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| **2024 UPC Model Code Changes** | | | | | | |
| **Summary** | Do not adopt change: | Adopt change: | | Adopt change with amendment: |  |  |
|  |  |  |  | May include renumbering or integration of existing amendment | | |

Last Updated: **12/23/24**

Red text = State amendment

Blue text = Model code change

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|  | = Significant change |

| **Existing State Amendment** | **Title or Subject** | **2021 UPC #** | **2024 UPC #** | **Summary** | **2024 Staff Recommendation** | **2024 TAG Member Recommendation** | **Other Comments** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chapter 1 Administration** | | | | | | | | |
|  | Construction Documents | 104.3.1 | 104.3.1 | Example Title | **Accept Change** | No additional comments. |  | |
|  | Example summary of the code change. | | | | | | | |
| **Accept Change** | **Accept Change**  with amendment | No additional comments. | 104.4.5 | Editorial | **Accept Change** |  |  | |
|  | **104.4.5 Suspension or Revocation.** The Authority Having Jurisdiction shall be permitted to, ~~in writing~~ with written notification, suspend or revoke a permit issued under the provisions of this code where the permit is issued in error or on the basis of incorrect information supplied or in violation of other ordinance or regulation of the jurisdiction. | | | | | | | |
| **Chapter 2 Definitions** | | | | | | | | |
|  | Definition | (N/A) | 203.0 | New definition | **Accept Change** |  |  | |
| **Anodeless Riser.** An assembly of steel-cased plastic pipe used to make the transition between plastic piping installed underground and metallic piping installed aboveground. [NFPA 54:3.3.3] | | | | | | | |
| Definition | 203.0 | 203.0 | Updated definition | **Accept Change** |  |  | |
| **Appliance.** A device that utilizes fuel or electricity as an energy source to produce light, heat, power, refrigeration, or air conditioning~~, or compressed fuel gas~~. This definition also ~~shall include a~~ includes vented decorative appliances and electric storage or tankless water heaters. | | | | | | |  |
| Definition | (N/A) | 204.0 | New definition | **Accept Change** |  |  | |
| **Body Spray.** A shower device for spraying water onto a bather from other than the overhead position. | | | | | | | |
| Definition | 204.0 | 204.0 | Updated definition | **Accept Change** |  |  | |
| **Bonding ~~Conductor or~~ Jumper.** A reliable conductor to ensure the required electrical conductivity between metal parts required to be electrically connected. [NFPA 70:100 (Part I)] | | | | | | | |
|  | Definition | 205.0 | 205.0 | Updated definition | **Accept Change** |  |  | |
| **Chimney, Metal.** ~~A chimney constructed of metal with a minimum thickness not less than 0.127 inches (3.23 mm) (No. 10 manufacturer’s standard gauge) steel sheet.~~ A field-constructed chimney of metal. [NFPA 54:3.3.18.4] | | | | | | | |
| Definition | 205.0 | 205.0 | Updated definition | **Accept Change** |  |  | |
| **Confined Space.** A ~~room or~~ space ~~having a volume less than 50 cubic feet per 1000 British thermal units per hour (Btu/h) (4.83 m~~~~3~~~~/kW) of the aggregate input rating of all fuel-burning appliances installed in that space~~ with limited entrance and egress that is not suitable for inhabitants and not intended for continuous human occupancy. | | | | | | | |
| Definition | 206.0 | 206.0 | Updated definition | **Accept Change** |  |  | |
| **~~Gray Water Diverter Valve~~ Diverter Valve, Gray Water.** A valve that directs gray water to the sanitary drainage system or a subsurface irrigation system. | | | | | | | |
| Definition | (N/A) | 206.0 | New definition | **Accept Change** |  |  | |
| **Diverter Valve, On-Site Treated Nonpotable Water.** A component in the collection system to control inflow and overflow in collection tanks intended for on-site treatment and direct beneficial use. | | | | | | | |
| Definition | (N/A) | 206.0 | New definition | **Accept Change** |  |  | |
| **Diverter Valve, Rainwater.** A component in commercial rainwater catchment systems to control high inflow and overflow volumes in rainwater storage tanks. | | | | | | | |
| Definition | 207.0 | 207.0 | Updated definition | **Accept Change** |  |  | |
| **Essentially Nontoxic Transfer Fluid.** ~~Essentially nontoxic at practically nontoxic, Toxicity Rating Class 1 (reference “Clinical Toxicology of Commercial Products” by Gosselin, Smith, Hodge, & Braddock)~~.A fluid generally recognized as safe by the Food and Drug Administration (FDA) as food grade. | | | | | | | |
| Definition | 208.0 | 208.0 | Updated definition | **Accept Change** |  |  | |
| **Flood-Level Rim.** The top edge of a receptor or fixture from which water overflows. | | | | | | | |
| Definition | 209.0 | 209.0 | Updated definition | **Accept Change** |  |  | |
| **Gas Piping.** An installation of pipe, valves, or fittings that are used to convey fuel gas, installed on a premise or in a building~~, but shall not include:~~.  ~~(1) A portion of the service piping.~~  ~~(2) An approved piping connection 6 feet (1829 mm) or less in length between an existing gas outlet and a gas appliance in the same room with the outlet.~~ | | | | | | | |
| Definition | 209.0 | 209.0 | Updated definition | **Accept Change** |  |  | |
| **Gray Water.** Untreated wastewater that has not come into contact with toilet waste, kitchen sink waste, dishwasher waste or similarly contaminated sources. Gray water includes wastewater from bathtubs, showers, lavatories, clothes washers, and laundry ~~tubs~~ sinks. Also, known as grey water, graywater, and greywater. | | | | | | | |
| Definition | 212.0 | 212.0 | Updated definition | **Accept Change** |  |  | |
| **~~Heat-Fusion Weld Joints~~ Joint, Heat-Fusion.** A joint used in some thermoplastic systems to connect the pipe to fittings or pipe lengths directly to one another (butt-fusion). This method of joining pipe to fittings includes socket-fusion, electro-fusion, and saddle-fusion. This method of welding involves the application of heat and pressure to the components, allowing them to fuse together forming a bond between the pipe and fitting. | | | | | | | |
| Definition | 215.0 | 215.0 | Updated definition | **Accept Change** |  |  | |
|  | **Medical Air.** For ~~the~~ purposes of this code, medical air is air supplied from cylinders, bulk containers, or medical air compressors, or reconstituted from oxygen USP and oil-free, dry nitrogen NF. [NFPA 99:3.3.~~96~~ 106] | | | | | | | |
| Definition | 215.0 | 215.0 | New Definition | **Accept Change** |  |  | |
| **Mid-Story Guide.** A support designed to keep piping in alignment, located mid-way between floors or a floor and ceiling. | | | | | | | |
| Definition | 222.0 | 222.0 | New Definition | **Accept Change** |  |  | |
| **Valve, Balancing.** A valve that regulates and controls the return of water to the water heater in a recirculating hot water piping system. | | | | | | | |
| Definition | 222.0 | 222.0 | Updated Definition | **Accept Change** |  |  | |
| **Vent Connector, Gas.** That portion of a gas venting system that connects a listed gas appliance beginning at the draft hood or flue collar to a gas vent and is installed within the space or area in which the appliance is located. | | | | | | | |
| Definition | 222.0 | 222.0 | New Definition | **Accept Change** |  |  | |
| **Vented Appliance.**  **Category I Vented Appliance.** An appliance that operates with a nonpositive vent static pressure and with a vent gas temperature that avoids excessive condensate production in the vent. [NFPA 54:3.3.4.10.1]  **Category II Vented Appliance.** An appliance that operates with a nonpositive vent static pressure and with a vent gas temperature that can cause excessive condensate production in the vent. [NFPA 54:3.3.4.10.2]  **Category III Vented Appliance.** An appliance that operates with a positive vent static pressure and with a vent gas temperature that avoids excessive condensate production in the vent. [NFPA 54:3.3.4.10.3]  **Category IV Vented Appliance.** An appliance that operates with a positive vent static pressure and with a vent gas temperature that can cause excessive condensate production in the vent. [NFPA 54:3.3.4.10.4] | | | | | | | |
| [51-56-0200](https://app.leg.wa.gov/WAC/default.aspx?cite=51-56-0200&pdf=true) | Definition | 225.0 | 225.0 | New Definition | **Accept Change** |  |  | |
| **Water Heater, Dual Purpose.** An appliance intended to be a heat source for both space heating and domestic hot water applications. | | | | | | | |
| [51-56-0200](https://app.leg.wa.gov/WAC/default.aspx?cite=51-56-0200&pdf=true) | Definition | 225.0 | 225.0 | New Definition | **Accept Change** |  |  | |
| **Water Station.** A designated location intended to provide access to drinking water through a device or appliance. | | | | | | | |
| **Chapter 3 General Regulations** | | | | | | | | |
|  | **Plastic Pipe, Plastic Pipe Fittings, and Components** | 301.2.3 | 301.2.3 | Updated Reference location | **Accept Change** |  |  | |
| **301.2.3 Plastic Pipe, Plastic Pipe Fittings, and Components.** Plastic pipe, plastic pipe fittings, and components other than those for gas shall comply with NSF/ANSI 14. | | | | | | | |
| Tall Wood (Mass Timber) Buildings | (N/A) | 301.6 | This segment adds building code language on expansion and contraction in mass timber buildings, ensuring design compliance. | **Accept Change** |  |  | |
| **301.6 Tall Wood (Mass Timber) Buildings.** Plumbing systems installed in tall wood (mass timber) buildings, shall comply with the following:  (1) Be designed by a licensed plumbing contractor or a registered design professional in accordance with this code and the building code.  (2) Be designed to accommodate expansion, contraction, and differential movement between parts of a tall wood (mass timber) building in accordance with Section 312.2. | | | | | | | |
| Prohibited Location | 308.0. 308.1 | 308.0, 308.1 | Language edit | **Accept Change** |  |  | |
| **308.0 ~~Improper Location~~ Prohibited Locations.** | | | | | | | |
| Fittings | 310.1 | 310.1 | Removed exemption for double hub sanitary tapped tee. | **Accept Change** |  |  | |
| **310.1 Fittings.** No double hub fitting, single or double tee branch, single or double tapped tee branch, side inlet quarter bend, running thread, band, or saddle shall be used as a drainage fitting~~, except that a double hub sanitary tapped tee shall be permitted to be used on a vertical line as a fixture connection~~. | | | | | | | |
| Female Plastic Connections | 310.9 | (N/A) | Female plastic tapered threads can’t be used with male metal threads, but straight plastic threads are allowed. | **Accept Change** |  |  | |
| **310.9 Female Plastic Connections.** Female plastic tapered (NPT) threaded connections shall not be allowed to be used when threaded onto a male metallic connection.  **Exception:** Female plastic parallel (straight) threaded connections shall be permitted. | | | | | | | |
| ABS and PVC Transition Joints | 310.10 | (N/A) | PVC and ABS pipes can't be glued to different materials, except as allowed in Section 705.9.4. | **Accept Change** |  |  | |
| **310.10 ABS and PVC Transition Joints.** Except as provided in Section 705.9.4, PVC and ABS pipe and fittings shall not be solvent welded to dissimilar material. | | | | | | | |
| Independent Systems | 311.1 | 311.1 | Adding clarifying language. | **Accept Change** |  |  | |
| **311.1 General.** The drainage system of each new building and of new work installed in an existing building shall be separate and independent from that of any other building, and, where available, every building shall have an independent connection with a public or private sewer.  **Exception:** Where one building stands in the rear of another building on an interior lot, and no public or private sewer is available or can be constructed to the rear building through an adjoining court, yard, or driveway, the building drain from the front building shall be permitted to be extended to the rear building. | | | | | | | |
| Protection of Pipping, Tubing. Materials, and Structures | 312.0 | 312.0 | Including Tubing pipe | **Accept Change** |  |  | |
| **312.0 Protection of Piping, Tubing, Materials, and Structures.** | | | | | | | |
| **Steel Nail Plates** | 312.9 | 312.9 | Clarifying language on piping and tubing and adding specification for fuel gas piping protection. | **Accept Change** |  |  | |
| **312.9 Steel Nail Plates.** Plastic piping or tubing, and copper or copper alloy piping or tubing penetrating framing members to within 1 inch (25.4 mm) of the exposed framing shall be protected by steel nail plates not less than No. 18 gauge (0.0478 inches) (1.2 mm) in thickness. The steel nail plate shall extend along the framing member not less than 1-1⁄2 inches (38 mm) beyond the outside diameter of the pipe or tubing. Fuel gas piping shall be protected in accordance with Section 1210.4.3.  **~~Exception:~~** ~~See Section 1210.3.3.~~ | | | | | | | |
| **Hangers, Supports, and Anchors.** | 313.0 | 313.0 | Adding in reference to Anchors | **Accept Change** |  |  | |
| **313.0 Hangers, ~~and~~ Supports and Anchors.** | | | | | | | |
| **General** | 313.1 | 313.1 | Adding in tubing and Seismic restraints. | **Accept Change** |  |  | |
| **313.1 General.** Piping, tubing, fixtures, appliances, and appurtenances shall be supported in accordance with this code, the manufacturer’s installation instructions, and in accordance with the Authority Having Jurisdiction. Seismic restraints shall be in accordance with the building code. | | | | | | | |
| **Material** | 313.2 | 313.2 | Clarifying language |  |  | |  |
| **313.2 Material.** Hangers, supports, and anchors shall be of sufficient strength to support the weight of the pipe or tubing and its contents. Piping or tubing shall be isolated from incompatible materials. | | | | | | | |
| **Chapter 4 Plumbing Fixtures and Fixture Fittings** | | | | | | | | |
|  | **Flanged Fixture Connections** | 402.6 | 402.6 | Explaining flange location, and how carriers shall be attached. | **Accept Change** |  |  | |
| **402.6 Flanged Fixture Connections.** Fixture connections between drainage pipes and water closets, floor outlet service sinks and urinals shall be made by means of approved copper alloy, hard lead, ABS, PVC, or iron flanges caulked, soldered, solvent cemented; rubber compression gaskets; or screwed to the drainage pipe. The connection shall be bolted with an approved gasket, washer, or setting compound between the fixture and the connection. The bottom of the flange shall be set on ~~an approved firm base~~ the top of the finished floor.  Wall-mounted water closet fixtures shall be securely bolted to an approved carrier fitting. The approved carrier fitting shall be securely attached to the structure. The connecting pipe between the carrier fitting and the fixture shall be an approved material and designed to accommodate an adequately sized gasket. Gasket material *shall* be neoprene, felt, or similar *approved* types. | | | | | | | |
| **Closet Rings (Closet Flanges).** | 402.6.1 | 402.6.1 | Clarifying language | **Accept Change** |  |  | |
| **402.6.1 Closet Rings (Closet Flanges).** Closet rings (closet flanges) for water closets or similar fixtures shall be of an approved type and shall be copper alloy, copper, hard lead, cast-iron, galvanized malleable iron, ABS, PVC, or other approved materials. ~~Each such~~ Closet rings (closet flanges) shall be approximately 7 inches (178 mm) in diameter and, where installed, shall, together with the soil pipe, present a 11⁄2 inch (38 mm) wide flange or face to receive the fixture gasket or closet seal.  (Remainder unchanged) | | | | | | | |
| **Securing Floor-Mounted, Back-Outlet Water Closet Bowls.** | 402.6.3 | 402.6.3 | Using specific language for closet flange placement. | **Accept Change** |  |  | |
| **402.6.3 Securing Floor-Mounted, Back-Outlet Water Closet Bowls.** Floor-mounted, back-outlet water closet bowls shall be set level with an angle of 90 degrees (1.57 rad) between the floor and wall at the centerline of the fixture outlet. The floor and wall shall have a flat mounting surface not less than 5 inches (127 mm) to the right and left of the fixture outlet centerline. The closet flange shall be secured to the wall mounting surface. Offset, eccentric, or reducing closet flanges shall not be permitted with these fixtures.  The fixture shall be secured to the wall outlet flange or drainage connection and to the floor by corrosion-resistant screws or bolts. ~~The closet flange shall be secured to a firm base.~~  ~~Where floor-mounted, back-outlet water closets are used, the soil pipe shall be not less than 3 inches (80 mm) in diameter. Offset, eccentric, or reducing closet flanges shall not be used.~~ | | | | | | | |
| **Overflows** | 404.2 | 404.2 | Updated language on Overflows and separating them in to separate parts | **Accept Change** |  |  | |
| **404.2. Overflows.** Where a fixture is provided with an overflow, the overflow shall comply with Section 404.2.1 or Section 404.2.2. | | | | | | | |
| **Sinks, Lavatories, and Bathtubs.** | (N/A) | 404.2.1 | Introducing Section 404.2.1 | **Accept Change** |  |  | |
