owned systems; and adherence to *Commission* Standard Details.

108[7].4.1.7 System Development Charge Inspections. Where applicable, the accuracy of a plumbing permit, relative to the declared quantity and descriptions of plumbing fixtures, to be installed or remain as [“]existing[“] *shall* be the sole responsibility of the applicant. Through plans review and progress inspections of Ground Works and Close-In, a **C**[c]ode **O**[o]fficial *may* direct certain permit corrections to be executed by the applicant, while such progress inspections *may* be allowed to continue at the inspector’s discretion. An *approved* final inspection and subsequent building occupancy *shall* be contingent on the complete inclusion and accuracy of all assessable plumbing fixture items.

108[7].4.2 Required Fuel Gas Inspections. All fuel gas and fuel gas-fired equipment installations *shall* be subject to a gasfitting CLOSE-IN and a gasfitting FINAL inspection. On limited installations, particularly those completed under a Short Form **P**[p]ermit, both inspections *shall* be completed simultaneously as a gasfitting FINAL inspection.

108[7].4.2.1 Gasfitting Close-In. Gas piping, from the *point of delivery* to the equipment shutoff valve, *shall* be tested. Masonry chimneys and metal vents that are to be concealed *shall* also be a part of this inspection. Critical inspection factors for piping *shall* include, but not be limited to: Sizing; materials and supports; welder’s certification; marking; labeling; clearances and other safety items; trenching; bedding and depth, where applicable; and use of appropriate tests and test equipment. Critical inspection factors for vents *shall* include, but not be limited to: Sizing; materials and supports; clearances; existing masonry vents cleaned or relined if required; and installation in accordance with the manufacturer’s installation requirements.

108[7].4.2.2 Gas Final. This inspection *shall* focus primarily on proper installation and operation of equipment and final connections to the gas supply and venting system. Critical inspection factors *shall* include, but not be limited to: gasfitting CLOSE-IN approval; equipment installation, protection, accessibility, and clearances; combustion and make-up air; manufacturer’s instructions on the jobsite; and performance of a complete operational firing sequence when required.

108[7].4.2.3 Temporary LP-Gas Service. Gas supply systems that are designed and installed for use with natural gas, but will be operated temporarily with liquefied petroleum [(L)P]-gas, *shall* be tested and inspected in the same manner as natural gas.

108[7].5 Minor Site [-]Utility Systems. Minor **S**[s]ite **U**[-u]tility water and sewer piping and appurtenances *shall* be installed by a [WSSC registered] *Master Plumber*. These systems *shall* be inspected in accordance with procedures outlined in **Sections** 108[7].4.1.1 and[&] **108.4.1.2** and any conditions set forth on the *approved Minor Site [-]Utility* plan.

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108[7].6 Emergency Inspections. See Section 108[7].3.7.

108[7].7 Special Plumbing Inspections. Special inspections of alternative engineered design plumbing systems *shall* be conducted in accordance with Sections 108[7].7.1 and 108[7].7.2.

108[7].7.1 Periodic Inspection. The *R[registered D[design P[professional]* or designated inspector *shall* periodically inspect and observe the alternative engineered design to determine that the installation is in accordance with the *approved* construction documents. All discrepancies *shall* be brought to the immediate attention of the plumbing contractor for correction. Records *shall* be kept of all inspections.

108[7].7.2 Written Report. The *R[registered D[design P[professional]* *shall* submit a final report in writing to the *Code Official* upon completion of the installation, certifying that the alternative engineered design conforms to the *approved* construction documents. A notice of approval for the plumbing system *shall* not be issued until this written report has been submitted.

108[7].8 Testing. In general, installations *shall* be tested as required in this *Code*. Plumbing and fuel gas work *shall* be tested as required in the respective sections of the IPC and IFGC; and for *Group R-3 occupancies*, in the IRC. Tests *shall* be made by the *L[licensee]* and observed by the *Code Official*.

108[7].8.1 New, Altered, Extended, Replaced or Repaired Systems. New plumbing and fuel gas systems and parts of existing systems that have been altered, extended, replaced or repaired *shall* be tested as prescribed herein to disclose leaks and defects. See the IPC and **this Code**[WSSC] Chapter 3, Sections 302.3.5[3.1] and 302.3.6[3.2]; the IRC and **this Code**[WSSC] Chapter 4 Sections 402.4.3[402.24.3, 402.25.1 & 402.25.2]; and the IFGC and **this Code**[WSSC] Chapter 5, Section 502.4.3.

108[7].8.2 Apparatus and Labor for Tests. Apparatus, equipment, instruments, material and labor required for testing an installation or part thereof *shall* be furnished by the *L[licensee]*.

108[7].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[6].7[6].

108[7].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 *C[ode O]fficials* 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. [Whenever an inspector from any agency or department observes an apparent or actual violation of some provision of some law, ordinance or code not within the inspector's authority to enforce, the inspector shall report the findings to the code official authority having jurisdiction.]

108[7].10 Approval. After the prescribed tests and inspections indicate that the work complies with this *Code*, an "APPROVED"[APPROVAL] sticker or tag *shall* be issued by the *Code Official*.

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

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

SECTION 109 FEES

109.1[6.7] **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 *S[site U]tility* systems, has been paid.

109.1[6.7].1 Insufficient Funds. In cases where funds are insufficient in check and electronic fund transfers, the applicant *shall* pay for associated costs as a part of the required fees. The *Commission* reserves the right to impose a 6-month cash only status in these cases.

109.2[6.7.3] Fee Schedule. The permit fees for all plumbing, gasfitting, and *S[site U]tility* 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. Any questions regarding codes, fixture descriptions, or SDC fees *shall* be referred to Permit Services.

109.3[6.7.2] Work Commencing Before Permit Issuance. Any *person* who commences any work on a plumbing, fuel gas, or *Site Utility* system before obtaining the necessary permits *shall* be subject to a **penalty fee**, in addition to the published permit fees, **equal to 100 percent**[%] of both the minimum permit fee and the fixture/appliance inspection fees. *Systems Development Charge (SDC)* fees or other impact fees *shall* be excluded from this penalty fee.

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.

109.5[6.7.5] Fee Refunds. Except as otherwise provided in Public Utilities Article, Annotated Code of Maryland, the *Commission* shall authorize the refunding of fees, no later than 180-days after the date of permit cancellation, expiration, or FINAL inspection, whichever is last, as follows:

109[6.7].5.1 Erroneous Payment. The full amount of any fee paid that was erroneously paid or collected.

109[6.7].5.2 Permit Cancelled. If a permit is cancelled or expires, the current permit refund fee *shall* be retained to cover administrative costs. The balance including impact fees *shall* be refunded, provided that no work has been performed and no inspections have been made.

109.6[6.7.4] System Development Charge Fixture[Fee]Credit[s]. In cases where a building is being demolished [and/]or renovated, an *SDC fixture* credit *shall* be allowed for existing plumbing fixtures that will be removed. Prior to the credit being issued, a fixture credit permit *shall* first be obtained and the fixtures to be removed *shall* be verified by the *Code Official*.

109[6].7.[6] Re[-]inspection Fees. A re[-]inspection fee *may* be assessed against the *permittee* for scheduled inspections not meeting the requirements of this *Code*. One Short Form permit *shall* constitute a re[-]inspection fee. Subsequent inspection requests *shall* not be scheduled until these fees have been paid. A re[-]inspection fee for a *H[omeowner]* *P[ermit]* *shall* be paid directly to the Permit[']s counter and will be noted on the active permit.

109[6].7.[6].1 Procedures. The *L[icensee]* *shall* schedule the original Long Form or Short Form *P[ermit]* for inspection. For Short Form *P[ermit]*s, the *Commission's* [WSSC's] Inspection Aides will record the permit number of the re[-]inspection fee permit into the history of the original permit. The *L[icensee]* *shall* print a copy of the Short Form *P[ermit]* and have it on the job for the re[-]inspection. The Plumbing Inspector will sign this copy of the permit which then goes to the property owner. If the *L[icensee]* wishes to have a signed copy of the permit, they *shall* print an additional copy and have on the **project site[job]** with instructions for the additional signatures.

SECTION 110 CONSTRUCTION DOCUMENTS[THEFT OF COMMISSION SERVICES]

110.1[06.5] Construction Documents[(Plans) Submission]. Construction documents, plans, engineering calculations, diagrams and other such data *shall* be submitted **electronically**[in one set] with each application for a Long Form [plumbing/gasfitting] *P[ermit]* or for a Short Form *P[ermit]* 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*.

Exception: The *Code Official* *shall* have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for *shall* be such that reviewing of construction documents *shall* not be necessary to determine compliance with this *Code*. In general, **submission of** construction documents *shall* not be required for *Group R-3 occupancy* one- and two-family residences; or for commercial work without *FOG* abatement **or industrial and special waste**, and, with a cumulative total of 10 or fewer items. The cumulative total of 10 or fewer items *may* include plumbing fixtures; and 3 or fewer gas appliances, served by a dedicated source, with an input rating of less than 200 [,]000 Btu/h (**58 KW**) each.

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

110.1[06.5].1 Engineered Design Required. The *Commission* *may* require construction documents, plans, computations, and specifications to be prepared and designed by a *R[egistered D[esign P[ro]fessional]*. Where fixtures, equipment, or processes are outside the scope of standard loading factors prescribed in this *Code*, such as

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commercial/industrial laundries and laundromats, an engineered design *shall* be required and the documents, plans and/or specifications *shall* be sealed and signed by a State of Maryland registered Professional Engineer. In any case, where the design has been sealed and signed, the engineer *shall* be proficient in mechanical/plumbing/fuel gas design; specifically, water, drainage, fuel gas, appliance venting, or ventilation/make-up air, as applicable.

110.1[06.5].2 Qualified Agent for the Applicant. In conjunction with Section 106.4, a **R[r]egistered Design Professional** [Engineer (PE)]or a [WSSC registered]**Master Licensee** [Plumber/Gasfitter]*shall* submit required construction documents/plans following **the Commission's**[WSSC] published procedures. At their discretion, *Code Officials may* require that any technical-based inquiry relative to a project be made only by a **R[r]egistered Design Professional** [engineer] or a minimum of a *Journeyman level L[l]icensee*.

110.1[06.5].3 Electronic Submittal Required. Design plans and other required supporting documentation *shall* be submitted to the **Commission**[WSSC] in accordance with applicable electronic submittal and related checklist protocols.[

106.5.4 Approved Construction Documents (Approved Plans). When the Commission issues a permit where construction documents/plans are required, the construction documents/plans shall be endorsed in writing and stamped APPROVED by the Code Official/plans reviewer. Such approved construction documents/plans 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/plans.

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

110.2[06.5.5] Retention of Construction Documents[(Plans)]. **Electronic records**[One set] of **approved** construction documents[/plans] *shall* be retained by the *Code Official* until FINAL approval of the work covered therein. One set of *approved* construction documents/plans *shall* be returned to the applicant, and *shall* be kept on the site of the building or work at all times during which the authorized work is in progress. Where construction documents/plans were submitted electronically, the **L[l]icensee**[d plumber or gasfitter] *shall* have the **approved construction documents**[set] printed and provided on the **project** site for the inspector's use to document the **project**[job]'s progress and incremental inspection results.

SECTION 111 NOTICE OF APPROVAL[CONNECTION TO THE COMMISSION'S SYSTEMS]

111.1 Approval. After the prescribed tests and inspections indicate that the work 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[VIOLATIONS AND PENALTIES]

112[1].1 Service Connections, General. Any newly constructed building located on a property which abut[t]s a public water or sewer main *shall* connect to the public water and/or sewer systems. Any property that does not abut[t] 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[3] of the **IPC**[International Plumbing Code].

112[1].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].1.1.1 Water Service Connection, Minimum Size. The minimum size new water *service connection* for Group *R-3 occupancies shall* be 1 ½-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].1.1.2 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**[protection] system *shall* exceed 1-inch["]. These criteria must be met for all models and all lots; and the entire extension project excluding ["pipe[-]stem["] lots **and flag lots**, must be designed uniformly.

112[1].1.2 Non-Abutting Properties. Connections to property not abutting directly on a *Commission* water or sewer main *may* be permitted under certain conditions.

112[1].1.3 Right-of-Way **Service Connection.** If the property to be served is to be connected to a *Commission* water or sewer main located in a right-of-way, on or off the owner's property, services *shall* be provided under the following conditions:

112[1].1.3.1 Responsibility. All necessary excavation, backfill, and restoration within right-of-ways *shall* be the responsibility of the *Master Plumber*.

112[1].1.3.2 Trenching. The main *shall* be exposed and the trench protected in accordance with all MOSHA requirements.

112[1].1.3.3 Tapping. Only *Commission*-authorized personnel *shall* make taps or connections into *Commission* water and sewer mains.

112[1].1.4 Reconnection. Reconnections to abandoned *building sewers* and water services *shall* be permitted provided they conform to applicable *Code* requirements.

112[1].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].1.5.1 Abandonment. Existing water connections not being re[-]used *shall* be disconnected at the main through an abandonment permit at the expense of the property owner.

112[1].1.6 Existing Sewer Connection. New buildings utilizing a previously un[-]used existing sewer *service connection*, and existing buildings having the *building sewer* replaced, *shall* be required to have a property line cleanout installed within 1-foot of the property line, or at the edge of the right-of-way in the case of *right-of-way service connections*, if such a cleanout does not already exist. 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**[WSSC] Standard Detail S-5.1 or S-5.2.

112[1].1.6.1 Abandonment. Existing sewer connections not being re[-]used *shall* be disconnected at the main through an abandonment permit at the expense of the property owner.

112[1].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 and/or sewer *service connections*, the applicant[-] built package is required at the time the applicant built package is submitted for new service.

112[1].2 Service Connection(s). Only one [(1)] water and/or only one [(1)] sewer *service connection* will be permitted to serve a lot or parcel, or a group of lots **and**[&] parcels which are under single ownership.

112[1].2.1 Additional Connection(s) Allowed or Required. After approval from the *Commission*, additional *service connection(s)* *shall* be allowed or required as follows:

112[1].2.1.1 Group R-3 **Occupancy Buildings** (single family homes). For detached building(s) 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[1].2.1.2 **Group I-2, Condition 2 Facilities**[Hospitals]. Two separate water *service connections* and separate piping on property are required in accordance with Section 609.2 of the **IPC**[International Plumbing Code].

112[1].2.1.3 Superstructures [(High Rises 420 feet in height or greater)]. **In buildings that are more than 420 feet (128 m) in building height, not fewer than t**[T]wo separate water *service connections* and separate piping on property are required in accordance with Section 403.3.2 of the **IBC**[International Building Code].

112[1].2.1.4 Greater Hydraulic Demand. For buildings, complexes or campuses with a significant domestic **water** and/or fire **sprinkler**[protection] **system** demand, additional water services *may* be allowed. Supporting documentation is required to demonstrate that a single service is not practical or where the local fire protection

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design official is requiring redundant service. Where separate services are *approved*, metering arrangements *shall* generate a single **Commission**[WSSC] account.

112[1].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[1].2.1.6 Sewer Serviceability. In order 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 (collection piping).

112[1].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 riding condition of a governmental action. Consideration *shall* be given to mainline water and sewer extensions needed to facilitate the required *service connections*.

112[1].2.1.8 Condominiums or Cooperative Ownership Properties. Condominiums or cooperative ownership properties that abut a public water main, **that** are constructed as **townhouses**["row-style" townhomes (one unit bottom to top)], and utilize a **NFPA 13D** or **13R** type fire sprinkler system *may* be served with individual **Commission**[WSSC] Water Service Connection outfitted with an outside meter or curb valve.

112[1].2.2 Shared Service Connections. Serving Multiple Property Owners – a shared *service connection* *may* be allowed when multiple properties or buildings (other than *Group R-3 occupancy*) 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 [WSSC] *Code Official*. The following conditions *shall* be required for approval by **Commission**[WSSC]:

112[1].2.2.1 **Recordation**. Recordation of the necessary covenants and easements for maintenance of the shared **S[s]ite U[u]tility** system.

112[1].2.2.2 **Outside Water Meter**. An accessible outside water meter for each water *service connection*. All **Commission**[WSSC] water meters serving the shared **S[s]ite U[u]tility** system *shall* be billed to a single account.

112[1].2.2.3 **Design**. Design to facilitate the sharing of water *service connection(s)* and sewer *service connection(s)*; where only the minimum number of services needed *shall* be allowed.

112[1].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 a ["private["] meter[ing].

112[1].2.3 Covenants. In general, 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* prior to any subdivision or sale of any or all of the properties covered by the covenant. Such action *may* require the property owner to obtain separate water and sewer connections or a *Shared Site Utility System Agreement*.

112[1].3 Right-Of-Way or Easement. A property owner *shall* have a recorded right-of-way or easement if their property's water service, sewer service or **S[s]ite U[-u]tility** system is installed, under, over or through any other property.

112[1].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**[protection] systems.

112[1].4.1 **Single Family** Group R-3 [Single Family]Occupancies. Connection to the potable water supply *shall* be made in accordance with provisions set forth in Section 112[1].2.1.8 and Chapter 6, "Installation of Commission Water Meters", Sections 603.2.2 and 604.3.2.

112[1].4.2 Other than Group R-3 Occupancies.

112[1].4.2.1 Systems Without Fire Hydrants. If the water service is to serve a fire sprinkler system with no private fire hydrants[,], a **RPBA (ASSE 1013)**[reduced pressure principle backflow assembly,] or a **DCVA (ASSE 1015)**[a double check valve backflow assembly] **furnished**[supplied] by the applicant **and**[,] *shall* be installed.

112[1].4.2.2 Systems with Fire Hydrants. If the water service is to serve private fire hydrants and/or other fire **sprinkler**[protection] systems, and an outside metering scheme is permitted and employed, the meter type utilized *shall* be an [Factory Mutual][**(FM)**][water] meter.

112[1].4.2.3 Existing Monitored Systems. Existing properties served with monitored fire sprinkler systems and/or monitored fire hydrants *may* discontinue to monitor those systems via a **Commission**[WSSC] *approved* third party

alarm monitoring company. Properties *may* be altered and new buildings erected without utilizing monitored systems.

112[1].4.2.4 Water Supplied to Fire Protection Systems or Private Hydrants. Water supplied to fire **sprinkler**[protection] 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 un[-]official or unauthorized use *shall* constitute theft of service and be subject to prosecution under Section 110 of this *Code*.

112[1].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[1].5 Metering.

112[1].5.1 General. The *Commission shall* determine *meter* size, type, and metering schemes for all properties. In general, *water meters shall* be right-sized based on plumbing hydraulic load, as set forth in Section 602.3. Oversized *meters shall* be prohibited, unless an exception is *approved* by the *Code Official*. **Commission**[WSSC] *meters may* not be designed or utilized to measure hot water distribution piping systems, plumbing fixtures individually, or groupings of fixtures individually.

112[1].5.1.1 Existing Metering Schemes. Existing properties *may* be permitted to have their existing metering schemes remain in lieu of new provisions of this *Code*. Properties *may* be altered and new buildings erected utilizing existing metering schemes with approval from the *Commission*.

112[1].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, plumbing modifications *shall* be permitted, inspected, and *approved*, prior to the conversion, to individually *meter* each unit with a **Commission**[WSSC] furnished *meter* and individual water/sewer account. Refer to Sections **112[1].5.8.2** and **112[1].5.8.3** for details.

112[1].5.2 Location. *Water meters shall* be set adjacent to the property line, or at the edge of a right-of-way where applicable, unless *approved* for location inside of a building. *Water meter* settings and vaults *shall* be constructed in accordance with **Commission**[WSSC] Standard Details.

112[1].5.3 Responsibility. *Commission water meters shall* be supplied and maintained by the *Commission*, *shall* remain the property of the *Commission*, and *shall* be installed in accordance with provisions set forth in Chapter 6.

112[1].5.4 Protection. *Commission water meters shall* be protected from damage by freezing or physical abuse. The property owner *shall* be responsible for expenses related to *meter* repair, replacement, or loss due to neglect or damage.

112[1].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[1].5.6 Exceptions. All water provided by *Commission shall* be metered[, except as provided in Section 111.4.2.3].

112[1].5.7 Meter Settings and Installation. The *Commission shall* furnish all *water meters*. The *Commission* or its designee *shall* install all outside *meters*. Outside settings for ¾-inch through 2-inch *meters* and outside vaults for 3-inch and larger *meters shall* be furnished installed by the utility contractor. The plumber *shall* install inside *Commission meters* size 1½-inch and larger. The *Commission* or its designee *shall* install inside *meters* size 1-inch and smaller. See Chapter 6 –[,] “Installation of Commission Water Meters”.

112[1].5.8 Multi-Unit Buildings. In accordance with State law, the *Commission shall* require individual metering of residential units within a multi-unit condominium or cooperative ownership property located in Prince George's County. For all other multi-unit properties, **the Commission**[WSSC] *shall* allow either *m*["M]aster *m*[M]eter[ing"] or individual unit *meters*[ing]. Where individual metering is optioned, design and installation *shall* meet the provisions set forth in Sections **112[1].5.8.2** and **112[1].5.8.3** below. Where required solely by the owner, unit [(private)] *water meters shall* be furnished, installed, and maintained by the property owner.

112[1].5.8.1 Mixed-Use Buildings. Where [both residential and commercial units in the same building (a) *m*["M]ixed- u[U]se[" 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 unit must be separately metered.

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112[1].5.8.1.1 Live/Work Units. In such *mixed-use buildings* where only one residential unit and one commercial unit are served by a single water service, the owner *may* choose to have one or two *meters*. Where only one *meter* is installed, the ["Unit Count"] for billing purposes *shall* be one.

112[1].5.8.1.2 Inside Meters. When a *m[M]ixed-u[U]se building* is allowed or required by other sections of this *Code* to be served by inside metering, 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 per Section 112[1].5.8.2 and 112[1].5.8.3[below], as well as Chapter 6 of this *Code*.

112[1].5.8.1.3 Outside Meters. When a *m[M]ixed-u[U]se 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 per Chapter 6 and as follows: One *meter shall* be installed outside on the water *service connection* to register all consumption on-property. The other *meter(s) 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 unit metering is either required or chosen.

112[1].5.8.2 Individual Metering. Where individual metering for multi-unit properties is either required or chosen, each residential unit *shall* be supplied with an individual cold water main supply pipe, **Commission**[WSSC] *meter*, and separately billed account. Collectively, all building piping, including any other water uses throughout the building *shall* be arranged as follows:

112[1].5.8.2.1 **No Combination Metering.** No combination of *master meters*[ing] with individual unit *meters* is permitted (not allowed as an option and will not be supported by the **Commission**[WSSC] billing system).

112[1].5.8.2.2 **Common areas/amenities.** Common areas/amenities *shall* be independently metered, with separate account and shut-off valve.

112[1].5.8.2.3 **Special Water Uses.** Special water uses typically ["sub-metered"], such as irrigation and[&] cooling towers, *shall* be supplied directly through an individual *meter* for each use and not be arranged as a ["sub-metered use"] to any other unit/use within the property.

112[1].5.8.2.4 **Additional Separate Metering.** Where commercial units (*mixed-use buildings*) are included, additional separate metering is required apart from residential units and common areas/amenities. See also Section 112[1].5.8.1. This *may* include only one *meter* for all commercial units or where individual commercial unit metering is optioned, design and installation *shall* follow the provisions of 112[1].5.8.3.

112[1].5.8.3 **Centralized Meter Room.** In all cases where individual multi-unit metering is utilized, by requirement or by option, a centralized *meter* room(s) *shall* be provided following the provisions set forth in Section 604 and as detailed as follows:

112[1].5.8.3.1 **Small Buildings.** Buildings up to three floors or 25 [,]000 gross square feet (**2 322 square m**) *shall* be outfitted with a central *meter* room, equipped with a lockable door accessible directly from the exterior of the building.

112[1].5.8.3.2 **Large Buildings.** Buildings greater than three floors or 25 [,]000 gross square feet (**2322 gross square m**) *shall* be outfitted with a central *meter* room, equipped with a lockable door. Additional central *meter* rooms, on a per wing/area/floor basis, including access requirements, are subject to **Commission**[WSSC] approval. Where direct access is practical, it *shall* be provided.

112[1].5.8.3.3 **Floor Drains.** Each *meter* room *shall* be provided with a minimum of one floor drain, 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[1].5.8.3.4 **Shutoff Valve.** One shut[]off 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 referenced lockable valve *shall* be downstream of the fire sprinkler supply tee and serving only the main domestic water.

112[1].5.8.3.5 **Identification.** Each individual *meter* piping *assembly shall* be identified with an affixed permanent tag/placard/label depicting the unique unit/suite/address served by that *meter*. All related

distribution piping, including concealed piping, *shall* also be identified/labeled every 25 feet (**7 620 mm**); in addition, within 5 feet (**1 524 mm**) of each side of a floor or wall penetration.

112[1].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 same for all buildings within a complex. The lock code *shall* be provided to the **Commission**[WSSC]'s Meter Services personnel during their initial meter setting/verification work order and updated lock codes communicated promptly to WSSC Customer Services Department staff.

112[1].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 utilize an **NFPA 13D** or **13R** type fire sprinkler system *may* be served with individual **Commission**[WSSC] *Water Service Connection* outfitted with an outside *meter* or curb valve with inside *meter*.

112[1].5.9 Commission Sub-Meter. Except as otherwise allowed by law, where water furnished by the *Commission* is used for purposes where none of the water that passes through the sub-meter enters the *Commission's* sewerage system, the owner *may* request the installation of a *Commission sub-meter*. See Public Utilities Article, Section 25-502 and[&] 25-504.

112[1].5.9.1 Piping arrangement. In cases where a *Commission s*[S]ub-meter or secondary *meter* is the same size as the corresponding **Commission**[WSSC] inside main *meter*, the piping *shall* be designed and installed to accommodate each *meter* in parallel to the other; each *shall* be right-sized per Table 602.1. Where practical, *Commission* submeters *shall* be installed on the upstream, potable side of an *isolation type backflow preventer*.

112[1].5.9.2 Established Credits. The following represents established credit values for various *sub-meter* applications where all or a portion of the registered water consumption does not discharge to the **Commission**[WSSC] sanitary sewer system:

112[1].5.9.2.1 Irrigation. 100% credit. [-]Irrigation, o[O]utdoor h[H]ose b[B]ibbs, w[W]all h[H]ydrants, y[Y]ard h[H]ydrants and similar outdoor only water uses.

112[1].5.9.2.2 Cooling Towers with Discharge Permit. 100% credit. [-]Cooling t[T]owers with an *approved* MDE environmental discharge permit[= 100%]. No provisions for any portion of the sub-metered water to be discharged to the sanitary sewer system including auto-mechanical [“]blow-off[“] for the introduction of fresh water and chemical/disinfection treatments.

112[1].5.9.2.3 Cooling Towers to Sanitary Sewer. 73% credit. [-]Cooling t[T]owers with drain or any mechanical loop piping routed to sanitary sewer including auto-mechanical [“]blow-off[“] for the introduction of fresh water and chemical/disinfection treatments.

112[1].5.9.2.4 Laundries. 25% credit. [-]Commercial/i[I]ndustrial I[L]aundries

112[1].5.9.2.5 Engineering Analysis. Any industry seeking a new credit or re-consideration of an established credit, *shall* provide an engineering analysis to the **Commission**[WSSC] Customer Relations Department for approval, to determine the ratio of registered water consumption that discharges to sewer versus the quantity that does not discharge to the *Commission's* sanitary sewer collection system unless *approved* by the *Commission*.

112[1].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. *Group R-3 occupancies* served as above *shall* be billed based on a flat rate, or based on an **effluent** [sewer use] *meter*, at the *Commission's* discretion.

112[1].5.11 Fire Hydrant Meters. The *Commission* *may* authorize use of a *fire hydrant* [water] *meter* to applicants requiring water for temporary use. A **Commission**[WSSC] small *fire hydrant meter* *shall* include an integral ASSE 1011 *backflow prevention device*. For a **Commission**[WSSC] large *fire hydrant meter*, the applicant *shall* provide a high [-] **degree of hazard backflow prevention** [device] *assembly* **RPBA** (ASSE 1013). The *assembly* must carry a satisfactory test tag current within six months. *Fire hydrant meters* use *shall* be restricted to temporary or seasonal applications such as, but not limited to: Tank truck filling, temporary water for construction sites, special events (e.g., charity walks, fairsgrounds), 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*.

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112[1].6 Containment. All buildings *shall* have a **containment backflow preventer**[containment device] installed on the outlet side of the water *meter*, prior to water uses within the premise, as cited in Section 502.3 in Chapter 5 of this *Code*. *Backflow preventers shall* be maintained by the owner as cited in Section 102.3.10[9].

SECTION 113 STOP WORK ORDER[APPEAL OF CODE OFFICIAL DECISIONS]

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 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 fines established by the authority having jurisdiction.

SECTION 114 APPEAL OF CODE OFFICIAL DECISIONS[TRADE QUALIFICATIONS AND EXAM]

114[09].1 Application for Appeal. Any *person shall* have the right to appeal a decision of the *Chief Code Official* to the WSSC Plumbing and Fuel Gas Board (**hereinafter "Board"**) on matters relating to *Code* interpretation. An appeal request *shall* be based on a claim that the true intent of this *Code* or the rules legally adopted thereunder have been incorrectly interpreted, that the provisions of this *Code* do not fully apply, or that an equally good or better form of construction is proposed. The appeal request *shall* be filed in writing within 20 days after the decision was issued. This Section *shall* not apply to license action decisions.

114[09].2 Notice of Meeting. The *Board shall* meet, upon notice from the chairman, within 45 days of the filing of an appeal or at stated periodic meetings.

114[09].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[09].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[09].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[09].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[09].5.2 Administration. The *Chief Code Official shall* take immediate action in accordance with the decision of the *Board*.

SECTION 115 VIOLATIONS AND PENALTIES[RECIPROCITY OF LICENSES]

115[08].1 Unlawful Acts. No *person shall* erect, construct, alter, repair, remove, demolish or utilize any plumbing, fuel gas, **S[s]ite U[-u]tility** system, or industrial discharge control system; or cause same to be done, in conflict with or in violation of any of the provisions of this *Code*.