| **404.2.1 Sinks, Lavatories, and Bathtubs.** The waste shall be so arranged that the standing water in the fixture shall not rise in the overflow where the stopper is closed or remain in the overflow where the fixture is empty. The overflow pipe from a fixture shall be connected on the house or inlet side of the fixture trap., ~~except that overflow on flush tanks shall be permitted to discharge into the water closets or urinals served by them, but it shall be unlawful to connect such overflows with any other part of the drainage system.~~ | | | | | | | |
| **Water Closets and Urinals.** | (N/A) | 404.2.2 | Introducing Section 404.2.2 | **Accept Change** |  |  | |
| **404.2.2 Water Closets and Urinals.** ~~except that~~ Overflow on flush tanks shall be permitted to discharge into the water closets or urinals served by them~~, but it shall be unlawful to connect such overflows with any other part of the drainage system~~. | | | | | | | |
| **Miscellaneous Fixtures** | 405.3 | 405.3 | Eliminating unneeded language | **Accept Change** |  | |  |
| **405.3 Miscellaneous Fixtures.** Fixed wooden, or tile wash sinks for domestic use shall not be installed in a buildingdesigned or used for human habitation. | | | | | | | |
| **Tileable Shower Receptors** | (N/A) | 408.2 | Rules on Tileable shower Receptors | **Accept Change** |  |  | |
| **408.2 Tileable Shower Receptors.** Tileable shower receptors and shower kits shall comply with IAPMO PS 106. | | | | | | | |
|  | **Water Consumption** | 408.2 | 408.3 | Moved location and added flow rate | **Accept Change** |  | **See existing amendment** | |
|  | **408.3. Water Consumption. Showerheads shall have a maximum flow rate of not more than 2.5 gpm at 80 psi (9.5L/m at 552 kPa). Body sprays shall have a flow rate of not more than 2.5 gpm at 80 psi (9.5 L/m at 552 kPa).** | | | | | | | |
|  | **Individual Shower and Tub-Shower Combination Control Valves** | 408.3 | 408.4 | **Moved location** | **Accept Change** |  | |  |
| **408.4 Individual Shower and Tub-Shower Combination Control Valves.** Showers and tub-shower combinations shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection for the rated flow rate of the installed showerhead. These valves shall be installed at the point of use and comply with ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1. | | | | | | | |
| **Gang Showers** | 408.3.1 | 408.4.1 | Moved location | **Accept Change** |  | |  |
| **408.4.1 Gang Showers.** Where gang showers are supplied with a single temperature-controlled water supply pipe, it shall be controlled by a mixing valve that complies with ASSE 1069. | | | | | | | |
| **Temperature Limiting.** | 408.3.2 | 408.4.2 | Moved location | **Accept Change** |  | |  |
| **408.4.2 Temperature Limiting.** The maximum water temperature discharging from an individual showerhead shall be limited to 120°F (49°C) by one of the following methods:  (1) A shower or tub/shower combination valve conforming to ASSE 1016/ASME A112.1016/CSAB125.16 where either:  (a) The valve is field-adjusted to the required maximum temperature, or  (b) The handle position, stop, or temperature limiting control is set in accordance with the manufacturer’s instructions to the required maximum temperature.  (2) For gang showers supplied by a single water supply pipe, a mixing valve that conforms to ASSE 1069 that is field-adjusted to the required maximum temperature. | | | | | | | |
| **Temperature-Actuated, Flow-Reduction**  **Devices for Individual Fixture Fittings.** | (N/A) | 408.4.3 | Adding New section about Flow-Reduction devices | **Accept Change** |  | |  |
| **408.4.3 Temperature-Actuated, Flow-Reduction Devices for Individual Fixture Fittings.** Temperature- actuated, flow-reduction devices, where installed for individual fixture fittings, shall comply with ASSE 1062. Such devices shall not be used alone as a substitute for the balanced pressure, thermostatic or combination shower valves requirements or as a substitute for bathtub or whirlpool tub water temperature-limiting valves requirements. | | | | | | | |
| **Waste Outlet** | 408.4 | 408.5 | Standard requires Free grate area of strainer. If linear must have equivalent waterway | **Accept Change** |  | **See existing amendment** | |
| **408.5 Waste Outlet**. Showers shall have a waste outlet and fixture tailpiece not less than 2 inches (50 mm) in diameter. Fixture tailpieces shall be constructed from the materials specified in Section 701.2 for drainage piping. Strainers serving ~~have a waterway at least~~  ~~equivalent to the area of the tailpiece.~~ shower drains shall comply with ASME A112.18.2/CSAB125.2. | | | | | | | |
| **Finished Curb or Threshold.** | 408.5 | 408.6 | This adds minimum depth and time requirements for testing the installation of a watertight shower receptor. | **Accept Change** |  |  | |
| **408.6 Finished Curb or Threshold.** Where a shower receptor has a finished dam, curb, or threshold, it shall be not less than 1 inch (25.4 mm) lower than the sides and back of such receptor. In no case, shall a dam or threshold be less than 2 inches (51 mm) or exceeding 9 inches (229 mm) in depth where measured from the top of the dam or threshold to the top of the drain. Each such receptor shall be provided with a nailing flange either integral or field installed in accordance with the manufacturer’s installation instructions. The flange shall be watertight and extend vertically not less than 1 inch (25.4 mm) above the top of the sides of the receptor. The finished floor of the receptor shall slope uniformly from the sides towards the drain not less than 1⁄8 inch per foot (10.4mm/m), nor more than 1⁄2 inch per foot (41.6 mm/m). | | | | | | | |
| [**51-56-0400**](https://app.leg.wa.gov/WAC/default.aspx?dispo=true&cite=51-56&full=true#51-56-001) | **Shower Compartments** | 408.6 | 408.7 | Detailed language on shower compartments. | **Accept Change** |  | **See existing amendment** | |
| **Need to update amendments to new numbers as this one has moved** | **408.7 Shower Compartments.** Shower compartments shall have a finished interior in accordance with the following:  (1) Not less than 1024 square inches (0.6606 m2).  (2) Be capable of encompassing a 30 inch (762 mm) circle.  The minimum required area and dimensions shall be measured at a height equal to the top of the threshold and a point tangent to its centerline. The area and dimensions shall be maintained to a point of not less than 70 inches (1778 mm) above the shower drain outlet with no protrusions other than the fixture valve or valves, showerheads, soap dishes, shelves, and safety grab bars, or rails. Fold-down seats in accessible shower stalls shall be permitted to protrude into the 30 inch (762 mm) circle. Exceptions:  (1) Showers that are designed to be in accordance with ICCA117.1.  (2) The minimum required area and dimension shall not apply for a shower receptor having overall dimensions of not less than 30 inches (762 mm) in width and 60 inches (1524 mm) in length. | | | | | | | |
|  | **Lining for Showers and Receptors** | 408.7 | 408.8 | Moved Location | **Accept Change** |  |  | |
| **408.8 Lining for Showers and Receptors.** Shower receptors built on-site shall be watertight and shall be constructed from approved-type dense, nonabsorbent, and noncorrosive materials. Each such receptor shall be adequately reinforced, shall be provided with an approved flanged floor drain designed to make a watertight joint on the floor, and shall have smooth, impervious, and durable surfaces.  Shower receptors shall have the subfloor and rough side of walls to a height of not less than 3 inches (76 mm) above the top of the finished dam or threshold shall be first lined with sheet plastic, lead, or copper, or shall be lined with other durable and watertight materials. Showers that are provided with a built in place, permanent seat or seating area that is located within the shower enclosure, shall be first lined with sheet plastic, lead, copper, or shall be lined with other durable and watertight materials that extend not less than 3 inches (76mm) above horizontal surfaces of the seat or the seating area.  Lining materials shall be pitched 1⁄4 inch per foot (20.8mm/m) to weep holes in the subdrain of a smooth and solidly formed subbase. Such lining materials shall extend upward on the rough jambs of the shower opening to a point not less than 3 inches (76 mm) above the horizontal surfaces of the seat or the seating area, the top of the finished dam or threshold and shall extend outward over the top of the permanent seat, permanent seating area, or rough threshold and be turned over and fastened on the outside face of both the permanent seat, permanent seating area, or rough threshold and the jambs.  Nonmetallic shower subpans or linings shall be permitted to be built up on the job site of not less than three layers of standard grade 15 pound (6.8 kg) asphalt impregnated roofing felt. The bottom layer shall be fitted to the formed subbase and each succeeding layer thoroughly hot-mopped to that below. Corners shall be carefully fitted and shall be made strong and watertight by folding or lapping, and each corner shall be reinforced with suitable webbing hot-mopped in place.  Folds, laps, and reinforcing webbing shall extend not less than 4 inches (102 mm) in all directions from the corner, and webbing shall be of approved type and mesh, producing a tensile strength of not less than 50 pounds per square foot (lb/ft2) (244 kg/m2) in either direction. Nonmetallic shower subpans or linings shall be permitted to consist of multilayers of other approved equivalent materials suitably reinforced and carefully fitted in place on the job site as elsewhere required in this section.  Linings shall be properly recessed and fastened to the approved backing so as not to occupy the space required for the wall covering and shall not be nailed or perforated at a point that is less than 1 inch (25.4 mm) above the finished dam or threshold. An approved type subdrain shall be installed with a shower subpan or lining. Each such subdrain shall be of the type that sets flush with the subbase and shall be equipped with a clamping ring or other device to make a tight connection between the lining and the drain. The subdrain shall have weep holes into the waste line. The weep holes located in the subdrain clamping ring shall be protected from clogging. | | | | | | | |
| PVC Sheets | **408.7.1** | 408.8.1 | Moved Location | **Accept Change** |  |  | |
| **408.8.1 PVC Sheets.** Plasticized polyvinyl chloride (PVC) sheets shall conform to ASTM D4551. Sheets shall be joined by solvent cementing in accordance with the manufacturer’s installation instructions. | | | | | | | |
| **Chlorinated Polyethylene** | 408.7.2 | 408.8.2 | Moved Location | **Accept Change** |  |  | |
| **408.8.2 Chlorinated Polyethylene (CPE) Sheets.** Nonplasticized chlorinated polyethylene sheets shall conform to ASTM D4068. The liner shall be joined in accordance with the manufacturer’s installation instructions. | | | | | | | |
| **Sheet Lead** | 408.7.3 | 408.8.3 | Moved Location | **Accept Change** |  |  | |
| **408.8.3 Sheet Lead.** Sheet lead shall weigh not less than 4 lb/ft2 (19.5 kg/m2) and shall be coated with an asphalt paint or other approved coating. The lead sheet shall be insulated from conducting substances, other than the connecting drain, by 15 pound (6.8 kg) asphalt felt or an equivalent. Sheet lead shall be joined by burning. | | | | | | | |
| Sheet Copper | 408.7.4 | 408.8.4 | Moved Location | **Accept Change** |  |  | |
| **408.8.4 Sheet Copper**. Sheet copper shall comply with ASTM B152 and shall weigh not less than 12 ounces per square foot (oz/ft2) (3.7 kg/m2) or No. 24 B & S Gauge (0.02 inches) (0.51 mm). The copper sheet shall be insulated from conducting substances, other than the connecting drain, by 15 pound (6.8 kg) asphalt felt or an equivalent. Sheet copper shall be joined by brazing or soldering. | | | | | | | |
| **Tests for Shower Receptors** | 408.7.5 | 408.8.5 | Moved Location also added specifications on size and time. | **Accept Change** |  |  | |
| **408.8.5 Tests for Shower Receptors.** Shower receptors shall be tested for watertightness by filling with water to a depth of not less than 2 inches (51 mm) for not less than 15 minutes. Where no threshold is present, a 2 inch (51 mm) barrier shall be temporarily constructed for testing. The test plug shall be so placed that both upper and under sides of the subpan shall be subjected to the test at the point where it is clamped to the drain. | | | | | | | |
| **Public Shower Floors** | 408.8 | 408.9 | Moved Location | **Accept Change** |  |  | |
| **408.9 Public Shower Floors.** Floors of public shower rooms shall have a nonskid surface and shall be drained in such a manner that wastewater from one bather shall not pass over areas occupied by other bathers. Gutters in public or gang shower rooms shall have rounded corners for easy cleaning and shall be sloped not less than 2 percent toward drains. Drains in gutters shall be spaced at a maximum of 8 feet (2438 mm) from sidewalls nor more than 16 feet (4877 mm) apart. | | | | | | | |
| **Location of Valves and Heads** | 408.9 | 408.10 | Moved Location | **Accept Change** |  |  | |
| **408.10 Location of Valves and Heads**. Control valves and showerheads shall be located on the sidewall of shower compartments or otherwise arranged so that the showerhead does not discharge directly at the entrance to the compartment so that the bather can adjust the valves before stepping into the shower spray. | | | | | | | |
| **Water Supply Riser** | 408.10 | 408.11 | Moved Location | **Accept Change** |  |  | |
| **408.11 Water Supply Riser**. A water supply riser from the shower valve to the showerhead outlet, whether exposed or not, shall be securely attached to the structure. | | | | | | | |
| **Installation and Access** | 409.6 | 409.6 | Removed citation that was not needed for this section | **Accept Change** |  |  | |
| **409.6 Installation and Access.** Bathtubs and whirlpool bathtubs shall be installed in accordance with the manufacturer’s installation instructions. Access openings shall be of a size and opening to permit the removal and replacement of the circulation pump. Whirlpool pump access located in the crawl space shall be located not more than 20 feet (6096 mm) from an access door, trap door, or crawl hole. The circulation pump shall be located above the crown weir of the trap The pump and the circulation piping shall be self-draining to minimize water retention. | | | | | | | |
| **Installation and Access** | (N/A) | 409.6.1 | Created a new Section | **Accept Change** |  |  | |
| **409.6.1 Suction Fittings.** Suction fittings on whirlpool bathtubs shall comply with ASME A112.19.7/CSA B45.10. | | | | | | | |
| **Flexible PVC Hoses and Tubing** | 409.6.1 | 409.6.2 | Moved location and added new standard document | **Accept Change** |  |  | |
| **409.6.2 Flexible PVC Hoses and Tubing. Flexible** PVC hoses and tubing intended to be used on whirlpool bathtub water circulation systems or pneumatic systems shall comply with IAPMO/ANSI Z1033. | | | | | | | |
| **Water Closet Seats** | 411.3 | 411.3 | Standardizing the design and functionality of water closet seats. | **Accept Change** |  |  | |
| **411.3 Water Closet Seats. Water** closet seats shall be properly sized for the water closet bowl type, and shall be of smooth, non-absorbent material. Seats, for public use, shall be of the elongated type and either of the open front type or have an automatic seat cover dispenser. Water closet seats shall be provided with or without covers. Plastic seats shall comply with IAPMO/ANSI Z124.5. | | | | | | | |
| **Application** | 414.1 | 414.1 | Specific language and standards added | **Accept Change** |  |  | |
| **414.1 Application.** Domestic dishwashing machines shall comply with UL 749. Domestic dishwashing machines containing sanitation features shall comply with NSF/ANSI 184 and UL 749. Commercial dishwashing machines shall comply with NSF/ANSI 3 and UL 921. | | | | | | | |
| [**51-56-0400**](https://app.leg.wa.gov/WAC/default.aspx?dispo=true&cite=51-56&full=true#51-56-001) | **Drainage Connection** | 414.3 | 414.3 | Specifying acceptable discharge methods for both domestic and commercial dishwashing machines | **Do not adopt** |  | See existing amendments | |
| **414.3 Drainage Connection**. Domestic dishwashing machines shall discharge indirectly through an air gap fitting in accordance with Section 807.3 into a waste receptor, a wye branch fitting on the tailpiece of a kitchen sink, or dishwasher connection of a food waste disposer. Commercial dishwashing machines shall discharge indirectly through an air break in accordance with Section 807.1, or by a direct connection in accordance with Section 704.3. | | | | | | | |
|  | Lead Content | (N/A) | 414.4 | Adding lead content for Dishwashers | **Accept Change** |  |  | |
| **414.4 Lead Content.** Dishwashing machines shall comply with the lead content requirements of Section 604.2. | | | | | | | |
| **Application** | 415.1 | 415.1 | Updated Location of standard | **Accept Change** |  |  | |
| **415.1 Application.** Drinking fountains shall be self-closing and comply with ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, or ASME A112.19.3/CSA B45.4. Drinking fountains and bottle filling stations shall also comply with NSF/ANSI/CAN 61. Permanently installed electric water coolers and bottle filling stations shall also comply with UL 399. | | | | | | | |
| **Applications** | 417.1 | 417.1 | **Update to the Standard** | **Accept Change** |  |  | |