115[08].2 Notice of Violation. A *Code Official shall* serve a Notice of Violation (NOV) or order to the *person* responsible for the erection, installation, alteration, extension, repair, removal or demolition of work in violation of the provisions of this *Code*, or in violation of a directive or the *approved* construction documents thereunder, or in violation of a permit or certificate issued under the provisions of this *Code*. Such order *shall* direct the discontinuance of the illegal action or condition and the abatement of the violation within a specified timeframe.

115[08].2.1 Failure to Comply. Failure to comply with a Notice of Violation (NOV) or other enforcement action **within the prescribed deadlines shall** be a further violation of this *Code* **and is subject to progressive enforcement action**.

[This may result in the issuance of a WSSC Civil Citation, a Stop Work Order at the premises where the improper work occurred, termination of Commission water and/or sewer service, or additional enforcement measures.]

115[08].2.2 Abatement of Violation. The imposition of the penalties herein prescribed *shall* not preclude the *Commission* from instituting appropriate action to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent illegal occupancy of a building, structure or premises, or to stop an illegal act, conduct, business or utilization of the plumbing, fuel gas, or *Site Utility* systems on or about any premises.

115.3[08.9] Administrative Hearings

115.3[08.9].1 Opportunity for Hearing by Licensee. Subject to the provisions of Title 10, Subtitle 2, of the State Government Article, Annotated Code of Maryland, before the *Commission* takes any final license denial, suspension or *revocation* action under Section **115.4[108.8]** of this *Code*, it *shall* give the applicant or *Licensee* against whom the action is contemplated an opportunity for a hearing.

115.3[08.9].2 Notification Procedure. The *Commission shall* give notice, and the hearing *shall* be held in accordance with Title 10, Subtitle 2, of the State Government Article, Annotated Code of Maryland, and **Commission[WSSC]** Standard Procedures for adjudicatory hearings. The notification procedures set forth in this Section *shall* apply.

115.3[08.9].2.1 In Writing. The applicant or *Licensee shall* be notified of pending action in writing through certified mail, and/or certificate-of-mailing, and/or hand-delivery.

115.3[08.9].2.2 Licensee Response Time. To request an administrative hearing, the applicant or *Licensee shall* respond, in writing or electronically, within 15 calendar days from the date of notification of the pending action. Failure by the applicant or *Licensee* to maintain current address information with the *Commission*, or failure to collect mail *shall* not constitute a valid excuse for failure to meet response deadlines.

115.3[08.9].2.3 Hearing Notification. If an administrative hearing is requested by the applicant or *Licensee*, the *Commission shall* schedule a hearing **approximately 4 to 6 weeks from the request date**, generally to occur within 45 calendar days of receipt of the request, and *shall* notify the requestor in writing of the hearing date, time, and location.

115.3[08.9].3 Failure to Appear. If after due notice, the individual against whom the action is contemplated fails or refuses to appear, the *Commission* or its designee *may* nevertheless hear and determine the matter.

115.3[08.9].4 Commission's Right to Proceed. The lapse or suspension of a license by operation of law or by order of the *Commission* or a court, or its voluntary surrender by a *Licensee*, *shall* not deprive the *Commission* of jurisdiction to investigate or act in disciplinary proceedings against the *Licensee*.

115.3[08.9].5 Delegation of Hearing Authority. The *Commission* delegates its administrative hearing authority to the WSSC Plumbing and Fuel Gas Board, which *shall* conduct the hearing and submit proposed findings of fact and proposed conclusions of law to the *Commission* for final disposition.

115.4 Penalties and Actions.

115[08].4.1 Civil Citations. Pursuant to Section 29-101, Public Utilities Article, Annotated Code of Maryland, a *Code Official shall* be authorized to issue **Civil Citations** to any *person* violating any provision of this *Code*. A *person* committing any of the following violations of this *Code shall* be subject to immediate delivery of a WSSC **Civil Citation** at the discretion of the *Code Official*, with or without first being issued a Notice of Violation (**NOV**):

115[08].4.1.1 Work Without License. Performing plumbing, gasfitting, or sewer and drain cleaning work without a valid license where such license is required by this *Code*.

115[08].4.1.2 Work Without Permit. Performing work without a valid permit where such permit is required by this *Code*.

115[08].4.1.3 Theft of Services. Committing a theft of *Commission* water or sewer services as set forth in Section 116[0].

115[08].4.1.4 Septic Waste Discharge. Violating any requirement of the septic waste discharge provisions of this *Code*. See Chapter 8.

115[08].4.1.5 Willful Code Violations. Willfully or deliberately violating any provision of this *Code*.

115[08].4.1.6 Health and Safety. Violating any provision of this *Code* where such violation presents an imminent threat to the public health, welfare, or safety or to the *Commission's* systems.

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115[08].4.1.7 Negligence or[,] Incompetence[, or Misconduct]. Committing acts constituting negligence or[,] incompetence [or misconduct] while providing plumbing, gas fitting, *Site Utility*, sewer and drain cleaning, or waste hauling services, or while assisting in providing these services.

115.4.1.8 Misconduct. Committing act of *misconduct* while providing plumbing, gas fitting, *Site Utility*, sewer and drain cleaning, or waste hauling services, or while assisting in providing these services.

115[08].4.1.9[8] Aiding or Abetting. Aiding or abetting any *person* to evade or violate any provision of this *Code*.

115[08].4.1.10[9] Deceptive Practices. Engaging in an unfair or deceptive trade practice as defined in Section 13-301 of the Commercial Law Article, Annotated Code of Maryland, or otherwise performing work where such work was not necessary.

115[08].4[2].11 Failure to Comply. Failure to comply with a Notice of Violation (NOV) or other enforcement action *shall* be a further violation of this *Code*. This *may* result in the issuance of a WSSC Civil Citation, a Stop Work Order at the premises where the improper work occurred, termination of *Commission* water and/or sewer service, or additional enforcement measures.

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

115.4.2[08.8.3] Reprimand. The *Commission shall* have the authority to *reprimand* a *L[.]icensee* who [is guilty of one or more of the provisions set forth in Section 108.8.1, and/or] has received one or more *N[n]otices O[o]f V[v]iolation*, depending on the seriousness and nature of the *Code* violations. **A reprimand *shall* come in the form of a certified letter from the Section Manager and serve as a warning of progressive enforcement and potential license action for continued violations.** A *reprimand shall* not restrict the *L[.]icensee* from continuing to perform work, obtaining permits, or requesting inspections.

115.4.3[08.8.1] **Suspension or Revocation**[General]. [Subject to the hearing provisions of Section 108.9 of this *Code*, and in any order depending upon the circumstances,]*T[t]he Commission may* [deny a license to an applicant, reprimand a Licensee, or]suspend [or revoke]a license[,] if the *Commission* determines that the [applicant] or *L[.]icensee*:

115.4.3[08.8.1].1 Misrepresentation. Fraudulently or deceptively obtained or attempted to obtain a license for the applicant or *L[.]icensee*, license examinee, or for another *person*.

115.4.3[08.8.1].2 Misuse of License. Fraudulently or deceptively used a license to obtain permits for another *person*, or for any other purpose.

115.4.3[08.8.1].3 Gross Negligence **and** [,]*Gross* Incompetence[, or Misconduct]. Was guilty [of bribery or attempted bribery of a *Code Official*; *misconduct* while interacting with a *Code Official*; or]gross negligence or[,] incompetence[, or misconduct] while providing or assisting in providing plumbing, gasfitting, , drain and sewer cleaning, or waste hauling services. A failed routine inspection of permitted work *shall* not be considered as gross negligence, incompetence or *misconduct*.

115.4.3.4 Gross Misconduct. Was guilty of bribery or attempted bribery of a *Code Official* or *misconduct* while interacting with a *Code Official* while providing or assisting in providing plumbing, gasfitting, *Site Utility*, drain and sewer cleaning, or waste hauling services.

115.4.3.5[08.8.1.4] Deceptive Practices. Engaged in an unfair or deceptive trade practice as defined in Section 13-301 of the Commercial Law Article, Annotated Code of Maryland, or otherwise performed work where such work was not necessary.

115.4.3.6[08.8.1.5] Deliberate Code Violations. Willfully or deliberately violated any provision of this *Code*.

115.4.3.7[08.8.1.6] Aiding or Abetting. Aided or abetted any *person* to evade or violate any provision of this *Code*.

115.4.4[08.3] Stop Work Order. **The *Commission may* issue a Stop Work Order per Code Section 113**[Upon notice from the Code Official, work that is performed contrary to the provisions of this Code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be posted at the jobsite; given to the owner of the property, to the owner's agent, or to the person performing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the Code Official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after being served with a Stop Work Order, except work that the person is directed to perform to remove a violation or unsafe condition, shall be subject to license action if licensed, and/or civil citation(s)].

115.4.5[08.6] 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. See also Sections **115.6[08.10]** and **115.8[08.11]**:

115.5[08.6].1 Unauthorized work. The property owner engaged in plumbing work without required authorization[]; or failed to schedule the required inspection for permitted work[].

115.4.5.2 Failure to Schedule Inspections. The property owner failed to schedule the required inspection for permitted work.

115.4.5.3[08.6.2] Gasfitting Work without License. The property owner engaged in gasfitting work, without a license.

115.4.5.4[08.6.3] Failure to Rectify Unauthorized Work. The property owner has been uncooperative or untimely in obtaining a licensed individual to rectify unauthorized plumbing or gasfitting work.

115.4.5.5[08.6.4] Unlicensed Services. The property owner is aiding or abetting an unlicensed individual or unregistered firm who performed plumbing or gasfitting services on **their**[his/her] property.

115.4.6[08.8.2] License Denial. The *Commission shall* deny a license to an applicant who provides incomplete, inaccurate, fraudulent, or false information on **their**[his or her] application, or during the examination process; has been found guilty of one or more of the provisions set forth in Section **115.4.3[108.8.1]** as a non- **L[l]icensee**; or, if applying as a reciprocal **L[l]icensee**, has an invalidated license in another jurisdiction.

115.4.7[08.8.4] License Reinstatement.

115.4.8[08.8.4].1 Suspension. Following the term of any license suspension, the license *shall* be reinstated by the *Commission*, provided that the **L[l]icensee** meets all of the requirements of Section **118[3]** of this *Code* for the particular type of license.

115.4.7[08.8.4].2 Revocation. Following the term, if any, of any license *revocation* the license *may* be reinstated by the *Commission*, provided that the **L[l]icensee** passes the required **Commission**[WSSC] examination and otherwise qualifies for the particular type of license in accordance with the requirements of Section[s] **1183** and **114**] of this *Code*.

115.4.8[08.8.5] Future License Actions. One or more *reprimands*, suspensions or *revocations may* have a bearing on future license actions, depending upon the nature and seriousness of the prior license action(s) and/or future violation(s).

115.6[08.10] Unsafe Installations.

115.6[08.10].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*.

115.6[08.10].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.

115.6[08.10].3 Authority to Condemn Equipment. Whenever a *Code Official* determines that any installation, or portion thereof, regulated by this **C[c]ode** 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[08].2 shall** be given. In cases of immediate danger to life or property, the order to disconnect *shall* be effective immediately without such notice.

115.6[08.10].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/or occupant of the building, structure or service system *shall* be notified of the decision to disconnect utility

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service prior to taking such action. If not notified prior to disconnection, the owner or occupant of the building, structure or service systems *shall* be notified in writing, as soon as practical thereafter.

115.6[08.10].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[08].7 Licensee Responsibility. [Licensed]*Master Plumbers, Master Gasfitters, and Sewer and Drain Cleaners* shall be held responsible for the violation of any part of this *Code* whether the violation is committed by themselves or by their employees or agents.

115[08].7.1 Temporary Inactivation of License. A *Code Official* has the discretion to inactivate a license due to repeated non-responsiveness to phone calls or emails; or when a compliance directive cited in a Notice of Violation (NOV) has not met the compliance date. When lines of communication are re-established or where work to correct a NOV has satisfactorily progressed, the temporary inactivation *shall* be lifted.

[108.8 Denials, Reprimands, Suspensions, and Revocations]

115[08].8[11] Progression of Enforcement Actions. **Progression of enforcement actions includes escalating penalties for repeat violations of the Code. A violation is considered repetitive if the same violation was committed during the lookback period. Progressive enforcement action may include the issuance of Civil Citations, a Stop Work Order at the premises where the improper work occurred, termination of *Commission* water and/or sewer service, reprimand, license action, or additional enforcement measures.**

115.8.1 Nature or Severity of Violation. In addition to a NOV, a *Code Official* may take additional action depending on the nature or severity of violation. Additional action may include the issuance of Civil Citations, a Stop Work Order at the premises where the improper work occurred, termination of *Commission* water and/or sewer service, reprimand, license action, or additional enforcement measures.

115.8.1.1 Low Degree of Severity. The violation does not involve criminal activity and does not cause an imminent endangerment to human health, welfare, and/or the environment.

115.8.1.2 High Degree of Severity. The violation involves criminal activity or causes an imminent endangerment to human health, welfare, and/or the environment. The violation involves one or more of the following violations in Section 115.4; misrepresentation, misuse of license, gross negligence and gross incompetence, or gross misconduct.

115.8.2 Lookback Period. The lookback period is used to determine if violation is repetitive and subject to progressive enforcement action.

115.8.2.1 Short Term Lookback Period. Violations with a low degree of severity shall have a look back period of 24 months.

115.8.2.2 Long Term Lookback Period. Violations with a high degree of severity shall have a lifetime lookback period.

[In general, progressive enforcement actions *shall* follow the following escalating plan unless an imminent danger to life warrants a more progressive tract. This escalating plan *may not* apply to actions governed by the *Fats, Oils and Grease* Program (Chapter 8) or the Industrial Discharge Control Program (Chapter 8) where previously mandated, specific Enforcement Response Plans exist:

108.11.1 First Notice of Violation (NOV). Property owners, their agents and contractors are subject to a written NOV, per Section 108.2, whereby the NOV will provide a directive to correct a *Code* violation by a specific date. In addition, illegal on-going work is subject to a Stop Work Order, per Section 108.3. Unlicensed property owners or other unlicensed workers performing illegal work are also subject to an immediate Civil Citation(s) (Fine's), per Section 108.4. The deadlines for corrective actions cited in the NOV *shall* be met as directed, and not contingent on the disposition of the Civil Citation(s).

108.11.2 Second Notice of Violation. Where a corrective action cited in a previous NOV has not been met on time or in an approvable manner, a second NOV is warranted. This second notice *shall* contain escalating enforcement language to include, but not limited to, a shorter compliance timeline, elevated civil citation/fine(s), potential license action, civil

liability and criminal prosecution, and termination of water, sewer or gas service. The deadlines for corrective actions cited in the NOV *shall* be met as directed, and not contingent on the disposition of the Civil Citation(s).

108.11.3 Third (Final) Notice. A final notice *shall* be served in one or more of the following ways:

108.11.3.1 Third level of Civil Citation/Fine as allowed under Maryland law.

108.11.3.2 Notice of proposed license action to the license holder, pursuant to Section 108.9

108.11.3.3 Summons for civil or criminal prosecution under Maryland law.

108.11.3.4 Notice to property owner for termination of service.]

115.9[08.5] Un[-]licensed Work Subject to Criminal Liability. Where an individual or a group of individuals willfully advertised, solicited, contracted and/or performed plumbing, gasfitting, *S[s]ite U[-u]tility*, sewer and drain cleaning, or waste hauling services without proper licenses or permits, the individual or group of individuals *may* be subject to civil liability and criminal prosecution under Maryland law.

SECTION 116 THEFT OF COMMISSION SERVICES

116[10].1 Intent to Obtain Services Without Payment.

116[10].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[10].1.2 Evidence. If a *person* tampers with, installs, taps, removes, displaces, or makes any connection with any pipe, valve, fire hydrant, *meter*, fitting, connection or other fixture, appurtenance, or equipment of the *Commission*, it *shall* constitute prima facie evidence of an intent to obtain water or sewer service without payment therefor.

110.2 Intent to Divert Services.

116[10].2.1 General. Unless otherwise allowed by law or by prior written permission of the *Commission*, a *person may* not make or cause to be made any pipe, tube, or other instrument or contrivance or connect the same or cause it to be connected with any water or sewer main, *service connection*, or other pipe for conducting or supplying water in such manner as to be calculated to supply water around or without passing through a *meter* provided by the *Commission* for the measuring and registering of the quantity of water and/or sewer usage.

116[10].2.1.1 Meter Byp[-P]ass Valve. A *meter* by[-]pass valve associated with an inside or outside *Commission*[WSSC] water *meter shall* only be opened by Authorized *Commission*[WSSC] personnel or by written permission from *Commission*[WSSC] Customer Relations or Utility Services personnel. Unauthorized opening of a *meter* by[-]pass valve *shall* constitute prima facie evidence of theft of service.

116[10].2.2 Illegal Sewer Connection or Discharge. Water from any source that has not first been measured or registered through a *Commission* water *meter shall* not be discharged to the *Commission's* sanitary sewer system, unless specifically allowed by this *Code*. Examples of illegal sewer connections or discharges *shall* include, but not be limited to: Storm water or ground water from any source, air conditioning condensate, [blow-down connections from chilled water systems supplied by a sub-meter,] outdoor pool and deck drains, building foundation drains or foundation sump pumps. See IPC Section 314.2 and WSSC amendments.

116[10].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*[WSSC] 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[10].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 [one (1)] foot (**304 mm**) horizontal per [five (5)] feet (**1 524 mm**) of vertical opening and where applicable, a diverting trench drain for downward sloping ramps/entrances/exits.

116[10].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

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Commission, shall constitute prima facie evidence of intent to violate and of the violation of this Section by the person or persons who would receive the direct benefits from the use of the water/sewer services without it being measured or registered on a meter.

116[10].2.4 Test [-]Meter. If a test [-]meter [or check-meter] installed or employed by the *Commission* shows that a *customer* is using a greater amount of water than that registered on the *meter* on or for the *customer's* premises for the purpose of registering the amount of water used by that *customer*, such condition *shall* constitute prima facie evidence that the unregistered water has been wrongfully diverted by such *customer*, and *shall* further constitute prima facie evidence of the intent to violate the provisions of this Section and of the violation of this Section.

SECTION 117 PLUMBING AND FUEL GAS BOARD

117[12].1 Duties.

117[12].1.1 Code Advisory Role. The WSSC Plumbing and Fuel Gas Board *shall* be responsible for reviewing and recommending to the [Commission] *Code* requirements governing plumbing, fuel gas, and ~~S[s]ite U[-u]tility~~ installations, and industrial discharge control. *Code* requirements reviewed and recommended by the *Board* *shall* not become effective until they have been *approved* and adopted by the *Commission* pursuant to Public Utilities Article, 17-403, of the Annotated Code of Maryland.

117[12].1.2 Hearings and Appeals. The *Board* *shall* serve as a hearing authority in cases set forth in Section 115.3[08.7] – “Administrative Hearings; Section 114[09.] – “Appeal of *Code* Official Decisions”; and requests for exceptions **for trade qualifications and exams in**[to] Section 118[4. Trade Qualifications and Exam] – “**Licenses and Registration**”, when referred by or denied by the *Chief Code Official*.

117[12].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[12].2 Voting Membership. Membership on the *Board* *shall* consist of the following 7 voting members, 6 of who *shall* be from outside the *Commission* and *shall* be selected by the General Manager of the *Commission*:

1. A [WSSC-registered] *Master Plumber/Gasfitter* representing the large commercial and/or large volume residential sector.
2. A [WSSC-registered] *Master Plumber* representing a local plumbing trade association.
3. A [WSSC-registered] *Master Gasfitter* representing a local HVAC trade association.
4. A plumbing/mechanical registered P[p]rofessional E[e]ngineer.
5. A consumer representative from Montgomery County, with an understanding of technical issues, who *shall* not have any financial interest in any *person* regulated by the *Board*.
6. A consumer representative from Prince George's County, with an understanding of technical issues, who *shall* not have any financial interest in any *person* regulated by the *Board*.
7. The *Commission's* *Chief Code Official* who *shall* be a permanent voting member of the *Board*.

112.2.1 Alternate Members. The General Manager **of 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[12].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[12].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, is the holder of a *Commission* issued license.

118.2 Principal Licensee. Each particular firm or corporation that performs plumbing, gasfitting, or sewer and drain cleaning in the *Sanitary District* *shall* register a single individual who shall be considered the *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**. The **Principal Licensee** shall be considered as the responsible **Licensee of Record**.

118.2.1[3.3] One **Principal Licensee Per Firm**. A **Principal L[]icensee** [of record]*shall* represent only one firm or corporation **and**[;] a firm or corporation *shall* be represented by only one **Principal Licensee**[licensed Master Plumber, Master Gasfitter, Master Plumber/Gasfitter, or Sewer and Drain Cleaner of record].

118.2.2[3.1.1] Non-Principal Licensees. *Master Plumbers, Master Gasfitters, Master Plumber/Gasfitters, and Sewer and Drain Cleaners not registered as a Principal Licensee shall*[may] be licensed as [“]non-principal [“ Master]L[]icensees[or “non-principal” Sewer and Drain Cleaners]. Non-**P**[p]rincipal L[]icensees *shall* not be eligible for permit issuance, *shall* not portray themselves as the **Principal L[]icensee** [of record]for any firm or corporation, and *shall* perform work only under the direction and control of a **Principal**[Master] L[]icensee[of record].

118.3[3.2] Who Is Not Licensed. The *Commission shall* not license any firm or corporation, other than indirectly through control of the **Principal L[]icensee** [of record]per Sections **118.2.1[3.3]** or **118[3].4**.

118[3].4 Firms with Multiple Divisions. If a firm or corporation has multiple operating branches, divisions, or geographic locations, **Principal L[]icensee** [of record]requirements *shall* be determined as follows:

118[3].4.1 Single Name. If all branches or divisions operate under a single corporate or advertised name, representation by one **Principal L[]icensee** [of record]*shall* be required.

118[3].4.2 Multiple Names. If each branch or division operates under its own advertised name, different than the corporate name of which it is a part but in respects other than just geographic location, then each such branch or division *shall* be required to be represented by its own **Principal L[]icensee**[of record].

118[3].5 Institutional License Required. Any public agency or utility, institution, industrial or commercial establishment, or similar entity that carries out the act of plumbing and/or gasfitting [“]in-house[“] (**done internally within organization**) throughout their campus and/or within their building(s) *shall* be represented by a [licensed WSSC]**Master Plumber/Gasfitter** as applicable. The L[]icensee *shall* register as the **P**[p]rincipal[le] L[]icensee or the entity and *shall* also comply with **Section 118.2.1[3.3]**.

118[3].5.1 Institutional Employment. A *Master Plumber, Master Gasfitter, or Master Plumber/Gasfitter may* be regularly employed for public work, or by an institution, industrial establishment, or public utility, but *shall* not carry on the business of plumbing or gasfitting outside of that employment unless licensed and registered as herein required.

118[3].5.2 Federal Property Exempt. See Section 102.8.

118.6 Licenses.

118.6.1 Apprentice Plumber.

118.6.1.1[3.6.7] **Authorization for Work**[Apprentice Plumber]. An *Apprentice Plumber* license *shall* authorize the L[]icensee to assist in providing plumbing services and sewer and drain cleaning services, under the direction and control of a [WSSC-licensed]**Master Plumber** or **Master Plumber/Gasfitter** on the **project** [job]site; or under a [WSSC-licensed]**Journeyman Plumber** or **Journeyman Plumber/Gasfitter** on the **project** [job]site who is under the direction and control of a [WSSC-licensed]**Master Plumber** or **Master Plumber/Gasfitter**.

118.6.1.2[4.1] **Qualifications**[Apprentice]. Qualification for this entry level position to the plumbing and/or fuel gas trade(s) does not require references or the passage of any exam. [Plumbing]**Apprentice[s]** **Plumbers** *shall* work a minimum of 7500-hours (generally 4 years) to qualify for the *journeyman* plumber’s exam, see 114.2.1.[Gasfitting Apprentices *shall* work a minimum of 3750-hours (generally 2 years) to qualify for the journeyman gasfitter’s exams, see 114.4.1.]

118.6.2 Apprentice Gasfitter.

118.6.2.1[3.6.8] **Authorization for Work**[Apprentice Gasfitter]. An *Apprentice Gasfitter* license *shall* authorize the L[]icensee to assist in providing gasfitting services, under the direction and control of a [WSSC-licensed]**Master Gasfitter** or **Master Plumber/Gasfitter** on the **project** [job]site; or under a [WSSC-licensed]**Journeyman Gasfitter** or **Journeyman Plumber/Gasfitter** on the **project** [job]site who is under the direction and control of a [WSSC-licensed]**Master Gasfitter** or **Master Plumber/Gasfitter**.

118.6.2.2[4.1] **Qualifications**[Apprentice]. Qualification for this entry level position to the plumbing and/or fuel gas trade(s) does not require references or the passage of any exam. [Plumbing Apprentices *shall* work a minimum of 7500-hours (generally 4 years) to qualify for the journeyman plumber’s exam, see 114.2.1.][Gasfitting

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[Apprentice[s] **Gasfitters** shall work a minimum of 3750-hours (generally 2 years) to qualify for the *J*[j]ourneyman *G*[g]asfitter['s] exams, see 114.4.1.

118.6.3 Apprentice Plumber/Gasfitter.

118.6.3.1[3.6.9] **Authorization for Work**[Apprentice Plumber/Gasfitter]. An *Apprentice Plumber/Gasfitter* license shall authorize the *L*[l]icensee 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** [job]site; or under a [WSSC-licensed] *Journeyman Plumber/Gasfitter* on the **project** [job]site who is under the direction and control of a [WSSC-licensed] *Master Plumber/Gasfitter*.

118.6.3.2[4.1] **Qualifications**[Apprentice]. Qualification for this entry level position to the plumbing and/or fuel gas trade(s) does not require references or the passage of any exam. [Plumbing] *Apprentice[s] Plumbers/Gasfitters* shall work a minimum of 7500-hours (generally 4 years) to qualify for the *J*[j]ourneyman *P*[p]lumber['s] exam, see 114.2.1. [Gasfitting] *Apprentice[s] Plumbers/Gasfitters* shall work a minimum of 3750-hours (generally 2 years) to qualify for the *J*[j]ourneyman *G*[g]asfitter['s] exam[s], see 114.4.1.

118.6.4 Journeyman Plumber.

118.6.4.1[3.6.4] **Authorization for Work**[Journeyman Plumber]. A *Journeyman Plumber* license shall authorize the *L*[l]icensee to provide plumbing and sewer and drain cleaning services under the direction and control of a [WSSC-licensed] *Master Plumber* or *Master Plumber/Gasfitter*.

118[4].**2.4.2**. **Qualifications**[Journeyman Plumber]. In order to qualify for the *Journeyman Plumber* exam, applicants shall meet the following requirements:

118[4].**2.4.2.1** Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the plumbing trade as an apprentice (or equivalent work experience) under the direction and control of a [WSSC-licensed] *Master Plumber* or *Master Plumber/Gasfitter* for a minimum of 7500-hours and 4-years of work experience in the trades.

118[4].**2.4.2.2** Formal Training. Apprentices in the plumbing trade who graduate from *approved* plumbing training courses, conducted under the auspices of an *approved* trade association, utility, or educational institution, shall gain additional credit toward the working hours requirement. Up to 750-hours spent by the applicant in attending such courses shall count as double when applied toward the total required hours.

118[4].**2.4.2.3** **Cross-Connection**[Backflow] Certification. As a prerequisite for taking the *Journeyman Plumber*[ing] exam, applicants shall have [passed] a **Certificate of Completion for a 32-hour** [State-approved] **cross-connection and b**[B]ackflow **p**[P]revention **training** [Certification] **p**[P]rogram **instructed by an approved Cross-Connection and Backflow Prevention Certified Course Instructor**, or [passed] a **Certificate of Completion for a cross-connection and b**[B]ackflow **p**[P]revention **training** [Certification] **p**[P]rogram from another jurisdiction or state that is acceptable to the *Commission*, within 3-years prior to application.

118[4].**2.4.2.4**[5] References. For all prospective *L*[l]icensees, 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[4].**2.4.2.5**[4] Exam. See Section 118[4].7.

118.6.5 Journeyman Gasfitter.

118.6.5.1[3.6.5] **Authorization for Work**[Journeyman Gasfitter]. A *Journeyman Gasfitter* license shall authorize the *L*[l]icensee to provide gasfitting services, under the direction and control of a [WSSC-licensed] *Master Gasfitter* or *Master Plumber/Gasfitter*.

118.6.5.2[4.4] **Qualifications**[Journeyman Gasfitter]. In order to qualify for the *Journeyman Gasfitter* exam, applicants shall meet the following requirements:

118.6.5.2.1[4.4.1] Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the gasfitting trade as an apprentice (or equivalent work experience) under the direction and control of a [WSSC-licensed] *Master Gasfitter* or *Master Plumber/Gasfitter* for a minimum of 3750-hours and 2-years of work experience in the trades.

118.6.5.2.2[4.4.2] Formal Training. *Apprentices* in the gasfitting trade who graduate from *approved* gasfitting training courses, conducted under the auspices of an *approved* trade association, utility, or educational

institution, *shall* gain additional credit toward the working hours requirement. Up to 375-hours spent by the applicant in attending such courses *shall* count as double when applied toward the total required hours.

118.6.5.2.3[4.4.4] References. For all prospective *L[I]icensees*, 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.

118.6.5.2.4[4.4.3] Exam. See Section 118[4].7.

118.6.6 Journeyman Plumber/Gasfitter.

118.6.6.1[3.6.6] Authorization for Work[Journeyman Plumber/Gasfitter]. *Journeyman Plumber/Gasfitter* license *shall* authorize the *L[I]icensee* to provide plumbing and sewer and drain cleaning services, under the direction and control of a [WSSC-licensed]*Master Plumber* or *Master Plumber/Gasfitter*; and gasfitting services under the direction and control of a [WSSC-licensed]*Master Gasfitter* or *Master Plumber/Gasfitter*.