| **417.1 Application.** Faucets and fixture fittings shall comply with ASME A112.18.1/CSA B125.1. Fixture fittings covered under the scope of NSF/ANSI/CAN 61 shall comply with the requirements of NSF/ANSI/CAN 61. | | | | | | | |
| **Low-Pressure Water Dispenser** | 417.6 | 417.6 | **Updated the Standard to in include new location** | **Accept Change** |  |  | |
| **417.6 Low-Pressure Water Dispenser**. Beverage faucets shall comply with ASME A112.18.1/CSA B125.1. Electrically heated or cooled water dispensers shall comply with ASSE 1023. | | | | | | | |
| **Head shampoo sink Faucets** | (N/A) | **417**.**7** | **Enhance safety by preventing scalding** | **Accept Change** |  |  | |
| **417.7 Head Shampoo Sink Faucets.** Head shampoo sink faucets shall be supplied with hot water that is limited to not more than 120°F (49°C). Each faucet shall have integral check valves to prevent crossover flow between the hot and cold water supply connections. The means for regulating the maximum temperature shall be in accordance with one of the following:  (1) A limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70.  (2) A water heater conforming to ASSE 1084.  (3) A temperature-actuated, flow-reduction device conforming to ASSE 1062. | | | | | | | |
| **Footbaths and Pedicure Baths** | (N/A) | 417.8 | **New section** | **Accept Change** |  |  | |
| **417.8 Footbaths and Pedicure Baths.** The water supplied to specialty plumbing fixtures, such as pedicure chairs having an integral foot bathtub and footbaths, shall be limited to not more than 120ºF (49ºC) by a water-temperature-limiting device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70 or by a water heater complying with ASSE 1084. | | | | | | | |
| [**51-56-0400**](https://app.leg.wa.gov/WAC/default.aspx?dispo=true&cite=51-56&full=true#51-56-001) | **Water Consumption** | 420.2 | 420.2 | **Changing Language** | **Do not adopt change** |  |  | |
| **420.2 Water Consumption.** Sink faucets shall have a maximum flow rate of not more than 2.2 gpm at 60 psi (8.3 L/m at 414 kPa).  Exceptions:  (1) Clinical sinks  (2) Laundry sinks  (3) Service sinks | | | | | | | |
| [**51-56-0400**](https://app.leg.wa.gov/WAC/default.aspx?dispo=true&cite=51-56&full=true#51-56-001) | **Pre-Rinse Spray Valve** | 420.3 | 420.3 | **Update to add Table Reference** | **Accept Change** |  |  | |
| **420.3 Pre-Rinse Spray Valve.** Commercial food service pre-rinse spray valves shall have a maximum flow rate in accordance with Table 420.3 and shall be equipped with an integral automatic shutoff. | | | | | | | |
| **COMMERCIAL PRE-RINSE SPRAY VALVE MAXIMUM FLOW RATE** | (N/A) | Table 420.3 | **Adding a New Table** | **Accept Change with amendment** |  |  | |
| **TABLE 420.3**  **COMMERCIAL PRE-RINSE SPRAY VALVE MAXIMUM FLOW RATE**   |  |  | | --- | --- | | **PRODUCT CLASS BY SPRAY FORCE** | **MAXIMUM FLOW RATE,**  **GPM** | | Product Class 1 ( ≤ 5.0 ounces-force) | 1.00 | | Product Class 2 ( > 5.0 ounces-force and ≤ 8.0 ounces-forces) | 1.20 | | Product Class 3 (> 8.0 ounces-forces) | 1.28 |   For SI units: 1 gallon per minute = 3.785 L/min, 1 ounce-force = 0.278 N | | | | | | | |
|  | **Fixture Calculations** | 422.1.1 | 422.1.1 | **Updated standards for water closet based on male or female** | **Accept Change** |  |  | |
| **422.1.1 Fixture Calculations.** The minimum number of fixtures shall be calculated at 50 percent male and 50 percent female based on the total occupant load. Where information submitted indicates a difference in the distribution of the sexes such information shall be used to determine the number of fixtures for each sex. Once the occupancy load and occupancy are determined, Table 422.1 shall be applied to determine the minimum number of plumbing fixtures required. Where applying the fixture ratios in Table 422.1 results in fractional numbers, such numbers shall be rounded to the next whole number. For multiple occupancies, fractional numbers shall be first summed and then rounded to the next whole number. For toilet facilities designed for use by all genders, the minimum number of fixtures shall be the aggregate calculated at 50 percent female and 50 percent male in accordance with Table 422.1. Where all-gender fixtures are provided in addition to separate men’s and women’s facilities, those fixtures shall be included in determining the number of fixtures provided in an occupancy. | | | | | | | |
| **Single Use, Family or Assisted-Use Toilet ,and Bathing Facilities** | 422.1.1 | 422.1.2 | **Update language on Single use toilets** | **Accept Change** |  |  | |
| **422.1.2 Single Use, Family or Assisted-Use Toilet ,and Bathing Facilities.** Where single use, family or assisted-use toilet, and bathing rooms are required, in applicable building regulations, the facilities shall be installed in accordance with those regulations. Fixtures located in single use, family or assisted-use, and bathing room facilities shall contribute to the total number of required fixtures in accordance with Section 422.1. | | | | | | | |
| **Separate Facilities** | 422.2 | 422.2 | **Update exception** | **Accept Change** |  |  | |
| **422.2 Separate Facilities.** Separate toilet facilities shall be provided for each sex.  **Exceptions:**  (1) Residential installations.  (2) In occupancies with a total occupant load of 10 or less, including customers and employees, one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both sexes.  (3) In business and mercantile occupancies with a total occupant load of 50 or less including customers and employees, one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both sexes.  (4) Separate facilities shall not be required where rooms have fixtures designed for use by both sexes and the water closets are installed in privacy compartments. Urinals shall be located in a privacy compartment. | | | | | | | |
| **Single Use Facilities** | 422.2.1 | 422.2.1 | **Clarifying language** | **Accept Change** |  |  | |
| **422.2.1 Single Use Facilities.** Single use toilet facilities, bathing facilities, and family or assisted use toilet facilities shall be identified with signage indicating use by either sex. | | | | | | | |
| **Water Closet Compartment** | (N/A) | 422.6 | New added section with specifications on water closet compartments | **Accept Change** |  |  | |
| **422.6 Water Closet Compartment.** Public water closets shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy. Partitions for water closets located in separate gender toilet or bathrooms shall comply with the Type B security requirements of IAPMO Z124.10. Partitions for water closets located in all gender toilet or bathrooms shall comply with the Type A security requirements of IAPMO Z124.10.  **Exceptions:**  (1) Water closet compartments shall not be required in a single- occupant toilet room having a lockable door.  (2) Toilet rooms in day care facilities having more than one water closets shall be permitted to have one water closet without an enclosing compartment. | | | | | | | |
| **Urinal Partitions** | (N/A) | 422.7 | **New added section with specifications on urinal partitions** | **Accept Change** |  |  | |
| **422.7 Urinal Partitions.** Each urinal shall be separated with walls or partitions to provide privacy. The horizontal dimension between walls or partitions at each urinal shall comply with Section 402.5. Partitions for urinals shall comply with the Type C security requirements of IAPMO Z124.10. Walls or partitions shall extend from not less than 12 inches (305mm) above the finished floor to not less than 60 inches (1524 mm) above the finished floor. Walls shall extend outward from the wall surface not less than 18 inches (457 mm). Urinals located in all gender toilet rooms shall be visually separated from the remainder of the room or each urinal shall be installed in a privacy compartment complying with Type A security requirements of IAPMO Z124.10.  **Exception:** Urinal partitions shall not be required in a single occupant or family/assisted-use toilet room with a lockable door. | | | | | | | |
| **Chapter 5 Water Heaters** | | | | | | | | |
| [51-56-0500](https://app.leg.wa.gov/WAC/default.aspx?cite=51-56-0500&pdf=true) | Applicability | 501.1 | 501.1 | Updating time frame standards | **Accept Change** |  |  | |
| **501.1 Applicability. The regulations of this chapter shall govern the construction, location, and installation of fuel-burning and other types of water heaters heating potable water, together with chimneys, vents, and their connectors. The minimum capacity for storage water heaters shall be in accordance with the first-hour rating listed in Table 501.1(2). A list of accepted water heater appliance standards is referenced in Table 501.1(1). Listed appliances shall be installed in accordance with the manufacturer’s installation instructions. Unlisted water heaters shall be permitted in accordance with Section 504.3.2. Water heaters shall be installed in accordance with the manufacturer’s installation instructions. The final installation shall be approved by the Authority Having Jurisdiction.** | | | | | | | |
| <51-56-0500> | **TABLE WATER HEATERS** | 501.1(1) | 501.1(1) | Table updated | **Accept Change** |  |  | |
| |  |  | | --- | --- | | **TYPE\*** | **STANDARD** | | Electric, Household Storage | UL 174 | | Oil-Fired Storage Tank | UL 732 | | Gas-Fired, 75 000 Btu/h or less, Storage | CSA/ANSI Z21.10.1/CSA 4.1 | | Gas-Fired, Above 75 000 Btu/h, Storage and Instantaneous | CSA/ANSI Z21.10.3/CSA 4.3 | | Electric, Commercial Storage | UL 1453 | | Solid Fuel-Fired | UL 2523 | | Electric Instantaneous | UL 499 |   For SI units: 1000 British thermal units per hour = 0.293 kW  \* Dual purpose water heaters shall be installed in accordance with this code  and the manufacturer’s installation instructions. | | | | | | | |
|  | Unlisted Water Heaters | 504.3.2 | 504.3.2 | Updated to include exception | **Accept Change** |  |  | |
| **504.3.2 Unlisted Water Heaters.** Except as otherwise permitted in this code, unlisted water heaters shall be approved by the Authority Having Jurisdiction prior to being installed. Clearance for unlisted water heaters shall be not less than 12 inches (305 mm) on all sides. Combustible floors under unlisted water heaters shall be protected in an approved manner. {NFPA 54-2018:10.27.2.2} | | | | | | | |
| Pressure-Limiting Devices | 504.4 | 504.4 | Adding an not an exceed limit | **Accept Change** |  |  | |
| **504.4 Pressure-Limiting Devices.** A water heater installation shall be provided with overpressure protection using an approved, listed device installed in accordance with the terms of its listing and the manufacturer’s installation instructions. Pressure relief devices shall have a pressure setting greater than the water service pressure and not exceed 150 psi (1034 kPa) as required in Section 608.4. | | | | | | | |
| Lead Content | (N/A) | 504.7 | New Section | **Accept Change** |  |  | |
| **504.7 Lead Content.** Water heaters shall comply with the lead content requirements of Section 604.2. | | | | | | | |
| **Engineered Installations** | 506.6 | 506.6 | Updated language | **Accept Change** |  |  | |
| **506.6 Engineered Installations.** Engineered combustion air installations shall provide an adequate supply of combustion, ventilation, and dilution air determined using engineering methods. [NFPA 54:9.3.5] | | | | | | | |
| Drainage Pan | 507.5 | 507.5 | Added new standards | **Accept Change** |  |  | |
| **507.5 Drainage Pan.** Where a water heater is located in an attic, in or on an attic ceiling assembly, floor-ceiling assembly, floor-subfloor assembly or where damage results from a leaking water heater, a watertight pan of corrosion-resistant materials shall be installed beneath the water heater in accordance  with the following:  (1) The drainage pan shall be provided with not less than 3⁄4 of an inch (20 mm) diameter drain to an approved location. The terminating end of the drainpipe shall be readilyvisible.  (2) The drainage pan shall be not less than 11⁄2 inches (38mm) in depth.  (3) Where a drainage pan pipe is installed, the material of the piping shall be rated for the temperature rating of the water heater and shall be approved for use with the liquidbeing discharged.  (4) Discharge from a relief valve into a drainage pan shall be prohibited. | | | | | | | |
| Type Gas(es). | 507.7 | 507.7 | Editor change | **Accept Change** |  |  | |
| **507.7 Type of Gas(es).** The appliance shall be connected to the fuel gas for which it was designed. No attempt shall be made to convert the appliance from the gas specified on the rating plate for use with a different gas without consulting the installation instructions, the serving gas supplier, or the appliance manufacturer for complete instructions. Listed appliances shall not be converted unless permitted by and in accordance with the manufacturer’s installation instructions. [NFPA 54:9.1.3] | | | | | | | |
| **Safety Shutoff Devices for Unlisted LP-Gas**  **Appliance Used Indoors.** | 507.8 | 507.8 | Language update | **Accept Change** |  |  | |
| **507.8 Safety Shutoff Devices for Unlisted LP-Gas Appliance Used Indoors.** Unlisted appliances for use with undiluted LP-Gases and installed indoors, except attended laboratory equipment, shall be equipped with safety shutoff devices of the complete shutoff type. [NFPA 54:9.1.4] | | | | | | | |
| **Installation in Residential Garages.** | 507.13 | 507.13 | Addition of exception | **Adopt with State amendment** |  | See existing amendment | |
| **507.13 Installation in Residential Garages.** Appliances in residential garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that all heating elements, switches, burners, and burner-ignition devices are located not less than 18 inches (457 mm) above the floor.**Exception:** Listed flammable vapor ignition resistant (FVIR) appliances. {NFPA 54:9.1.10.1} | | | | | | | |
| **Addition to Existing System** | (N/A) | 507.18 | Updating Title, editor language update | **Accept Change** |  |  | |
| **507.18 Addition to Existing System.** When additional appliances are being connected to a gas piping system, the existing piping shall be checked to determine whether it has adequate capacity. If the capacity of the system is determined to be inadequate for the additional appliances, the existing system shall be enlarged as required, or separate gas piping of adequate capacity shall be provided. [NFPA 54:5.1.2] | | | | | | | |
| **Gas Appliance Pressure Regulators.** | 507.20 | 507.20 | Update Reference location | **Do Not adopt** |  |  | |
| **507.20 Gas Appliance Pressure Regulators.** Where the gas supply pressure is higher than that at which the appliance is designed to operate or varies beyond the design pressure limits of the appliance, a gas appliance pressure regulator listed in accordance with CSA/ANSI Z21.18/CSA 6.3 shall be installed. [NFPA 54:9.1.17] | | | | | | | |
| **Bleed Lines for Diaphragm-Type Valves.** | 507.22 | 507.21 | Section Moved | **Do Not adopt** |  |  | |
| **<< 507.21 Bleed Lines for Diaphragm-Type Valves.** Bleed lines shall comply with the following requirements:  (1) Diaphragm-type valves shall be equipped to convey bleed gas to the outdoors or into the combustion chamber adjacent to a continuous pilot.  (2) In the case of bleed lines leading outdoors, means shall be employed to prevent water from entering this piping and also to prevent blockage of vents by insects and foreign matter.  (3) Bleed lines shall not terminate in the appliance flue or exhaust system.  (4) In the case of bleed lines entering the combustion chamber, the bleed line shall be located so the bleed gas is readily ignited by the pilot and the heat liberated thereby does not adversely affect the normal operation of the safety shutoff system. The terminus of the bleed line shall be securely held in a fixed position relative to the pilot. For manufactured gas, the need for a flame arrester in the bleed line piping shall be determined.  (5) A bleed line(s) from a diaphragm-type valve and a vent line(s) from an appliance pressure regulator shall not be connected to a common manifold terminating in a combustion chamber. Bleed lines shall not terminate in positive-pressure-type combustion chambers. [NFPA 54:9.1.18]<< | | | | | | | |
| **Combination of Appliances and Equipment** | 507.23 | 507.22 | Section Moved | **Do Not adopt** |  |  | |
| **<< 507.22 Combination of Appliances and Equipment.** Any combination of appliances, equipment, attachments, or devices used together in any manner shall comply with the standards that apply to the individual appliance and equipment. [NFPA 54:9.1.19] << | | | | | | | |
| **Installation Instructions** | 507.24 | 507.23 | Section Moved, Language updated | **Accept Change** |  |  | |
| **<< 507.23 Installation Instructions.** The installer shall conform to the appliance and equipment manufacturers’ recommendations in completing an installation. The installer shall leave the manufacturers’ installation, operating, and maintenance instructions on the premises. [NFPA 54:9.1.20] << | | | | | | | |
| **Protection of Outdoor Appliances** | 507.25 | 507.24 | Section Moved, Update reference location | **Accept Change** |  |  | |
| **<< 507.24 Protection of Outdoor Appliances.** Appliances not listed for outdoor installation but installed outdoors shall be provided with protection to the degree that the environment requires. Appliances listed for outdoor installation shall be permitted to be installed without protection in accordance with the manufacturer’s installation instructions. [NFPA 54:9.1.21] **<<** | | | | | | | |
| **Accessibility for Service.** | 507.26 | 507.25 | Section Moved, Update reference location | **Accept Change** |  |  | |
| **<< 507.25 Accessibility for Service.** All appliances shall be located with respect to building construction and other equipment so as to permit access for repair or replacement of the appliance. Clearance shall be maintained to permit removal of the appliance; cleaning of heating surfaces; the replacement of filters, blowers, motors, burners, controls, and vent connections; the lubrication of moving parts where necessary; the adjustment and cleaning of burners and pilots; and the proper functioning of explosion vents, if provided. For attic installation, the passageway and servicing area adjacent to the appliance shall be in accordance with Section 508.4. {NFPA 54:9.2.1} Unless otherwise specified, clearances of not less than 30 inches (762 mm) in depth, width, and height of working space shall be maintained.<< | | | | | | | |
|  | 507.27 | 507.26 | Section Moved | **Accept Change** |  |  | |
| **>> 507.26 Clearance to Combustible Materials.** Appliances and their vent connectors shall be installed with clearances from combustible material so their operation does not create a hazard to persons or property. Minimum clearances between combustible walls and the back and sides of various conventional types of appliances and their vent connectors are specified in Section 509.0. [NFPA 54:9.2.2] >> | | | | | | | |
| **Appliances on Roofs, in Attics or Under-Floor Spaces.** | (N/A) | 508.0 | Title of Section Change | **Accept Change** |  |  | |
| **508.0 Appliances on Roofs, in Attics or Under-Floor Spaces.** | | | | | | | |
| **Guards and Rails** | 508.2.1.1 | 508.2.1.1 | Updated Reference Location | **Accept Change** |  |  | |
| **508.2.1.1 Guards and Rails.** Guards or rails shall be required where the following exist:  (1) The clearance between the appliance and a roof edge or open end of an equipment platform is less than 6 feet (1829 mm).  (2) The open end of the equipment platform is located more than 30 inches (762 mm) above the roof, floor, or grade below. Where guards or rails are installed, they shall be constructed so as to prevent the passage of a 21inch (533 mm) diameter ball, resist the imposed loading conditions, and shall extend not less than 30 inches (762 mm) beyond each side of the equipment or appliance.  **Exception:** Guards shall not be required where a permanent fall arrest anchorage connector system in accordance with ASSP Z359.1 is installed. | | | | | | | |
| **Electrical Power** | 508.2.2 | 508.2.2 | Updated Reference location | **Accept Change** |  |  | |
| **508.2.2 Electrical Power.** Appliances requiring an external source of electrical power shall be installed in accordance with NFPA 70. [NFPA 54:9.4.2.3] | | | | | | | |
| **Appliances in Attics and Under-Floor Spaces** | 508.4 | 508.4 | Updated language | **Accept Change** |  |  | |
| **508.4 Appliances in Attics and Under-Floor Spaces.** An attic or under-floor space in which an appliance is installed shall be accessible through an opening and passage way larger than the largest component of the appliance, and not less than 22 inches by 30 inches (559 mm by 762 mm). {NFPA 54:9.5.1} | | | | | | | |
| **Length of Passageway** | 508.4.1 | 508.4.1 | Added Reference location | **Accept Change** |  |  | |
| **508.4.1 Length of Passageway.** Where the height of the passageway is less than 6 feet (1829 mm), the distance from the passageway access to the appliance shall not exceed 20 feet (6096 mm) measured along the centerline of the passageway. [NFPA 54:9.5.1.1] Where the height of the passageway is 6 feet (1829 mm) or more, the distance from the passageway access to the appliance shall not exceed 50 feet (15 240 mm) measured along the centerline of the passageway. | | | | | | | |
| **Lighting and Convenience Outlet** | 508.4.4 | 508.4.4 | Update code language | **Accept Change** |  |  | |
| **508.4.4 Lighting and Convenience Outlet.** A permanent 120 V receptacle outlet and a luminaire shall be installed near the appliance. The switch controlling the luminaire shall be located at the entrance to the passage-way. [NFPA 54:9.5.3] | | | | | | | |
|  | **Installation** | 509.1.1 | 509.1.1 | Specification language added | **Accept Change** |  |  | |
| **509.1.1 Installation.** Listed chimneys and vents shall be installed in accordance with Section 509.0 and the manufacturers’ installation instructions. [NFPA 54:12.2.1] | | | | | | | |
| **Direct-Vent Appliances** | 509.2.6 | 509.2.6 | Title of section update | **Accept Change** |  |  | |
| **509.2.6 Direct-Vent Appliances.** Listed direct vent appliances shall be installed in accordance with the manufacturer’s installation instructions. [NFPA 54:12.3.5.1] | | | | | | | |
| **Through-the-Wall Vent Termination** | **(N/A)** | **509.2.6.1** | **Added new section** | **Accept Change** |  | |  |
| **509.2.6.1 Through-the-Wall Vent Termination.** Through-the-wall vent terminations for listed direct-vent appliances shall be in accordance with Section 509.8.1. [NFPA 54:12.3.5.2] | | | | | | | |
| **Appliances with Integral Vents** | **509.2.7** | **509.2.7** | **Eliminated reference to no longer used section 509.8** | **Accept Change** |  |  | |
| **509.2.7 Appliances with Integral Vents.** Appliances incorporating integral venting means shall be installed in accordance with Section 509.8. [NFPA 54:12.3.6] | | | | | | | |
| **Ventilating Hoods and Exhaust Systems** | **509.3.4** | **509.3.4** | **Addition of language on food truck** | **Accept Change** |  |  | |
| **509.3.4 Ventilating Hoods and Exhaust Systems.** Where automatically operated appliances, other than food service appliances, are vented through a ventilating hood or exhaust system equipped with a damper or with a power means of exhaust, provisions shall be made to allow the flow of gas to the main burners only when the damper is open to a position to properly vent the appliance and when the power means of exhaust is in operation. [NFPA 54:12.4.4.1] | | | | | | | |
| **Factory-Built Chimneys** | **509.5.1** | **509.5.1** | **Updated Reference** | **Accept Change** |  | |  |
| **509.5.1 Factory-Built Chimneys.** Factory-built chimneys shall be listed in accordance with UL 103, UL 959, or UL 2561. Factory-built chimneys used to vent appliances that operate at positive vent pressure shall be listed for such application. [NFPA 54:12.6.1.1] | | | | | | | |
| **Size of Chimneys** | **509.5.5** | **509.5.5** | **Code requirement updates** | **Accept Change** |  |  | |
| **509.5.5 Size of Chimneys**. The effective area of a chimney venting system serving listed appliances with draft hoods, Category I appliances, and other appliances listed for use with Type B vents shall be in accordance with one of the following methods:  (1) Those listed in Section 510.0.  (2) The effective areas of the vent connector and chimney flue of a venting system serving a single appliance with a draft hood shall be not less than the area of the appliance flue collar or draft hood outlet or greater than seven times the draft hood outlet area.  (3) The effective area of the chimney flue of a venting system serving two appliances with draft hoods shall be not less than the area of the larger draft hood outlet plus 50 percent of the area of the smaller draft hood outlet or greater than seven times the smaller draft hood outlet area.  (4) Chimney venting systems using mechanical draft shall be sized in accordance with engineering methods.  (5) Other engineering methods. [NFPA 54:12.6.3.1] | | | | | | | |
| **Cleanouts** | **509.5.6.2** | **509.5.6.2** | **Code language update** | **Accept Change** |  |  | |
| **509.5.6.2 Cleanouts.** Cleanouts shall be examined and where they do not remain tightly closed when not in use, they shall be repaired or replaced. [NFPA 54:12.6.4.3] | | | | | | | |
| **Insulation Protection Shield** | **509.6.1.1** | **509.6.1.1** | **Title of section update, steel thickness** | **Accept Change** |  |  | |
| **509.6.1.1 Insulation Protection Shield.** Where a vent passes through an insulated assembly, an approved metal shield constructed of steel having a thickness of not less than 26 gauge (0.0179 inch) (0.45 mm) (No. 26 gauge) shall be installed between the vent and insulation. The shield shall extend not less than 2 inches (51 mm) above the insulation and be secured to the structure in accordance with the manufacturer’s installation instructions. | | | | | | | |
| **Category I Appliances** | **509.6.2.1** | **509.6.2.1** | **Code update on engineering methods** | **Accept Change** |  |  | |
| **509.6.2.1 Category I Appliances.** The sizing of natural draft venting systems serving one or more listed appliances equipped with a draft hood or appliances listed for use with a Type B gas vent, installed in a single story of a building, shall be in accordance with one of the following:  (1) The provisions of Section 510.0.  (2) Vents serving fan-assisted combustion system appliances, or combinations of fan-assisted combustion system and draft hood-equipped appliances, shall be sized in accordance with Section 510.0 or other engineering methods.  (3) For sizing an individual gas vent for a single, draft hood-equipped appliance, the effective area of the vent connector and the gas vent shall be not less than the area of the appliance draft hood outlet or greater than seven times the draft hood outlet area.  (4) For sizing a gas vent connected to two appliances with draft hoods, the effective area of the vent shall be not less than the area of the larger draft hood outlet plus 50 percent of the area of the smaller draft hood outlet or greater than seven times the smaller draft hood outlet area.  **(5) Engineering methods. [**NFPA **54:12.7.4.1]** | | | | | | | |
| **Category II, Category III, and Category IV Appliances** | **509.6.2.3** | **509.6.2.3** | **Code update** | **Accept Change** |  |  | |
| **509.6.2.3 Category II, Category III, and Category IV Appliances.** The sizing of gas vents for Category II, Category III, and Category IV appliances shall be in accordance with the appliance manufacturers’ instructions. The sizing of plastic pipe specified by the appliance manufacturer as a venting material for Category II, III, and IV appliances shall be in accordance with the appliance manufacturers’ instructions. [NFPA 54:12.7.4.3] | | | | | | | |
| **Sizing** | **509.6.2.4** | **509.6.2.4** | **Updating reference** | **Accept Change** |  |  | |
| **509.6.2.4 Sizing.** Chimney venting systems using mechanical draft shall be sized in accordance with engineering methods. [NFPA 54:12.7.4.4] | | | | | | | |
| **Gas Vents Serving Appliances on More than One Floor** | **509.6.3** | **509.6.3** | **Gave specifications and regulation updates to this section** | **Accept Change** |  |  | |
| **509.6.3 Gas Vents Serving Appliances on More than One Floor**. Where a common vent is installed in a multistory installation to vent Category I appliances located on more than one floor level, the venting system shall be designed and installed in accordance with engineering methods. Crawl spaces, basements, and attics shall be considered as floor levels. [NFPA 54:12.7.5.1] | | | | | | | |
| **Termination.** | **509.7.2** | **509.7.2** | **Reference update** | **Accept Change** |  | |  |
| **509.7.2 Termination.** The termination of single-wall metal pipe shall meet the following requirements:  (1) Single-wall metal pipe shall terminate at least 5 feet (1524 mm) in vertical height above the highest connected appliance draft hood outlet or flue collar. [NFPA 54:12.8.3(1)]  (2) Single-wall metal pipe shall extend at least 2 feet (610 mm) above the highest point where it passes through a roof of a building and at least 2 feet (610mm) higher than any portion of a building within a horizontal distance of 10 feet (3048 mm). [NFPA 54:12.8.3(2)]  (3) An approved cap or roof assembly shall be attached to the terminus of a single-wall metal pipe. [NFPA54:12.8.3(3)] | | | | | | | |
| **FIGURE** | **509.7.3.4(1)1** | **509.7.3.4(1)1** | **Table update** | **Accept Change** |  | |  |
|  | | | | | | | |
| **Size of Single-Wall Metal Pipe.** | **509.7.4** | **509.7.4** | **Adding language to code** | **Accept Change** |  | |  |
| **509.7.4 C.** Single-wall metal piping shall comply with the following requirements:  (1) A venting system of a single-wall metal pipe shall be sized in accordance with one of the following methods and the appliance manufacturer’s instructions:  (a) For a draft hood-equipped appliance, in accordance with Section 510.0.  (b) For a venting system for a single appliance with a draft hood, the areas of the connector and the pipe each shall not be less than the area of the appliance flue collar or draft hood outlet, whichever is smaller. The vent area shall not be greater than seven times the draft hood outlet area.  (c) Engineering methods. | | | | | | | |
| **REDUCTION OF CLEARANCES WITH SPECIFIED FORMS OF PROTECTION1** | **TABLE 509.7.3.4(2)** | **TABLE 509.7.3.4(2)** | **Code adoption of new notes** | **Accept Change** |  | |  |

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|  | **Notes:**  **TABLE 509.7.3.4(2) REDUCTION OF CLEARANCES WITH SPECIFIED FORMS OF PROTECTION1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 [NFPA 54: TABLE 10.2.4]**  1 Reduction of clearances from combustible materials shall not interfere with combustion air, draft hood clearance and relief, and accessibility of servicing.  2 All clearances shall be measured from the outer surface of the combustible material to the nearest point on the surface of the appliance, disregarding any intervening  protection applied to the combustible material.  3 Spacers and ties shall be of noncombustible material. No spacer or tie shall be used directly opposite the appliance or connector.  4 Where all clearance reduction systems use a ventilated air space, adequate provision for air circulation shall be provided as described. [See Figure 509.7.3.4(2)  and Figure 509.7.3.4(3)]  5 At least 1 inch (25.4 mm) shall be between clearance reduction systems and combustible walls and ceilings for reduction systems using a ventilated air space.  6 Where a wall protector is installed on a single flat wall away from corners, it shall have a minimum 1 inch (25.4 mm) air gap. To provide adequate air circulation,  the bottom and top edges, or only the side and top edges, or all edges shall be left open.  7 Mineral wool batts (blanket or board) shall have a minimum density of 8 pounds per cubic foot (lb/ft3) (128 kg/m3) and a minimum melting point of 1500°F  (816°C).  8 Insulation material used as part of a clearance reduction system shall have a thermal conductivity of 1.0 British thermal unit inch per hour square foot degree  Fahrenheit [Btu•in/(h•ft2•°F)] [0.1 W/(m•K)] or less.  9 At least 1 inch (25.4 mm) shall be between the appliance and the protector. The clearance between the appliance and the combustible surface shall not be  reduced below that allowed in this table.  10 All clearances and thicknesses are minimum; larger clearances and thicknesses are acceptable.  11 Listed single-wall connectors shall be installed in accordance with the terms of their listing and the manufacturer’s installation instructions. |

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|  | **Through-the-Wall Vent Termination** | | **509.8** | | **509.8** | | | **Updating Code Section** | | **Accept Change** |  | |  |
| **509.8 Through-the-Wall Vent Termination**. Through the-wall vent termination shall be in accordance with Section 509.8.1 through Section 509.8.3. | | | | | | | | | | | | |
| **Clearance for Through-the-Wall Vent Termination** | | **(N/A)** | | **509.8.1** | | | **New Code Section** | | **Accept Change** |  | |  |
| **509.8.1 Clearance for Through-the-Wall Vent Termination.** The clearance for through-the-wall direct and non-direct vent terminals shall be in accordance with Table 509.8.1 and Figure 509.8.1. Exception: The clearances in Table 509.8.1 shall not apply to the combustion air intake of a direct vent appliance. [NFPA4:12.9.1] | | | | | | | | | | | | |
| **FIGURE EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS** | | **(N/A)** | | **509.8.1** | | | **Updated new figure** | | **Accept Change** |  | |  |
| **FIGURE 509.8.1 EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS [NFPA 54: FIGURE 12.9.1]** | | | | | | | | | | | | |
| **Condensation Drain** | | **509.9** | | **509.9** | | | **Updated to follow NFPA only** | | **Accept Change** |  | |  |
| **509.9 Condensation Drain.** Provision shall be made to collect and dispose of condensate from venting systems serving Category II and Category IV appliances and noncategorized condensing appliances. [NFPA 54:12.10.1] | | | | | | | | | | | | |
| **Installation** | | **(N/A)** | | **509.1** | | | **New Code section** | | **Accept Change** |  | |  |
| **509.9.1 Installation.** Drains for condensate shall be installed in accordance with the appliance and vent manufacturers’ installation instructions. [NFPA 54:12.10.2] | | | | | | | | | | | | |
| **THROUGH-THE-WALL DIRECT-VENT TERMINATION CLEARANCES**  **[NFPA 54: TABLE 12.9.1]** | | **(N/A)** | | **509.8.1** | | | **New Table added** | | **Accept Change** |  | |  |
| **ABLE 509.8.1 THROUGH-THE-WALL DIRECT-VENT TERMINATION CLEARANCES [NFPA 54: TABLE 12.9.1]<<** | | | | | | | | | | | | |
| Medium-Heat Appliances | | 509.10.1.4 | | 509.10.1.4 | | | New Code language | | **Accept Change** |  |  | |