118.6.6.2 Qualifications. See Sections 118.9.2 and 118.10.2.

118.6.7 Master Plumber.

118.6.7.1[3.6.1] Authorization for Work[Master Plumber]. A *Master Plumber* license *shall* authorize the *L[I]icensee* to provide plumbing, and sewer and drain cleaning services.

118.6.7.2[4.3] Qualifications[Master Plumber]. In order to qualify for the *Master Plumber* exam, applicants *shall* meet the following requirements:

118.6.7.2.1[4.3.1] Work Experience. Applicants *shall* furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the plumbing trade as a registered *Journeyman Plumber* under the direction and control of a [WSSC-licensed]*Master Plumber* or *Master Plumber/Gasfitter* for a minimum of 3750-hours and 2-years of work experience in the trades.

118.6.7.2.2[4.3.2] Cross-Connection[Backflow] Certification. As a prerequisite for taking the *Master Plumbing* exam, applicants *shall* have [passed] a **Certificate of Completion for a 32-hour** [State-approved]**cross-connection and b[B]ackflow p[P]revention training** [Certification]p[P]rogram **instructed by an approved Cross-Connection and Backflow Prevention Certified Course Instructor**, or [passed] a **Certificate of Completion for a cross-connection and b[B]ackflow p[P]revention training** [Certification]p[P]rogram from another jurisdiction or state that is acceptable to the *Commission*, within 3-years prior to application.

118.6.7.2.3[4.3.4] References. For all prospective *L[I]icensees*, 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.

118.6.7.2.4[4.3.3] Exam. See Section 118[4].7.

118.6.8 Master Gasfitter.

118.6.8.1[3.6.2] Authorization for Work[Master Gasfitter]. A *Master Gasfitter* license *shall* authorize the *L[I]icensee* to provide gasfitting services.

118.6.8.6[4.5] Qualifications[Master Gasfitter]. In order to qualify for the *Master Gasfitter* examination, applicants *shall* meet the following requirements:

118.6.8.6.1[4.5.1] Work Experience. Applicants *shall* furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the gasfitting trade as a registered *Journeyman Gasfitter* under the direction and control of a [WSSC-licensed]*Master Gasfitter* or *Master Plumber/Gasfitter* for a minimum of 3750-hours and 2-years of work experience in the trades.

118.6.8.6.2[4.5.3] References. For all prospective *L[I]icensees*, 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.

118.6.8.6.3[4.5.2] Exam. See Section 118[4].7.

118.6.9 Master Plumber/Gasfitter.

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118.6.9.1[3.6.3] Authorization for Work[Master Plumber/Gasfitter]. A *Master Plumber/Gasfitter* license shall authorize the *L[]icensee* 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[3.6.11] Authorization for Work[Sewer and Drain Cleaner]. A *Master Plumber, Master Plumber/Gasfitter, or a Sewer and Drain Cleaner shall be authorized to provide sewer and drain* [The]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*, [or]*Master Plumber/Gasfitter*, or [of a WSSC-licensed]*Sewer and Drain Cleaner*.

Additional work shall be regulated and restricted as follows:

118.6.10.1.1[3.6.11.1] Fixture Removal Access. The *Sewer and Drain Cleaner* license shall allow the *L[]icensee* to remove and reset a plumbing fixture for access to the drainage system only when engaged in sewer and drain cleaning activity.

118.6.10.1.2[3.6.11.2] Plumbing Prohibited. A [WSSC-licensed]*Sewer and Drain Cleaner* shall be prohibited from installing, extending, or altering any plumbing; and shall be prohibited from engaging in the plumbing or gas[]fitting business.

118.6.10.1.3[3.6.11.3] Master Plumber. A [WSSC-licensed]*Master Plumber* or *Master Plumber/Gasfitter* shall not be required to hold a *Sewer and Drain Cleaner*[’s] license in order to engage in the sewer and drain cleaning business.

118.6.10.1.4[3.6.11.4] Institutional Employees. A *person* regularly employed by any *person*, firm or corporation, municipal or private, or by a municipal, state, or federal government agency within the *Sanitary District*[WSSD], and who in the course of such employment performs incidental sewer and drain cleaning work, shall not be required to become licensed as a [WSSC-licensed]*Sewer and Drain Cleaner* for these exclusive employment conditions.

118.6.10.2[4.6] Qualifications[Sewer and Drain Cleaner].

118.6.10.2.1[4.6.1] Work Experience. Applicants shall furnish satisfactory proof (W-2 forms, pay stubs, etc.) of work experience in the sewer and drain cleaning business under the direction and control of a [WSSC-licensed]*Sewer and Drain Cleaner, Master Plumber, or Master Plumber/Gasfitter* for a minimum of 3750-hours and 2-years of work experience in the trades. Proof of work experience shall be supported by written statements from one or more employers of the applicant.

118.6.10.2.1.1[4.6.2] Journeyman Plumber. A [WSSC-licensed]*Journeyman Plumber or Journeyman Plumber/Gasfitter* shall be considered a qualified applicant in lieu of the work experience required in Section 118.6.10.2.1[4.6.1].

118.6.10.2.2[4.6.3] References. For all prospective *L[]icensees*, 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.

118.6.11[3.7] Cross-Connection[Backflow] Technician.

118.6.11.1[3.7.3] Authorization for Work[Certified Technician]. Only those individuals licensed with the *Commission* as a **Cross-Connection**[Backflow] Technician shall be authorized to certify the installation and testing of mechanical *cross-connection control assemblies*[devices].

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

118.6.11.2.2[3.7.2] Cross-Connection Certification[Training]. All **Cross-Connection**[Backflow] Technician applicants shall have[pass] a **Certificate of Completion for a** [State-approved]32-hour c[C]ross- c[C]onnection and[/] b[B]ackflow p[P]revention training program instructed by an **approved Cross-Connection and Backflow Prevention Certified Course Instructor**, or have[pass] a **Certificate of Completion for a 32-hour c[C]ross-**

c[C]onnection and[/] b[B]ackflow p[P]revention training program from another jurisdiction or state that is acceptable to the *Commission*.

118.6.11.2.3[3.7.4] Rec[-C]ertification Limit. A **Cross-Connection**[Backflow] *Technician* license shall be valid for a period of 3-years. Individuals shall be required to have [complete] a **Certificate of Completion for an** [State-approved] 8-hour re-certification 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 [State-approved] c[C]ross- c[C]onnection and[/] b[B]ackflow p[P]revention training program **that meets the requirements of Section 119.**

118.6.12[3.6.10] Non-Licensed Worker. A non-licensed worker, such as a [“]helper[“] or [“]laborer,[“] shall not provide or assist in providing plumbing or gasfitting work. A non-licensed *person* shall only perform classes of work that support plumbing and gasfitting work. Examples include, but shall not be limited to: Excavating, backfilling, cutting and drilling of the structure, carrying materials and equipment, cleaning up, painting, patching, and similar classes of support work.

118.6.13[3.6.12] Minor Work Not Requiring a Licensee. An individual shall not be required to be a L[l]icensee to perform minor plumbing and gas appliance maintenance services. Minor plumbing and gas appliance maintenance services shall be defined as Exempt Work, as cited Section 106.2.3[,] – “Plumbing Maintenance”, and Section 106.2.4 – “Gas Appliance Maintenance”.

118[4].7 Exam.

118[4].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.

118.3[4].7.2 Fee. Fees for the exam are applied according to the schedule of f[F]ees and charges approved by the *Commission* at time of exam application. Failure to pay required fees shall render an application invalid.

118.3[4].7.3 Passing Score. A passing score of no less than 70% shall constitute successful completion of the exam.

118.3[4].7.4 Ree[-E]xamination. Applicants shall be permitted to re[-]take the exam every 30 days until a passing score has been obtained.

118[3].8 Insurance Requirements and Warranty.

118[3].8.1 Coverage Parameters.

118[3].8.1.1 Proof of Coverage. Prior to registration as the [Master] L[l]icensee of R[r]ecord, or *Sewer and Drain Cleaner* L[l]icensee of R[r]ecord, for a firm or corporation, the L[l]icensee 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**[WSSC] listed as the certificate holder.

118[3].8.1.2 Person Representing a Public Agency or Public Service Corporation. In cases where a L[l]icensee is representing a public agency or public service corporation, the L[l]icensee shall provide evidence of insurance coverage or financial responsibility and statements of self-insurance on each required coverage.

118[3].8.1.3 Minimum Coverage. The minimum insurance requirement shall be a Commercial General Liability policy with a combined aggregate limit for bodily injury and property damage of \$1,000,000.

118[3].8.2 Premium Obligations.

118[3].8.2.1 Insurance Company. The insurance company issuing policies of insurance shall be licensed for business in the State of Maryland.

118[3].8.2.2 Licensee Responsibility. The L[l]icensee of record shall be responsible for submitting an updated certificate of insurance prior to the policy expiration date. Failure to do so shall result in lapse of registration.

118[3].8.3 Insurance Cancellations. A minimum of 30 days written notification to **the Commission**[WSSC] shall be given by the insurer of any alteration, change, or cancellation affecting any certificates or policies of insurance as required under this *Code*. Notification shall be sent via registered or certified mail, or shall be hand-carried to the *Commission*.

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118[3].8.4 Insurance Conditions.

118[3].8.4.1 Scope. All aforementioned policies and certificates of insurance *shall* be obtained prior to the issuance of a **Commission**[WSSC] license or permit.

118[3].8.4.2 Purpose. Insurance requirements set forth herein *shall* satisfy part of the requirements for the issuance of a license to the **L**[l]icensee of **R**[r]ecord for a firm or corporation.

118[3].8.4.3 Protection. Insurance requirements *shall* not be construed by anyone to indicate that such requirements are sufficient or adequate under all circumstances.

118[3].8.5 Warranty. On all work requiring a permit, the **L**[l]icensee *shall* warrant the work as cited below. Contracts between a **L**[l]icensee, individual, or company, and the owner, owner's agent, or proprietor, *shall* define responsibilities between these parties and *shall* not involve the **Commission**.

118.4[3.8].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.

118.4[3.8].5.2 All Other Work. All other work *shall* be warranted for 1-year from date of FINAL inspection.

118.4[3.8].5.3 Exception. Where the owner or owner's agent obstructs or refuses to allow inspection, the warranty requirements *shall* not apply to the work subject to inspection, provided the **L**[l]icensee has notified the **Commission** in accordance with Section 106.7.2[9.3].3.

118.9 Registration.

118.9.1[3.9] Registration Procedure.

118.9.1[3.9].1 Registration. Applicants *shall* register at the **Commission** after trade and examination qualifications are satisfied per Sections 118[14 and 115], as applicable. Required work experience as a *Journeyman* begins at the time of registration.

118.9.1[3.9].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[3.9].3 Referral Evidence. For all prospective **L**[l]icensees, 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[3.9].4 Four-Year Registration, Master License by **Commission**[WSSC] Exam. *Master* license applicants passing the **Commission**[WSSC] exam *shall* renew their license every 4-years.

118.9.1[3.9].5 Two-Year Registration, Journeyman License. *Journeyman* license applicants *shall* renew their license every 2-years.

118.9.1[3.9].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. See Sections 118[3].6.1[7], 118.6.2, and [118[3].6.3[9] for the scope of work allowed to be performed and oversight requirements.

118.9.1[3.9].7 Two-Year Registration, Master License by Reciprocity. *Master Plumbers, Master Gasfitters, and Master Plumber/Gasfitters* registering under the reciprocity provisions of Section 115 *shall* be required to renew their **Commission**[WSSC] license every 2-years. Expiration will be set to occur one(1) month after expiration of the license of origin.

118.9.1[3.9].8 Two-Year Registration, Sewer and Drain Cleaner License. **Sewer and Drain C**[c]leaners *shall* renew their license every 2-years.

118.9.2[3.10] Registration Card. *Licensees* *shall* be required to carry their registration card when performing plumbing, gas[]fitting, or sewer and drain cleaning work. The registration card and, if requested by the *Code Official*, a picture identification card, *shall* be presented upon request to the *Code Official*. If a **Commission**[WSSC] registration card is lost or destroyed, the **L**[l]icensee *shall* apply for a new registration card within 5 calendar days.

118.9.3[3.11] Change of Business or Licensee Status. If a **L**[l]icensee of record changes their business affiliation, goes out of business, or is deceased, or if the firm or corporation for which they are the **L**[l]icensee of **R**[r]ecord changes its name, the respective registration as **L**[l]icensee of **R**[r]ecord *shall* immediately become null and void. The **L**[l]icensee

(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[3.12] Lapse of Registration. Lapse of registration *shall* render a **Commission**[WSSC] license invalid. No work regulated by this *Code* *shall* proceed until registration is current.

118.9.4[3.12].1 Plumber or Gasfitter. If a **L**[**I**]licensee fails to renew their license within 4-years after the license expires, or if a **L**[**I**]licensee applicant who has passed the *Commission* exam fails to apply for registration within 4-years of the date of qualification, the **L**[**I**]licensee or applicant *shall* be required to re-qualify in accordance with the provisions set forth in Section[s] 118[3 and 114 of this Code]. Otherwise, only the appropriate registration fee *shall* be required if all other requirements of this *Code* are shown to be satisfied.

118.9.4[3.12].2 Sewer and Drain Cleaner. If the **L**[**I**]licensee fails to renew their license within 2 years after the license expires, the **L**[**I**]licensee *shall* be required to re-qualify in accordance with the provisions set forth in Section[s] 118[3 and 114 of this Code]. Otherwise, only the appropriate registration fee *shall* be required if all other requirements of this *Code* are shown to be satisfied.

118.10[3.13] License Display and Advertisement Requirements.

118.10[3.13].1 Vehicle Displays. Each company-owned vehicle utilized to provide plumbing, fuel gas, and/or sewer and drain cleaning services *shall* display information as follows:

118.10[3.13].1.1 Name. Company or firm name.

118.10[3.13].1.2 Number. WSSC registration/license number of the **L**[**I**]licensee of **R**[**r**]ecord (e.g. WSSC #12345).

118.10[3.13].1.3 Both Sides. Required information *shall* appear on both sides of the vehicle.

118.10[3.13].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[3.14] Licensee Contact Information. **L**[**I**]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 WSSC 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).**

[113.14.1 Bad Contact Information Fee. Where incorrect or obsolete information causes WSSC staff undue inefficiencies in routine distribution of information or inquiry of the licensee regarding licensing, permit, plan review, inspection, violations or other activities, the license shall be subject to the published Bad Contact Information Fee at the WSSC Code Official’s discretion.]

118.12 Reciprocity of Licenses.

118.12[5].1 Master Plumber or Master Gasfitter, With License from a Jurisdiction Having Reciprocity with WSSC. The *Commission* *shall* reciprocate at the *Master L*[**I**]licensee level with a jurisdiction where the applicant has passed a plumbing exam and/or gasfitting exam, acceptable to the *Code Official*. Applicants *shall* qualify for registration as a [WSSC-licensed]*Master Plumber* or *Master Gasfitter* upon satisfaction of or pursuant to the following conditions:

118.12[5].1.1 Current License. Present a current Master Plumber or Master Gasfitter license issued by the reciprocating jurisdiction or licensing agency.

118.12[5].1.2 Good Standing. Present a letter of good standing from the reciprocating jurisdiction or licensing agency.

118.12[5].1.3 Cross-Connection Training[Backflow Certification]. *Master Plumber* applicants *shall* have [passed] a **Certificate of Completion for a 32-hour** [State-approved]**cross-connection and b**[**B**]ackflow **p**[**P**]revention **training**[Certification] **p**[**P**]rogram **instructed by an approved Cross-Connection and Backflow Prevention Certified Course Instructor**, or have[passed] a **certificate of completion for a cross-connection and b**[**B**]ackflow **p**[**P**]revention **training**[Certification] **p**[**P**]rogram from another jurisdiction or state that is acceptable to the *Commission*, within 3-years prior to application.

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118.12[5].1.4 Exam Verification. *Master Gasfitter* applicants *shall* present a validated **Commission**[WSSC] exam verification form, from the reciprocating jurisdiction or licensing agency, verifying that the applicant has passed a separate *Master Gasfitter* exam.

118.12[5].1.5 License and Registration. Satisfy the requirements set forth in Sections **118.1[3]** and **118.9**.

118.12[5].1.6 License Invalidation. A **Commission**[WSSC] license issued pursuant to the provisions set forth herein *shall* become null and void if the applicant's license from the jurisdiction or licensing agency from which it was reciprocated becomes revoked, suspended, lapsed, or otherwise invalidated.

118.12[5].2 Master Plumber or Master Gasfitter, With License from a Jurisdiction Not Having Reciprocity with WSSC. Applicants *shall* qualify for the exam as a [WSSC-licensed] *Master Plumber* or *Master Gasfitter* upon satisfaction of the following conditions:

118.12[5].2.1 Current License. Present a current *Master Plumber* or *Master Gasfitter* license issued by the jurisdiction or licensing agency.

118.12[5].2.2 Good Standing. Present a letter of good standing from the jurisdiction or licensing agency.

118.12[5].2.3 **Cross-Connection Training**[Backflow Certification]. *Master Plumber* applicants *shall* have [passed] a **Certificate of Completion for a 32-hour** [State-approved] **cross-connection and b[B]ackflow p[P]revention training**[Certification] **p[P]rogram instructed by an approved Cross-Connection and Backflow Prevention Certified Course Instructor**, or have[passed] a **certificate of completion for a cross-connection and b[B]ackflow p[P]revention training**[Certification] **p[P]rogram** from another jurisdiction or state that is acceptable to the *Commission*, within 3-years prior to application.

118.12[5].2.4 License and Registration. Satisfy the requirements set forth in Sections **118.1[3]** and **118.9**.

118.12[5].2.5 References. For all prospective **L[l]icensees**, 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[5].3 Journeyman Plumber or Journeyman Gasfitter, With License from a Jurisdiction Having Reciprocity with WSSC. The *Commission* *shall* reciprocate at the *Journeyman L[l]icensee* level with a jurisdiction where the applicant has passed a plumbing exam and/or gas[]fitting exam, acceptable to the *Code Official*. Applicants *shall* qualify for registration as a [WSSC-licensed] *Journeyman Plumber* or *Journeyman Gasfitter* upon satisfaction of or pursuant to the following conditions:

118.12[5].3.1 Current License. Present a current *Journeyman Plumber* or *Journeyman Gasfitter* license issued by the reciprocating jurisdiction or licensing agency.

118.12[5].3.2 Good Standing. Present a letter of good standing from the reciprocating jurisdiction or licensing agency.

118.12[5].3.3 **Cross-Connection Training**[Backflow Certification]. *Journeyman Plumber* applicants *shall* have [passed] a **Certificate of Completion for a 32-hour** [State-approved] **cross-connection and b[B]ackflow p[P]revention training**[Certification] **p[P]rogram instructed by an approved Cross-Connection and Backflow Prevention Certified Course Instructor**, or have[passed] a **certificate of completion for a cross-connection and b[B]ackflow p[P]revention training**[Certification] **p[P]rogram** from another jurisdiction or state that is acceptable to the *Commission*, within 3 years prior to application.

118.12[5].3.4 Exam Verification. *Journeyman Gasfitter* applicants *shall* present a validated **Commission**[WSSC] exam verification form, from the reciprocating jurisdiction or licensing agency, verifying that the applicant has passed a separate *Journeyman Gasfitter* exam.

118.12[5].3.5 License and Registration. Satisfy the requirements set forth in Sections **118.1[3]** and **118.9**.

118.12[5].3.6 License Invalidation. A **Commission**[WSSC] license issued pursuant to the provisions set forth herein *shall* become null and void if the applicant's license from the jurisdiction or licensing agency from which it was reciprocated becomes revoked, suspended, lapsed, or otherwise invalidated.

118.12[5].4 Journeyman Plumber or Journeyman Gasfitter, With License from a Jurisdiction Not Having Reciprocity with WSSC. Applicants *shall* qualify for the exam as a [WSSC-licensed] *Journeyman Plumber* or *Journeyman Gasfitter* upon satisfaction of the following conditions:

118.12[5].4.1 Current License. Present a current *Journeyman Plumber* or *Journeyman Gasfitter* license issued by the jurisdiction or licensing agency.

118.12[5].4.2 Good Standing. Present a letter of good standing from the jurisdiction or licensing agency.

118.12[5].4.3 **Cross-Connection Training**[Backflow Certification]. *Journeyman Plumber* applicants *shall* have [passed]a]**Certificate of Completion for a 32-hour** [State-approved]**cross-connection and b**[B]ackflow p[P]revention training[Certification] p[P]rogram **instructed by an *approved Cross-Connection and Backflow Prevention Certified Course Instructor***, or have[passed] a **certificate of completion for a cross-connection and b**[B]ackflow p[P]revention training[Certification] p[P]rogram from another jurisdiction or state that is acceptable to the *Commission*, within 3 years prior to application.

118.12[5].4.4 License and Registration. Satisfy the requirements set forth in Sections 118.1[3] and 118.9.

118.12[5].4.5 References. For all prospective L[ic]ensees, 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:

119.1.2 Certified Instructor.

119.1.2.1 Qualifications. In order to qualify to be *Certified Instructor*, individual *shall* have a certificate of competition from an instructional certification program sponsored by an organization recognized by the Chief Code Official, including, but not limited to, 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, but not limited to, TREEO, ASSE, and USC FCCC&HR, which shall include completion of instructor recertification training or any other institution specific requirement as necessary to maintain a current certification.

119.1.3 Course Materials. *Shall* include a cross connection/*backflow prevention* training manual prepared by one of the following, TREEO, ASSE, or FCCCHR.

119.1.4 Course Curriculum. At a minimum, curriculum *shall* include adequate training in the following:

1. Introduction to *backflow prevention*
2. Hazards of cross connection/*backflow*
3. Laws of *backflow prevention*
4. Responsibilities of certified technician
5. The methods, mechanisms, and installation techniques for the prevention of *backflow*
6. Field testing
7. Field reports
8. Troubleshooting
9. Repair of a *backflow* occurrence
10. Recertification

119.1.5 Facility. The program *shall* be conducted at a facility that provides adequate space and a suitable training environment.

119.1.5.1 Inspection Accessibility. Facility *shall* be accessible for inspection by a Code Official during normal business and class hours without prior notice.

119.1.5.2 Adequate Apparatus. Facility *shall* be equipped with adequate apparatus necessary for adequate training in the opinion of the Chief Code Official, including,

1. A test kit.
2. 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.
3. Mechanical cross connection control assembly set up for field testing.

SCOPE AND ADMINISTRATION

119.2 Certificate. The *Certified Instructor shall* issue a certificate of competition to an individual who successfully completes the program with the following,

1. Name and signature of the *Certified Instructor*.
2. Name of the *certified cross-connection technician* to whom it is issued.
3. A statement that the course constitutes a 32-hour cross connection/*backflow prevention* certification program approved by the Commission(WSSC Water).
4. The date of completion of the certification program.
5. 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 Instructor *shall* offer a recertification program 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 Public Utilities Article, Annotated Code of Maryland, the definitions set forth below in **Section** [§]202 apply to the provisions of this *Code*.

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

201.2 Industrial and Special Waste. In addition to the definitions set forth in this Chapter 2 of this *Code*, the definitions set forth in **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. An acronym for the National Sanitation Foundation

OSHA. Occupational Safety and Health Administration

DEFINITIONS

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

SUS. Site Utility System

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[2] ADDITIONAL DEFINITIONS

ABUT. Touching or being adjacent to something along one side.

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

AIR GAP (Drainage System). 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 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.

AIR GAP (Water Distribution System). 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. 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).

[ANSI. American National Standards Institute.]

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

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

APPRENTICE. The holder of a *Commission* issued license for an Apprentice Plumber, Apprentice Gasfitter, or Apprentice Plumber/Gasfitter.

APPRENTICE PLUMBER. The holder of a *Commission* issued license for an Apprentice Plumber, see Section 118.2.1 for authorization of work and qualifications.

APPRENTICE GASFITTER. The holder of a *Commission* issued license for an Apprentice Gasfitter, see Section 118.2.2 for authorization of work and qualifications.

APPRENTICE PLUMBER/GASFITTER. The holder of a *Commission* issued license for an Apprentice Plumber/Gas Fitter, see Section 118.2.3 for authorization of work and qualifications.

[ASSE. American Society of Sanitary Engineering.]

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

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

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

[AWWA. American Water Works Association.]

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

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

BACKFLOW PREVENTION. Prohibition of the backflow of water or other substances into potable water supply system by an assembly, device, or method.

BACKFLOW PREVENTION ASSEMBLY. See *assembly*.

BACKFLOW PREVENTION DEVICE. See *device*.

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

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

BOARD. The WSSC Plumbing and Fuel Gas Board. Duties and voting membership of Board can be found in Section 117.

BUILDING SEWER. For purposes of this *Code* and inspection limits, a *Building Sewer* begins at the end of the Building Drain and continues to the point of connection at the ***Commission*[WSSC] *Service Connection, Right-of-Way Service Connection*** or inlet to a private sewage disposal system (septic tank) and does include appurtenances such as a *Grease* or *Sand/Oil* Interceptor or sewage lift/pump station. However, for a standard *S[s]ite U[-u]tility System [(SUS)]*, the plumber's responsibility will end at and include the final connection to the SUS as shown on the *approved* SUS plan. Standard SUS sewer piping *shall* be installed and inspected under provisions set forth on the *approved* SUS plan and within the Development Services Code. A *Minor Site Utility System[s]* sewer *shall* be recognized as a *Building Sewer* and *shall* be installed under a plumbing permit and this *Code*. County and State Health and Environmental Officials regulate private sewage disposal systems.

BUILDING WATER SERVICE. For purposes of this *Code* and inspection limits, a *Building Water Service* begins at the point of connection to the ***Commission*[WSSC] *Service Connection*** at the property line or edge of Right-of-Way and continues to the main Water Service Valve. However, for a standard *S[s]ite U[-u]tility System[(SUS)]*, the plumber's responsibility will begin at end of the SUS as shown on the *approved* SUS plan. Standard SUS water service piping *shall* be installed and inspected under provisions set forth on the *approved* SUS plan and within the Development Services Code. A *Minor Site Utility Systems* water service *shall* be recognized as a *Building Water Service* and *shall* be installed under a plumbing permit and this *Code*. 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 [WSSC] plumbing permit or inspection; where the same scope of work is installed by a registered plumber, it *shall* be considered a *Building Water Service* and *shall* be installed and inspected under a [WSSC] plumbing permit. County and State Health and Environmental Officials regulate private wells and well drilling.

CHIEF CODE OFFICIAL. The supervisor or higher level authority, of the "*Code Official*."

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

CODE. The WSSC Plumbing and Fuel Gas Code.

DEFINITIONS

CODE OFFICIAL. *Commission* employees charged to administer and enforce any part or all of this *Code*. Examples include, but not limited to: inspectors, investigators, plans reviewers, support specialist, permit agents, *meter* personnel, **Commission**[WSSC] Police, Utility Services personnel and any related supervisors.

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

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

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

COOKING APPLIANCE. Is any appliance, regardless of heat source, capable of contributing to *grease*-[]*laden* wastewater discharges from an **FSE**[food service establishment] such as, but not limited to, the following: stove top, range, oven, grill, fryer, rotisserie, wok, kettle, braising pan.

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

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

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

CROSS-CONNECTION TECHNICIAN. **The holder of a Commission issued license for a Cross-Connection Technician, see Section 118.2.11 for authorization of work and qualifications.**[A WSSC-licensed *Master Plumber*, *Master Plumber/Gasfitter*, *Journeyman Plumber* or *Journeyman Plumber/Gasfitter* who is licensed by WSSC for installing, servicing and testing of *backflow assemblies*.]

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

DEGREE OF HAZARD. An actual or potential threat of contamination **or pollution, classified as either High Hazard or Low Hazard**,[of a physical or toxic nature to the public] **to a** potable water system[or the owner's potable water system].

DEVICE. A **mechanical non-testable apparatus which is designed to protect against backflow**[non-testable backflow preventer].

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

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

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

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

EPERMITTING. The Commission's Electronic Permitting Application System.

EPLAN REVIEW. The Commission's electronic plan review system.

FAT. Fat shall refer to fats, oils, and grease of organic (animal or plant) origin, see FOG. [Organic polar compounds derived from vegetable/plant or animal sources that are composed of long chain triglycerides. The term fat shall include all types and forms of fat derived from any source. The term shall be used interchangeably with oil and grease.]

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

FLOW-BASED GREASE INTERCEPTOR (FBGI). *Grease Interceptor with design based on flow rate, with two subcategories; Mechanical Flow-Based Grease Interceptor and Passive Flow-Based Grease Interceptor. Flow-Based Grease Interceptors shall conform to PDI Standard G101, ASME A112.14.3 or ASME A112.14.4. Sizing is based on listed flow rate and Section 1003 of the Code. Also referred to as a hydro-mechanical grease interceptor.* [Grease interceptor design based on flow rate with a specific requirement for upstream sink tail piece flow restriction (for indirectly connected fixtures) and a flow control device. Solids screens or strainers with a maximum screen size of 1/8" perforations must be provided to capture the solids discharge from dish/pot washing sinks and floor sinks to avoid overloading the grease interceptor with solids. Sizing is based on the reasonable maximum flow anticipated from the fixtures connected to the grease interceptor based on the WSSC Tail Piece Flow Rate Table (new) for indirect connections, and IPC Chapter 10/ASME A112.14.3 for direct connections. Minimum size = 7 gallons per minute. Flow-based grease interceptors shall conform to ASME A112.14.3 or ASME A112.14.4 at the calculated flow rate. The following flow-based grease interceptors are differentiated based on whether or not there are mechanical grease removal features:]

FOG. An acronym for *F*[f]ats, *O*[o]ils, and *G*[g]rease. [FOG can be] **of organic, animal[/vegetable] or plant, origin.** [or mineral/petroleum 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 (FSE). Establishments where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars;[,] or any other commercial operation that has the potential to discharge *grease-[]laden* wastewater.