| **509.10.1.4 Medium-Heat Appliances.** Vent connectors for medium-heat appliances shall be constructed of factory-built, medium-heat chimney sections or steel of a thickness not less than that specified in Table 509.10.1.4 and shall comply with the following:  (1) A steel vent connector for an appliance with a vent gas temperature in excess of 1000°F (538°C) measured at the entrance to the connector shall be lined with medium-duty fire brick or the equivalent.  (2) The lining shall be at least 21⁄2 inches (64 mm) thick for a vent connector having a diameter or greatest cross-sectional dimension of 18 inches(457 mm) or less.  (3) The lining shall be at least 41⁄2 inches (114 mm) thick laid on the 41⁄2 inches (114 mm) bed for a vent connector having a diameter or greatest cross-sectional imension greater than 18 inches (457 mm).  (4) Where factory-built chimney sections are installed, they shall be joined together in accordance with the chimney manufacturer’s instructions. [NFPA 54:12.11.2.5] | | | | | | | | | | | | |
| Size of Vent Connector | | 509.10.2 | | 509.10.2 | | | Clarifying code language | | **Accept Change** |  |  | |
| **509.10.2 Size of Vent Connector.** A vent connector for an appliance with a single draft hood or for a Category I fan-assisted combustion system appliance shall be  sized and installed in accordance with Section 510.0 or engineering methods. [NFPA 54:12.11.3.1] | | | | | | | | | | | | |
| Manifold | | 509.10.2.1 | | 509.10.2.1 | | | Clarifying code language | | **Accept Change** |  |  | |
| **509.10.2.1 Manifold.** Where a single appliance having more than one draft hood outlet or flue collar is installed, the manifold shall be constructed according to the instructions of the appliance manufacturer. Where there are no instructions, the manifold shall be designed and constructed in accordance with engineering methods. As an alternative method, the effective area of the manifold shall equal the combined area of the flue collars or draft hood outlets, and the vent connectors shall have a minimum 1 foot (305mm) rise. [NFPA 54:12.11.3.2] | | | | | | | | | | | | |
| Size | | 509.10.2.2 | | 509.10.2.2 | | | Clarifying code language | | **Accept Change** |  |  | |
| **509.10.2.2 Size.** Where two or more appliances are connected to a common vent or chimney, each vent connector shall be sized in accordance with Section 510.0 or engineering methods. [NFPA 54:12.11.3.3] | | | | | | | | | | | | |
| **Height** | | **509.10.2.3** | | **509.10.2.3** | | | Clarifying code language | | **Accept Change** |  |  | |
| **509.10.2.3 Height.** Where two or more appliances are vented through a common vent connector or vent manifold, the common vent connector or vent manifold shall be located at the highest level consistent with available headroom and clearance to combustible material and sized in accordance with Section 510.0 or engineering methods. [NFPA 54:12.11.3.5] | | | | | | | | | | | | |
| **Joints** | | 509.10.5 | | 509.10.5 | | | Updating method (1) on joint methods | | **Accept Change** |  |  | |
| **509.10.5 Joints**. Joints between sections of connector piping and connections to flue collars or draft hood outlets shall be fastened in accordance with one of the following methods:  (1) Mechanically fastened by means of not less than three sheet-metal screws equally spaced around the joint.  (2) Vent connectors of listed vent material assembled and connected to flue collars or draft hood outlets in accordance with the manufacturer’s instructions.  (3) Other approved means. {NFPA 54:12.11.6} | | | | | | | | | | | | |
| Connector Junctions | | (N/A) | | 509.10.6 | | | New Section added to code | | **Accept Change** |  |  | |
| **509.10.6 Connector Junctions.** Where vent connectors are joined together, the connection shall be made with a manufactured tee or wye fitting. [NFPA 54:12.11.7] | | | | | | | | | | | | |
| Slope | | 509.10.6 | | 509.10.7 | | | Moved section, and updated Reference | | **Accept Change** |  |  | |
| **509.10.7 Slope.** A vent connector shall be installed without any dips or sags and shall slope upward toward the vent or chimney at least 1⁄4 inch per foot (20.8m/m).<<  **Exception:** Vent connectors attached to a mechanical draft system installed in accordance with appliance and the draft system manufacturers’ instructions. [NFPA 54:12.11.8] | | | | | | | | | | | | |
| Length of Vent Connector. | | 509.10.7 | | 509.10.8 | | | Moved section | | **Accept Change** |  |  | |
| **509.10.8 Length of Vent Connector.** The length of vent connectors shall comply with Section 509.10.8.1 or Section 509.10.8.2. << | | | | | | | | | | | | |
| Single Wall Connector | | 509.10.7.1 | | 509.10.8.1 | | | Moved section | | **Accept Change** |  |  | |
| 509.10.8.1 Single Wall Connector. The maximum horizontal length of a single-wall connector shall be 75 percent of the height of the chimney or vent, except for << engineered systems. [NFPA 54:12.11.9.1] | | | | | | | | | | | | |
| Type B Double Wall Connector | | 509.10.7.2 | | 509.10.8.2 | | | Moved section | | **Accept Change** |  |  | |
| **509.10.8.2 Type B Double Wall Connector.** The maximum horizontal length of a Type B double-wall connector shall be 100 percent of the height of the chimney or<< vent, except for engineered systems. The maximum length of an individual connector for a chimney or vent system serving multiple appliances, from the appliance outlet to the junction with the common vent or another connector, shall be 100 percent of the height of the chimney or vent. [NFPA 54:12.11.9.2] | | | | | | | | | | | | |
| Support | | 509.10.8 | | 509.10.9 | | | Moved section | | **Accept Change** |  |  | |
| **509.10.9 Support.** A vent connector shall be supported for the design and weight of the material employed to maintain clearances and prevent physical damage and separation of joints. [NFPA 54:12.11.10] | | | | | | | | | | | | |
| Chimney Connection | | 509.10.9 | | 509.10.10 | | | Moved section | | **Accept Change** |  |  | |
| **509.10.10 Chimney Connection.** Where entering a flue in a masonry or metal chimney, the vent connector shall be installed above the extreme bottom to avoid<< stoppage. Where a thimble or slip joint is used to facilitate removal of the connector, the connector shall be firmly attached to or inserted into the thimble or slip joint to  prevent the connector from falling out.Means shall be employed to prevent the connector from entering so far as to restrict the space between its end and the opposite wall of the chimney flue. [NFPA54:12.11.11.1 – 12.11.11.3] | | | | | | | | | | | | |
| Inspection | | 509.10.10 | | 509.10.11 | | | Moved section | | **Accept Change** |  |  | |
| **509.10.11 Inspection.** The entire length of a vent connector shall be readily accessible for inspection, cleaning, and replacement. [NFPA 54:12.11.12] << | | | | | | | | | | | | |
| Fireplaces | | 509.10.11 | | 509.10.12 | | | Moved section | | **Accept Change** |  |  | |
| **509.10.12 Fireplaces.** A vent connector shall not be connected to a chimney flue serving a fireplace unless the fireplace flue opening is permanently sealed.[NFPA << 54:12.11.13] | | | | | | | | | | | | |
| Passage Through Ceilings, Floors, or Walls. | | 509.10.12 | | 509.10.13 | | | Update to exception on vent type b and type l | | **Accept Change** |  |  | |
| 509.10.13 Passage Through Ceilings, Floors, or Walls. A vent connector shall not pass through a ceiling, floor, or fire-resistance-rated wall. A single-wall metal pipe << connector shall not pass through an interior  wall. Exceptions:  (1) Vent connectors made of listed Type B or Type L vent material and serving listed appliances with draft hoods and other appliances listed for use with Type B gas vents that pass through walls or partitions constructed of combustible material shall be installed with not less than the listed clearance to combustible material.  (2) Vent connectors shall be permitted to pass through ceilings, floors, or walls in accordance with Section 509.7.3.1 and Section 509.7.3.5. | | | | | | | | | | | | |
| Medium-Heat Appliances | | 509.10.12.1 | | 509.10.13.1 | | | Moved section | | **Accept Change** |  |  | |
| » 509.10.13.1 Medium-Heat Appliances. Vent connectors for medium-heat appliances shall not pass through walls or partitions constructed of combustible material. [NFPA54:12.11.14.2] | | | | | | | | | | | | |
| **Appliances Requiring Draft Hoods.** | | 509.12 | | 509.12 | | | Updated code title and exceptions | | **Accept Change** |  | |  |
| 509.12 Appliances Requiring Draft Hoods. Vented appliances shall be installed with draft hoods.  Exception: Dual oven-type combination ranges; direct vent appliances; fan-assisted combustion system appliances; appliances requiring chimney draft for operation; single-firebox boilers equipped with conversion burners with inputs greater than 400 000 Btu/h (117 kW); appliances equipped with blast, power, or pressure burners that are not listed for use with draft hoods; and appliances designed for forced venting. [NFPA54:12.13.1] | | | | | | | | | | | | |
| Automatically Operated Vent Dampers | | 509.14 | | 509.14 | | | Updated code language | | **Accept Change** |  | |  |
| **509.14 Automatically Operated Vent Dampers.** An automatically operated vent damper shall be listed. [NFPA54:12.15] | | | | | | | | | | | | |
| Obstructions | | 509.15 | | 509.15 | | | Updated Code Exceptions | | **Accept Change** |  |  | |
| **509.15 Obstructions.** Devices that retard the flow of vent gases shall not be installed in a vent connector, chimney, or vent. The following shall not be considered as obstructions:  (1) Draft regulators and safety controls specifically listed for installation in venting systems and installed in accordance with the manufacturer’s installation instructions.  (2) Approved draft regulators and safety controls designed and installed in accordance with engineering methods.  (3) Listed heat reclaimers and automatically operated vent dampers installed in accordance with the manufacturers’ installation instructions.  (4) Vent dampers serving listed appliances installed in accordance with Section 510.1 or Section 510.2 or engineering methods.  (5) Approved economizers, heat reclaimers, and recuperators installed in venting systems of appliances not required to be equipped with draft hoods, provided the appliance manufacturer’s instructions cover the installation of such a device in the venting system and performance in accordance with Section 509.3 and Section 509.3.1 is obtained. [NFPA 54:12.16] | | | | | | | | | | | | |
|  | Additional Requirements to Single Appliance Vent. | | 510.1 | | 510.1 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.1 Additional Requirements to Single Appliance Vent.** Venting Table 510.1.2(1) through Table 510.1.2(6) shall not be used where obstructions are installed in the venting system. The installation of vents serving listed appliances with vent dampers shall be in accordance with the appliance manufacturer’s instructions or in accordance with the following: | | | | | | | | | | | | |
| Corrugated Chimney Liners | | 510.1.6 | | 510.1.6 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.1.6 Corrugated Chimney Liners.** Listed corrugated metallic chimney liner systems in masonry chimneys shall be sized by using Table 510.1.2(1) or Table 510.1.2(2) for Type B vents with the maximum capacity reduced by 20 percent (0.80 x maximum capacity) and the minimum capacity as shown in Table 510.1.2(1) or  Table 510.1.2(2). Corrugated metallic liner systems installed with bends or offsets shall have their maximum capacity further reduced in accordance with Section 10.1.2. The 20 percent reduction for corrugated metallic chimney liner systems includes an allowance for one long radius 90 degree (1.57 rad) turn at the bottom of the liner. [NFPA54:13.1.7] | | | | | | | | | | | | |
| Vertical Vent Upsizing Using the 7 Times Rule | | 510.1.8 | | 510.1.8 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.1.8 Vertical Vent Upsizing Using the 7 Times Rule.** Where the vertical vent has a larger diameter than the vent connector, the vertical vent diameter shall be used to determine the minimum vent capacity, and the connector diameter shall be used to determine the maximum vent capacity. The flow area of the vertical vent  shall not exceed seven times the flow area of the listed appliance categorized vent area, flue collar area, or draft hood outlet area unless designed in accordance with  engineering methods. [NFPA 54:13.1.9] | | | | | | | | | | | | |
| Multiple Vertical Vent Sizes | | 510.1.13 | | 510.1.13 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.1.13 Multiple Vertical Vent Sizes.** In a single run of vent or vent connector, more than one diameter and type shall be permitted to be used, provided that all the sizes and types are permitted by the tables. [NFPA54:13.1.14] | | | | | | | | | | | | |
| Sizing Vents | | 510.1.16 | | 510.1.16 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.1.16 Sizing Vents Not Covered by Tables.** Where a vent height is lower than 6 feet (1829 mm) or higher than shown in Table 510.1.2(1) through Table 510.2(9), an engineering method shall be used to calculate the vent capacity. [NFPA 54:13.1.17 | | | | | | | | | | | | |
| Additional Requirements to Multiple-Appliance Vent | | 510.2 | | 510.2 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.2 Additional Requirements to Multiple-Appliance Vent.** Venting Table 510.2(1) through Table 510.2(9) shall not be used where obstructions are installed in the venting system. The installation of vents serving listed appliances with vent dampers shall be in accordance with the appliance manufacturer’s instructions, or in accordance with the following:  (1) The maximum capacity of the vent connector shall be determined using the NAT Max column.  (2) The maximum capacity of the vertical vent or chimney shall be determined using the FAN + NAT column when the second appliance is a fan-assisted appliance, or the NAT + NAT column when the second appliance is equipped with a draft hood. (3) The minimum capacity shall be determined as if the appliance were a fan-assisted appliance, as follows:  (a) The minimum capacity of the vent connector shall be determined using the FAN Min column.  (b) The FAN + FAN column shall be used when the second appliance is a fan-assisted appliance, and the FAN + NAT column shall be used when the second appliance is equipped with a draft hood, to determine whether the vertical vent or chimney configuration is not permitted (NA). Where the vent configuration is NA, the vent configuration shall not be permitted and an alternative venting configuration shall be utilized. [NFPA 54:13.2.1] | | | | | | | | | | | | |
| Vent Connector Rise | | 510.2.11 | | 510.2.11 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.2.11 Vent Connector Rise.** The vent connector rise (*R*) for each appliance shall be measured from the draft hood outlet or flue collar to the centerline where the vent gas streams come together. {NFPA 54:13.2.12} | | | | | | | | | | | | |
| **Vent Height** | | 510.2.12 | | 510.2.12 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.2.12 Vent Height.** The available total height (*H*) for multiple appliances on the same floor shall be measured from the highest draft hood outlet or flue collar up to the level of the outlet of the common vent. [NFPA54:13.2.13] | | | | | | | | | | | | |
| **Multistory Vent Height** | | 510.2.13 | | 510.2.13 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.2.13 Multistory Vent Height.** Where appliances are located on more than one floor, the available total height (*H*) for each segment of the system shall be the vertical distance between the highest draft hood outlet or flue collar entering that segment and the centerline of the next higher interconnection tee. [NFPA 54:13.2.14] | | | | | | | | | | | | |
| **Multistory Type B Vents Required** | | 510.2.15 | | 510.2.15 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.2.15 Multistory Type B Vents Required.** Where used in multistory systems, vertical common vents shall be Type B double wall and shall be installed with a listed vent cap. [NFPA 54:13.2.16] | | | | | | | | | | | | |
| **Multistory Vent Offsets and Capacity** | | 510.2.16 | | 510.2.16 | | | Updated Code Section Title | | Do not adopt |  | Existing amendment | |
| **510.2.16 Multistory Vent Offsets and Capacity.** Offsets in multistory common vent systems shall be limited to a single offset in each system, and systems with an offset shall comply with all of the following:  (1) The offset angle shall not exceed 45 degrees (0.79 rad) from vertical.  (2) The horizontal length of the offset shall not exceed 18 inches per inch (18 mm/mm) of common vent diameter of the segment in which the offset is located.  (3) For the segment of the common vertical vent containing the offset, the common vent capacity listed in the common venting tables shall be reduced by 20 percent (0.80 x maximum common vent capacity).  (4) A multistory common vent shall not be reduced in size above the offset. [NFPA 54:13.2.17] | | | | | | | | | | | | |
| **Vertical Vent Size Limitation** | | 510.2.17 | | 510.2.17 | | | Reference section updated | | Do not adopt |  | Existing amendment | |
| **510.2.17 Vertical Vent Size Limitation.** Where two or more appliances are connected to a vertical vent or chimney, the flow area of the largest section of vertical vent or chimney shall not exceed seven times the smallest listed appliance categorized vent areas, flue collar area, or draft hood outlet area unless designed in accordance with engineering methods. [NFPA 54:13.2.18] | | | | | | | | | | | | |
| Two-Stage/Modulating Appliances | | 510.2.18 | | 510.2.18 | | | Section Title update. Maximum vent connector tables updated | | Do not adopt |  | **Existing amendment** | |
| **510.2.18 Two-Stage/Modulating Appliances.** The minimum vent connector capacity (FAN Min) of appliances with more than one input rate shall be determined from the tables and shall be less than the lowest appliance input rating. The maximum vent connector capacity (FAN Max or NAT Max) shall be determined from the tables and shall be greater than the highest appliance input rating. [NFPA 54:13.2.19] | | | | | | | | | | | | |
| Chapter 6 Water Supply and Distribution | | | | | | | | | | | | | |
| [51-56-0600](https://app.leg.wa.gov/WAC/default.aspx?cite=51-56-0600&pdf=true) | **Approval of Devices or Assemblies** | | **603.2** | | **603.2** | | | Updated reference section | | **Do not adopt** |  | | **Existing amendment** |
| **603.2 Approval of Devices or Assemblies.** Before a device or an assembly is installed for the prevention of backflow, it shall have first been approved by the Authority Having Jurisdiction. Devices or assemblies shall be tested in accordance with recognized standards or other standards acceptable to the Authority Having Jurisdiction. Backflow prevention devices and assemblies shall comply with Table 603.2, except for specific applications and provisions as stated in Section 603.5.1 through Section 603.5.22. Devices or assemblies installed in a potable water supply system for protection against backflow shall be maintained in good working condition by the person or persons having control of such devices or assemblies. Such devices or assemblies shall be tested at the time of installation, repair, or relocation and not less than on an annual schedule thereafter, or more often where required by the Authority Having Jurisdiction. Where found to be defective or inoperative, the device or assembly shall be repaired or replaced. No device or assembly shall be removed from use or relocated or other device or assembly substituted, without the approval of the  Authority Having Jurisdiction. Testing or maintenance shall be performed by a certified backflow assembly tester or repairer certified in accordance with SSE/IAPMO/ANSI Series 5000 or any other additional certification approved by the Authority Having Jurisdiction. | | | | | | | | | | | | |
| [51-56-0600](https://app.leg.wa.gov/WAC/default.aspx?cite=51-56-0600&pdf=true) | BACKFLOW PREVENTION DEVICES, ASSEMBLIES, AND METHODS | | TABLE 603.2 | | TABLE 603.2 | | | Added requirements carbonated beverage | | **Adopt with existing amendment** |  |  | |
|  |  | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | |
| Testing | | 603.4.2 | | 603.4.2 | | | Updated reference location | | **Adopt with existing amendment** |  |  | |
| **603.4.2 Testing.** The premise owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation and not less than on an annual schedule thereafter, or more often where required by the Authority Having Jurisdiction. The periodic testing shall be performed in accordance with the procedures referenced in ASSE/IAPMO/ANSI Series 5000 by a tester qualified in accordance with those standards. The field test kit used shall comply with ASSE 1064. | | | | | | | | | | | | |
| Protection from Lawn Sprinklers and Irrigation Systems | | 603.5.6 | | 603.5.6 | | | Added new device requirement | | **Adopt with existing amendment** |  |  | |
| **603.5.6 Protection from Lawn Sprinklers and Irrigation Systems.** Potable water supplies to systems having no pumps or connections for pumping equipment, nd no chemical injection or provisions for chemical injection, shall be protected from backflow by one of the following devices:  (1) Atmospheric vacuum breaker (AVB)  (2) Pressure vacuum breaker backflow prevention assembly (PVB)  (3) Spill-resistant pressure vacuum breaker (SVB)  (4) Reduced-pressure principle backflow prevention assembly (RP)  (5) A valve complying with IAPMO PS 72 | | | | | | | | | | | | |
| Beverage Dispensers | | 603.5.12 | | 603.5.12 | | | Updated requirements for Beverage Dispensers | | **Adopt with existing amendment** |  |  | |
| **603.5.12 Beverage Dispensers.** Potable water supply to carbonated beverage dispensers shall be protected by an air gap or a vented backflow preventer that complies with ASSE 1022. For carbonated beverage dispensers, piping material installed downstream of the backflow preventer shall not be affected by carbon dioxide gas. Non-carbonated beverage dispensers, such as ice makers and coffee machines, shall be protected by an air gap or dual check backflow preventer that comply with ASSE 1032 or ASSE 1024. | | | | | | | | | | | | |
| Garbage Can Washers | | (N/A) | | 603.5.19 | | | New Section added | | **Accept Change** |  |  | |
| **603.5.19 Garbage Can Washers.** Where garbage can washers are connected to a potable water supply system, the connection shall be protected against backflow in accordance with Table 603.2. | | | | | | | | | | | | |
| Plumbing Fixture Fittings | | 603.5.19 | | 603.5.20 | | | Section moved | | **Accept Change** |  |  | |
| **>> 603.5.20 Plumbing Fixture Fittings.** Plumbing fixture fittings with integral backflow protection shall comply with ASME A112.18.1/CSA B125.1. >> | | | | | | | | | | | | |
| **Swimming Pools,** | | **603.5.20** | | **603.5.21** | | | **Section moved** | | **Accept Change** |  | |  |
| **>> 603.5.21 Swimming Pools**, Spas, and Hot Tubs. Potable water supply to swimming pools, spas, and hot tubs shall be protected by an air gap or a reduced pressure  principle backflow preventer in accordance with the following:  (1) The unit is equipped with a submerged fill line.  (2) The potable water supply is directly connected to the unit circulation system. >> | | | | | | | | | | | | |
| Chemical Dispensers | | 603.5.21 | | 603.5.22 | | | Section moved and new backflow requirements | | **Accept Change** |  |  | |
| **>> 603.5.22 Chemical Dispensers.** The water supply to chemical dispensers shall be protected against backflow by one of the following:  (1) The chemical dispenser shall comply with ANSI/CAN/ASSE/IAPMO 1055. Where an installation involves a water source coming from a faucet with an integrated vacuum breaker device, a pressure bleed device conforming to IAPMO PS 104 shall be used to protect the vacuum breaker device.  (2) Water supply shall be protected by one of the following methods:  (a) Air gap  (b) Atmospheric vacuum breaker (AVB)  (c) Pressure vacuum breaker backflow prevention assembly (PVB)  (d) Spill-resistant pressure vacuum breaker (SVB)  (e) Reduced-pressure principle backflow prevention assembly (RP) | | | | | | | | | | | | |
| **Pipe, Tube, and Fittings** | | 604.1 | | 604.1 | | | Added new reference page | | **Accept Change** |  |  | |
| **604.1 Pipe, Tube, and Fittings.** Pipe, tube, fittings, solvent cement, thread sealants, solders, and flux used in potable water systems intended to supply drinking water shall comply with NSF/ANSI/CAN 61. Where pipe fittings and valves are made from copper alloys containing more than 15 percent zinc by weight and are used in plastic piping systems, they shall be resistant to dezincification and stress corrosion cracking in compliance with NSF/ANSI 14. Materials used in the water supply system, except valves and similar devices, shall be of a like material, except where otherwise approved by the Authority Having Jurisdiction. Materials for building water piping and building supply piping shall comply with the applicable standards referenced in Table 604.1. | | | | | | | | | | | | |
| Flexible Connectors | | 604.5 | | 604.5 | | | Clarified code language. | | **Accept Change** |  |  | |
| **604.5 Flexible Connectors.** Flexible water connectors shall be installed in accessible locations, and where under continuous pressure shall comply with ASME A112.18.6/CSA B125.6. Flexible water connectors with an excess flow shutoff device shall comply with CSA B125.5/IAPMO Z600. | | | | | | | | | | | | |
| Epoxy Coating | | 604.9 | | 604.9 | | | Updated reference for code | | **Accept Change** |  |  | |
| **604.9 Epoxy Coating.** The epoxy coating used on existing, underground steel building supply piping shall comply with NSF/ANSI/CAN 61 and AWWA C210. | | | | | | | | | | | | |
| MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION PIPING AND FITTINGS | | TABLE 604.1 | | TABLE 604.1 | | | Updated Code | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| Solvent Cement Joints | | 605.2.2 | | 605.2.2 | | | Specified code | | **Accept Change** |  |  | |
| **605.2.2 Solvent Cement Joints.** Solvent cement joints for CPVC pipe and fittings shall be clean from dirt and moisture. Solvent cements shall comply with ASTM F493, requiring the use of a primer shall be orange in color. The primer shall be colored and shall comply with ASTM F656. Listed solvent cement that complies with ASTM F493 and that does not require the use of primers, yellow, green, or red in color, shall be permitted for pipe and fittings that comply with ASTM D2846, 1⁄2 of an inch (15mm) through 2 inches (50 mm) in diameter or ASTM F442, 1⁄2 of an inch (15 mm) through 3 inches (80 mm) in diameter. Apply primer where required inside the fitting and to the depth of the fitting on pipe. Apply liberal coat of cement to the outside surface of pipe to depth of fitting and inside of fitting. Place pipe inside fitting to forcefully bottom the pipe in the socket and hold together until joint is set. | | | | | | | | | | | | |
| **PVC Plastic Pipe and Joints** | | 605.12 | | 605.12 | | | Added new exemption | | **Accept Change** |  |  | |
| **605.12 PVC Plastic Pipe and Joints.** PVC plastic pipe and fitting joining methods shall be installed in accordance with the manufacturer’s installation instructions and shall comply with Section 605.12.1 through Section 605.12.3. PVC piping shall not be exposed to direct sunlight. **Exception:** PVC piping in a location exposed to direct sunlight shall not exceed 24 inches (610 mm) in length and be wrapped with not less than 0.04 of an inch (1.02 mm) thick UV resistant tape or otherwise protected from UV degradation. | | | | | | | | | | | | |
| **Dielectric Unions** | | 605.15 | | 605.15 | | | Change in reference location | | **Accept Change** |  |  | |
| **605.15 Dielectric Unions.** Dielectric unions where installed at points of connection where there is a dissimilarity of metals shall be in accordance with ASSE 1079 or IAPMO PS 66. | | | | | | | | | | | | |
| Copper or Copper Alloy Pipe or Tubing to Threaded Pipe Joints | | 605.16.1 | | 605.16.1 | | | Change in reference location | | **Accept Change** |  |  | |
| **605.16.1 Copper or Copper Alloy Pipe or Tubing to Threaded Pipe Joints.** Joints from copper or copper alloy pipe or tubing to threaded pipe shall be made using copper alloy adapter, copper alloy nipple [minimum 6 inches (152 mm)], dielectric fitting, or dielectric union in accordance with ASSE 1079 or IAPMO PS 66.The joint between the copper or copper alloy pipe or tubing and the fitting shall be a soldered, brazed, flared, or press-connect joint and the connection between the threaded pipe and the fitting shall be made with a standard pipe size threaded joint. | | | | | | | | | | | | |
| Stainless Steel to Other Materials. | | 605.16.3 | | 605.16.3 | | | New reference location | | **Accept Change** |  |  | |
| **605.16.3 Stainless Steel to Other Materials.** Where connecting stainless steel pipe to other types of piping, mechanical joints of the compression type, dielectric fitting, or dielectric union in accordance with ASSE 1079 or IAPMO PS 66 and designed for the specific transition intended shall be used. | | | | | | | | | | | | |
| **General** | | 606.1 | | 606.1 | | | New reference and code update | | **Accept Change** |  |  | |
| **606.1 General.** Valves up to and including 2 inches (50mm) in size shall be copper alloy or other approved material. Sizes exceeding 2 inches (50 mm) shall be ermitted to have bodies of cast iron, copper alloy, or other approved materials. Each gate or ball valve shall be a fullway or full-port type with working parts of the non-corrosive material. Where valves are made from copper alloys containing more than 15 percent zinc by weight and are used in plastic piping systems, they shall be resistant to dezincification and stress corrosion cracking in compliance with NSF/ANSI 14. Valves carrying water used in potable water systems shall comply with the requirements of ASME A112.4.14/CSA B124.14, ASMEB16.34, ASTM F1970, ASTM F2389, AWWA C500, AWWA C504, AWWA C507, IAPMO/ANSI Z1157, MSS SP-67, MSS SP-70, MSS SP-71, MSS SP-72, MSS SP-78, MSS SP-80, MSS SP-110, MSS SP-122, or NSF/ANSI 359.Valves intended to supply drinking water shall also comply with the requirements of NSF/ANSI/CAN 61. | | | | | | | | | | | | |
| Manifolds | | (N/A) | | 606.5.1 | | | New Code section added | | **Accept Change** |  |  | |
| **606.5.1 Manifolds.** Field installed manifolds for water distribution shall conform with the applicable requirements for valves, pipes, and fittings as referenced in this code. Manufactured water distribution manifolds shall be in accordance with IAPMO IGC 109. | | | | | | | | | | | | |
| Leak Detection Devices | | 606.9 | | 606.9 | | | New reference location | | **Accept Change** |  |  | |
| **606.9 Leak Detection Devices.** Where leak detection devices for water supply and distribution are installed, they shall comply with ANSI/CAN/IAPMO Z1349. | | | | | | | | | | | | |
| Private Well Water Tanks | | (N/A) | | 607.2 | | | New Code section added | | **Accept Change** |  |  | |
| **607.2 Private Well Water Tanks.** Pressurized potable water tanks for private well water systems shall comply with ASSE1099/WSC-PST 2000. | | | | | | | | | | | | |
| Potable Water Tanks | | 607.2 | | 607.3 | | | New location, and updated Reference location | | **Accept Change** |  |  | |
| **607.3 Potable Water Tanks.** Potable water supply tanks, interior tank coatings, or tank liners intended to supply drinking water shall comply with NSF/ANSI/CAN 61. << | | | | | | | | | | | | |
| Venting | | 607.3 | | 607.4 | | | New location | | **Accept Change** |  |  | |
| **607.4 Venting.** Tanks used for potable water shall be tightly covered and vented in accordance with the manufacturer’s installation instructions. Such vent shall be << screened with a corrosion-resistant material of not less than number 24 mesh. | | | | | | | | | | | | |
| Overflow | | 607.4 | | 607.5 | | | New location | | **Accept Change** |  |  | |
| **607.5 Overflow.** Tanks shall have not less than a 16 square inch (0.01 m2) overflow that is screened with a corrosion-resistant material of not less than number 24 << mesh. | | | | | | | | | | | | |
| Valves | | 607.5 | | 607.6 | | | New reference and code update | | **Accept Change** |  |  | |
| **607.6 Valves.** Pressurized tanks shall be provided with a listed pressure-relief valve installed in accordance with the manufacturer’s installation instructions. The << relief valve shall be discharged in accordance with Section 608.5. Where a potable water supply tank is located above the fixtures, appliances, or system components it serves, it shall be equipped with a vacuum relief valve that complies with ANSI Z21.22/CSA 4.4. | | | | | | | | | | | | |
| Inadequate Water Pressure | | 608.1 | | 608.1 | | | Updated code language | | **Accept Change** |  |  | |
| **608.1 Inadequate Water Pressure.** Where the water pressure in the main or other source of supply will not provide a residual water pressure of not less than 15 pounds force per square inch (psi) (103 kPa), after allowing for friction and other pressure losses, a tank and a pump or other means that will provide said 15 psi (103 kPa) pressure shall be installed. Where fixtures, fixture fittings, or both are installed that, require a residual pressure exceeding 15 psi (103 kPa), that minimum residual pressure shall be provided. | | | | | | | | | | | | |
| Excessive Water Pressure | | 608.2 | | 608.2 | | | Updated code language, and ne Reference location | | **Accept Change** |  |  | |
| **608.2 Excessive Water Pressure.** Where static water pressure in the water supply piping exceeds 80 psi (552 kPa), an approved-type pressure regulator preceded by an adequate strainer shall be installed and the static pressure reduced to 80 psi (552 kPa) or less. Pressure regulators for potable water distribution systems shall comply with ASSE 1003 or AWWA C530. Pressure regulator(s) equal to or exceeding 11⁄2 inches (40 mm) shall not require a strainer. Such regulator(s) shall control the pressure to water outlets in the building unless otherwise approved by the Authority Having Jurisdiction. Each such regulator and strainer shall be accessibly located aboveground or in a vault equipped with a properly sized and sloped boresighted drain to daylight, shall be protected from freezing, and shall have the strainer readily accessible for cleaning without removing the regulator or strainer body or disconnecting the supply piping. Pipe size determinations shall be based on 80 percent of the reduced pressure where using Table 610.4. An approved expansion tank shall be installed in the cold water distribution piping downstream of each such regulator to prevent pressure exceeding 80 psi from developing due to thermal expansion. Expansion tanks used in potable water systems intended to supply drinking water shall comply with NSF/ANSI/CAN 61. The expansion tank shall be properly sized, securely fastened to the structure, and installed in accordance with the manufacturer’s installation instructions and listing. Systems designed by a licensed plumbing contractor or registered design professionals shall be permitted to use approved pressure relief valves in lieu of expansion tanks provided such relief valves have a maximum pressure relief setting of 100 psi (689 kPa) or less. | | | | | | | | | | | | |