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

GREASE. Grease shall refer to 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, examples include heating oil, and motor and machine oil. [Examples of Compounds derived from vegetable/plant or animal sources that are composed of long chain triglycerides. The term grease shall include all types and forms of grease derived from any source. The term shall be used interchangeably with fat and oil.]

GREASE-LADEN. See FOG.

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

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

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

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

GRINDER PUMP. A sewage pump that macerates waste during the pumping operation.

DEFINITIONS

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

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

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

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

INTERNATIONAL FUEL GAS CODE (IFGC). The 2021 edition of the International Fuel Gas Code, 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.

INTERNATIONAL PLUMBING CODE (IPC). The 2021 edition of the International Plumbing Code, 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.

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

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

JOURNEYMAN. The holder of a *Commission* issued license for a Journeyman Plumber, Journeyman Gasfitter, or Journeyman Plumber/Gasfitter.

JOURNEYMAN PLUMBER. The holder of a *Commission* issued license for a Journeyman Plumber, see Section 118.2.4 for authorization of work and qualifications.

JOURNEYMAN GASFITTER. The holder of a *Commission* issued license for a Journeyman Gasfitter, see Section 118.2.5 for authorization of work and qualifications.

JOURNEYMAN PLUMBER/GASFITTER. The holder of a *Commission* issued license for a Journeyman Plumber/Gasfitter, see Section 118.2.6 for authorization of work and qualifications.

LICENSEE. The holder of a *Commission* issued license.

LICENSEE OF RECORD. See *Principal Licensee*.

LOW HAZARD[(non-health hazard)]. A *cross-connection* or potential *cross-connection connection* **that may result in pollution. See IPC for definition of pollution.**[involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the potable water supply.]

LOW LEAD CONTENT. Low lead content means:

[1. Containing not more than 0.2% lead for solder and flux;]

[2. Containing not more than 8% lead by dry weight for pipes and pipe fittings;]

[3.]

1. Containing a percentage of lead for plumbing fittings and fixtures that is in compliance with standards established under Section 1417 of the federal Safe Drinking Water Act (42 USC Section 300g-6)[; and]

a. Not containing more than 0.2 percent lead when used with respect to solder and flux; and

b. Not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.

2. NSF 61 certified

- [4. Containing not more than a weighted average lead content of 0.25% for the wetted surfaces of a pipe, pipe fitting, plumbing fitting, or fixture intended to dispense water for human consumption through drinking or cooking; or Meeting NSF standards 372 and 61-Annex G.]

LOW PRESSURE SEWER SYSTEM. Formerly known as a Grinder System. 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*. LPSSs are public systems and usually have more than one customer.

PRINCIPAL LICENSEE. Each particular firm or corporation that performs plumbing, gasfitting, or sewer and drain cleaning in the *Sanitary District shall* register a single individual who shall be considered the Principal Licensee, see Section 118.2. Also referred to as *Licensee of Record*.

MASTER. When referring to an individual, the holder of a *Commission* issued license for a Master Plumber, Master Gasfitter, or Master Plumber/Gasfitter.

MASTER PLUMBER. The holder of a *Commission* issued license for a Master Plumber, see Section 118.2.7 for authorization of work and qualifications.

MASTER GASFITTER. The holder of a *Commission* issued license for a Master Gasfitter, see Section 118.2.8 for authorization of work and qualifications.

MASTER PLUMBER/GASFITTER. The holder of a *Commission* issued license for a Master Plumber/Gasfitter, see Section 118.2.9 for authorization of work and qualifications.

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

MECHANICAL FLOW-BASED GREASE INTERCEPTOR. *Flow-Based Grease interceptor* [design]with **integral** mechanical **FOG**[grease] removal features. [Typically - installed indoors under a sink. Cleaned and maintained by the FSE, pumping contractors, or specialty maintenance contractors.] **Also**[Sometimes -] referred to as a **G**[g]rease **R**[r]emoval [(or recovery)] **D**[d]evice.

METER. A device used to measure water or wastewater for determining billing or other accountable purpose.

DETECTOR[etector Check] **METER.** Measures a portion of water used in a fire **sprinkler**[protection] system (**also referred to as**[aka] **tattle tale meter**). Typically, current **detector check**[DC] **meters** are installed within the by-pass arrangement of a privately owned and maintained ASSE 1048 or 1047 *backflow prevention assembly*.

DOMESTIC[omestic] **METER** Measures all water use/consumption, other than **fire sprinkler system**[protection].

EFFLUENT[ffluent] **METER.** Measures actual wastewater flow; attached to or located within the wastewater flow stream; very rarely employed due to accuracy concerns; special permission required (**also referred to as**[aka] **totalizer meter**).

FIRE HYDRANT METER. Connected to a fire hydrant, measures water use for temporary or seasonal applications.

MASTER[FM] **METER.** Meters all domestic and fire sprinkler system flow, typically installed at or near property line for non-residential projects, FM Certified. [An acronym meaning Factory Mutual, which indicates *approved* for fire protection systems; typically installed on commercial/industrial uses at or near the property line; *meters* all domestic and fire protection flows (aka Master Meter).]

PRIVATE[rivate] **METER.** Measures increments of overall flow; typically owned, maintained and read by the property owner or manager (**also referred to as**[aka] **landlord meter**).

SEWER[ewer]-**ONLY**[nly] **METER.** Measures domestic water consumption, originating from a source other than a WSSC water service line, for purposes of establishing sewer billing charges (e.g. well water, other municipal source, or a *water re-use system* such as rainwater harvesting).

SUB[ub]-**METER**[meter]. A secondary *meter* installed in series and downstream of a [main] *domestic meter* or *master*[FM] *meter* to determine water consumption by various systems. Typically purposed **to determine credit**[as a sewer deduct meter] (e.g. irrigation, cooling tower, etc.) or a proportional metering device to determine a portion of overall domestic use (e.g. *mixed-use buildings* or a process such as laundering).

WATER[ater]-**ONLY**[nly] **METER.** Sometimes referred to as a "Hose Bibb Only" *meter*; measures flows in multi-unit buildings with a dedicated branch to an outdoor only water-only use (e.g. hose bibb, irrigation). Also, *may* serve an entire property that is not connected to a *Commission*[WSSC] sewer service line.

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MINOR SITE UTILITY (MSU). At the discretion of the Commission, site-utility designs of less complexity and or developed length may be waived from the site-utility document review process as outlined in the WSSC Development Services Code and may be designated as a 'Minor Site Utility' system.

MISCIBILITY. 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. Use of abusive language, threats, mischievous or criminal acts, directed toward the public while providing services, or toward a *Code Official* while performing their official duties. [See Sections 108.4.7 and 108.8[6].1.3.]

MIXED-USE BUILDING. A building with both residential and commercial units.

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

NON-RESIDENTIAL BUILDING or OCCUPANCY. The classification non-residential *shall* apply to any building type or occupancy that does not meet the parameters of a *Group R-3 occupancy* as set forth in the International Building Code. *Group R-3 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.

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

[NSF. An acronym for the National Sanitation Foundation.]

OIL. Oil shall 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. [Organic polar compounds derived from vegetable/plant or animal sources that are composed of long chain triglycerides. The term oil shall include all types and forms of oil derived from any source. The term shall be used interchangeably with fat and grease.]

OIL AND SAND SEPERATOR. A plumbing appurtenance designed to remove solids, sand, and grit; and oil and grease of petrochemical origin from wastewater.

PASSIVE FLOW-BASED GREASE INTERCEPTOR (FBGI). *Flow-Based Grease Interceptor* [design]without [no]integral mechanical *FOG*[grease] removal features. [Typically - installed indoors under a sink or outdoors in-ground. Cleaned by the *FSE* or pumping contractors. Sometimes -referred to as a hydro-mechanical grease interceptor (when designed and installed with a flow control device with air intake) or a grease trap (when designed and installed with a flow control device without air intake).]

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

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

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

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

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

REBUILD or REBUILT (assembly). Removal and replacement of all or selected assembly components.

REBUILD or REBUILT (device). Removal and replacement of all internal device components.

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

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

REGISTERED DESIGN PROFESSIONAL. Licensed Professional Engineer under the laws of the State of Maryland.

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

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

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

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

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

SEWER AND DRAIN CLEANER. The holder of a *Commission* issued license for a Sewer and Drain Cleaner, see Section 118.2.10 for authorization of work and qualifications.

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

SHARED SITE UTILITY SYSTEM AGREEMENT. A recorded arrangement approved by WSSC 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 (SU). A system of privately owned water and/or sewer mains located on private property. These systems are also operated and maintained by the property owner. All Site Utility projects within the WSSD shall be administered, designed, constructed and inspected through the Site Utility process described in the WSSC Development Services Code.

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

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

STOPPAGE. A clog or obstruction in a *building sewer* or drain that cannot be readily relieved by a *Sewer and Drain Cleaner*.

HARD STOPPAGE. 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 but are not limited to: Root intrusions, broken or misaligned pipe, a solidified mass that cannot be dislodged, and permanent objects in the pipe.

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

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

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

VENTILATED SPACE. A space within a building that allows air or gases to freely exchange with any unconfined space or outdoors. Building structural voids such as chases, wall cavities, and similar dead spaces *shall* not be utilized as a ventilated space. The air exchange opening *shall* be adequately sized to accommodate the equipment and appurtenances within the space but in no case less than [seven(7)] square inches (**4 516 square mm**) and where no dimension is smaller than [three(3)] inches (**76 mm**).

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

VOLUME-BASED GREASE INTERCEPTOR (VBGI). *Grease interceptor* design based on volume and retention time.[with no specific requirement for upstream sink tail piece flow restrictions or a flow control device.] **Sizing and design are based on Section 1003 of the Code and Commission Specifications.**[Sizing is based on the number of drainage fixture units connected to the grease interceptor based on the 2006 Uniform Plumbing Code (UPC) Table 10-3. Minimum size = 300 gallons. Typically - installed outdoors and underground. Typically - cleaned by pumping contractors. Sometimes - referred to as a gravity grease interceptor or outdoor grease interceptor.]

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

WEIGHTED AVERAGE LEAD CONTENT. Weighted average lead content means:

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

WSSC. Acronym for the Washington Suburban Sanitary Commission, **see Commission.**

WSSC WATER. Brand name for the Washington Suburban Sanitary Commission, **see Commission.**

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

CHAPTER 3 ADOPTION OF INTERNATIONAL PLUMBING CODE

SECTION 301 GENERAL

301.1 Adoption. The **2021**[2018] edition of the *International Plumbing Code* ([hereinafter “IPC[”]), published by the International Code Council, Inc., is hereby adopted and incorporated herein by reference, and has the same force and effect as though fully set forth in this *Code*, subject to the additions, deletions or other modifications set forth in this Chapter as amendments thereto.

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

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

SECTION 302 AMENDMENTS TO THE INTERNATIONAL PLUMBING CODE

302.1 Amendment of IPC CHAPTER 1, ADMINISTRATION. IPC Chapter 1 –[, “Administration”, is hereby DELETED in its entirety.

302.2 Amendment of IPC CHAPTER 2, DEFINITIONS [Reserved.]

302.2.1 IPC Section 202, Additional Definitions, is hereby AMENDED by DELETING and REPLACING provisions thereto, specifying definition of PRIVATE, all to read as follows:

PRIVATE. In the classification of plumbing fixtures, “*private*” 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.

302.2.2 IPC Section 202, Additional Definitions, is hereby AMENDED by DELETING and REPLACING provisions thereto, specifying definition of PUBLIC OR PUBLIC UTILIZATION, all to read as follows:

PUBLIC OR PUBLIC UTILIZATION. In the classification of plumbing fixtures, “*public*” 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.

302.2.3 IPC Section 202, Additional Definitions, is hereby AMENDED by DELETING and REPLACING provisions thereto, specifying definition of WATER DISPENSER, all to read as follows:

WATER DISPENSER. 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.

302.3 Amendment of IPC CHAPTER 3, GENERAL REGULATIONS

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

(IPC as amended)

305.4 Freezing. Water, soil and waste pipes *shall* not be installed outside of a building, in attic or crawl spaces, concealed in outside walls, or in any other place subjected to freezing temperatures unless adequate provision is made to protect such pipes from freezing by insulation, heat or both. Water piping installed in exterior walls, ceilings, and unprotected floor spaces *shall* be protected by a minimum R-24 insulation on the [“cold[” side of the piping, with no insulation on the [“warm[” side of the piping. Exterior water supply system piping *shall* be installed not less than 6 inches (**152 mm**) below the frost line and not less than 12 inches (**304 mm**) below grade. In Prince

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

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

(IPC as amended)

312.5 Water supply system test. Upon completion of a section of or the entire water supply system, the system, or portion completed *shall* be tested and proved tight under a water pressure not less than the working pressure of the system; or, for piping systems other than plastic, by an air test of not less than 50 psi (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[7]. Subject to **Section 105.4[1].4**, testing for plastic piping systems *shall* follow a two step process in winter months:

1. The system *shall* be air tested with 5 psi **(34 kPa)** prior to wall close-in by the plumbing contractor using a safe and reliable method, see manufacture's recommendations and requirements. Do **not**[O NOT] leave air pressure charged on an unmanned project and NO other work *may* be performed on premises during an air test.

2. Then after permanent heat is available and prior to final inspection the plumbing contractor *shall* fill the CPVC or PVC system with water equal to system working pressure. The water test *shall* be held for 24 hours without loss.

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

(IPC as amended)

312.6 Gravity sewer test. Gravity sewer tests *shall* consist of plugging the end of the sewer at the point of connection with the public sewer, filling the *building sewer* with water or air, testing with 5 psi (**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**[amended] by **ADDING**[adding] the requirement for tagging testable *backflow preventers* after testing and **REMOVING** the requirement for test gauges to comply with ASSE 1064, 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**[proof] vacuum breakers *shall* be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure *shall* be performed in accordance with one of the following standards:

ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CAN/CSA B64.10 or **CSA B64.10.1**.

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

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

(IPC as amended)

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

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

(IPC as amended)

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

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

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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.

(IPC as amended)

405.3.6 Front rim elevation. Unless specifically designed and/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.

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

(IPC as amended)

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

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

302.5 Amendment of IPC CHAPTER 5, WATER HEATERS

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

(IPC as amended)

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

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

501.1.2.1 Guarded *Domestic Hot Water* Delivery Outlets

501.1.2.2 Water Storage at 140°F or greater

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

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

501.1.3 Minimum and Maximum Storage Temperatures. Where water is stored for domestic use, the water within the storage tank *shall* maintain a minimum of 120°F (**48°C**), not including draw down and recovery. Where an ASSE 1017 master thermostatic mixing valve is not utilized, hot water storage temperatures *shall* not exceed 125°F (**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 utilized (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* as follows:

(IPC as amended)

501.9 Nursing Homes, Hospitals and Adult and Child Care Facilities. A master thermostatic mixing valve complying with ASSE 1017 *shall* be provided to safeguard the temperature of the water delivered from the potable *domestic hot water* distribution system. See 501.1.4. The potability of the water *shall* be maintained throughout the system.

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

302.5.3 IPC Section 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 utilized, sizing of the water heater(s) *shall* be based on hot water demand as established under IPC Appendix E; utilize Tables E 103.3(2) and [E] 103.3(3) to establish the minimum required hot water gpm flow.

Table 501.11

First Hour Rating¹

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

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

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

(IPC as amended)

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

601.5.1 Isolation Valve. Each unused system or segment *shall* be provided with a valve within 12 inches["] 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["] downstream of the required *isolation* valve, each un[-]used system or segment *shall* be provided with a flushing port to facilitate the independent flushing and/or disinfection of the stagnant section prior to operating the *isolation* valve and commissioning that system or segment.

601.5.3 Backflow Preventer. As an alternate to the flushing port, a[n] **Dual Check Backflow Preventer (ASSE 1024)**[DCV Backflow Device] *shall* be installed within 12 inches["] (304 mm) downstream of the *isolation* valve.

601.5.4 Testable Backflow Assemblies. See Section 508.2[.6] for testing requirements for testable *backflow assemblies* serving any dormant use or seasonal uses such as irrigation, swimming pools, decorative fountains, etc.

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

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

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

(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 wash/showers/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 utilized. 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 [six (16)] inches **(152 mm)** above grade, the end of the wire *shall* be held in place by the cleanout cap/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**[protection] 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**[protection], the water service *shall* be routed vertical and penetrate the lowest relative slab within [five (15)] feet **(1 524 mm)** of the outside wall which it passed under.

603.5 Restraint. For piping systems greater than 2["] inches **(609 mm)** 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 Registered Design Professional)**, which *may* be part of a or minor S[s]ite U[u]tility 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 **Retraining 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 Registered Design Professional)**, which *may* be part of a S[s]ite U[u]tility or M[m]inor S[s]ite U[u]tility plan.

603.5.3 **Blocking.** Blocking of the final water service elbow *shall* conform to the dimensions included in **Commission**[WSSC] 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/rodding.

603.5.4 **Vertical Spool.** The final vertical ["]spool["] section *shall* be restrained to the final vertical elbow by strapping/rodding unless part of an alternate engineered design **(stamped and signed by Registered Design Professional)**. **The number and size of rods shall be per Table 603.5.4.**[Use 3/4 inch rods through 6 inch and 7/8 inch rods for 8 - 12 inch pipe.]

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 603.5.2

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 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**[WSSC] main to property line) for *Group R-3 occupancies* *shall* be sized per 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 E 201.1 "Distribution Pipe" column is use to determine size of distribution main (service valve to first major branch, riser, or water heater supply). Use developed length from service valve to most remote fixture.

604.1.2.4 **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 and/or fixture use.

604.1.3.3 **3/4 Inch Service Connections.** A 3/4["] *inch service connection* is limited to 25 **WSFUs**[wsfu] 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**[wsfu] 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 and/or their design and construction team to be the final responsible party when determining the need for a booster pump and/or a pressure reducing valve, all to read as follows:

(IPC as amended)

604.7.1 Insufficient Pressure. The property owner and/or their design and construction team *shall* be the final responsible party for determining when/how 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 and/or their design and construction team *shall* be the final responsible party for determining when/how a pressure reducing valve/regulator 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 as follows:

(IPC as amended)

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

(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**[devices]. See Amended Section 302.3.3 (added IPC 305.4.2) for winterization requirements.

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

302.6.10 IPC Section 608, Protection of Potable Water Supply, is hereby DELETED, see Chapter 5 – "Cross-Connection Control Backflow Prevention" for requirements regarding protection of potable water supply.

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 *S[s]ite U[u]tility 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**[WSSC] Standard Details, *shall* be provided on the exterior, prior to the subject sewer entering the building, and on the exterior, after the subject sewer exits the building. Additional manholes/cleanouts *shall* be required within the building where spacing requirements of IPC 708.1.1 dictate.

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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 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 [six (6)] inches (**152 mm**) above grade, the end of the wire *shall* be held in place by the cleanout cap/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.
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)

708.3.1 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 unpaved areas, the cleanout shall extend [six (6)] inches **(152 mm)** above grade; in paved areas, access shall comply with **Commission**[WSSC] 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**[WSSC] sewer *service connections* with a vertical riser, shall be connected to by the plumber in accordance with **Commission**[WSSC] Standard Details S-5.0. The cleanout cover *assembly* shall be installed by the plumber in accordance with **Commission**[WSSC] 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**[WSSC] *service connection* located at the property line or edge of right-of-way. The cleanout cover *assembly* shall conform with **Commission**[WSSC] Standard Detail S-5.1 or S-5.2. See Section 111.1.6.

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 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[5], Backwater Valves, is hereby AMENDED by MODIFYING Section 714[5].1 to recognize private manholes and by ADDING Section 715.6, to specify marking and labeling requirements for backwater valve access as follows:

(IPC as amended)

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

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

302.7.9 IPC Section 716 Replacement of Underground Building Sewers and Building Drains by Pipe-Bursting Methods, is hereby AMENDED by MODIFYING Section 716.3 to include additional pre-installation inspection requirements.

(IPC as amended)

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 grade/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.

302.7.10 IPC Section 716 Replacement of Underground Building Sewers and Building Drains by Pipe-Bursting Methods, is hereby AMENDED by MODIFYING Section 716.3 to include additional post-installation inspection requirements.

716.7 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 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 prior to pressure testing of the replacement piping system.

302.7.11 IPC Section 717 Relining Building Sewers and Building Drains, is hereby AMENDED by MODIFYING Section 717.3 to include additional requirements for prohibited applications.

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, but are not limited to, backgrade or insufficient slope, complete pipe wall deterioration or complete separations such as from tree root invasion or improper support. Where the existing pipeline grade/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.

302.7.12 IPC Section 717 Relining Building Sewers and Building Drains, is hereby AMENDED by MODIFYING Section 717.8 to include additional post-installation inspection requirements.

717.8 Post-installation recorded video camera survey. The completed relined piping system shall be inspected internally by a recorded video camera survey after the system has been flushed and flow tested with water. Restored sewer piping shall be flushed and then flow one gpm of clean water while video recording as a final inspection requirement. The video survey shall be submitted to the Code Official prior to finalization of the permit. The video survey shall be reviewed and evaluated to provide verification that no defects exist. Any defects identified shall be repaired and replaced in accordance with this Code.

302.8 Amendment of IPC CHAPTER 8, INDIRECT/SPECIAL WASTE

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

(IPC as amended)

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

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

302.8.2 IPC 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 readily visible 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 as follows:

(IPC as amended)

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

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

(IPC as amended)

Section 904.1, Roof Extension. All open vent pipes which extend through a roof *shall* be terminated at least 12 inches (**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.

(IPC as amended)

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

1. the connection to the drain is in accordance with section 905.3;
2. an accessible clean-out *shall* be provided, and labeled, to service the horizontal run of vent;
3. the horizontal run of the vent *shall* slope at 2% minimum toward the drain
4. each vent *shall* be routed to a minimum of 6 inches (**152 mm**) above the highest flood rim before interconnecting with other vents or terminating outdoors;
5. where such vents terminate independently to the outdoors or where such vents are the ["bottom"] or beginning of a vent header or stack that terminates to the outdoors, the vent terminal *shall* be protected with a vandal proof termination fitting or a ["return bend"].

302.9.4 IPC 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)

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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 (2)] pipe diameters in length.

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

(IPC as amended)

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

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

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

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

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

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

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

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

302.10.1 IPC Section 1002.4.1.5 Fixture drain connection for trap priming, is hereby DELETED in its entirety.

302.10.2[1] IPC Section 1003, Traps, Interceptors, and Separators, is hereby DELETED in its entirety and **REPLACED**[. It is replaced] with new Section 1003, all to read as follows:

SECTION 1003 [TRAPS,]INTERCEPTORS[AND SEPARATORS]

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[.5.1].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.

[1003.13 Access and maintenance of interceptors and separators. Access *shall* be provided to each interceptor and separator for service and maintenance. Interceptors and separators *shall* be maintained by periodic removal of accumulated *grease*, scum, oil, or other floating substances and solids deposited in the interceptor or separator.]

1003.1.6[12] Venting of I[i]nterceptors[and separators]. Interceptors[and separators] *shall* be designed so as not to become air bound where tight covers are utilized. Each interceptor[or separator] *shall* be vented where subject to a loss of trap seal. **Interceptors shall be vented per manufacturer's instructions.**

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

1003.2 Grease Abatement Systems.

1003.2.1[.1] Applicability. The regulations in this s[S]ection *shall* apply to **Food Service Establishments (FSE), as defined in Chapter 2**[where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars, or any other commercial operation that has the potential to discharge grease laden wastewater; hereafter referred to as Food Service Establishments (FSE)].

1003.2.2[1] **Where Required**[Grease Abatement Systems – General]. *Grease abatement systems shall* be provided to prevent the discharge of **FOG**[Fats, Oil, Grease,] and other substances harmful or hazardous to the building drainage system, the public sewer, the private sewage disposal system or the sewage treatment plant or processes, **see Section 804.**

[1003.1.2 Definitions.

1003.1.2.1 Grease Abatement System. Any grease interceptor, grease trap, grease recovery device, or any treatment system designed to remove Fats, Oils, and Grease (FOG) from FSE wastewater, with two general subcategories as follows:

1003.1.2.2 Volume-Based Grease Interceptor. Grease interceptor design based on volume and retention time with no specific requirement for upstream sink tail piece flow restrictions or a flow control device. Sizing is based on the number of drainage fixture units connected to the grease interceptor, see WSSC Table 1003.d. Minimum size = 300 gallons. Typically - installed outdoors and underground. Typically - cleaned by pumping contractors. Sometimes - referred to as a gravity grease interceptor or outdoor grease interceptor.

1003.1.2.3 Flow-Based Grease Interceptor. Grease interceptor design based on flow rate with a specific requirement for upstream sink tail piece flow restriction (for indirectly connected fixtures) and a flow control device. Solids screens or strainers with a maximum screen size of 1/8" perforations must be provided to capture the solids discharge from all sinks, such as pre-rinse stations or dish/pot washing or located at floor sinks and receptors to avoid overloading the grease interceptor with solids. Sizing is based on the reasonable maximum flow anticipated from the fixtures connected to the grease interceptor based on the WSSC Tail Piece Flow Rate Table 1003.a for indirect connections, and Table 1003.c for direct connections. Minimum size = 25 gallons per minute. Flow-based grease interceptors shall conform to ASME A112.14.3 or ASME A112.14.4 at the calculated flow rate; however, flow-based interceptors of such design which causes either the inlet or outlet piping to remain "submerged" during normal static conditions shall be prohibited. The following flow-based grease interceptors are differentiated based on whether or not there are mechanical grease removal features:

1003.1.2.3.1 Passive Flow Based Grease Interceptor. Grease interceptor design with no mechanical grease removal features. Typically -installed indoors under a sink or outdoors in-ground. Cleaned by the FSE or pumping contractors. Sometimes referred to as a hydro-mechanical grease interceptor (when designed and installed with a flow control device with air intake) or a grease trap (when designed and installed with a flow control device without air intake).

1003.1.2.3.2 **Mechanical Flow Based Grease Interceptor.** Grease interceptor design with mechanical grease removal features. Typically - installed indoors under a sink. Cleaned and maintained by the FSE, pumping contractors, or specialty maintenance contractors. Sometimes - referred to as a grease removal (or recovery) device.]

[1003.2 Where Required.]

1003.2.1.2 **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/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 and/or clean-up activities *shall* be abated accordingly. Only such sinks located in areas exclusively used for produce preparation *may* route to sanitary un[-]abated as determined by the *Code Official*, also see 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 [one (1)] inch **(25 mm)** above finished floor. 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[7] **Fish Scale Interceptor**[Trap]. Seafood prep sinks *shall* discharge through a local scale **interceptor**[separator] 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 FOG-related sewer back-ups/SSO's and the potential for **FOG**[fats, oils and grease] 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**[grease] such as fruit and vegetable washing sinks, connect to the regular building drain, a permanent engraved sign *shall* be posted at such sinks indicating their limited use. (Example: "VEGETABLE WASHING ONLY" or "NO GREASE").

1003.2.4.3 **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**[grease] must be separated prior to the **wet basin**[lift station].

1003.2.5[4] **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[Food Service Establishments] 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[5] Flow-[]Based Grease Interceptors.

1003.2.7[5].1 General.

1003.2.7.1.1[2] Discharge to Flow-Based Grease Interceptors. Flow-[]Based Grease Interceptors shall receive waste only from fixtures and equipment that allow **FOG**[fats, oils or grease] to be discharged.

1003.2.7[5].1.2 Manufacturer Specifications. Flow-B[b]ased G[g]rease I[i]nterceptors shall conform to **PDI-G 101**, ASME A112.14.3, and/or ASME A112.14.4 and shall be installed in accordance with manufacturer's specifications.

1003.2.7[5].1.3 Restrictions. The following restrictions shall apply to the selection of Flow-B[b]ased Grease Interceptors:

1003.2.7[5].1.3.1 Quantity of Interceptors. A maximum of two[(2)] Flow-B[b]ased Grease Interceptors shall be installed per FSE kitchen/food preparation location.

1003.2.7[5].1.3.2 Number of Connections. [Any]FSEs [kitchen]shall be limited to four [(4)]connected fixtures, equipment, or drains; whether one or two Flow-B[b]ased Grease Interceptor[']s are employed.

1003.2.7[5].1.3.3 Number of Appliances. FSEs [kitchen]shall be limited[utilizing a Flow-based Grease Interceptors shall be limited] to four [(4)]cooking appliances; **whether one or two Flow-Based Grease Interceptors are employed.**

1003.2.7[5].1.3.4 Exceeds Physical Capacity. Any condition where **FOG**[grease] generation potential, emulsification (e.g. dishwasher), and/or grease storage capacity exceeds the physical capabilities of a Flow-B[b]ased Grease Interceptor.

1003.2.7[5].1.3.5 FSE Design. Where FSE[kitchen] designs exceed one or more of the above parameters, the design shall incorporate a Volume-B[b]ased Grease Interceptor.

1003.2.7[5].1.4 Flow Control Device. A[The] manufacturer required flow control device shall be installed, sized to match the interceptors flow rate, and shall be readily accessible for inspection, cleaning and maintenance. The flow [-]control device shall be [vented and terminate not less than 6 inches (152 mm) above the flood rim level or be]installed in accordance with the manufacturer's instructions. **Flow-Based Grease Interceptors installed without flow control device shall be prohibited.**

1003.2.7[5].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/pot washing sinks or located at floor sinks and receptors to minimize the solids discharged to[loading on] F[f]low-B[b]ased G[g]rease I[i]nterceptors.

1003.2.7[5].2 Location and Installation.

1003.2.7[5].2.1 Location. Flow-B[b]ased G[g]rease I[i]nterceptors 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 F[f]low-B[b]ased Grease I[i]nterceptors shall not be installed below grade or slab, including within a vault or manufacturer's recess/receiver box. Mechanical F[f]low-B[b]ased Grease I[i]nterceptors may be partially recessed in a manner that allows all electronic components to remain one [(1)]inch (25 mm) above finished floor.

1003.2.7[5].2.2 Interceptor Access. Flow-B[b]ased G[g]rease I[i]nterceptors shall be located in a visible ready access area and readily accessible for daily maintenance, servicing and inspection by the user and the **Commission**[WSSC]. The user is responsible for providing the necessary access for inspection at their expense. [This includes access to any internal or external flow control devices for the interceptor.]

1003.2.7[5].2.2.1 Failure to Provide Access. Failure to provide access for inspection, upon request, shall be a violation and is subject to a civil citation at the Code Official's discretion.

1003.2.7[5].2.3 Visible Inspection. Upon removal of the interceptor's main access cover(s), the inlet and outlet chambers/baffles shall be unobstructed for visible inspection and not require the removal of internal obstructions such as plugs, caps, panels, etc. Where visible obstructions exist, auxiliary monitoring/inspection ports shall be field installed into the inlet and/or outlet piping as needed. Monitoring/inspection ports shall meet Commission details.

1003.2.7[5].2.4 **Clearance.** Clearance[Headroom] above *F[f]low-B[b]ased G[g]rease I[i]nterceptors* as well as solid sediment strainers *shall* be sufficient to fully open lid and easily remove internal components.

1003.2.7[5].2.5 **Flow Control Device Access.** The flow control device *shall* be accessible for maintenance.

1003.2.7[5].2.6 **Tampering.** Tampering or otherwise by[-]passing or preventing a flow control device to function either by advisement from any *person* and/or actual physical change by any *person shall* be a violation requiring a civil citation.

1003.2.7[5].3 Sizing.

1003.2.7[5].3.1 Directly Connected Fixtures. For sinks, fixtures and drains directly connected to a *F[f]low-B[b]ased G[g]rease I[i]nterceptor* (no requirement for an air gap), *F[f]low-B[b]ased G[g]rease I[i]nterceptor* sizing *shall* be sized utilizing Table 1003.c.

1003.2.7[5].3.2 Indirectly Connected Fixtures. For sinks, fixtures and drains indirectly connected to a *F[f]low-B[b]ased G[g]rease I[i]nterceptor* (air gap required), a restricted flow tail piece is required and the *F[f]low-B[b]ased G[g]rease I[i]nterceptor 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**[International Plumbing Code,] 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[5].3.2.1[3] **Single Indirect Fixture.** For a single indirectly connected fixture served by a *F[f]low-B[b]ased G[g]rease I[i]nterceptor*, the full tail piece flow rate from Table 1003.a *shall* be used.

1003.2.7[5].3.2.2[4] **Multiple Indirect Fixtures.** For multiple indirectly connected fixtures served by a single *F[f]low-B[b]ased G[g]rease I[i]nterceptor*, fixtures with the highest flow rates *shall* be considered first, with the full tail piece flow rates for the two highest flow fixtures/drains, 1/2 of the tail piece flow rates for the next two highest flowing fixture/drains, and 1/4 of the tail piece flow rates for each subsequent fixtures/drains *shall* be used (see Table 1003.b[below]).

1003.2.7[5].3.3[5] **Direct and Indirect Fixtures.** *Flow-B[b]ased G[g]rease I[i]nterceptors* serving both indirectly and directly connected sinks, fixtures and/or drains *shall* be sized based on a proper combination of the methods listed above.

1003.2.7[5].3.4[6] **Minimum Interceptor Size.** The minimum size *Flow-B[b]ased 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[6] Volume-[]Based Grease Interceptors.

1003.2.8[6].1 General.

1003.2.8.1.1[3] **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 1003.4.3**, the discharge shall route directly to the sanitary drainage system and not pass through the required *grease abatement system*.

1003.2.8[6].1.2 **Commission Specifications.** *Volume-Based Grease Interceptors shall be designed and installed in accordance with current Commission details and specifications.*

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

1003.2.8[6].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[6].2 Location and Installation.

1003.2.8[6].2.1 Location[General]. In general, *V[olume-B]ased G[rease I]nterceptors 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[6].2.1.1[5] **Indoor Installation.** Where an outdoor location is not possible or is impractical, *V[olume-B]ased Grease I[nterceptors may be installed indoors within [twenty (20)] feet (6096 mm) of an accessible service entrance, unless otherwise approved.*

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

1003.2.8[6].2.2[7] **Accessways.** 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[6].2.2[7].1 **Cover.** For all *V*[v]olume-*B*[b]ased *Grease I*[i]nterceptors, the manhole frame and cover or other access cover *shall* have a minimum dimension of 22 inches["] (558 mm).

1003.2.8[6].2.2[7].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[6].2.2[7].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[6].2.2[7].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["] (1 219 mm) preferred).

1003.2.8[6].2.3 **Manhole and Cleanout Access.** Manholes and cleanouts *shall* be readily accessible for convenient inspection and maintenance. The discharge/outlet piping of a *Volume-Based Grease Interceptor*[VBGI] *shall* be serviceable from a downstream manhole or a two-way clean[-]out *shall* be installed accordingly. A two-way cleanout consists of 2 individual cleanouts installed in series with each capable of cleaning out the other, a single two-way cleanout fitting is prohibited.

1003.2.8[6].2.4 **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 i[l]nterceptor.

1003.2.8[6].2.5[6] **Depth.** All *V*[v]olume-*B*[b]ased *Grease I*[i]nterceptors *shall* be installed at a maximum depth of [twelve (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 [twenty (20)] feet (6096 mm).

1003.2.8[6].2.6[8] **Above Grade.** *Volume-B*[b]ased *Grease I*[i]nterceptors installed above grade *shall* be designed and installed to meet the following provisions:

1003.2.8[6].2.6[8].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[6].2.6[8].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[6].2.6[8].3 **Minimum Temperature.** Located in an area capable of maintaining a minimum of 50°[degrees]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/grade, the building owner *shall* install an OSHA approved permanent platform at the interceptor to provide access for workers.

1003.2.8[6].3 **Sizing.** The volume of the interceptor *shall* be determined by using T[t]able 1003.c[below]. If the drainage fixture units (DFUs) are not known, the interceptor *shall* be sized based on the maximum DFUs allowed for the pipe size connected to the inlet of the interceptor.

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[8] Oil and Sand Interceptors[Separators Required].

1003.3[8].1 General. The provisions of 1003.2[8] *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[8.2] Sizing[e]. [Passive/Gravity/] *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** – 1 600 Gallons (6 056 liters)

1003.2.3[8.2].1 Engineered Sizing. Manufactured mechanical **interceptors**[separators] or **interceptors**[separators] utilizing other means of abatement *shall* be submitted as an engineered[s] design. Plan submittal *shall* include calculations, manufacturer's guidelines, and engineer's seal and signature. Subject to *Commission* Plans Review approval.

1003.3.4[8.3] Parking Garages. Parking garages with less than 1/3 of side surface areas open to the outdoors and protected from surface and storm water run-off *may* have inside floor and trough drains connected to the *Commission* sanitary sewer through an **Oil and Sand Interceptor**. Parking garages with 40 or less spaces *may* be served by a small **Oil and Sand**[sand and oil] *Interceptor*; those with greater than 40 spaces *shall* be served by a large interceptor.

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1003.3.5[8.4] Vehicle Washing Facilities. All vehicle washing facilities *shall* have required drains connected to the sanitary drainage system through a[n] **O[il and S[s]and I[i]nterceptor** as follows:

1003.3.5[8.4].1 Automatic Vehicle Washing. Automatic vehicle washing facilities *shall* have the equivalent of one **large[1600 Gallon] interceptor (1 600 gallon)** per vehicle lane.

1003.3.5[8.4].2 Self Service Vehicle Washing. Self service type vehicle washing facilities *shall* have the equivalent of one **large[1600 Gallon] interceptor (1 600 gallon)** per eight wash bays. A single wash bay *may* be served by a small interceptor **(500 gallon)**.

1003.3.6[8.5] Vehicle Service Facilities. Vehicle service facilities, maintenance and service garages, etc., *shall* have all inside floor and trough drains subjected to *oil* or sand connected to the sanitary drainage system through an interceptor.

1003.3.6[8.5].1 **Small Volume-Based Oil and Sand Interceptor**. Up to [eight (8)] bays *may* be served by a small interceptor

1003.3.6[8.5].2 **Large Volume-Based Oil and Sand Interceptor**. Up to [twenty-four (24)] bays *may* be served by a large interceptor.

1003.3.7[8.6] Barns and Stables. Barns, stables, and similar facilities not open to the outdoors and protected from surface and storm water run-off *shall* have all inside floor drains and trench drains connected to the *Commission* sanitary sewer through a small interceptor **(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[9] Clothes **W[w]asher D[d]ischarge I[i]nterceptor**. 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 [(3)] 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[10] Bottling Establishments. Bottling plants *shall* discharge process wastes into an interceptor that will provide for the separation of broken glass or other solids before discharging waste into the drainage system.

1003.4.4[11] Slaughterhouses. Slaughtering room and dressing room drains *shall* be equipped with *approved interceptors*[separators]. The **interceptor**[separator] *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 (Storm) Traps, through Section 1113, Sumps and Pumping Systems , *shall* be DELETED in their entirety, as these provisions *shall* be enforced by the County building official.

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

302.13 Amendment of IPC CHAPTER 13, 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*.

CHAPTER 4 ADOPTION OF INTERNATIONAL FUEL GAS CODE

SECTION 401 GENERAL

401.1 Adoption. The **2021**[2018] edition of the *International Fuel Gas Code* ([hereinafter “IFGC”]), published by the International Code Council, Inc., is hereby adopted and incorporated herein by reference, and has the same force and effect as though fully set forth in this *Code*, subject to the additions, deletions or other modifications set forth in this Chapter as amendments thereto.

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

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

SECTION 402 AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE

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

402.2 Reserved.

402.3 Amendment of IFGC CHAPTER 3, GENERAL REGULATIONS.

402.3.1 IFGC Section 304.6, 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:

(IFGC 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 B[b]tu/h. 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/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 B[b]tu/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 as follows:

(IFGC 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

CROSS-CONNECTION CONTROL BACKFLOW PREVENTION

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

(IFGC as amended)

401.11 Private Meters and Gas Utility Submeters. Private *m*[M]eters and *g*[G]as *u*[U]tility *s*[S]ub-meters *shall* be installed as follows:

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

401.11.2 **Readily Accessible.** *Shall be readily accessible.*

401.11.3 **Ventilated Space.** *Shall be located in a Ventilated Space.*

401.11.4[2] **Required Clearance.** Located at least [thirty-six (36)] inches (**914 mm**) from an *i*[I]gnition *s*[S]ource.

401.11.5[3] **Support and Protection.** Adequately supported and protected from physical damage, temperature extremes, corrosion, or excessive vibration.

401.11.6[4] **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[5] **Prohibited Locations.**[Prohibited Locations –] **Installations in** bedrooms, bathrooms, buried/vaulted below grade/slab, or hazardous locations *shall be prohibited*.

402.4.2 IFGC Section 404.3 , Prohibited locations, is hereby AMENDED by ADDING Section 404.3.1 to include requirements for underground pipelines after meter as follows:

(IFGC as amended)

404.3.1 Underground Piping After Service Meter Assembly. *Underground piping after service meter assembly is prohibited unless the piping carries only to gas utilization equipment located outdoors.*

402.4.3[2] IFGC Section 406.1.2, Repairs and Additions , is hereby AMENDED by referring to and ADDING thereto new Section 406.1.2.1, all to read as follows:

(IFGC as amended)

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

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

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

1. [•]A maximum of 12 joints in the new and disturbed piping are allowed, excluding the equipment connector.
2. [•]The new piping and any disturbed piping *shall* not be concealed.
3. [•]The developed length of the new piping *shall* not exceed 15 feet (4 572 mm).

It *shall* be the *L*[I]icensee's responsibility to perform the required *soap test* prior to inspection, and to ensure that the piping does not leak.

402.4.4[3] IFGC Section 412, Liquefied Petroleum Gas Motor Vehicle Fuel-Dispensing Stations, is hereby DELETED in its entirety.

402.4.5[4] 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 D.O.E 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 insulated 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**[1-1/2 feet] **(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 insulated 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.

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**[aka:] *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 WSSC 302.6.10.**

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

501.3 Definitions. See Chapter 2 of this Code.

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

501.5 Contamination by distribution components. All piping, fixtures, fittings, equipment, appurtenances, accessories, filters, conditioners, heat exchangers, etc. *shall* be constructed of materials such that when the working surface areas of these components are in contact with potable water they *shall* not alter the taste, odor, color or potability of the water.

SECTION 502 APPLICABILITY

502.1 Applicability. This Chapter applies to all occupancies, including *Group R-3 o*[O]*ccupancies*[(see definition)], and their accessory structures.

502.2 **Facility** Hazard Classification.

502.2.1 General. For the purposes of this *Code*, [commercial and industrial]facilities are considered to fall into three categories with respect to *cross-connection* hazard **classifications**[levels]: *high hazard*, moderate hazard and *low hazard*. **The Commission**[WSSC] assigns facilities to the hazard categories based on industry type and low-pressure vulnerability.

502.2.1.1 - Inspection Priority Ranking. A Commission designation assigned to a property based on the degree of water end-use plumbing fixtures, equipment, and/or processes pose to the safety and potability of the drinking water system both on the owner’s property as well as within the Commission’s distribution system. The ranking is a numeric scale of odd number from 1 to 9; where 1 and 3 represent facilities with high hazard classifications and will equate to the higher tier of the program’s base fee. Rankings of 5, 7, & 9 represent moderate and low hazard classifications will equate to the lower tier of the program’s base fee. See Table 502.2.1.1 for a representation of Customer Inspection Priority Rankings.

Cross Connection Inspection Priority Ranking Number				
Hazard Classification				
High ¹		Moderate		Low
1	3	5	7	9
Hospital	Dentist	Building or Property with one or more higher hazard water	Building or Property with only a low hazard fire sprinkler system	Building or Property without a water use requiring a testable backflow preventer
Urgent Care w/surgery	Urgent Care w/o surgery	Grocery	Retail	
Laboratory	Doctor w/WUE ²	Office Building ³	Church	These facilities will be inspected on same frequency as 5s and 7s.
Industrial Processing	Dry Cleaners	Schools	Church	
Concrete Plant	Auto Vehicle	Food Service	Assembly Hall	
Comm/Ind Laundry	Washing	Multi-unit Residential	Banks	
Food Processing	Stadium	Vehicle Service ³	Library	
Bottling Plant	Airport	Hotel/Lodge/Motel/Inn ³	Police Station	
Nursing Home	Photo/Film Processing	Salon/Spa/Barber	Day Care	
Birthing Center	Commercial Printing	Auto Dealer ³	Theater	
Veterinarian	Commercial Pool ⁴	Drug Store	Warehouse	
Funeral Home	Golf Courses	Fire House	Mobile Home	
Morgue	Assisted Living	Racket/Tennis Club	Park	
Animal Shelter	Marina	Barn/Stable	Camp Ground	
	Correctional Facility		Cemetery	
	Crematorium		Doctor w/o WUE	
	University/College		Laundromat	
	Radiologist/MRI/ X-Ray		Ball Fields	
	Nursery		Ice Rink	

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 Priority Ranking of 5, 7, or 9)
- 2 - WUE = Water Utilizing Equipment
- 3 - Subject to further evaluation
- 4 - Commercial Pools - other than single family residential pools

Table 502.2.1.1

502.2.2 Vulnerability. **The Commission**[WSSC] prioritizes facilities based (first) on industry type and (second) on low-pressure vulnerability, to produce an overall prioritization. **The Commission**[WSSC] establishes industry type using North American Industry Classification System (NAICS) codes and descriptions. **The Commission**[WSSC] established low-pressure vulnerability using its computer water model and topographic data, and using its knowledge of areas prone to pressure transients.

502.3 Containment and [Internal Protection(Isolation)].

502.3.1 New Facilities. New facilities, of all hazard levels, and existing facilities connecting to a new water *service connection* for the first time, *shall* require both *containment* and *isolation*[internal-protection] *assemblies or devices*, as applicable. *Containment backflow preventers shall* be installed immediately downstream of the branch that serves the fire **sprinkler**[protection] system. For buildings served by an outside *meter*, the branches to fire and domestic *shall* be installed within [five (5)] feet (**1 524 mm**) of where the main water service enters the building. New facilities,

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regardless of hazard **classification**[levels], *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**[internal-protection] *assemblies* in all facilities *shall* remain in service, be tested annually and repaired or replaced as otherwise needed to ensure compliance with this *Code*. *Devices shall* be replaced or rebuilt every five years. Where any of the following conditions present as part of a design-retrofit or upgrade, *containment* and **isolation**[internal-protection] *assemblies* or *devices* for these facilities *shall* meet the same requirements as cited under 502.3.1.above:

[502.3.2.1 Replacement or Upgraded Water Service Connection.]

1. [502.3.2.2]Replacement, upgraded, or relined Water Service.
2. [502.3.2.3]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.
3. [502.3.2.4]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**[WSSC]. **The Commission**[WSSC] *shall* require a *containment backflow assembly* if *high* [-]hazard application(s) are present. Where a facility has a *containment backflow preventer* not commensurate with the *degree of hazard*, an upgrade will be required. These facilities *shall* be reclassified as moderate or high hazard facilities and future inspection frequency *shall* be adjusted accordingly.

502.3.4 Containment **Backflow Prevention**[Protection] of Federal Property. *Containment backflow preventers are* [protection is] required for federal properties proximate to each water *service connection*. **RPBA (ASSE 1013)**[RPZA-type] **backflow prevention assembly**[protection] *shall* be installed above grade and protected from freezing and other physical damage per Section 507.6.2. **Backflow Prevention Assembly T**[test R]eports *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 **B**[backflow **Prevention Assembly T**]est **R**]eports for *isolation* [type]*backflow prevention assemblies* installed throughout the campus. Each campus *shall* maintain an effective *backflow* program in accordance with federal standards. Program managers *may* voluntarily submit **B**[backflow **Prevention Assembly T**]est **R**]eports 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**[WSSC] if there is reason to believe that *backflow* has or *may* have occurred. This *shall* include private water system, plumbing fixture, equipment utilizing water, or any building system with the means of contaminating the public water system or building's potable water distribution system.

503.2 Testing and Maintenance of Backflow Preventers. The *customer*, at their own expense, *shall* purchase, install, operate, test and maintain *approved backflow* [-]*preventers* as directed by **the Commission**[WSSC]. The *customer shall* immediately correct any malfunction of a *backflow preventer* revealed by periodic testing or observation. **Testable b**[B]*ackflow prevention assemblies shall* be tested annually or as otherwise directed by **the Commission**[WSSC]. Non-testable **backflow prevention devices shall** be replaced or re[-]built every 5 years.

503.3 Licensed Cross-Connection Technician. The *customer shall* be responsible for hiring a **C**[cross- **C**]onnection **T**]echnician (who is employed by a [registered and insured]*Master Plumber*) to **test, maintain, and certify the installation** [perform the installation, testing and maintenance on his or her]**of 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*[ion assemblies and/or devices installed on their premises].

503.6 Change of Use. The *customer shall* immediately contact **the Commission**[WSSC] when the use of **their**[his or her] property changes. **The Commission**[WSSC] *shall* then reassess the **degree of hazard** classification of the property and determine if an inspection is warranted.

503.7 Backflow Preventers Out of Service. The *customer shall* notify **the Commission**[WSSC] in writing of any *backflow preventers* that have been taken out of service.

SECTION 504 CROSS-CONNECTION CONTROL TECHNICIAN'S RESPONSIBILITIES

504.1 Violations. *Cross-Connection Technicians shall* be held responsible for the violation of any part of this **Code**[Manual] whether the violation is committed by themselves or by their employees or agents.

504.2 Testing and Maintenance of Backflow Preventers. *Cross-[]Connection Technicians shall* be responsible for performing accurate field tests and for repairing, overhauling or replacing *backflow preventers*. It *shall* be the *Cross-Connection Technician's* responsibility to safeguard the design, material and/or operational characteristics of an *assembly* during repair or maintenance unless otherwise *approved by the Commission*[WSSC].

504.3 Generation of Data. *Cross Connection Technicians shall* be responsible for the accurate generation of data, a correct assessment of the workings of each *assembly* tested, and proper dissemination of the data to **the Commission**[WSSC] 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 Commission*[WSSC] **Code Official**[Plumbing Inspector]:

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 a label with legible print or type, inserted in a durable, transparent and sealable plastic bag/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**[WSSC's] **Backflow Prevention Assembly Test Report**[standardized test reports]. All test reports shall [be submitted to WSSC preferably on-line and must]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 [WSSC]**Cross-Connection Test Report System**[either on-line or at the permit counter].

504.4.4[106.2.3.1.1] Submittal Deadline. The **Backflow Prevention Assembly Test Report** *shall* be submitted to the **Commission**[WSSC] within **30 calendar**[5 business] days of a successful test.

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

504.4.5 Responsibility. The **Principal Licensee** shall be responsible for submitting **Backflow Prevention Assembly Test Reports**. Failure to submit test reports may result in a Notice of Violation or penalty.

504.5 Replacement Parts. *Cross-Connection Technicians shall* be responsible for ensuring that original [-]manufacturer [replacement]parts are used in the repair **or rebuild** of [or replacement of parts in a]*backflow [-]preventers*[ion assembly].

504.6 Safety Procedures. *Cross-Connection Technicians shall* conduct testing upon assurance that all safety procedures have been observed and that all personnel involved have been appropriately notified.

504.7 Cross-Connection Technician's Certification. A *Cross-[]Connection Technician's* certification *shall* be kept current by completing recertification on or before the date the current certification expires. Any lapses in certification or discontinuance of certification *shall* be reported to **the Commission**[WSSC]. See Section 113.7.

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504.8 Backflow Preventers Out of Service. 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* so the tracking record can be updated in the Commission's *backflow preventer* tracking system.

SECTION 505 SELECTION OF BACKFLOW PREVENTERS

505.1 Approved Standards. Backflow preventers *shall be listed by*[conform to] ASSE, **conform to**[standards as listed in] this *Code*, or *shall meet at least one of the following standards*[be equivalent to]:

1. [✓]ANSI/AWWA Standards
2. [✓]USC Standards
3. [✓]CAN/CSA Standards

505.2 Other Standards. *Backflow preventers* manufactured to other standards *may* also be installed, provided written approval is first obtained from **the Commission**[WSSC]. All equipment connected to the potable water supply system used to retract human or animal body fluids *shall* be protected by an air gap or a reduced pressure principle *backflow assembly*.

505.3 Application of Backflow Preventers. Application of *backflow preventers* including, but not limited to, those listed in Table 5.1 *shall* be subject to field verification of **degree of hazards** and conditions by **the Commission**[WSSC].

Standard Number	Backflow Preventer or Method	Type of Protection [BS=back-siphonage BP=back-pressure]	Degree of Hazard	Installation Dimensions and Position	Pressure Condition [I=Intermittent C=Continuous]	Comments	Use
ASME A112.1.2 [ANSI A112.2.1]	Air Gap	Backsiphonage and Backpressure [BS & BP]	High	Twice effective opening - not less than one inch above flood rim level	Continuous [C]	See bypass arrangements	Lavatory, Sink, or Bathtub Spouts Pot Fillers Residential Dishwashers [(ASSE 1006)] [Residential] Clothes Washers [(ASSE 1007)] Residential Type Refrigerator/Ice Maker
ASSE 1001	Pipe Applied Vacuum Breaker	Backsiphonage [BS]	High	6 inches above highest outlet Vertical position only No downstream valves	Intermittent [I]	Outside of Fume Hood or Similar Environments	Goosenecks and appliances not subject to back pressure or continuous pressure
ASSE 1011	Hose Connection Vacuum Breaker	Backsiphonage [BS]	High	Locked on hose bibb threads	Intermittent [I]	Yard hydrant supply requires auxiliary or additional protection	Hose Bibb, Wall Hydrant and Sill cock
ASSE 1012	Dual Check Valve with Atmospheric Vent	Backsiphonage and Backpressure [BS & BP]	Low	Any accessible position Drain piped to floor or by air gap over a receptor (Horizontal only)	Continuous [C]	Drain/vent outlet shall be between 3 & 9 o'clock *See footnote	Residential Boiler, Spas, Hot Tubs, Residential Water Treatment System, Heat Transfer Fluid Make-up to a Single Wall Heat Exchanger utilizing only Non-Toxic Heat Transfer Fluid

Table 5.1 - Application of Backflow Preventers

Standard Number	Backflow Preventer or Method	Type of Protection [BS=back-siphonage BP=back-pressure]	Degree of Hazard	Installation Dimensions and Position	Pressure Condition [I=Intermittent C=Continuous]	Comments	Use
ASSE 1013	Reduced Pressure Principle Backflow Preventer	Back-siphonage and Back-pressure [BS & BP]	High	<u>Inside building</u> 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) <u>Outside building</u> 18 inches to 24 inches (centerline to grade) <u>Orientation</u> Horizontal or Vertical Installation <u>Relief Valve</u> Drain piped to air gap over a receptor Area Shall Be Suitable for Uncontrolled Discharge <u>For Residential</u> Outdoors Only	Continuous [C]	Valves per Section 603 **See footnote See Section 507.3.1	Chemical or Biological Systems Chilled Water / Cooling Tower Commercial Boiler / Heat Exchanger utilizing Toxic Heat Transfer Fluid*** Commercial Swimming Pool, Spas, etc. Food Injection Equipment Hospital Equipment Lawn Irrigation Dental / Medical Vacuum Systems Interconnection w/a Non-potable System Water and Wastewater Treatment Plants Fire Sprinkler with Chemical Additives Exhaust Hood / Degreaser Commercial Water Treatment System Commercial Clothes Washer Commercial/Industrial Laundry Vehicle or Train Wash System Hose Bibb(s) in Hazardous Area
ASSE 1014	Backflow Prevention Devices for Hand-held Showers	Back-siphonage and Back-pressure	Low		Intermittent		Hand Held Showers
ASSE 1015	Double Check Valve Assembly	Back-siphonage and Back-pressure [BS & BP]	Low	<u>Inside building</u> 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) <u>Outside building</u> 18 inches to 24 inches (centerline to grade) <u>Orientation</u> Horizontal or Vertical Installation	Continuous [C]	Valves per Section 603 **See footnote	Fire Sprinkler without Chemical Additive, Wash Down Rack, Culinary Pressure Cooker & Industrial Food Steamer (1" or larger), Commercial Domestic Water - Low and Moderate Containment

Table 5.1 - Application of Backflow Preventers (continued)

Standard Number	Backflow Preventer or Method	Type of Protection [BS=back-siphonage BP=back-pressure]	Degree of Hazard	Installation Dimensions and Position	Pressure Condition [I=Intermittent C=Continuous]	Comments	Use
ASSE 1019	Vacuum Breaker Wall Hydrants	Backsiphonage [BS]	High	<u>Mounting Height</u> Minimum 6 inches above grade	Intermittent[I]		Wall Hydrants
ASSE 1020	Pressure Type Vacuum Breaker	Backsiphonage [BS]	High	<u>Mounting Height</u> Minimum of 12 inches above highest outlet, Maximum 60 inches to floor/grade <u>Orientation</u> Vertical only <u>Relief Valve</u> Area Shall Be Suitable for Uncontrolled Discharge <u>Residential</u> Outdoors Only	Continuous[C]	Valves per Section 603 **See footnote	Residential Lawn Sprinklers
ASSE 1022	Backflow Preventer for Carbonated Beverage Machines	Backsiphonage and Backpressure [BS & BP]	Low	<u>Orientation</u> Vertical or Horizontal <u>Pipe Material</u> No copper pipe downstream of backflow preventer	Continuous[C]	*See footnote	Carbonated Beverage System or Equipment Non-Carbonated Beverage System or Equipment [Tea/Coffee Makers/Dispenser Juice Dispenser Frozen Beverage/Makers/Dispenser]

Table 5.1 - Application of Backflow Preventers (continued)

Standard Number	Backflow Preventer or Method	Type of Protection [BS=back-siphonage BP=back-pressure]	Degree of Hazard	Installation Dimensions and Position	Pressure Condition [I=Intermittent C=Continuous]	Comments	Use
ASSE 1024	Dual Check Valve	Backsiphonage and Backpressure [BS & BP]	Low	Any accessible position	Continuous [C]	*See footnote	Residential Domestic Water Containment Residential Fire Sprinkler System Outside Drinking Fountain Non-carbonated Beverage Dispenser Soft Serve Ice Cream or Yogurt Commercial Ice Maker Dental Operative Unit Water Filter Cartridge Humidifier Hand Held Shower Tub Spout Below Flood Rim Shower Steamer Food Steamer (less than 1 inch); Wok Range; Proofer; Eye Wash Station Clothes Dryer with Steamer Dental Model Trimmer
ASSE 1035	Laboratory Faucet Backflow Preventer	Backsiphonage [BS]	High	6 inches above downstream piping, Area suitable for discharge	Intermittent [I]		Chemical faucets, Hose sprays on faucets not meeting standards, Miscellaneous faucet applications

Table 5.1 - Application of Backflow Preventers (continued)

Standard Number	Backflow Preventer or Method	Type of Protection [BS=back-siphonage BP=back-pressure]	Degree of Hazard	Installation Dimensions and Position	Pressure Condition [I=Intermittent C=Continuous]	Comments	Use
ASSE 1047	Reduced Pressure Detector Assembly	Backsiphonage and Backpressure [BS & BP]	High	<u>Inside building</u> 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) <u>Outside building</u> 18 inches to 24 inches (centerline to grade) <u>Orientation</u> Horizontal or Vertical Installation Relief Valve Drain piped to air gap over a receptor Area Shall Be Suitable for Uncontrolled Discharge <u>For Residential</u> <u>Outdoors Only</u>	Continuous [C]	Yard hydrant supply requires auxiliary or additional protection	Fire Sprinkler without Chemical Additive and where Detector Meter is needed
ASSE 1048	Double Check Detector Assembly	Backsiphonage and Backpressure [BS & BP]	Low	<u>Inside building</u> 18 inches to 48 inches for greater than 2 inch 60 inches for 2 inch or less (centerline to floor) <u>Outside building</u> 18 inches to 24 inches (centerline to grade) <u>Orientation</u> Horizontal or Vertical Installation	Continuous [C]	**See footnote	Fire Sprinkler without Chemical Additive and where Detector Meter is needed
ASSE 1052	Dual Check Vacuum Breakers	Backsiphonage and Backpressure [BS & BP]	High	House bibb Dual Check Vacuum Breaker	Intermittent [C]		Miscellaneous Hose Bibb Connection
ASSE 1055	Chemical Dispensers with Integral Backflow Protection [Air Gap]	Backsiphonage [BS]	High	Minimum of 12 inches above outlet and stored concentrate	Intermittent [I]		Janitorial Product Dispensing

Table 5.1 - Application of Backflow Preventers (continued)

Standard Number	Backflow Preventer or Method	Type of Protection [BS=back-siphonage BP=back-pressure]	Degree of Hazard	Installation Dimensions and Position	Pressure Condition [I=Intermittent C=Continuous]	Comments	Use
ASSE 1056	Spill-Resistant Vacuum Breaker	Backsiphonage [BS]	High	<u>Mounting Height</u> Minimum of 12 inches above highest outlet, Maximum 60 inches to floor/grade <u>Orientation</u> Vertical only	Continuous [C]	Valves per Section 603	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		Continuous		Residential Boilers

*A dated test tag shall be affixed to all ASSE 1012, ASSE 1022 and ASSE 1024 devices indicating:

- Installation date

- The following statement: "FOR OPTIMUM PERFORMANCE AND SAFETY, WSSC CODE REQUIRES THAT THIS DEVICE SHALL BE REPLACED OR REBUILT EVERY FIVE (5) YEARS. ("Replace or Rebuild" Tags are available from WSSC)

**A dated test tag shall be affixed to all ASSE 1013, ASSE 1015, ASSE 1020, ASSE 1047, ASSE 1048, and ASSE 1056 assemblies. ("Test" Tags are available from WSSC)

***Double wall heat exchanger required for domestic hot water production where toxic heat transfer fluid is utilized.

Table 5.1 - 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*[protection] 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, [devices,]equipment, appurtenances, etc. Each usage *shall* be provided with an individual water [“]rough-in[“], provided with a shut-off valve per IPC 606.2, and protected against *backflow* commensurate with the *degree of hazard* for that use.