| Expansion Tanks, and Combination Temperature and Pressure-Relief Valves. | | 608.3 | | 608.3 | | | Updated code language, and New Reference location | | **Accept Change** |  |  | |
| **608.3 Expansion Tanks, and Combination Temperature and Pressure-Relief Valves.** A water system provided with a check valve, backflow preventer, or other normally closed device that prevents dissipation of building pressure back into the water main, independent of the type of water heater used, shall be provided with an approved, listed,  and adequately sized expansion tank or other approved device having a similar function to control thermal expansion. Pre-pressurized water expansion tanks shall comply with IAPMO/ANSI Z1088. Such expansion tank or other approved device shall be installed on the building side of the check valve, backflow preventer, or other device and shall be sized, securely fastened to the structure, and installed in accordance with the manufacturer’s installation instructions. A water system containing storage water heating equipment shall be provided with an approved, listed, adequately sized combination temperature and pressure-relief valve, except for listed non-storage instantaneous heaters having an inside diameter of not more than 3 inches (80 mm). Each such approved combination temperature and pressure-relief valve shall be installed on the water-heating device in an approved location based on its listing requirements and the manufacturer’s installation instructions. Each such combination temperature and pressure-relief valve shall be provided with a drain in accordance with Section 608.5.**Exception:** An expansion tank shall not be required for an instantaneous non-storage water heater. | | | | | | | | | | | | |
| Vacuum Relief Valves | | 608.7 | | 608.7 | | | New Reference location | | **Accept Change** |  |  | |
| **608.7 Vacuum Relief Valves.** Where a hot-water storage tank or an indirect water heater is located at an elevation above the fixture outlets in the hot-water system, a vacuum relief valve that complies with ANSI Z21.22/CSA 4.4 shall be installed on the storage tank or heater. | | | | | | | | | | | | |
| Hot-Water Recirculating Pumps | | (N/A) | | 609.8.3 | | | New section to protect health and safety | | **Accept Change** |  |  | |
| **609.8.3 Hot-Water Recirculating Pumps.** For healthcare facilities, long term care facilities, hotels, or motels, devices that automatically turn off the recirculation pump(s) shall not be required. | | | | | | | | | | | | |
| Water Supply Fixture Units | | 610.3 | | 610.3 | | | Updated Code Language | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| Scale Reduction Devices | | 611.1.2 | | 611.1.2 | | | New Reference location | | **Accept Change** |  |  | |
| **611.1.2 Scale Reduction Devices.** Scale reduction devices shall comply with IAPMO/ANSI Z601. | | | | | | | | | | | | |
| Air Gap Discharge | | 611.2 | | 611.2 | | | New Reference location | | **Accept Change** |  |  | |
| **611.2 Air Gap Discharge.** Discharge from drinking water treatment units shall enter the drainage system through an air gap in accordance with Table 603.3.1 or an air gap device that complies with Table 603.2, NSF/ANSI 58, or IAPMO PS 65. | | | | | | | | | | | | |
| SIZING OF RESIDENTIAL WATER SOFTENERS4 | | 611.4 | | 611.4 | | | Updated New Note | | **Accept Change** |  |  | |
| Table  Description automatically generated  For SI units: 1 inch = 25 mm  **Notes:**  1 Installation of a kitchen sink and dishwasher, laundry sink, and automatic clothes washer permitted without additional size increase.  2 An additional water closet and lavatory permitted.  3 Over four bathroom groups, the softener size shall be engineered for the specific installation.  4 See also Appendix A, Recommended Rules for Sizing the Water Supply System, and Appendix C, Alternate Plumbing Systems, for alternate methods of sizing water supply systems. | | | | | | | | | | | | |
| Where Required | | 612.1 | | 612.1 | | | New Reference location | | **Adopt with existing amendment** |  |  | |
| **612.1 Where Required.** Where residential sprinkler systems are required in one and two-family dwellings or townhouses, the systems shall be installed by personnel, installer, or both, certified in accordance with ASSE/IAPMO/ANSI Series 7000 in accordance with this section or NFPA 13D. This section shall be considered equivalent to NFPA 13D. Partial residential sprinkler systems shall be permitted to be installed in buildings not required to be equipped with a residential sprinkler system. | | | | | | | | | | | | |
| DRINKING WATER TREATMENT UNITS | | TABLE 611.1 | | TABLE 611.1 | | | Updated Code language | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| **Chapter 7 Sanitary Drainage** | | | | | | | | | | | | | |
|  | MAXIMUM UNIT LOADING AND MAXIMUM LENGTH OF DRAINAGE AND VENT PIPING | | TABLE 703.2 | | TABLE 703.2 | | | Updated Code Language | | **Accept Change** |  |  | |
| Table  Description automatically generated  For SI units: 1 inch = 25 mm, 1 foot = 304.8 mm  **Notes:**  1 Excluding trap arm.  2 Except for sinks, urinals, and dishwashers – exceeding 1 fixture unit.  3 Except for six-unit traps or water closets.  4 Not to exceed six water closets or five six-unit traps.  5 Based on 1⁄4 inch per foot (20.8 mm/m) slope. For 1⁄8 of an inch per foot (10.4 mm/m) slope, multiply horizontal fixture units by a factor of 0.8.  6 The diameter of an individual vent shall be not less than 11⁄4 inches (32 mm) nor less than one-half the diameter of the drain to which it is connected. Fixture unit load values for drainage and vent piping shall be computed from Table 702.1 and Table 702.2. Not to exceed one-third of the total permitted length of a vent shall be permitted to be installed in a horizontal position. Where vents are increased one pipe size for their entire length, the maximum length limitations specified in this table do not apply. This table is in accordance with the requirements of Section 901.3.  7 Up to 8 public lavatories are permitted to be installed on a 11⁄2 inch (40 mm) vertical branch or horizontal sanitary branch sloped at 1⁄4 inch per foot (20.8 mm/m). | | | | | | | | | | | | |
| Plastic Pipe to Other Materials | | 705.10.3 | | 705.10.3 | | | New Reference location in updated code language | | **Accept Change** |  |  | |
| **705.10.3 Plastic Pipe to Other Materials.** Where connecting plastic pipe to other types of plastic or other types of piping material; approved listed adapter or transition fittings and listed for the specific transition intended shall be used. Except as provided in Section 705.9.4, PVC and ABS pipe and fittings shall not be solvent welded to any other unlike material. | | | | | | | | | | | | |
| CLEANOUT MATERIALS FOR DRAIN, WASTE, AND VENT | | TABLE 707.2 | | TABLE 707.2 | | | New Reference location | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| Load Rated Cover | | (N/A) | | 707.4.1 | | | New Section added | | **Accept Change** |  |  | |
| **707.4.1 Load Rated Cover.** Cleanout floor covers and top rims meant to take loads shall be rated for the loading in accordance with ASME A112.36.2M. | | | | | | | | | | | | |
| General | | 708.1 | | 708.1 | | | Update Code language and requirements | | **Accept Change** |  |  | |
| **708.1 General.** Building drain and other horizontal drainage piping shall be run in practical alignment and a uniform slope of not less than 1⁄4 inch per foot (20.8 mm/m) or 2 percent toward the point of disposal. Where it is impractical due to the depth of the street sewer, structural features, or to the arrangement of a building or structure to obtain a slope of 1⁄4 inch per foot (20.8 mm/m) or 2 percent, building drain piping 4 inches (100 mm) or larger in diameter shall be permitted to have a slope of not less than 1⁄8 inch per foot (10.4 mm/m) or 1 percent, when first approved by the Authority Having Jurisdiction. | | | | | | | | | | | | |
| Backwater Valves | | 710.9 | | 710.6 | | | Reference location update | | **Accept Change** |  |  | |
| **710.6 Backwater Valves.** Backwater valves, gate valves, fullway ball valves, unions, motors, compressors, air tanks, and other mechanical devices required by this section shall be located where they will be accessible for inspection and repair and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover. Backwater valves shall comply with ASME A112.14.1 or IAPMO IGC 305, and have bodies of cast-iron, plastic, copper alloy, or other approved materials; shall have noncorrosive bearings, seats, and self-aligning discs; and shall be constructed to ensure a positive mechanical seal. Such backwater valves shall remain open during periods of low flows to avoid screening of solids and shall not restrict capacities or cause excessive turbulence during peak loads. Unless otherwise listed, valve access covers shall be bolted type with gasket, and each valve shall bear the manufacturer’s name cast into the body and the cover. | | | | | | | | | | | | |
| Alarm | | 710.9 | | 710.9 | | | Code Language update | | **Accept Change** |  |  | |
| **710.9 Alarm.** Such sumps and receiving tanks shall be automatically discharged and, wherein a “public use” occupancy, shall be provided with dual pumps or ejectors arranged to function alternately in normal use and independently. Such pumps shall be capable of running continuously in case of overload or mechanical failure of one of the pumps or ejectors. The pumps shall have an audio and visual alarm, readily accessible, that signals pump failure or an overload condition. The lowest inlet shall have a clearance of not less than 2 inches (51 mm) from the high-water or “starting” level of the sump. | | | | | | | | | | | | |
| **Private** | | **713.2** | | **713.2** | | | **Code Language update** | | **Do Not Adopt** |  |  | |
| **713.2 Private Sewage Disposal System.** Where no public sewer intended to serve a lot or premises is available in a thoroughfare or right of way abutting such lot or premises, drainage piping from a building or works shall be connected to a private sewage disposal system as approved by the Authority Having Jurisdiction. See Appendix H. | | | | | | | | | | | | |
| **Existing Sewers** | | **715.3** | | **715.3** | | | **Updated Section and new reference location** | | **Do Not Adopt** |  |  | |
| **715.3 Existing Sewers.** Where permitted by the Authority Having Jurisdiction, trenchless methods of rehabilitation of existing building sewer and building storm sewers shall be installed in accordance with Section 715.3.1 or Section 715.3.2. | | | | | | | | | | | | |
| **Sewer Pipe Lining** | | **(N/A)** | | **715.3.1** | | | **New section with specific requirements to piping lining** | | **Do Not Adopt** |  |  | |
| **715.3.1 Sewer Pipe Lining**. For trenchless installation of resin-impregnated flexible tubing to line existing building sewers and building storm sewers installation shall be in accordance with ASTM F1216, ASTM F2561, ASTM F2599, or ASTM F3240. | | | | | | | | | | | | |
| **Sewer Pipe Replacement.** | | **(N/A)** | | **715.3.2** | | | **Requirements for sewer pipe trenchless installation** | | **Do Not Adopt** |  |  | |
| **715.3.2 Sewer Pipe Replacement**. For trenchless installation of polyethylene (PE) pipe using the pipe bursting method to replace existing building sewers and building storm sewers materials shall be in accordance with ASTM F714. | | | | | | | | | | | | |
| **Slope** | | **718.1** | | **718.1** | | | **incorporates fixture unit loading limits from Table 717.1** | | **Do Not Adopt** |  |  | |
| **718.1 Slope. Building sewers shall be run in practical alignment and at a uniform slope of not less than 1⁄4 inch per foot (20.8 mm/m) toward the point of disposal.**  **Exception: Where approved by the Authority Having Jurisdiction and where it is impractical, due to the depth of the street sewer, the structural features or the arrangement of a building or structure, to obtain a slope of 1⁄4 inch per foot (20.8 mm/m), piping 4 inches (100 mm) through 6 inches (150 mm) shall be permitted to have a slope of not less than 1⁄8 inch per foot (10.4 mm/m) and piping 8 inches (200 mm) and larger shall be permitted to have a slope of not less than 1⁄16 inch per foot (5.2 mm/m). The maximum and minimum fixture unit loading shall be in accordance with Table 717.1.** | | | | | | | | | | | | |
| **Chapter 8 Indirect Wastes** | | | | | | | | | | | | | |
|  | Pipe Size and Length | | 803.3 | | 803.3 | | | The update clarifies venting requirements by separating sentences for readability without changing technical requirements. | | **Accept Change** |  |  | |
| **803.3 Pipe Size and Length.** Except as hereinafter provided, the size of indirect waste piping shall be in accordance with other sections of this code applicable to drainage and vent piping. No vent from indirect waste piping shall combine with a sewer-connected vent. Vents from indirect waste piping shall extend separately to the outside air. Indirect waste pipes exceeding 5 feet (1524 mm), but less than 15 feet (4572 mm) in length shall be directly trapped, but such traps need not be vented. | | | | | | | | | | | | |
| Non-Classed Apparatus | | 807.1 | | 807.1 | | | Update requirement for air break | | **Accept Change** |  |  | |
| **807.1 Non-Classed Apparatus.** Commercial dishwashing machines, silverware washing machines, and other appliances, devices, equipment, or other apparatus not regularly classed as plumbing fixtures, which are equipped with pumps, drips, or drainage outlets, shall be permitted to be drained by indirect waste pipes discharging through an air break into an approved type of open receptor. | | | | | | | | | | | | |
| Domestic Dishwashing Machine | | 807.3 | | 807.3 | | | Updated requirements on dishwasher | | **Accept Change** |  |  | |
| **807.3 Domestic Dishwashing Machine.** No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine. Listed dishwasher air gap fittings shall be installed with the flood-level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher. | | | | | | | | | | | | |
| **General** | | **809.1** | | **809.1** | | | Updated requirements on air break | | **Accept Change** |  |  | |
| **809.1 General. Drinking fountains shall be permitted to be** installed with indirect wastes through an air break. | | | | | | | | | | | | |
| **Condensate Control** | | **814.2** | | **814.2** | | | **Updated requirements to follow** | | **Accept Change** |  |  | |
| **814.2 Condensate Control.** Where any equipment or appliance is installed in a space where damage is capable of resulting from condensate overflow, a drain line shall be provided and shall be drained in accordance with Section 814.1. An additional protection method for condensate overflow shall be provided in accordance with one of the following:  (1) A water level detecting device that will shut off the equipment or appliance in the event the primary drain is blocked. Such detecting device shall be in accordance with the manufacturer’s installation instructions.  (2) An additional watertight pan of corrosion-resistant material, with a separate drain line, installed beneath the cooling coil, unit, or the appliance to catch the overflow condensate due to a clogged primary condensate drain.  (3) An additional separate drain line at a level that is higher than the primary drain line connection of the drain pan.  (4) An additional watertight pan of corrosion-resistant material with a water level detection device installed beneath the cooling coil, unit, or the appliance to catch the overflow condensate due to a clogged primary condensate drain and to shut off the equipment.  The additional pan or the additional drain line connection shall be provided with a drainpipe of not less than 3⁄4 of an inch (20 mm) nominal pipe size, discharging at a point that is readily observed. | | | | | | | | | | | | |
| **MINIMUM CONDENSATE PIPE SIZE** | | **TABLE 814.3** | | **TABLE 814.3** | | | **Updated Air-condition requirements** | | **Accept Change** |  |  | |
| Table  Description automatically generated  The size of condensate waste pipes is for one unit or a combination of units, or as recommended by the manufacturer. The capacity of waste pipes assumes a 1⁄8 inch per foot (10.4 mm/m) or 1 percent slope, with the pipe running threequarters full at the following pipe conditions:  Table  Description automatically generated  Condensate drain sizing for other slopes or other conditions shall be approved by the Authority Having Jurisdiction. Air-conditioning waste pipes, 1¼ of an inch (32 mm) and larger in size, shall be constructed of materials specified in Chapter 7. Condensate waste piping less than 1¼ of an inch (32 mm) in size shall be permitted to be PVC, CPVC, PE, PP, copper, or other rigid materials approved by the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Appliance Condensate Drains** | | **814.4** | | **814.4** | | | **Requirements for indirect waist** | | **Accept Change** |  |  | |