506.2 [Devices,]A[a]ppurtenances, A[a]ppliances and A[a]pparatus. All [devices,]appurtenances, appliances and apparatus intended to provide some special function, such as sterilization, distillation, processing, cooling, or storage of ice or food, and that connect to the water supply system, *shall* be provided with *prevention*[protection] 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 S[s]ervice P[p]iping. Water service piping *shall* be protected in accordance with the IPC[International Plumbing Code] Sections 603.2 and 603.2.1.

506.4 Chemicals and O[o]ther S[s]ubstances. Chemicals and other substances that produce either toxic conditions, taste, odor or discoloration in a potable water system *shall* not be introduced into, or utilized in, such systems.

506.5 Valves and O[o]utlets P[p]rohibited B[b]elow G[g]rade. Potable water outlets and combination stop and waste arrangements *shall* not be installed below grade. Freezeproof yard hydrants that drain the riser into the ground are considered a stop and waste arrangement.

506.5.1 Exception. Freezeproof yard hydrants that drain the riser into the ground *shall* be permitted to be installed, provided that the potable water supply to such hydrants is protected upstream of the hydrants in accordance with Table 5.1 and the hydrants are permanently identified as *non-potable 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)** [reduced-pressure principle] *backflow [-]prevention assembly shall* be installed at the interconnection when the *auxiliary water supply* is or *may* be contaminated to a degree that it would constitute a high *degree of hazard*. A **DCVA (ASSE 1015)**[double check valve assembly] *shall* be installed at the interconnection when the *auxiliary water supply* is verified as municipal grade potable water treatment under a Maryland Department of the Environment permit.

506.6.2 Private Water Supplies and Secondary Sources of Water. For private water supplies and secondary sources of water, an air [-]gap separation or a **RPBA (ASSE 1013)** [reduced-pressure principle] *backflow [-]prevention assembly shall* be installed at the interconnection because the private water supply and/or secondary source of water are un[-]regulated and *may* be contaminated.

506.6.3 Used Waters and Industrial Fluids. For used waters and industrial fluids, an air [-]gap separation or a **RPBA (ASSE 1013)**[reduced-pressure principle backflow-prevention assembly] *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**[WSSC] *may* authorize use of a *fire hydrant* [water] *meter* to applicants requiring water for temporary use as follows:

506.7.2 Small **Fire** Hydrant Meter. A **Commission**[WSSC] small *fire hydrant meter* (3/4-inch[es]) *shall* include an integral **HCVB**[vacuum breaker] (ASSE 1001) *backflow prevention device*.

506.7.3 Large **Fire** Hydrant Meter. For a **Commission**[WSSC] large *fire hydrant meter* (3-inch[es]), the applicant *shall* provide a **RPBA**[reduced pressure principle backflow assembly] (ASSE 1013) *backflow prevention assembly*[suitable for high [-]degree of hazard applications]. The *backflow prevention assembly* must carry a satisfactory test tag current within six months. The *backflow preventer*[BFP] *shall* be located within special 20 feet (6 096 mm) of the *fire h[H]ydrant m[M]eter*, ahead of any water take-offs, and the inlet piping/or hose *shall* not be concealed.

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506.7.4 Fire Hydrant[s] Use Restrictions. Fire hydrant use *shall* be restricted to temporary or seasonal applications such as, but not limited to: Tank [-]truck filling, temporary water for construction sites, 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*.

506.8.2 Irrigation. [-]**Irrigation** branch *shall* be downstream of an inside *meter*; ahead of pressure reducing station, if applicable; **with backflow preventer commensurate**[commiserate] with **degree of hazard**.

506.8.3 Domestic. [-]**Domestic** branch *shall* be downstream of an inside *meter*; **containment backflow preventer commensurate**[commiserate] with **degree of hazard**.

506.8.4 Non-potable **water** system. [-]**Non-potable water system** branch *shall* be downstream of an inside *meter*; **containment backflow preventer** *shall* be an **RPBA (ASSE 1013)**[RP].

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 **D[d]ual C[c]heck Backflow Preventer**[valve,] (ASSE 1024)[, CSA B64.6]. Chemical additives *shall* be prohibited in residential fire sprinkler systems. No valve *shall* be installed on the tee branch supplying the fire sprinkler system.

506.9.2 Automatic Commercial Fire Sprinkler Systems. Where potable water is used to serve or supplement a *fire sprinkler system*, **backflow preventer**[ion] *shall* be as follows:

506.9.2[10].1 **No Chemical Additives. DCVA (ASSE 1015)**[DCVA – no chemical additives].

506.9.2[10].2 **With Chemical Additives. RPBA (ASSE 1013)** [RPZA – with chemical additives].

506.9.2[10].3 **Limited System.** [ASSE 1024 DCV -]Limited System up to 7 heads; no chemicals or pump, **Dual Check Backflow Preventer (ASSE 1024)**.

Exceptions to 506.9.2:

1. 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 in length**.
2. *Isolation* for the water distribution system is not required for deluge, preaction or dry pipe systems.

[506.11 Exceptions to Requirements of 506.9 and 506.10.]

[506.11.1 Where systems are installed as a portion of the water distribution system in accordance with the requirements of this *Code* and the IPC and are not provided with a fire department connection, *isolation* or the water supply system *shall* not be required.

506.11.2 *Isolation* or the water distribution system is not required for deluge, preaction or dry pipe systems.]

506.10[12] Retrofits and Existing Commercial Fire Sprinkler Systems. Existing **c[C]ommercial f[F]ire s[S]prinkler s[S]ystems** *shall* be required to update/upgrade the *backflow prevention* as follows:

506.10[12].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 506.10 *shall* be installed.

506.10[12].2 Single Check Valves. Older systems (untouched or retrofitting up to ten heads), utilizing a single check valve for *backflow prevention* are not required to upgrade to a testable **backflow prevention assembly** provided all of the following conditions are met:

1. [506.12.2.1]No chemical additives are present or have ever been utilized.

2. [506.12.2.1]Single check valves **shall be**[are] replaced **or rebuilt** every five years. **Replaced or rebuilt**[New] check valves *shall* be tagged **and shall include: Installation date (and/or expiration date), and the words: “for optimal performance and safety this device is required by the Code to be replaced or re[-]built every 5 years.”**[with the installation date; the expiration date; and a notice identifying the requirement to replace by the expiration date.]
3. [506.12.2.3]Where possible, a testable *backflow prevention assembly* per 506.10 *shall* be installed.

506.10[12].3 Unprotected Systems. Unprotected systems *shall* be required to have a testable **backflow prevention assembly** installed per 506.10.

506.10[12].4 Hydraulic Consideration. Where **backflow prevention**[protection] is added or upgraded, the owner/applicant, their design team, and/or their installing contractor *shall* be required to coordinate/permit these changes with the appropriate county or local fire officials in order to ensure the changes meet hydraulic and flow requirements of the fire department. Proof of coordination/permit *shall* be required.

SECTION 507 INSTALLATION OF BACKFLOW PREVENTERS

507.1 Installation Dimensions. Installation dimensions *shall* conform to Table 5.1. **DCDA** [Double check detector assemblies](ASSE 1048) and **RPDA** [reduced-pressure detector assemblies](ASSE 1047) *shall* be installed in accordance with WSSC's Standard Details for Construction.

507.2 Accessibility.

507.2.1 General. *Backflow preventers shall* have access for maintenance, replacement and testing. *Backflow preventers shall* not be installed where platforms, ladders or lifts are required for access. *Backflow preventers shall* be installed inside buildings in an area capable of maintaining a minimum temperature of 50°[degrees]F[ahrenheit] (**20°C**), except those *approved* for seasonal removal or replacement.

507.2.2 Backflow Preventers Above Grade. If a new *backflow preventer* must be installed higher than 5 feet (**1 524 mm**) above finished floor/grade, the building owner *shall* install an OSHA [-]*approved* permanent platform at the *backflow preventer* to provide access for workers. For existing *backflow preventers* installed higher than 5 feet (**1 524 mm**) above finished floor/grade, the building owner *shall* provide an OSHA [-]*approved* platform or scaffold for maintenance and testing; or the owner *shall* contract a [WSSC registered] *Master Plumber* to relocate the *assembly* to an approvable location.

507.3 Designated Area.

507.3.1 General. *Backflow preventers shall* be installed in an area exclusively reserved for such *assemblies* or *devices*. Related appurtenances including valves, water *meters*, and fire pumps and sprinkler standpipes *shall* be permitted to share the same area, provided respective dimensional requirements can be maintained. 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**[RP type](**ASSE 1013**) **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 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 **N**[n]on- **P**[p]otable **W**[w]ater. 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

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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 620mm) 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 5.2.

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 5.2 - Size of Pipe Identification

507.5 Valves.

507.5.1 Shut-off Valves. Shut[-]off valves *shall* be required on the inlet and outlet of **RPBAs**[reduced-pressure assemblies](ASSE 1013), **RPDAs**(ASSE[and] 1047), **DCVAs**[double check assemblies](ASSE 1015), **DCDAs**(ASSE[and] 1048), [and] **PVBAs**[pressure-type vacuum breaker assemblies](ASSE 1020) **and SVBAs**(ASSE 1056), and on the inlet to **HCVBs**[atmosphere-type vacuum breaker](ASSE 1001)[assemblies]. Valves *shall* be factory affixed directly to the **backflow prevention assembly** body.

507.5.2 Requirements for ASSE 1013 **and**[; 1015;] 1047[; and 1048] Assemblies. [A fine mesh y-strainer with drain valve *may* be installed per manufacture's specifications ahead of the inlet shut-off valve on ASSE 1013 assemblies. **RPBAs**(ASSE 1013) and **RPDAs**(ASSE 1047)[assemblies] *shall* not be installed in a vertical position unless *approved* by the manufacturer.

507.5.3 Fire Sprinkler Systems. [ASSE 1013; 1015; 1047; and 1048] **A**[a]ssemblies for *fire sprinkler systems* *shall* be installed with **UL listed and FM approved**[FM-UL] rated valves or with rising stem gate valves; valves *shall* be indicator type. [and] **S**[s]trainers *shall* not be installed **on fire sprinkler systems**.

507.5.3 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 [“]hard[“] piping and *shall* not contain a means to later circumvent the required **backflow prevention**[protection] *assembly*. Unions *may* only be used on outdoor *assemblies*, to facilitate winterization.

507.6.3 Relief Port Piping. The termination of the piping from the relief port or air gap fitting of a **backflow preventer** *shall* be discharged to an *approved* indirect waste receptor or to the outdoors where it will not cause damage or create a nuisance. **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.**

507.6.4 Backflow Preventers Installed Outside. **Backflow preventers** *shall* be installed inside the building unless otherwise *approved* by **the Commission**[WSSC]. When installed outside of a [commercial or industrial] building, the building owner *shall* provide an above grade protective enclosure for the **backflow preventers** which *shall* be heated to

prevent freezing and properly secured to prevent damage to the *assembly or device*. Outdoor enclosures for *backflow preventers* [ion assemblies] *shall* comply with ASSE 1060 – **Performance Requirements for Outdoor Enclosures for Fluid Conveying Components**. Heat *shall* not be required if the **backflow preventer** [assembly or device] is removed during the winter months. **PVBAs and SVBAs** [Pressure vacuum breakers] *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** [BFP's] *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* [ion assemblies or devices] *shall* be located after the split with no **backflow preventer** [assembly or device] required on the common service.

507.6.7 Pumps and O[ot]her A[ap]pliances. 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** [protection] systems, domestic water, or local system/equipment enhancement *shall* be installed on the downstream side of the respective *backflow preventers*.

507.6.9 Reutilization P[ro]hibited. Water utilized for the cooling of equipment or other processes *shall* not be returned to the potable water system. Such water *shall* be discharged into a drainage system through an air gap or *shall* be utilized for non-potable purposes.

507.6.10 Reuse of P[ip]ing. Piping that has been utilized for any purpose other than conveying potable water *shall* not be utilized for conveying potable water.

507.6.11 Painting of W[ate]r T[an]ks. 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** [replaced]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:

1. [508.2.1]On installation
2. [508.2.2]At least annually
3. [508.2.3]After repairs
4. [508.2.4]After relocation or replacement
5. [508.2.5]On responding to a reported *backflow* incident
6. [508.2.6]Prior to any reactivation or seasonal start-up of a dormant water use, such as, but not limited to: irrigation systems, swimming pools, pool houses, decorative fountains, summer homes, etc.

508.3 Permits.

508.3.1 Rebuilding and Testing of Backflow Preventers.

508.3.1.1 Testable Assemblies. Rebuilding and testing of testable **backflow prevention assemblies** *shall* be exempt from a permit requirement but *shall* only be performed by a [licensed] **C[c]ross-C[c]onnection T[t]echnician**.

CROSS-CONNECTION CONTROL BACKFLOW PREVENTION

508.3.1.1.1 **Test and Tag.** Tests *shall* be performed by a **Cross-Connection Technician**[Certified Backflow Prevention Mechanic]. A dated test tag indicating the corresponding **Backflow Prevention Assembly T**[t]est **R**[r]eport number and the test results *shall* be attached to each testable *backflow prevention assembly*.

508.3.1.2 Non-Testable Devices. Replacing or rebuilding non-testable *backflow prevention*[ers] **devices** *shall* be exempt from a permit requirement and *may* be performed by **the**[a] homeowner (residential only), a **Master Plumber or a Journeymen Plumber**[or a licensed cross-connection technician]. A notification tag must be hung on or near the *device*.

508.3.1.2.1 **Tag. Dual Check Valves with Atmospheric Vent**(ASSE 1012), **Backflow Preventers for Carbonated Beverage Machine**(ASSE 1022), and **Dual Check Backflow Preventers**(ASSE 1024)[devices] *shall* be tagged and *shall* include: Installation date (and/or expiration date), and the words: “for optimal performance and safety this *device* is required by **the**[WSSC] *Code* to be replaced or re[-]built every 5 years.”

508.3.2 Long-Form Permit. A **L**[l]ong [-]**F**[f]orm **P**[p]ermit *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**[commercial].

508.3.3 Short-Form Permit. A **S**[s]hort [-]**F**[f]orm **P**[p]ermit *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 and/or pursuant to agreement with the appropriate federal agency. Such facilities *may* be required to install an outside water *meter* setting, and to contain the property with **backflow prevention**[protection], at the same general location as the *meter*. This installation *shall* be above ground and must be protected from freezing.

508.4 Field **T**[-t]est **P**[p]rocedures and **E**[e]quipment.

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**.[calibrated annually and] **T**[t]he calibration date *shall* be entered on the **B**[b]ackflow **Prevention Assembly T**[t]est **R**[r]eport and[.] **t**[T]here *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**[meeting the recommendation of the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research *shall* be accepted for WSSC’s reporting requirements].

508.5 Test Reports.

508.5.1 General. Testing of **testable backflow prevention assemblies** requires the submission of a completed **Commission**[WSSC] **B**[b]ackflow **Prevention Assembly T**[t]est **R**[r]eport showing a passing test result. Replaced or rebuilt non-testable *backflow prevention*[ers] **devices** do not require submission of a form but a notification tag must be hung on or near the *device*.

[508.5.2 Submission of Test Reports. Test reports *shall* be completed by certified Backflow Technicians and *shall* be submitted preferably on WSSC’s website. The test report number must be entered when test reports are submitted. These numbers will be purchased by the Principal Master Plumber before submitting reports.]

508.5.2[3] Failed Tests. [Test reports showing a failing test result *shall* not be acceptable.]In the event of a failed test, the **Cross-Connection**[backflow] **T**[t]echnician *shall* repair, rebuild or replace the **backflow prevention assembly** until a passing test result is obtained. If property owners do not authorize repairs, **the Cross-Connection Technician shall notify the Commission**. Submission of a failed field test report is not considered notification. The water supply to the **backflow prevention assemblies** that fail test *shall* be as follows:

1. For **backflow prevention assemblies** with two checks valves,
 - a. For the failure of only one check valve the water supply to an *assembly* *may* remain on and the system *may* remain in use prior to repair, rebuild or replacement.
 - b. For the failure of both checks valves in an assembly serving a *fire sprinkler system*,

- i. For a DCVA (ASSE 1015) or a DCDA (ASSE 1048) the water supply to the *assembly may* remain on and the *fire protection system may* remain in use prior to repair, *rebuild* or replacement.
 - ii. For a RPBA (ASSE 1013) or a RPDA (ASSE 1047) the water supply to the *assembly shall* be shutoff and the Fire Marshal *shall* be notified immediately. The *fire protection system* shall remain shut off until the *assembly* is repaired, *rebuilt* or replaced and a passing test result is obtained.
 - c. For the failure of both checks valves serving uses other than *fire sprinkler systems* the water supply to *assembly shall* be shut off until the *assembly* is repaired, *rebuilt* or replaced and a passing test result is obtained.
2. For a PVBA (ASSE 1020) or a SVBA (ASSE 1056) the water supply to the *assembly shall* be shut off until the *assembly* is repaired, *rebuilt* or replaced and a passing test result is obtained.

[water service should not be restored until the protection of the potable water supply system is reestablished and the licensed cross connection technician shall notify WSSC.]

508.5.4 License Number. [Licensed]Cross-[]*Connection Technicians shall* be required to provide their license number on all test reports. Submission of a test report online will not be possible without providing a license number. Cross-[]*Connection Technicians* must also provide the [registered]*M*[m]*aster P*[p]*lumber's* license number.

CHAPTER 6 WSSC WATER METERS

SECTION 601 GENERAL

601.1 Scope. This chapter *shall* outline all details relating to the installation of *Commission* water meters. Work normally installed by plumbers that relate to *Commission* meters and as outlined in this chapter, *shall* be [WSSC Plumbing and Fuel Gas]Code requirements, and *shall* be enforced in conjunction with requirements specified in related sections of this C[c]ode. In unusual circumstances, the *Commission* retains the right to deviate from these provisions. See Chapter 1 –[,]
“Administration”, Section 111, Connection to the Commission’s Systems and Metering, for administrative provisions relating to water service connections and *Commission* water meters.

601.2 General Requirements.

601.2.1 Standard Details. *Commission* water meters *shall* be installed in accordance with **the Commission**[WSSC] Standard Details.

601.2.2 Jumpers Prohibited. The installation of a straight pipe or jumper in lieu of a water meter *shall* be prohibited.

601.2.3 Accessibility. Water meters *shall* be readily accessible for maintenance, replacement, and reading.

SECTION 602 WATER METER SELECTION

602.1 Application. The size and type of *Commission* water meters, both for new and design retrofit applications, *shall* be based on application and plumbing hydraulic load, in accordance with Table 602.1. Emerging water meter technology not included (covered) in Table 602.1 *shall* be *approved* by the **Commission’s**[WSSC] Materials Evaluation Committee (MEC) prior to installation or implementation.

602.2 Location. The *Commission* *shall* determine the location, outside or inside of buildings, for all *Commission* water meters. See Section 111.5.

602.2.1 Group R-3 **Occupancy**(Single Family Homes) – Outside Meter Required. The following parameters *shall* determine where outside **the Commission**[WSSC] meters are required, for all service connections, new or replacement:

1. [602.2.1.1]Where the on-property water service is 300 feet (91 m) or greater in length.[]
2. [602.2.1.2]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.
3. [602.2.1.3]When not meeting any condition above, but at the request (option) of the property owner.

602.3 Size. The minimum size water meter required to meet plumbing hydraulic demand and minimum pressure requirements for proper operation of domestic plumbing fixtures and appliances *shall* be installed, regardless of water service connection size, building water service size, or building piping size. Plumbing hydraulic demand *shall* be estimated utilizing design criteria from IPC Section 604 and Appendix E; and IRC Section 2903.

602.4 Commission Sub-Meters. *Commission* sub-meters *shall* meet the following requirements: Water passing through a *Commission* sub-meter *shall* not discharge into the sanitary sewage system, except as otherwise allowed by law.

1. [•]A *Commission* sub-meter *shall* be installed on the outlet side of the master meter.
2. [•]Where required, a *Commission* sub-meter remote reader wire *shall* be installed, and *shall* be tagged on both the outside and inside cable ends.
3. [•]The backflow preventer *shall* be installed on the outlet side of the *Commission* sub-meter.
4. [•]A *Commission* sub-meter *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 = ¾-inch PD ^{3,4}	145 gpm = 2-inch PD
45 gpm = 1-inch PD ⁴	288 gpm = 3-inch CMP
90 gpm = 1½-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}

540 gpm = 4" TRB I	315 gpm = 3" TRB II
1125 gpm = 6" TRB I	567 gpm = 4" TRB II
1620 gpm = 8" TRB I	1260 gpm = 6" TRB II
2610 gpm = 10" TRB I	2160 gpm = 8" TRB II
3870 gpm = 12" TRB I	3420 gpm = 10" TRB II
	4500 gpm = 12" TRB II

Abbreviations: PD = Positive Displacement; CMP = Compound; TRB = Turbine (Class I and II)

- 1) All meters, size ¾-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 ¾-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 ¾-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

WSSC WATER METERS

SECTION 603 OUTSIDE WATER METERS

603.1 Installation Responsibility. Outside *meters*, settings, and vaults *shall* be furnished and installed by the *Commission* or its designee. See Section 111.5.6, Meter Settings and Installation.

603.2 Building Service Valves.

603.2.1 First Valve (**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 NPFA 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** [provide domestic isolation] 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 NPFA 13 fire sprinkler system is specified, a minimum of a DCVA [double check valve assembly] (ASSE 1015) *shall* be installed to protect the domestic water from the fire sprinkler system. The supply for the fire sprinkler system *may* tee off before or after the first valve. When ahead of the first valve, a second **valve** (domestic isolation **shutoff valve**) [isolation] 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/*non-potable water* systems *may* be established in parallel to the domestic water branch; each branch *shall* contain a[n] **RPBA** (ASSE 1013) [RP backflow preventer].

603.3 Outside Meters Size ¾-Inch Through 2-Inch.

603.3.1 Location. In general, *meter* settings size ¾-inch through 2-inch, *shall* be located in the public right-of-way in accordance with *Commission* Standard Details.

603.3.2 Water Service Connection. The *Commission's* water service connection responsibility *shall* terminate at the property line; or, in the case of a **Commission** [WSSC] *right-of-way service connection*, 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. Plumbers *shall* not enter *meter* settings except for operating the angle valve as part of construction [-]related activities, or for assessing a problem, which if detected, *shall* be reported to the *Commission*.

603.3.3.3 Prohibited Activity. *Commission* service connections, *meter* settings, or any portion thereof, *shall* not be removed, altered, or replaced except as directed by the *Code Official* or as cited in this *Code*.

603.3.3.4 Verification Required. The plumber *shall* verify that the correct size and type *meter* as shown on the plumbing permit has been installed; that the *meter* setting is the correct size and type for the *meter*, and is complete and to grade; prior to FINAL plumbing inspection. See Section 107.4.1.5.

603.3.3.5 Minor Adjustments. Minor adjustments to the *meter* setting, frame and cover, *may* be corrected by the plumber, prior to FINAL inspection. Major damages or *meter* setting deficiencies *shall* be reported to the *Commission*.

603.4 Outside Meters Size 3-Inch and Larger.

603.4.1 Meter Vault Location. Where an outside water *meter* vault is specified by the *Commission*, the *Commission* or its designee *shall* construct the vault on private property, adjacent to public property, in a right-of-way provided by the property owner to the *Commission*.

SECTION 604 INSIDE WATER METERS

604.1 Freeze Protection. Water *meters* installed inside of buildings *shall* be located in an area capable of maintaining a minimum temperature of 50° [degrees] F [ahnenheit] (**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/Meter 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 NPFA 13D or 13R fire sprinkler system is specified, a second full-flow valve *shall* be installed to provide domestic isolation and to provide an uninterrupted fire sprinkler supply. Irrigation supplies, hose bibbs, and pressure reducing valves, *shall* be installed after the fire sprinkler supply tee, and *may* be installed ahead of the domestic isolation valve.

604.3.3 Parallel Systems. When a NPFA 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/*non-potable water* systems *may* be established in parallel to the domestic water branch; each branch *shall* contain a[n] **RPBA (ASSE 1013)**[RP backflow preventer].

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**[WSSC] remote reader *shall* be provided for all inside *Commission* meters as follows:

604.4.1[2] Conduit **Size and Fittings**. Conduit *shall* be 1[1/2"] inch (**25.4 mm**) minimum I.D. and *shall* have no fittings greater than 45 degrees (**0.78 rad**); fittings *may* not be insert type.

604.4.2[1] Conduit **Terminations**[and Cable Exit]. **Conduit termination for remote reader shall be 18 inches (457 mm) to 48 inches (1219 mm) above grade; do not terminate**[locate] in a fenced or rear yard; 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. In general, water *service connections*, size 1-inch through 2-inch, *shall* be located in the public right-of-way in accordance with *Commission* Standard Details. The *Commission* water *service connection* *shall* terminate with a curb valve at the property line; or, from the edge of the right-of-way, whichever is closer to the main.

604.5.2 Activities by Plumbers.

604.5.2.1 General. Plumbers *shall* connect to the *Commission's* curb valve. *Commission service connections* or any portion thereof, *shall* not be removed, altered, or replaced unless directed by a *Code Official*.

604.5.2.2 Curb Valve Depth. The maximum depth from finished grade to the curb valve *shall* be 60 [-] inches (**1524 mm**); minimum depth *shall* be 42 [-] inches (**1066 mm**).

604.5.2.3 Valve Box Required. A pre-manufactured cast metal valve/curb box *shall* be furnished and installed by the plumber at the property line, and *shall* consist of the valve box, adjustable top section, and lid. An extension stem and guide *shall* be installed on a curb stop valve 1-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):

1. [•] Multiple water *service connections* to multiple homes/units on a single lot/tract of property.
2. [•] Within 20 feet (6 096 mm) of an adjacent valve/curb valve access assembly.
3. [•] 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. The plumber *shall* verify that the top of the curb box is complete, operational, and flush with the permanent grade; and that the correct size and type of *meter* as shown on the plumbing permit has been installed; prior to FINAL inspection. See Section 107.4.1.5.

604.6 Meter Test Sleeves Not Required. *Meter* Test Sleeves/Piping *shall* not be required for any 1-1/2-inch["] *meter* or for any sub-meter located in a penthouse mechanical room. All other *meter* applications require test sleeves/piping according to *Commission* Standard Details.

CHAPTER 7

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For provisions relating to design and construction of *S[s]ite U[u]tility* systems (formerly Chapter 7), refer to the WSSC Development Services Code.

CHAPTER 8 INDUSTRIAL AND SPECIAL WASTE

SECTION 801 APPLICABILITY

801.1 Scope. This chapter *shall* authorize the regulation of Industrial Users discharging to the *Commission* wastewater system through the issuance of permits to certain non-domestic users and through enforcement of general requirements for other users; *shall* authorize monitoring and enforcement activities; *shall* detail user reporting requirements; and *shall* provide for the setting of fees for the equitable distribution of costs resulting from the program established herein. These requirements *shall* apply to all *persons* [(see definition)]within the **Sanitary District**[WSSD] and to persons outside the **Sanitary District**[WSSD] who are, users of the *Commission* sewer and wastewater treatment systems by agreement, permit or other means. *Persons* who apply for or receive service from the *Commission* *shall* be deemed to have consented to inspections and *shall* comply with *Commission* regulations. *Water re-use systems* are subject to chapter 9.

801.2 Definitions. In addition to the definitions generally applicable to the provisions of this *Code* (See Chapter 2), the following definitions are specifically applicable to the provisions of this Chapter 8 –[,] “Industrial and Special Waste”.

801.2.1 Administrator. The Administrator of the U.S. Environmental Protection Agency.

801.2.2 Authorized Representative.

801.2.2.1 Corporation. If the Industrial User is a corporation, authorized representative *shall* mean:

1. [•]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
2. [•]The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations, can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

801.2.2.2 Partnership or Proprietorship. If the Industrial User is a partnership, or sole proprietorship, an authorized representative *shall* mean a general partner or proprietor, respectively.

801.2.2.3 Government. If the Industrial User is a Federal, State or local governmental facility, an authorized representative *shall* mean a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or **their**[his or her] designee.

801.2.2.4 Designee. The individuals described in paragraph 801.2.2 *may* designate another authorized representative if the authorization is in writing; the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company; and the written authorization is submitted to the *Commission*.

801.2.2.5 New Authorization. If authorization in paragraph 801.2.2.4 is no longer accurate because a different individual or position has responsibility, a new authorization satisfying the requirements of paragraphs 801.2.2.1 and 801.2.2.4 of this section must be submitted to the *Commission* prior to or together with any reports to be signed by an authorized representative.

801.2.3 Best Management Practices (BMPs). Methods, activities, prohibitions of practices, maintenance procedures, and other management practices designed to reduce the quantity of pollutants discharged to a pretreatment system or to the POTW. BMP's also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

801.2.4 Biochemical Oxygen Demand (BOD). The measure of oxygen utilized in the biochemical oxidation of organic matter in 5 days at 20 degrees Celsius expressed in milligrams per liter (mg/l).

801.2.5 Bypass. The intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.

801.2.6 Categorical Industrial User. Any industrial user who is subject to categorical pretreatment standards.

801.2.7 Categorical Pretreatment Standard (Categorical Standard). 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.

801.2.8 Code of Federal Regulations(CFR). A codification of the general and permanent rules published in the Federal Register by the Executive Department and agencies of the Federal government.

801.2.9 Chronic Violation. Violations of wastewater discharge limits in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement , including instantaneous limits, as defined by 40 CFR 403.3(l).

801.2.10 Composite Sample. **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).**[A sample formed by mixing discrete, individual samples taken at a continuous proportion to the discharge flow or at periodic points in time.]

801.2.11 Decontamination Wastewater. Wastewater generated as a result of decontamination activities performed, to include but limited to, after a terrorist attack with CBR substances, radiological contaminations, activity at hazardous waste sites, or chemical spill exposures.

801.2.12[11] Discharge Authorization **Permit**. A permit issued by the *Commission* authorizing the discharge of industrial wastes into the wastewater treatment system subject to specific discharge standards, reporting requirements and other restrictions.

801.2.13[12] Domestic Wastes. The waterborne wastes derived from ordinary living processes.

801.2.14[13] Effluent. The flow of liquid out of a fixture, pipe, process, or system.

801.2.15[14] Environmental Protection Agency (EPA). The U.S. Environmental Protection Agency or, where appropriate, the Regional Water Management Division Director, or other duly authorized official of said agency.

801.2.16[15] Existing Source. Any source of discharge, the construction of which commenced prior to the publication by EPA of proposed categorical pretreatment standards, which will be applicable to such source if the standard is thereafter promulgated in accordance with Section 307 of the Clean Water Act.

801.2.17[16] Food Service Establishments (FSEs). Establishments where food is served to or provided for the public, with or without charge, including but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars;[,] or any other commercial operation that has the potential to discharge *grease-[]laden* wastewater.

801.2.18[17] Garbage. The solid animal and vegetable waste resulting domestic or commercial handling, storage, dispensing, preparation, cooking and serving of foods.

801.2.19[18] 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.

801.2.20[19] Ground Water. Subsurface water occupying the zone of saturation, either confined or free.

801.2.20[19].1 Confined Ground Water. A body of ground water covered with a material impervious enough to sever free hydraulic connection with overlying ground water.

801.2.20[19].2 Free Ground Water. Ground water in the zone of saturation extending down to the first impervious barrier.

801.2.21[20] Indirect Discharge. The introduction of pollutants into a POTW from any non-domestic source regulated under section 307(b), (c) or (d) of the Clean Water Act.

801.2.22[21] Industrial User. Any place of business, endeavor, arts, trade or commerce, whether public or private, commercial or charitable, that uses water in a product, process, or any manner that generates wastewater which is a source of indirect discharge. For the purposes of Chapter 8 the terms Industrial User and User will be used interchangeably.

801.2.23[22] Industrial Wastes. Liquid or liquid borne wastes resulting from the processes employed in industrial and commercial establishments.

801.2.24[23] Influent. The flow of a liquid into a fixture, pipe, process, or system.

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801.2.25[24] Interference. A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

1. [•]Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal; and
2. [•]Is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA)(including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

801.2.26[25] Lower Explosive Limit (LEL). The minimum concentration of a particular combustible gas that can be ignited in air.

801.2.27[26] Industrial Waste Monitoring Point (**IWMP**). A *Commission approved* access opening to the building drainage system for the purpose of obtaining samples of the I[i]ndustrial U[u]ser's waste discharges. Limits imposed on permitted industries apply at this point.

801.2.28[27] Misconduct. Use of abusive language, threats, mischievous or criminal acts, directed toward the public while providing services, or toward a *Code Official* while performing official duties.

801.2.29[28] New Source. A New Source *shall* be defined as:

801.2.29[28].1 Any Premises. Any building, structure, facility, or installation from which there is, or *may* be, a discharge of pollutants; the construction of which commenced after the publication of proposed pretreatment standards under Section 307(c) of the Clean Water Act which will be applicable to such source if such standards are thereafter promulgated in accordance with that section, provided that:

1. The building, structure, facility or installation is constructed at a site at which no other source is located; or
2. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
3. The production or wastewater generating processes if the building, structure, facility or installation is substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.

801.2.29[28].2 Construction Site. Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of paragraphs 801.2.28[26].1.(2[.]) and 801.2. 28[26].1.(3[.]) of this Section but otherwise alters, replaces, or adds to existing process or production equipment.

801.2.29[28].3 New Source. Construction of a new source as defined under this paragraph has commenced if the owner or operator has:

1. Begun, or caused to begin as part of a continuous on-site construction program as follows:
 - a. Any placement, assembly, or installation of facilities or equipment; or
 - b. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
2. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

801.2.30[29] Non-Contact Cooling Water. Water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

801.2.31[30] Non-Domestic Waste. The liquid wastes from industrial or commercial processes, trade or business; distinct from domestic wastes.

801.2.32[31] NPDES Permit. A National Pollutant Discharge Elimination System Permit. NPDES Permits authorize the operation of **Commission**[WSSC] wastewater treatment plants. NPDES Permits for **Commission**[WSSC] plants *shall* be issued by the State of Maryland.

801.2.33[32] Owner. A proprietor, *person*, or entity who owns or has exclusive rights of possession.

801.2.34[33] Person. Any individual; partnership; co-partnership; firm; company; corporation; association; joint stock company; trust; estate; f[F]ederal, s[S]tate, and local governmental entity; society; group or any other legal entity; or their legal representatives, agents, or assigns or governmental entities.

801.2.35[34] Pass-Through. A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

801.2.36[35] pH. A measure of acidity, or alkalinity of a liquid. It is represented on a scale of 0 to 14 with 7 representing a neutral state; 0 representing the most acidic; and 14 representing the most alkaline.

801.2.37[36] Pollutant. Any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, chemical wastes, biological wastes, radioactive wastes, heat, rocks, sand and other industrial, municipal, commercial and agricultural waste or any other contaminant.

801.2.38[37] Pollution. The addition of sewage, industrial wastes, or other harmful or objectionable material to water. Sources of pollution can be privies, septic tanks, subsurface irrigation fields, seepage pits, sink drains, barnyard wastes, etc.

801.2.39[38] POTW. A Publicly-Owned Treatment Works of the *Commission*, which includes any device and system used in storage, treatment, recycling, and reclamation of municipal sewage or industrial waste of a liquid nature. Also included are sewers, pipes, and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

801.2.40[39] POTW Treatment Plant. That portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage.

801.2.41[40] Pretreatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration *may* be obtained by physical, chemical, or biological processes, process changes, or by other means, except as prohibited by 40 CFR 403.6(d) of the General Pretreatment Regulations. 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).

801.2.42[41] Pretreatment Requirements. Any substantive or procedural requirement related to Pretreatment, other than a National Pretreatment Standard, imposed on an Industrial User.

801.2.43[42] Pretreatment Standards or Standards. Prohibited discharge standards, categorical Pretreatment Standards, state pretreatment standards, and local limits.

801.2.44[43] Prohibited Discharges. Absolute ban against the discharge of certain substance; these prohibitions appear in Section 804 of this **C[c]ode**.

801.2.45[44] Properly Shredded Garbage. Garbage that has been shredded such that all particles will be freely carried under flow conditions normally occurring in the wastewater sewers with no particles greater than ½-inch in any dimension.

801.2.46[45] RCRA. Resource Conservation Recovery Act.

801.2.47[46] Severe Property Damage. Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

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801.2.48[47] Significant Industrial User. An Industrial User meeting one or all of the criteria as defined in 40 CFR 403.3, the criteria being:

1. All Industrial Users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and
2. Any other Industrial User that discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blow-down wastewater); or
3. Any Industrial User which contributes process wastes stream which makes up 5-percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or
4. Any Industrial User designated by the *Commission* 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.

801.2.49[48] Slug Discharge. A slug discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause Interference or Pass-Through, or in any other way violate the *Commission's* regulations, local limits or Permit conditions. **Also referred to as slug load or slug loadings.**

801.2.50[49] Special Wastes. Wastes that require special treatment before entry into the normal plumbing system.

801.2.51[50] Storm Water. Any flow of water occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

801.2.52[51] Technical Review Criteria (TRC). Violations of wastewater discharge limits in which 33 percent or more of all the measurements taken for the same pollutant parameter taken during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, *fats, oil and grease*; and TRC=1.2 for all other pollutants except pH).

801.2.53[52] Toxic Substances. Substances that, when inhaled or ingested, can cause death or disease.

801.2.54[53] Total PCBs. 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 *shall* be used for all PCB analysis.

801.2.55[54] Upset. An exceptional incident in which there is unintentional and temporary noncompliance with categorical pretreatment standards because of factors beyond the reasonable control of the Industrial User. An Upset does not include non[-]compliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

801.2.56[55] Wastewater. Liquid and water-carried industrial waste and sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated which are discharged to the POTW.

801.2.57[56] Zero Discharge Categorical Industrial User. 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 *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 these Regulations *shall* be deemed to prevent any special agreement or arrangement between the *Commission* and any *person*, whereby wastewater of unusual strength or characteristic *may* be accepted by the *Commission* for treatment, that will not violate or cause the *Commission* and/or the user to violate, Federal or State pretreatment requirements or standards; and which *shall* not be harmful to the system. Under no circumstances *shall* Federal or State pretreatment standards or requirements be waived.

SECTION 804 PROHIBITED DISCHARGES

804.1 Prohibited Discharge to Sanitary Sewer. No *person shall* discharge the following, or cause the following to be discharged, directly or indirectly, into the *Commission's* sanitary sewer:

804.1.1 Temperature. Any liquids or vapors having a temperature greater than 140°[degrees]F[ahrenheit] (60°C). In no case *shall* discharged waste raise the temperature at the treatment works influent greater than 104°[degrees]F[ahrenheit] (40°C).

804.1.2 Fire or Explosion Hazard. Any liquids, solids or gases that by reason of their nature or quantity are, or *may* be, either alone or by interaction with other substances sufficient to cause a fire or explosion hazard in the POTW or its processes, including, but not limited to, waste streams with a closed cup flash point of less than 140°[degrees]F[ahrenheit] (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.

M[Prohibited m]aterials that can create a Fire or Explosion Hazard include but *shall* not be limited to; gasoline, kerosene, naphtha, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances determined to be a fire and/or explosion hazard.

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804.1.3 Public Nuisance or Hazard. Any malodorous or toxic gases, vapors, fumes, or other substances that, either singly or by interaction with other wastes, *shall* be capable of creating a public nuisance, a hazard to human health or the environment, or the prevention of entry by *Commission* personnel into sewers for maintenance and repair.

804.1.4 Interference and Pass-Through. Any liquids, solids, or gases not amenable to treatment or reduction by the sewage treatment processes employed, or amenable to treatment only to such a degree that the wastewater treatment plant violates its NPDES permit; or any substance which *may* interfere with or pass-through the POTW into the receiving waters untreated or without adequate treatment.

804.1.5 Excess Coloration. Any liquids, solids, or gases that, singly or by interaction with other material, cause excessive coloration which *may* pass-through the POTW to the receiving waters or any substance with excessive color such that the color is not removed in the wastewater treatment plant, including but not limited to, dye wastes.

804.1.6 Obstruction to Flow. Any lint, ashes, cinders, sand, mud, straw, shavings, metals, glass, bones, wood, plastics, stone dusts, rags, paunch manure, butcher's offal, or any solids, liquids or other substances capable of causing obstruction to the flow in sewers or other interference with the proper operation of the wastewater system.

804.1.7 Concentrated Releases. Any slug load, **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. An average daily flow greater than 2-percent of the average daily sewage flow at the wastewater treatment plant receiving the industrial waste unless otherwise permitted in writing.

804.1.9 Discharge Limitations. Any water or wastewater containing substances in excess of the limitations contained in Table 804.1.9. These limits *shall* be subject to revision and *may* be modified to represent concentration or mass based standards.

804.1.10 Radioactive Wastes. Any radioactive wastes or isotopes of such half-life or concentration as to exceed limits established by applicable local, State, or Federal regulations. Reports of discharges to the *Commission's* system *shall* reflect actual discharge concentrations rather than any time or dilution adjustments.

804.1.11 Pathogenic Wastes. Any[,] substance containing viable pathogenic or parasitic organisms that could pose a health hazard to the public or interfere with the proper operation of the wastewater collection or treatment systems

804.1.12 Storm or Ground Water. Any storm water, surface water, ground water, roof runoff, subsurface drainage.

804.1.13 Viscous Substances. Any substances that could solidify or become viscous at temperatures between 40°[-degrees]F[ahrenheit] (4°[°]C) and 140°[-degrees]F[ahrenheit] (60°[°]C); or at any other temperature that could cause obstruction and/or interference with the conveyance system or the POTW processes.

804.1.14 Dilution Prohibition. Any water added to a discharge as a partial or complete substitute for proper treatment to achieve compliance with applicable discharge limitations for any wastewater constituent.

804.1.15 Hauled Pollutants. Any trucked or hauled pollutants, except at disposal sites designated by the *Commission* in conformance with the provisions cited in Section 814.

804.1.16 Oils. Any wastes containing petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that could cause Interference or Pass-Through.

804.1.17 Glycol. Any glycol compound or derivative added to or contained in internal combustion engine cooling systems or liquid conveyance systems for the purposes of altering liquid freezing and/or boiling points.

804.1.18 Pretreatment Residue. Sludges, screenings or other residues from pretreatment systems or industrial processes.

804.1.19 Corrosive Substances. Substances causing corrosive damage, harm or endangerment to the collection system, pumps, personnel.

804.1.20 Mercury. Except as otherwise provided in this section, any substance containing mercury in amounts greater than 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	Limit³
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.[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
Oil and Grease (Non-polar, Petroleum) [Total Petroleum Hydrocarbons]	250
Fats, Oil and Grease (FOG , Polar) ⁵	200
pH ⁶	6.0 - 10.0 standard units
Temperature	140°F

Notes:

- 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.
- To determine compliance with numerical permit limitations, unless otherwise specified in the permit, the analytical methods *shall* include:
 - 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
 - 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.
- Maximum for any sample obtained during a calendar day.
- 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.[0]001 mg/L *shall* be used for all PCB analysis.
- Fats, wax, grease, or oils of animal or vegetable origin, whether emulsified or not. Any discharge capable of causing an obstruction and/or interference with the plumbing system, conveyance system, or the POTW processes shall be prohibited regardless of limit.
- 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. Storage of any materials that could enter the *Commission's* sanitary sewers via discharge, accidental spill, or leakage; or that could create a hazard or in any other way have a deleterious effect on the conveyance systems or treatment processes; or that could constitute a hazard to any individuals; *shall* be subject to review by the *Commission*. The *Commission shall* require reasonable safeguards to prevent the discharge, spill, or leakage of such materials into the sanitary sewage system. When deemed necessary, the owner *shall* install and maintain, at their expense, suitable control structures or devices that *may* include but *shall* not be limited to, dikes, dams, or sumps to prevent sudden or accidental waste discharges to the sanitary sewage system.

SECTION 806 DISCHARGE AUTHORIZATION PERMITS 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, that are or that have the potential to be Significant, *shall* apply to the *Commission* for a Discharge Authorization Permit. The *Commission may* require other Industrial Users, as it deems necessary, to submit a Discharge Authorization Permit Application and obtain a permit. Discharge Authorization Permit Applications *shall* be signed by an authorized representative of the Industrial User. No Significant Industrial User or other Industrial User designated by the *Commission*, *shall* discharge to the *Commission's* sanitary sewer system without first obtaining a Discharge Authorization Permit.

The *Commission may* require Zero Discharge Categorical Industrial Users, as it deems necessary, 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 *C[c]ode*.

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 *C[c]ode* 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 non[-]compliant discharge. The Discharge Authorization Permit *shall* at a minimum contain the following:

1. Effective and expiration dates.
2. Statement of non-transferability as specified in Section 806.7.
3. Effluent limitations, including best management practices, based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and/or State and local law.
4. Self-monitoring, sampling, reporting, notification, and record keeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and/or State and local law.
5. Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedules *may* not extend the compliance date beyond applicable federal deadlines.
6. Requirement to control slug discharges, if determined by the *Commission* to be necessary.

7. The Discharge Authorization Permit *may* contain other conditions as deemed appropriate by the *Commission* to ensure compliance with all applicable pretreatment standards and requirements.

806.3 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:

1. Effective and expiration dates.
2. Statement of prohibited discharge of categorically regulated process wastewater.
3. Statement of non-transferability as specified in Section 806.7
4. Reporting, notification, and record keeping requirement.
5. Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedules *may* not extend the compliance date beyond applicable federal deadlines.
6. 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:

1. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements.
2. To address significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of Discharge Authorization Permit or Categorical Zero Discharge Permit issuance.
3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge.
4. Information indicating that the permitted discharge poses a threat to the *Commission's* treatment plants, collection system personnel, or the receiving waters.
5. Violation of any terms or conditions of the Discharge Authorization Permit or the Categorical Zero Discharge Permit.
6. Misrepresentations or failure to fully disclose all relevant facts in the Discharge Authorization Permit application or in any required reporting.
7. Revision of or a grant of variance from categorical pretreatment standards pursuant to 40 CFR 403.13. To correct typographical or other errors in the Discharge Authorization Permit or the Categorical Zero Discharge Permit.
8. 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/Termination. The *Commission may* terminate or suspend a Discharge Authorization Permit or a Categorical Zero Discharge Permit for good cause including, but not limited to, the following:

1. Failure to notify the *Commission* in advance of significant changes to industry processes, pretreatment modifications, or wastewater characteristics.
2. Misrepresentation or failure to fully disclose all relevant facts in the Discharge Authorization Permit application.
3. Falsifying self-monitoring reports or certification statements.
4. Tampering with monitoring equipment.
5. Refusing to allow *Commission* personnel timely access to the facility premises and records.
6. Failure to comply with Discharge Authorization conditions, requirements or effluent limitations.
7. Failure to pay fines, permit renewal fees, or annual discharge fee.
8. Failure to meet compliance schedules.
9. Failure to complete a wastewater survey or the Discharge Authorization Permit application.
10. Failure to provide advance notice of the transfer of business ownership of a permitted facility.
11. Violation of any pretreatment standard or requirement, or any terms of the Discharge Authorization Permit, the Categorical Zero Discharge Permit, or these regulations.

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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:

1. Completes a new Discharge Authorization Permit application and pays the associated fees.
2. Requests in writing that the existing Discharge Authorization Permit or Categorical Zero Discharge Permit be reinstated or reissued.
3. Identifies the steps taken to correct the violation(s) which led to the suspension or termination of the existing Discharge Authorization Permit Categorical Zero Discharge Permit.
4. Upon reviewing all of the required information provided, **the *Commission*[WSSC]** *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 provision *shall* submit a request for reconsideration in writing. The request *shall* be addressed to the Regulatory Services **Division**[Group] and *shall* state in detail the provision(s) of the Discharge Authorization Permit or Categorical Zero Discharge Permit objected to, the reason(s) 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 *Commission* 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*.

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:

1. States that the new owner and/or operator have no immediate intent to change the facility's operations and processes.
2. Identifies the specific date on which the transfer is to occur.
3. Acknowledges full responsibility for complying with the existing Discharge Authorization Permit 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 prior to 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 prior to 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 prior to 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**[WSSD] or in those portions of Montgomery and Prince George's Counties outside of the **Sanitary District**[WSSD], while in the pursuit of their official duties cited in this **Code** including but not limited to: Inspecting, monitoring, reviewing records, copying records, setting up monitoring or measuring equipment or any other actions necessary to determine compliance with this *Code*. *Commission* personnel *shall* have the right to document locations, processes, conditions or equipment, at an Industrial User's facility through the use of photographs or video cameras or at the discretion of the *Commission*, require the Industrial User to supply such documentation.

807.1.2 Inspections. Inspections of facilities *shall* be performed by the *Code Official*, employees of the *Commission*, or its agents as deemed necessary by the *Commission*. Inspections *may* be performed anytime the facility is in operation, discharging or has a potential to discharge.

807.1.3 Identification and Entry. Where an Industrial User has security measures or safety procedures in force that require proper identification and clearance or special protective equipment before entry can be gained into the premises, the Industrial User *shall* make necessary arrangements at its own expense, to enable *Commission* employees, their agents, the State or EPA entry without delay for the purposes of performing their official duties.

807.1.4 Termination of Services. Failure to permit inspections on demand *shall* be a violation of these regulations and *may* prompt the termination of water and/or sewer service.

807.1.5 Jurisdictional Coordination. Joint activities as indicated in Section 807.1.1 between *Commission* employees and employees of outside jurisdictions, State or Federal agencies *may* be conducted on any private premise and into any building that discharges ultimately to the outside jurisdiction or is subject to inspection by other State or Federal Regulatory agencies.

807.1.6 Intimidation or Obstruction. Industrial Users *shall* not initiate or permit any action which harasses, intimidates, obstructs or threatens *Commission* employees or their agents in the performance of their official duties.

SECTION 808 REPORTING REQUIREMENTS

808.1 Submission of Required Information.

808.1.1 Documentation. Upon request of the *Commission*, any discharger or potential discharger of industrial wastes into the *Commission's* sewer system *shall* submit plans, reports, questionnaires, notices, analytical data, or any other information necessary to evaluate waste discharge characteristics and ensure compliance with these regulations, and Federal and State pretreatment requirements or standards. These documents, as outlined above or as specified in 40 CFR 403.12, *shall* be completed in a manner as *approved* by the *Commission* and returned in a time frame as specified in 40 CFR 403.12 or, in the absence of such specification, in a time frame as directed by the *Commission*. All information submitted in order to meet the above pretreatment requirements, *shall* be signed by an authorized representative, as well as include the certification statement contained in 40 CFR 403.6(a)(2)(ii) when applicable. Analytical results associated with the required reports *shall* be based upon data obtained through appropriate sampling and analysis

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performed during the period covered by the report, which data are representative of conditions occurring during the reporting period.

808.1.2 Process Changes. Industrial Users *shall* immediately report any process changes that alter the characteristics of any industrial discharge to the *Commission*. Failure to report process changes or modifications to the *Commission shall* be a violation of the *Code*.

808.1.3 Record Preservation. Industrial Users *shall* retain and preserve any records, books, documents, memoranda, reports, correspondence, computer files, and summaries of these materials relating to testing, internal or external monitoring, sampling, investigative and chemical analyses made by or on behalf of the Industrial User in connection with its discharge (including documentation associated with Best Management Practices) for a minimum of 3 years from the date of drafting or preparation. All records that pertain to matters that are the subject of special orders, or any other enforcement or litigation activities brought by the *Commission, shall* be retained and preserved until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired. Such materials *shall* be made available to *Commission* personnel upon request.

808.1.4 Compliance Schedule. Industrial Users installing a pretreatment technology or taking any other series of activities necessary to obtain and maintain compliance with a pretreatment standard or requirement *may* be required to follow a compliance schedule developed by the *Commission*, or the Industrial User as *approved* by the *Commission*. Compliance schedules *shall* contain increments of progress in the form of activities to be performed and dates for the commencement and completion of these activities leading to the construction and operation of the pretreatment technology or completion of other required activities to bring the Industrial User into compliance. Failure to initiate or complete the required activities to comply with the milestone and date elements of a compliance schedule *shall* be a violation of this *Code*.

808.1.5 Owner's Expense. All pretreatment technologies *shall* be installed, operated and maintained at the owner's expense.

808.1.6 Documentation Approval. Where pretreatment is necessary to conform to the requirements of the *Commission*, plans, procedures and complete specifications for the proposed work *shall* be submitted for review and approval by the *Commission*. Neither submission of plans nor issuance of a permit *shall* be construed to indicate that the *Commission* in any way vouches for, or warrants the capabilities of, any such pretreatment system or device, plans, specifications or data in any manner. The review and approval of plans, procedures or other information required by the *Commission shall* in no way relieve the Industrial User from the responsibility for modifying its pretreatment facilities to achieve compliance with the *Commission's* limitations. Industrial Users *shall* not make any alterations to pretreatment facilities without prior written notice to and approval of the *Commission*.

808.1.7 Public Information. Records concerning Industrial Users and the nature of their discharges *shall* be public information unless the Industrial User declares and is able to demonstrate to the satisfaction of the *Commission*, that the release of the information would divulge information, processes, or methods of operation entitled to protection as trade secrets pursuant to the requirements of the Maryland Public Information Act. Any such declaration *shall* be made at the time of the submission of the information or data. Effluent data *shall* not be treated as confidential information. When requested by the Industrial User furnishing a report, the portions of a report which might disclose trade secrets or secret processes *shall* not be made available for inspection by the public. Confidential portions of a report *shall* be available for use by the State or EPA in judicial review or enforcement proceedings involving the Industrial User furnishing the report.

808.1.8 Periodic Reports. All Significant Industrial Users and Zero Discharge Categorical Industrial Users *shall* submit to the *Commission* at least once every **6 months**[quarterly] on dates specified by the *Commission*, reports indicating flows, and the nature and concentration of pollutants in the discharge in a format prescribed in the Discharge Authorization Permit 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:

1. Description of discharge practices, including non-routine batch discharges.
2. Description of stored chemicals.
3. Procedures for immediately notifying the *Commission* of any accidental or slug discharge. Such notification shall also be given for any discharge which would violate any of the prohibited discharges cited in Section 804 of this C[c]ode.
4. Procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of *containment* structures or equipment, measures for containing pollutants (including inorganic, and organic chemicals) and/or measures and equipment for emergency response.
5. The Industrial User shall permanently post a notice in a prominent place advising all employees to notify the *Commission* in the event of a dangerous discharge for which a notification is required.
6. Employers shall advise all appropriate employees who may cause or be adversely affected by such a discharge of the emergency notification procedure.

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[0] 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 ordinance, a permit issued thereunder, or any applicable Federal or State law.

808.1.11[0].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[0].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[0].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[0].4 Certification. In the case of any notification made under paragraph 808.1.11[9].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.

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808.1.12[1] Violation Reporting Timeframe. In the event self-monitoring indicates a violation of one or more parameters, the Industrial User *shall* report the violation to the *Commission* within 24 hours of becoming aware of the violation. This reporting requirement *shall* not be satisfied by means other than direct communication with *Commission* personnel (i.e., telephone recording system messages [or electronic mail messages]*shall* not satisfy this notification requirement). The violation data and the explanation for the violation *shall* be submitted within 7 days of becoming aware of the violation.

808.1.12[1].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 and /or consolidate points of discharge; separate domestic and industrial waste streams.

809.2 Monitoring Point Alternative. In the event that no monitoring facility is required, the monitoring point *shall* be considered to be the nearest downstream manhole or the discharge point(s) inside the Industrial User's facility that are representative of the Industrial User's discharge, except as *shall* otherwise be stated in a Discharge Authorization Permit.

809.3 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 a 24-hour period *may* be composited prior to the analysis as follows: For cyanide, total phenols, and sulfides the samples *may* be composited in the laboratory or in the field; for volatile organics and *oil 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[n] 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(s)*.

810.3 False Representation. *Persons* who make any false statements, representation, or certification in any application, record, plan, or other document filed or required to be maintained pursuant to these regulations; or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under these regulations; or who withholds, omits, or fails to report information requested or required; *shall* be prosecuted.

810.4 Suspension and Revocation. Industrial Users subject to the requirements of a Discharge Authorization Permit 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 *C[c]ode* in accordance with the *Commission's* Enforcement Response Plan.

SECTION 811 PUBLIC NOTICE OF VIOLATIONS

811.1 General. The *Commission* shall publish annually in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdictions(s) served by the *Commission* a list of Industrial Users who by definition are in significant noncompliance during the previous 12 months with applicable pretreatment requirements.

811.2 Conditions for Nonc[-C]ompliance. 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.

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SECTION 812 LIABILITY FOR EXPENSES

812.1 Repair Reimbursement. The property owner, tenant, or Industrial User *shall* reimburse the *Commission* for the cost of any work or repair made necessary by the neglect or action of the property owner, tenant, or Industrial User resulting from the discharge of an industrial waste.

812.2 Activity Reimbursement. The property owner, tenant, or Industrial User *shall* reimburse the *Commission* for all costs associated with investigations, monitoring, analyses, or enforcement actions resulting from violation(s) of *Commission* requirements or standards.

SECTION 813 NOTICE

813.1 Immediate Notification. In the event of any **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 discharge(s), type, concentration and volume of waste, and corrective action being taken.

813.2 Written Notification. Within 5 days following an accidental discharge, the User *shall* submit to the *Commission* (and any applicable outside jurisdiction) a detailed written report describing the cause of the discharge and the measures to be taken by the User to prevent similar future occurrences. Such notification *shall* not relieve the User of any expense, loss, damage, or other liability which *may* be incurred as a result of the discharge, nor *shall* such notification relieve the User of any fines, civil penalties, or other liability which *may* be imposed by this regulation or other applicable law.

SECTION 814 HAULED WASTES

814.1 Applicability. The regulations in this subsection *shall* pertain to companies, individuals or partnerships hereinafter referred to as Waste Haulers, engaged in the business of transportation and/or disposal of domestic wastes or *grease* from *food service establishments*. These regulations *shall* also apply to businesses as deemed appropriate by the *Commission* including, but not limited to, *grease interceptor* cleaning, buses, carpet cleaning and mobile food service companies.

The cleaning of *grease interceptors* within the **Commission**[WSSC] 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), the following definitions are specifically applicable to the provisions of this Section 814, Hauled Waste.

814.2.1 Holding Tank. 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, but not limited to, households, job trailers, and portable restroom trailers.

814.2.2[1] Non-Domestic Wastes. Wastes from wastewater treatment plants or non-domestic sources *shall* not be discharged at the designated disposal sites unless specifically authorized in writing by the *Commission*. The contents of *grease abatement systems* at *FSEs* are considered domestic wastewater for the purposes of this section,

814.2.3[2] Point of Discharge. Discharge of waste at any place in the sewer collection system other than those designated by the *Commission shall* be prohibited.

814.2.4 Septic Tank. A septic tank 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.

814.2.5 Transfer Tank. A tank, vessel, or container in a centralized location used to temporarily store hauled wastes from various sources or locations prior to 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**[WSSC's Plumbing and Fuel Gas] *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 from various sources, is considered combined wastes and is prohibited.

814.4 Application. Individuals, partnerships, or corporations engaging in the cleaning of *grease interceptors* within the **Sanitary District**[WSSD] *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*.

Individuals, partnerships, or corporations 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*.

Discharge of waste without a Waste Hauler Discharge Permit *shall* be prohibited. (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**[WSSC] service area *shall* apply for a Zero Discharge Permit for each truck used in cleaning of *grease interceptors* within the **Sanitary District**[WSSD], 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 Discharge 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 **C[c]ode**.

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**[WSSC]-*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**[WSSC]-*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 composite 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 and/or readings in a manner and number as specified by the *Commission*.

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814.11 Notifications of Spills and Clean up. The waste haulers *shall* notify **the Commission**[WSSC] immediately, via phone, of all spill occurrences followed by filing, in-writing within 7 days, a report detailing the reason for the spill, the areas impacted, clean-up activities, and whether the spill reached any environmentally sensitive area such as parks, residential, commercial or institutional areas, streams, rivers, lakes, ponds or storm drain. Any corrective actions taken to avoid the occurrences of the spills in future should also be a part of this reporting. In the case where the spill occurs at a *FSE*, a copy of this report *shall* also be provided to the owner of the *grease interceptor*.

814.12 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), as well as 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, Termination, or Denial. The Waste Hauler Discharge Permit or Zero Discharge Permit *may* be suspended, terminated, or denied for good cause including, but not limited to, the following:

814.14.1 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 fully, 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 and/or obtaining instrument readings (i.e. % LEL, pH, H₂S, etc.).

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 [WSSC] *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**[WSSC] for judgments obtained by **the Commission**[WSSC] against Waste Haulers.

814.15 Penalties. 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 the above conditions and those specified in this *Code*, *shall* be cause for issuance of a State of Maryland civil citation (\$250.00-\$1000.00) and/or suspension or *revocation* of all permits assigned to the *permittee* upon written notice of such violation. Such violations *may* be cause for legal prosecution by the *Commission* under provisions of this *Code*. The following violations *shall* be addressed with a civil citation, including but not limited to:

1. Discharging without a hose.
2. Discharging without a permit.
3. Unauthorized transfer of permit.
4. Creating unsanitary conditions through spillage of wastes.
5. Failure to comply with *grease interceptor* cleaning procedures.
6. 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; and

815.1.5 Other. Other fees as the *Commission* may deem necessary to carry out the requirements contained herein.

SECTION 816 UPSET PROVISION

(Categorical Industrial Users only)

816.1 Scope. An upset, as defined by the Federal general pretreatment regulations in 40 CFR Part 403, is an exceptional incident in which there is unintentional and temporary non[-]compliance with categorical pretreatment standards because of factors beyond the reasonable control of the Industrial User. An upset *shall* not include non[-]compliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

816.2 Upset Defense. An upset *may* be used as an affirmative defense to an action brought for noncompliance with categorical pretreatment standards only if the Industrial User demonstrates, through properly signed contemporaneous logs, or other relevant evidence, that includes the following:

816.2.1 Specific Cause. An upset occurred and the Industrial User can identify the specific cause(s) of the upset.

816.2.2 Prudent Operation. The permitted facility was, at the time, being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures.

816.2.3 Timely Reporting. The Industrial User has submitted the following information to the *Commission* within 24-hours of becoming aware of the upset; if this information is provided orally, a written submission *shall* follow within 5 days: A description of the indirect discharge and cause of noncompliance; the period of noncompliance, including exact dates and times, or if not corrected, the anticipated time that the noncompliance is expected to continue; steps being taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

816.2.4 Burden of Proof. In any enforcement proceeding, the Industrial User seeking to establish the occurrence of an upset *shall* have the burden of proof.

816.2.5 Legal Remedy. Industrial Users *shall* have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with categorical pretreatment standards.

816.2.6 Temporary Shutdown. The Industrial User *shall* control production or all discharges to the extent necessary to maintain compliance with categorical pretreatment standards upon reduction, loss, or failure of its treatment facility until the facility is restored, or an alternative method of treatment is provided. This requirement *shall* apply in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

SECTION 817 BYPASS PROVISION

817.1 Emergency Limits. Bypass of an Industrial User's treatment facility *shall* be prohibited unless it is unavoidable to prevent loss of life, personal injury, or severe property damage; or no feasible alternative exists, such as the use of auxiliary treatment facilities.

817.2 Essential Maintenance. The Industrial User *may* allow any bypass to occur which *shall* not cause pretreatment standards or requirements to be violated, but only if it also is for essential maintenance to assure efficient operations. If bypass is needed for maintenance, the Industrial User *shall* notify the *Commission* of necessary maintenance within 24 hours. Industrial User *shall* submit data documenting that standards were being met and *shall* submit written a report within 30 days of the event.

817.3 Notice.

817.3.1 Written Notice. If an Industrial User knows in advance of the need for a bypass, the User *shall* submit prior written notice to the *Commission*, a minimum of 10 days before the date of the bypass.

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817.3.2 Verbal Notice. An Industrial User *shall* submit verbal notice of an unanticipated bypass that exceeds applicable pretreatment standards to the *Commission* within 24 hours from the time the Industrial User becomes aware of the bypass. A written submission *shall* also be provided within 5 days of the time the Industrial User becomes aware of the cause. The written submission *shall* include the duration of the bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass. The *Commission* may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

817.4 Exceptions. The *Commission* *shall* take enforcement action against an Industrial User for a bypass unless:

817.4.1 Unavoidable. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

817.4.2 No Alternatives. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition *shall* not be satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.

817.4.3 Notices Submitted. The Industrial User submitted notices as required cited in Section 817.3.

817.5 *Commission* Authorization. The *Commission* may approve an anticipated bypass, after considering its adverse effects, if the *Commission* determines that it *shall* meet the 3 conditions cited in Section 817.4.

SECTION 818 FOOD SERVICE ESTABLISHMENT DISCHARGE REQUIREMENTS

818.1 Applicability. The regulations in this Section *shall* apply to establishments where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars[,] or any other commercial operation that has the potential to discharge *grease-[]laden* wastewater; hereafter referred to as *Food Service Establishments(FSE)*. **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 the WSSC Plumbing and Fuel Gas Code related to Industrial Users shall also apply to Food Service Establishments.

818.2 Permit Required. All qualifying *Food Service Establishments(FSE)* *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 *Code* requirements or other federal, state or *Commission* deadlines, the *Commission* reserves the right to issue a *FSE* Discharge Permit prior to 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:

1. [818.2.2.1]**Prior to a new FSE opening with a valid Health Department Permit.**
2. [818.2.2.2]**At the time of the Commission's full initial inspection of an open FSE.**
3. [818.2.2.3]**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 these regulations.

818.2.3 Survey or Application Review. The *Commission* *shall* review the application or survey submitted by the *FSE* and may require additional information.

818.2.4 Duration. The *FSE Wastewater Discharge Permit* *shall* be issued for a specified time period determined by the *Commission*. 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 these Regulations. The *FSE Wastewater Discharge Permit shall*, at a minimum, contain the following:

1. Best Management Practices (BMPs) for controlling *FOG* discharges
2. *Grease abatement system* operations and maintenance standards, when applicable
3. On-site record keeping requirements (see Section 808.1.3)
4. Statement of non-transferability.
5. The *FSE Wastewater Discharge Permit may* contain other conditions as deemed appropriate by the *Commission* to ensure compliance with all applicable regulations.

818.2.6 FSE Wastewater Discharge Permit Conditions.

The following conditions shall be effective in the Permit:

1. The *FSE shall* meet all requirements of the *Code*.
2. The *FSE shall* maintain the required County Health Department Permits at all times. Failure to do so may render the permit invalid.
3. Duty to Mitigate requirements
4. Duty to Comply requirements
5. Duty to Provide Information requirements
6. Requests for Reconsideration requirements
7. Confidentiality procedures
8. Permit Modification, Suspension, or Termination procedures
9. *Commission* Right of Entry
10. Notification of Changed Discharge requirements
11. Records Retention requirements
12. Falsifying Information clause
13. Permit Transferability procedure
14. Severability clause
15. Property Rights clause
16. Extension of Compliance Dates procedures

818.2.7[6] FSE Wastewater Discharge Permit Modifications. The *Commission may* modify the *FSE Wastewater Discharge Permit* for good cause including, but not limited to, the following:

1. To incorporate any new pretreatment standards or requirements.
2. To address significant alterations or additions to the *FSE's* operations since the time of *FSE Wastewater Discharge Permit* issuance.

818.2.8[7] Permit Transferability. The *FSE Wastewater Discharge Permit shall* not be reassigned or transferred without prior written approval by the *Commission*.

818.2.9[8] 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[9] Other Permits. **FSEs**[Food Service Establishments] *shall* maintain the required County Health Department permits at all times. Failure to maintain health department permits *may* render the *FSE Wastewater Discharge permit* invalid.

818.3 Inspections. All **FSEs**[Food Service Establishments] are subject to routine inspections as determined by the *Commission*. (see also Section 807)

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818.4 Grease Abatement System Installation and Maintenance Requirements, General. When directed by the *Commission*, FSEs shall install and maintain a **Commission**[WSSC] approved grease abatement system that meets or exceeds minimum requirements cited in Section 302.10.

818.4.1 Wastewater Discharge Permittee/Property Owner's Responsibility. Grease **a**[A]batement **s**[S]ystems 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 **g**[G]rease **a**[A]batement **s**[S]ystems. If a grease abatement system is specifically designed to function properly with FOG and solids accumulation greater than 25%, the allowable accumulation of FOG and solids may be adjusted by the **Commission**[WSSC] 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** – [the]"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** – [the]"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**[WSSC] in writing prior to implementation. The **Commission**[WSSC] 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, prior *Commission* approval and applicable plumbing permit(s) must be executed.

818.4.3.2[1] **Deviation.** FSEs who deviate from the frequency of pumping or maintenance requirements of their **Commission**[WSSC] issued Maintenance Directive, without prior **Commission**[WSSC] 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 prior to 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[5] **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 **g**[G]rease **a**[A]batement **s**[S]ystems located in the **Commission**[WSSC] service area. Pumping and disposal of the contents shall be performed in accordance with conditions of the waste hauler discharge permit cited in Section 814. FSEs are required to research and assure their designated hauler is fully permitted.

818.7[6] **Use of Additives.** The introduction into the plumbing system of any surfactant, solvent, emulsifier, free enzymes or material that allows the grease to pass from the *grease abatement system* into the collection system is prohibited.

818.7[6].1 **Conditional Allowance.** Use of a biological additive may be conditionally allowed with **Commission**[WSSC]'s approval if the product manufacturer or distributor can demonstrate to the satisfaction of the **Commission**[WSSC] that:

1. The additive will not interfere with the normal operation of the *grease interceptor*.
2. The additive will not interfere with operations of the receiving wastewater treatment plant.
3. The use of the additive does not increase the potential for FOG to be discharged to the sanitary sewer.
4. The only active ingredients are bacterial products.
5. The use of the additive will not cause foaming in the sanitary sewer.
6. The pH of the additive is between 6 and 10.

818.7[6].2 **Additives Not a Substitute.** The use of an additive will not substitute for the need for proper cleaning or maintenance of the *grease* abatement device and cannot be used as justification for altering the cleaning frequency.

818.7[6].3 **Additive Exception.** Additives that are added to drain lines that do not connect to a *grease* abatement device are not impacted by this restriction.

818.7[6].4 **Normal Cleaning Products.** Normal kitchen and dish cleaning products are not considered additives for the purpose of this section.

818.8[7] **On-Site Plumbing System Maintenance.** The on-site plumbing system for commercial and multi-unit residential properties *shall* be maintained by, and at the expense of the property owner; including cleaning of the system due to *grease* related discharges. All jetted material must be removed at the nearest downstream manhole. Chemical cleaning of sewer lines is prohibited, except in conjunction with a jetting operation.

818.9[8] **Violations.**

818.9[8].1 Violations of the *Food Service Establishment* *shall* include, but not be limited to, the following:

818.9[8].1.1 **Grease Abatement Maintenance.** Failure to properly maintain a *grease abatement system*

818.9[8].1.2 **Records.** Failure to keep or to present records of maintenance

818.9[8].1.3 **Tampering Flow Control Device.** Unauthorized removal and/or tampering with the flow control device

818.9[8].1.4 **FSE Permit.** Failure to present *Food Service Establishment* Discharge Permit

818.9[8].1.5 **FSE Wastewater Permit.** Failure to comply with any condition of a *FSE* Wastewater Discharge Permit

818.9[8].1.6 **Waste Hauler.** Failure to use a permitted Waste Hauler for interceptor maintenance

818.9[8].1.7 **Master Plumber.** Failure to use a [WSSC registered]*Master Plumber* for correcting any and all enforcement actions that require plumbing work

818.9[8].1.8 **Normal Operation.** Bypassing, tampering or otherwise preventing normal operation of a *grease* abatement device

818.9[8].1.9 **Pass-through.** Pass-through of observable and measurable amounts of **FOG**[fats, oils or grease] to the *Commission's* sewer service

818.9[8].2 **Violation Enforcement Actions.** Violations *shall* subject the **FSE**[Food Service Establishment] to penalties and other enforcement action as provided for in this *Code* and the *Commission's* *FSE* Enforcement Response Plan.

[818.8.3 Failure to properly maintain a grease abatement system or to present records of maintenance; removal and/or tampering with the flow control device; or failure to comply with any condition of a *FSE* Wastewater Discharge Permit shall be a violation of this Code, and shall subject the permittee to penalties and other enforcement action as provided for in the *Commission's* *FSE* Enforcement Response Plan.]

818.9[8].3[4] **Repeated Violations FBGI.** Repeated violations for failure to clean or maintain a **F[f]low-B[b]ased G[g]rease I[i]nterceptor** *shall* result in a requirement to install a **V[v]olume-B[b]ased Grease I[i]nterceptor** as provided for in the *Commission's* *FSE* Enforcement Response Plan.

818.9[8].4[5] **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 NON-POTABLE WATER DERIVED FROM VARIOUS SOURCES

SECTION 901 GENERAL

901.1 Scope. Subject to outside approvals pursuant to 901.2 of this *Code*, this Chapter *shall* provide provisions to facilitate certain *non-potable water* uses in non-residential applications only. Such uses *may* include, but are not limited to, toilet and urinal flushing, mechanical systems and equipment cooling. Certain applications of *non-potable water* (e.g., irrigation (sub-surface, drip or spray), general hose bibb applications or automatic and/or self-service vehicle washing operations) *may* require additional provisions to ensure safety. This *Code* does not provide plumbing fixture guidelines for such applications; approvals and provisions *shall* be provided by the authority having jurisdiction.

901.1.1 Exceptions. This chapter is not applicable to process water recycling which is unique to, and self-[] contained within, a specific water utilizing process such as, but not limited to, vehicle washing, laundering, ice melt, or similar uses. These regulations also do not apply to residential use of rain barrels for outside irrigation, where the system does not come in contact with the building's plumbing system.

901.2 Additional Outside Jurisdiction Requirements. All centralized *non-potable water* use projects and decentralized *non-potable water* use projects must first be authorized by the appropriate county agencies (authority having jurisdiction). The appropriate authority having jurisdiction is responsible for oversight of the design, operation, maintenance, monitoring, recordkeeping and reporting requirements of the *non-potable water* projects. This includes establishing safe-minimum water quality standards for each intended *non-potable water* application and monitoring for compliance with the standards. At all times, in addition to the local county standards, all applicable federal and state water quality standards *shall* be met.

901.3 Definitions. In addition to the definitions included in Chapter 2 of this *Code*, the following definitions are specifically applicable to the provisions of this Chapter 9, Water Re-Use Systems.

901.3.1 Non-Potable Water. Water which is not reliably safe for drinking, personal use or culinary related utilization.

901.3.2 Centralized Non-Potable Water Systems. *Non-potable water* that is treated and distributed from a central location, e.g., a wastewater treatment plant

901.3.3 Decentralized Non-Potable Water Systems. *Non-potable water* that is collected, treated and used on location.

901.3.4 Water Re-Use Systems. Varieties of water recycling from the following sources: wastewater treatment plant effluent; graywater; rainwater; ground water; condensate; process and equipment discharge.

901.3.4.1 Reclaimed Water. Enhanced wastewater effluent produced at a centralized municipal wastewater treatment plant, resulting in recycled water suitable for various, yet specific *non-potable water* uses.

901.3.4.2 Graywater System. A decentralized *water re-use system* that employs on-site treatment of the discharge from specific plumbing fixtures such as bathtubs, showers, lavatory sinks, clothes washers, laundry tubs/trays, etc. thereby producing recycled water for various specific *non-potable water* uses.

901.3.4.3 Rainwater Harvesting System. A decentralized *water re-use system* that employs on-site treatment of captured rainwater from rooftop and similar elevated decking areas thereby producing recycled water for various specific *non-potable water* uses.

901.3.4.4 Groundwater Re-Use System. A decentralized *water re-use system* that employs on-site treatment of captured groundwater from foundation drainage systems thereby producing recycled water for various specific *non-potable water* uses.

901.3.4.5 Condensate Re-Use System. A decentralized *water re-use system* that employs on-site treatment of captured condensate from refrigeration and air conditioning systems thereby producing recycled water for various specific *non-potable water* uses.

901.3.4.6 Process Water Re-Use System. A decentralized *water re-use system* that employs on-site treatment of captured process wastewater from various systems thereby producing recycled water for various specific *non-potable water* uses.

901.3.5 Blackwater. A sanitary sewer flow containing human waste such as fecal matter or urine, or kitchen waste water.

901.3.6 Non-Residential Building or Occupancy. The classification non-residential *shall* apply to any building type or occupancy that does not meet the parameters of a *Group R-3 occupancy* as set forth in the International Building Code. *Group R-3 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.

901.4 Limitations. **The Commission**[WSSC] and this **C[c]ode** do not regulate the production and safety of *non-potable water* or ensure that *non-potable water* quality standards are being met.

SECTION 902 PERMIT

902.1 Permit. The installation of *Water Re-Use Systems* *shall* require a Long Form Permit where any such system utilizes any one of the following conditions:

902.1.1 Potable Water Connection. Any connection regardless of intended use: manual or automatic feed; emergency back-up or routine supplementation.

902.1.2 Sanitary Drainage Connection. Any connection, whether direct or indirect.

902.1.3 Use Within the Building. Any utilization of *non-potable water* within the building, including but not limited to, toilet and urinal flushing; mechanical system make-up; equipment cooling; etc.

902.1.4 Shared Space. Where any *Water Re-Use System* or associated collection and/or distribution piping shares space with any other plumbing or mechanical system components.

902.2 Plans Review Required. Design plans, as required per 904.1 below, *shall* be submitted along with the required permit application for **Commission**[WSSC] review.

SECTION 903 BACKFLOW PREVENTION AND METERING

903.1 Required 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) [RPZA] *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**[WSSC] Meter. In general, *water re-use systems* *shall* be metered to account for discharges to the sanitary sewer as follows:

903.2.1 Standard Details. **Sewer-Only**[sewer use] *meters* *shall* be installed following the **Commission**[WSSC] Standard Details.

903.2.2 Location. Where possible, the *meter* *shall* be located downstream of the water treatment process. The *meter* *shall* be located within a pressurized section of the **treatment system for water re-use** [treatment] *system* and downstream of a 100 micron filter.

903.2.3 Treatment Waste and Backwash. Liquid waste or backwash generated from the *non-potable water* treatment process *shall* be:

903.2.3.1 **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**[WSSC] 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 properly disposed of.

903.2.4 Exception for Graywater Systems. Where graywater or similar systems receive the waste stream from plumbing fixtures or equipment that is served with the **Commission**[WSSC] metered water, additional **Sewer-Only** [sewer use] metering is not required.

SECTION 904 SYSTEM DESIGN

904.1 General. **Treatment systems for water re-use** [treatment] *systems* and associated collection and distribution piping *shall* be designed by a registered professional engineer.

WATER RE-USE SYSTEMS

904.1.1 Construction Documents. Design plans *shall* include plan views, including exterior tanks and associated piping, complete elevation schematics, and corresponding equipment schedules. Zoom and scale *shall* be adequately enlarged to facilitate a clear understanding of all equipment, appurtenances and flow direction.

904.2 Sources. The sources of water for *water re-use systems* *shall* include, but are not limited to, as follows:

904.2.1 Graywater. Bathtubs, showers, lavatory sinks, clothes washers and laundry trays.

904.2.2 Rainwater. Rooftop drainage systems; elevated patios, decks, and similar.

904.2.3 Groundwater. Subsurface foundation drain systems and similar.

904.2.4 Condensate. Refrigeration and air conditioning condensate.

904.2.5 Clear Process Waste. Equipment cooling, steam recovery, ice melt, fire pump test, and similar ["clear"] process waste.

904.3 Prohibited Sources.

904.3.1 Blackwater. Urine, fecal waste, kitchen waste, and similar.

904.3.2 Blood Borne Waste. Hospitals, Laboratories, Morgues.

904.3.3 Industrial Waste. Untreated industrial waste.

904.3.4 Surface Water. At grade surface run-off or at grade ponded/standing water

904.3.5 Vehicle Generated Waste. Parking lots, decks, or garages; vehicle service centers; vehicle washing operations; and similar.

904.4 Reclaimed Water. Treated wastewater treatment plant effluent differs from other *water re-use systems* in that the treatment process is performed at the municipal level, offsite from the use. It is then piped to the property in a municipal utility *approved* manner, but then is distributed and utilized on property as required of other *water re-use systems* described in this *Code*. Uses for reclaimed water are limited to the uses set forth by the Maryland Department of the Environment. This use is synonymous with centralized *non-potable water* systems.

904.5 Minimum Water Quality Standard. It is the responsibility of the appropriate State and County Government Agencies to establish water quality standards. At a minimum, non potable water produced for plumbing, mechanical and industrial process as allowed by this *Code*, *shall* meet the parameters set forth by the Maryland Department of the Environment – Class IV effluent water quality standard, or other equivalent standards established by local authorities.

904.6 Collection Piping. All collection piping within a building *shall* be designed and installed in accordance with IPC Chapters 3, 7, 9 **and** 10 and this *Code*. Marking and labeling *shall* be required of all collection piping, above and below grade, whether under gravity flow or pump pressure conditions.

904.6.1 Graywater Collection Piping. Graywater collection piping systems and associated collection reservoirs/sumps *shall* be protected from the sanitary sewer system by segregation, an air gap or a backwater valve.

904.7 Distribution Piping.

904.7.1 Design and Installation. All distribution piping *shall* be designed and installed in accordance with IPC Chapter 3 **and** 6 and this *Code*.

904.7.2 Marking and Labeling. All piping and pipe covering *shall* be marked and labeled pursuant to IPC Section 608.8. Fixture and equipment supply shut-off valves *shall* be tagged to alert service technicians of the origin and nature of the *non-potable water*.

904.7.3 Potable Water Back-up. Potable water *shall* be interconnected in adequate supply and volume to support the fixture demand in the event of system failure or removal. See 903.1.

904.7.4 Water Coloring. *Non-potable water* does not require coloring. Where coloring is specified by the designer, caution *shall* be used to ensure permanent staining of fixtures will not occur.

904.8 Storage Tanks.

904.8.1 Construction. When installed above or below grade, storage tanks *shall* be constructed to withstand internal and external forces whether the tank is empty or full.

904.8.2 Drain and Overflow. The drain and overflow of a storage tank to the sanitary sewer is only allowed for graywater systems and similar (e.g.; reclaimed water and process water), where upstream processes utilized **Commission**[WSSC] metered water. All other **un**["non-"]metered[""]discharges (e.g., rain water, condensate, and groundwater) *shall* be routed to the storm water system in accordance with relevant standards.

904.8.3 Air Gap or Backwater Valve. Where possible, an air gap *shall* be provided between the drain/overflow of a storage tank and its sanitary drain receptor. In lieu of an air gap, a backwater valve *may* be installed downstream of a storage tank directly discharging to the sanitary sewer to protect the tank from any possible back-up within the building drainage system. When directly connected, both drain and overflow *shall* discharge into a vented trap. Whether direct or indirect, traps serving such storage tanks *shall* include automatic trap priming devices.

904.8.4 Storm Sewer Connection. When applicable, *water re-use system* collection piping, tanks, drains and overflows *shall* be protected from storm sewer backflow by air gap or a backwater valve(s).

904.9 Roof Washer System. Rainwater harvesting systems *shall* be outfitted with debris excluders or similar devices. It is recommended that roof washing systems be designed to automatically divert a sufficient volume of initial rainfall to effectively clean the roof or collection surface of undesired debris and contaminants.

904.10 Combination Systems. Multiple sources *may* be utilized to provide make-up to a single *non-potable water* treatment systems as follows:

904.10.1 Collection System Segregation. Each type of source water *shall* be independently routed to the treatment and storage components, unless otherwise *approved* by the *Code Official*.

904.10.2 Metering. Prior to joining source waters together for treatment, metering of all **un**["non-]metered["] source waters *shall* be accomplished. Source waters *shall* be filtered through a minimum of a 100 micron filter.

904.10.3 Overflow and Backwash. Collection overflows and filtration backwash water *shall* be routed to their required corresponding collection systems

(e.g.: rainwater to storm sewer; graywater to sanitary sewer. etc.)

SECTION 905 DISCLOSURE AND SIGNAGE

905.1 Distribution Piping. Distribution piping and supply shut-off valves *shall* be marked, labeled and tagged in accordance with Section 904.7.2.

905.2 Commercial, Industrial and Institutional Restrooms. Each restroom in these various occupancies *shall* have, at a minimum, one disclosure sign posted in a conspicuous location. The lettering *shall* be highly visible and a minimum of a 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 [where applicable] Flushing".

905.3 Water Re-use Equipment Room. In all *water re-use system* equipment rooms there *shall* be a disclosure sign, or 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 [describe use]. Prior to commencing any plumbing or mechanical work on premises, by law you must consult with the system operator."

SECTION 906 OPERATIONS AND MAINTENANCE

906.1 Approved Operators. *Water Re-use Systems* *shall* be operated and maintained by qualified technicians. Licensing and qualification credentials for technicians, if any, will be established by the county government agency having jurisdiction.

906.2 Operation, Maintenance, Recordation **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 and/or report the system *shall* constitute a violation of this *Code* and the *water re-use system* *may* be subject to a shut-down order requiring a disconnection of the system and supplying all related plumbing fixtures with potable water.

906.3 Minimum Water Quality. When minimum required water quality standards cannot be met, the *water re-use systems* *shall* be completely by[-]passed and supplied with potable water through an adequately sized interconnection. Distribution piping *shall* be purged and disinfected as needed.

906.4 System Shut-down and Removal. Long term shut down or removal of a *water re-use system* *shall* be done under a Short Form Permit. Collection piping *shall* be re-routed directly to the sanitary or storm water systems as applicable. Interconnection between the treatment system and the potable water mains *shall* be permanently divorced. Existing distribution piping *shall* be purged and disinfected as needed. Re-activation requires the same approvals as a new system.

WATER RE-USE SYSTEMS

906.5 Conveyance of Non-Potable Water System During Changes in Ownership and/or Building Occupancy. The new owner or tenant *shall* be notified of all the details related to the *non-potable water* system including: operations, maintenance, monitoring, recordkeeping and reporting documents. All responsibilities *shall* be officially transferred to, and carried-out by, the new owner/tenant and the jurisdiction having authority *shall* be notified of the changes in ownership.

906.6 Detailed Guidelines. The Environmental Protection Agency's 2012 Water Reuse Guidelines and the 2011 National Sanitation Foundation – NSF/ANSI 350 *may* be utilized for additional detailed guidelines for design, operation, maintenance and monitoring requirements of the *non-potable water* systems.

APPENDIX A
RESIDENTIAL SYSTEM DEVELOPMENT CHARGE

Rates Effective July 1, 1999

Fixture Code Revisions Effective May 1, 2007

Code	Fixture Description	Water Supply Fixture Unit Value	SDC Water Charge	Drainage Fixture Unit Value	SDC Sewer Charge	SDC Combined Charge
R0	Bathtub (Residential)	3.00	\$ 264	1.60	\$ 184	\$ 448
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.