| **814.4 Appliance Condensate Drains.** Condensate drain lines from individual condensing appliances shall be sized as required by the manufacturer’s instructions. Condensate drain lines serving more than one appliance connecting to a common indirect waste pipe shall have the connections to the indirect waste pipe protected by a sanitary waste valve complying with ASME A112.18.8, condensate trap complying with IAPMO IGC 196, or trap with a trap primer. | | | | | | | | | | | | |
| **Point of Discharge** | | **814.5** | | **814.5** | | | **Updated code language for discharge on Air condition** | | **Accept Change** |  |  | |
| **814.5 Point of Discharge.** Air-conditioning condensate waste pipes shall connect indirectly to the drainage system through an air gap or air break to trapped and vented receptors, dry wells, mop sinks, leach pits, or the tailpiece of plumbing fixtures. An individual condensate drain shall be trapped in accordance with the appliance manufacturer’s instructions or in accordance with Section 814.4. | | | | | | | | | | | | |
| **Chapter 9 Vents** | | | | | | | | | | | | | |
|  | Location of Opening | | 905.5 | | 905.5 | | | Added Exception for water heaters | | **Accept Change** |  |  | |
| **905.5 Location of Opening.** The vent pipe opening from soil or waste pipe shall not be below the weir of the trap. **Exception:** Water closets and similar fixtures. | | | | | | | | | | | | |
| Frost or Snow Closure | | 906.7 | | 906.7 | | | Updated code requirement to 3 inches | | **Accept Change** |  |  | |
| **906.7 Frost or Snow Closure.** Where frost or snow closure is likely to occur in locations having minimum design temperature below 0°F (-17.8°C), vent terminals shall be not less than 3 inches (76 mm) in diameter, but in no event smaller than the required vent pipe. The change in diameter shall be made inside the building not less than 1 foot (305mm) below the roof in an insulated space and terminate not less than 10 inches (254 mm) above the roof, or in accordance with the Authority Having Jurisdiction. | | | | | | | | | | | | |
| Connections and Size | | 910.4 | | 910.4 | | | Updating Title, and requirement angle connection | | **Accept Change** |  |  | |
| **910.4 Connections and Size.** Branches serving traps shall connect to the main line at an angle not exceeding 2 percent. Each waste pipe and each trap in such a system shall be not less than two pipe sizes exceeding the sizes required by Chapter 7 of this code, and not less than two pipe sizes exceeding a fixture tailpiece or connection. | | | | | | | | | | | | |
| **Circuit Vent Permitted.** | | **911.1** | | **911.1** | | | **Requirement for wall hung water closet update.** | | **Adopt with existing amendment** |  |  | |
| **911.1 Circuit Vent Permitted.** A maximum of eight floor outlet water closets, showers, bathtubs, or floor drains connected to a horizontal branch shall be permitted to be circuit vented. Each trap arm shall connect horizontally to the horizontal branch being circuit vented in accordance with Table 1002.2. The horizontal branch shall be classified as a drain and a vent from the most downstream trap arm connection to the most upstream trap arm connection to the horizontal branch.  **Exception:** Back-outlet and wall-hung water closets shall be permitted to be circuit vented provided that no floor-outlet fixtures are connected to the same horizontal branch. Back-outlet and wall-hung water closets shall connect horizontally to the horizontal circuit vented drain. | | | | | | | | | | | | |
| **Chapter 10 Traps and Interceptors** | | | | | | | | | | | | | |
|  | Where Required | | 1001.2 | | 1001.2 | | | Code language update | | **Accept Change** |  |  | |
| **1001.2 Where Required.** Each plumbing fixture shall be separately trapped by an approved type of liquid seal trap. This section shall not apply to fixtures with integral traps. Not more than one trap shall be permitted on a trap arm. Food waste disposers installed with a set of restaurant, commercial, or industrial sinks shall be connected to a separate trap. Each domestic clothes washer and each laundry sink shall be connected to a separate and independent trap, except that a trap serving a laundry sink shall also be permitted to receive the waste from a clothes washer set adjacent to it. The vertical distance between a fixture outlet and the trap weir shall be as short as practicable, but in no case shall the tailpiece exceed 24 inches (610 mm) in length. One trap shall be permitted to serve a set of not more than three single compartment sinks or laundry sinks of the same depth or three lavatories immediately adjacent to each other and in the same room where the waste outlets are not more than 30 inches (762 mm) apart, and the trap is centrally located where three compartments are installed. | | | | | | | | | | | | |
| HORIZONTAL LENGTHS OF TRAP ARMS  (EXCEPT FOR WATER CLOSETS AND SIMILAR FIXTURES)1, 2, 3 | | TABLE 1002.2 | | TABLE 1002.2 | | | Updated code notes to include ne note for showers and similar fixtures. | | **Accept Change** |  |  | |
| **TABLE 1002.2**  **HORIZONTAL LENGTHS OF TRAP ARMS**  **(EXCEPT FOR WATER CLOSETS AND SIMILAR FIXTURES)1, 2, 3**    For SI units: 1 inch = 25.4 mm  **Notes:**  1 Maintain 1⁄4 inch per foot slope (20.8 mm/m).  2 The developed length between the trap of a water closet or similar fixture (measured from the face of the closet flange to the inner edge of the vent) and its vent shall not exceed 6 feet (1829 mm).  3 Horizontally wet vented bathtubs, showers and similar fixtures shall be limited to a maximum of 6 feet (1829 mm) for 1½ inch (40 mm) fixture drains and 8 feet (2438 mm) for 2 inch (50 mm) fixture drains, maintaining ¼ inch per foot slope (20.8 mm/m). | | | | | | | | | | | | |
| Trap Seal Primers | | 1007.2 | | 1007.2 | | | New Requirements from ASSE | | **Accept Change** |  |  | |
| **1007.2 Trap Seal Primers.** Potable water supply trap seal primer valves shall comply with ASSE 1018. Drainage or electronic design type trap seal primer devices shall comply with ASSE 1044 or IAPMO PS 76. | | | | | | | | | | | | |
| **Where Required** | | **1009.1** | | **1009.1** | | | **Reference to new Created table** | | **Accept Change** |  |  | |
| **1009.1 Where Required.** Interceptors (clarifiers) (including grease, oil, sand, solid interceptors, etc.) shall be required by the Authority Having Jurisdiction where they are necessary for the proper handling of liquid wastes containing grease, flammable wastes, sand, solids, acid or alkaline substances, or other ingredients harmful to the building drainage system, the public or private sewer, or to public or private sewage disposal. A list of acceptable interceptor standards is referenced in Table 1009.1. | | | | | | | | | | | | |
| **APPROVED INTERCEPTORS (CLARIFIERS** | | **(N/A)** | | TABLE 1009.1 | | | **New Created Table** | | **Accept Change** |  |  | |
| **TABLE 1009.1**  **APPROVED INTERCEPTORS (CLARIFIERS** | | | | | | | | | | | | |
| **General** | | **1014.1** | | **1014.1** | | | **Updated Reference location for grease interceptors.** | | **Accept Change** |  |  | |
| **1014.1 General.** Where it is determined by the Authority Having Jurisdiction that waste pretreatment is required, an approved type of grease interceptor(s) shall comply with ASME A112.14.3, ASME A112.14.4, CSA B481, ANSI/CAN/IAPMO Z1001, PDI G-101, or PDI G-102, and sized in accordance with Section 1014.2.1 or Section 1014.3.6, shall be installed in accordance with the manufacturer’s installation instructions to receive the drainage from fixtures or equipment that produce grease-laden waste. Grease-laden waste fixtures shall include, but not be limited to, sinks and drains, such as floor drains, floor sinks, and other fixtures or equipment in serving establishments, such as restaurants, cafes, lunch counters, cafeterias, bars and clubs, hotels, hospitals, sanitariums, factory or school kitchens, or other establishments where grease is introduced into the drainage or sewage system in quantities that can effect line stoppage or hinder sewage treatment or private sewage disposal systems. A combination of hydromechanical, gravity grease interceptors and engineered systems shall be allowed to meet this code and other applicable requirements of the Authority Having Jurisdiction where space or existing physical constraints of existing buildings necessitate such installations. A grease interceptor shall not be required for individual dwelling units or private living quarters. Water closets, urinals, and other plumbing fixtures conveying human waste shall not drain into or through the grease interceptor. | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **1014.3.4 Location.** Each grease interceptor shall be so installed and connected that it shall be easily accessible for inspection, cleaning, and removal of the intercepted grease. A gravity grease interceptor that complies with ANSI/CAN/IAPMO Z1001 shall not be installed in a building where food is handled. Location of the grease interceptor shall meet the approval of the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Construction Requirements** | | **1014.3.5** | | **1014.3.5** | | | **Updated code language** | | **Accept Change** |  |  | |
| **1014.3.5 Construction Requirements.** Gravity grease interceptors shall be designed to remove grease from effluent and shall be sized in accordance with this section. Gravity grease interceptors shall also be designed to retain grease until accumulations can be removed by pumping the interceptor. When provided, a sample box shall be located at the outlet end of gravity grease interceptors so that the Authority Having Jurisdiction can periodically sample effluent quality. | | | | | | | | | | | | |
| **Interceptors Required** | | **1017.1** | | **1017.1** | | | **Updated to separate into another section.** | | **Accept Change** |  |  | |
| **1017.1 Interceptors Required.** Repair garages and gasoline stations with grease racks or grease pits, and factories that have oily, flammable, or both types of wastes as a result of manufacturing, storage, maintenance, repair, or testing processes, shall be provided with an oil or flammable liquid interceptor. Floor drains in such locations shall be connected directly to oil and flammable liquid interceptors. | | | | | | | | | | | | |
| **Interceptor Design Alternatives** | | **(N/A)** | | **1017.2** | | | **New Section** | | **Accept Change** |  |  | |
| **1017.2 Interceptor Design Alternatives.** Oil interceptors shall comply with IAPMO IGC 183 or be in accordance with Section 1017.3 through Section 1017.4. | | | | | | | | | | | | |
| **Interceptor Details** | | **1017.2** | | **1017.3** | | | **Updated Code requirements** | | **Accept Change** |  | |  |
| **1017.3 Interceptor Details.** Oil and flammable liquid interceptors shall be in accordance with the following:  (1) The separation or vapor compartment shall be independently vented to the outer air. Where two or more separation or vapor compartments are used, each shall be vented to the outer air or shall be permitted to connect to a header that is installed at a minimum of 6 inches (152 mm) above the spill line of the lowest floor drain and vented independently to the outer air.  (2) The minimum size of a flammable vapor vent shall be not less than 2 inches (50 mm), and, where vented through a sidewall, the vent shall be not less than 10 feet (3048 mm) above the adjacent level at an approved location.  (3) The interceptor shall be vented on the sewer side and shall not connect to a flammable vapor vent. Oil and flammable interceptors shall be provided with gastight cleanout covers that shall be readily accessible.  (4) The waste line shall be not less than 3 inches (80 mm) in diameter with a full-size cleanout to grade.  (5) Where an interceptor is provided with an overflow, it shall be provided with an overflow line [not less than 2 inches (50 mm) in diameter] to an approved waste oil tank having a minimum capacity of 550 gallons (2082 L) and meeting the requirements of the Authority Having Jurisdiction.  (a) The waste oil from the separator shall flow by gravity or shall be pumped to a higher elevation by an automatic pump.  (b) Pumps shall be adequately sized and accessible.  (c) Waste oil tanks shall have a 2 inch (50 mm) minimum pump-out connection at grade and an 11⁄2 inch (40 mm) minimum vent to atmosphere at an approved location not less than 10 feet (3048 mm) above grade. | | | | | | | | | | | | |
| **Design of Interceptors.** | | **1017.2** | | **1017.4** | | | **Moved locations and updated code language** | | **Accept Change** |  |  | |
| **1017.4 Design of Interceptors.** Each manufactured interceptor that is rated shall be stamped or labeled by the manufacturer with an indication of its full discharge rate in gpm (L/s). The following shall apply:  (1) The full discharge rate to such an interceptor shall be determined at full flow. Each interceptor shall be rated equal to or greater than the incoming flow and shall be provided with an overflow line to an underground tank.  (2) Interceptors not rated by the manufacturer shall have a depth of not less than 2 feet (610 mm) below the invert of the discharge drain. The outlet opening shall have not less than an 18 inch (457 mm) water seal and shall have a minimum capacity as follows:  (a) Where not more than three motor vehicles are serviced, stored, or both, interceptors shall have a minimum capacity of 6 cubic feet (0.2 m3), and 1 cubic foot (0.03 m3) of capacity shall be added for each vehicle up to 10 vehicles.  (b) Above 10 vehicles, the Authority Having Jurisdiction shall determine the size of the interceptor required.  (c) Where vehicles are serviced and not stored, interceptor capacity shall be based on a net capacity of 1cubic foot (0.03 m3) for each 100 square feet (9.29m2) of the surface to be drained into the interceptor, with a minimum of 6 cubic feet (0.2 m3). | | | | | | | | | | | | |
|  | | **Chapter 11 Storm Drainage** | | | | | | | | | | | |
|  | Rain Leaders and Conductors | | 1101.13.1 | | 1101.13.1 | | | Updated code language | | **Adopt with existing amendment** |  |  | |
| **1101.13.1 Rain Leaders and Conductors.** Rain leaders and conductors connected to a building storm sewer shall have a cleanout installed at the base of the leader or conductor before it connects to the horizontal drain. | | | | | | | | | | | | |
| **Chapter 12 Fuel Gas Piping** | | | | | | | | | | | | | |
|  | **This Chapter is not adopted per RCW 19.27.031** | | | | | | | | | | | | |
| **Chapter 13 Health Care Facilities and Medical Gas and Medical Vacuum Systems** | | | | | | | | | | | | | |
|  | Where Required | | 1301.4 | | 1301.4 | | | New Reference location | | **Accept Change** |  |  | |
| **1301.4 Where Required.** Construction and equipment requirements shall be applied only to new construction and new equipment, except as modified in individual sections of this chapter. {NFPA 99:1.3.2} | | | | | | | | | | | | |
| Risk Categories | | 1302.1 | | 1302.1 | | | Updating to include all activities | | **Accept Change** |  |  | |
| **1302.1 Risk Categories.** All activities, as well as systems or equipment that are new or altered, shall be designed to meet Category 1 through Category 4 requirements, as detailed in this chapter. {NFPA 99:4.1} | | | | | | | | | | | | |
| STANDARD DESIGNATION COLORS AND OPERATING PRESSURES FOR GAS AND VACUUM SYSTEMS | | TABLE 1305.1 | | TABLE 1305.1 | | | Updated the Standard gauge pressures limits. | | **Accept Change** |  |  | |
| **TABLE 1305.1**  **STANDARD DESIGNATION COLORS AND OPERATING PRESSURES FOR GAS AND VACUUM SYSTEMS**  **[NFPA 99: TABLE 5.1.11]** | | | | | | | | | | | | |
| Pressure Relief Valves | | 1308.2 | | 1308.2 | | | They added size requirement for note 5, and clarified code language on note 6 | | **Accept Change** |  |  | |
| **1308.2 Pressure Relief Valves.** All pressure relief valves  shall meet the following requirements:  (1) They shall be of brass, bronze, or stainless steel construction.  (2) They shall be designed for the specific gas service.  (3) They shall have a relief pressure setting not higher than the maximum allowable working pressure (MAWP) of the component with the lowest working pressure rating in the portion of the system being protected.  (4) They shall be vented to the outside of the building, except that relief valves for compressed air systems having less than 3000 cubic feet (84 950 L) at STP shall be permitted to be diffused locally by means that will not restrict the flow.  (5) They shall have a vent discharge line that is not smaller than the size of the relief valve outlet or ¾ NPS (20 mm), whichever is larger.  (6) Where two or more relief valves discharge into a common vent line, the internal cross-sectional area of the common line shall be not less than the aggregate cross-sectional area of all relief valve vent discharge lines served.  (7) They shall not discharge into locations creating potential hazards.  (8) They shall have the discharge terminal turned down and screened to prevent the entry of rain, snow, or vermin.  (9) They shall be designed in accordance with ASME B31.3.[NFPA 99:5.1.3.5.6.1] | | | | | | | | | | | | |
| Supply Air Quality | | 1309.6 | | 1309.6 | | | Updated Code Language | | **Accept Change** |  |  | |
| **1309.6 Supply Air Quality.** The supply air to the concentrator(s) shall be of a quality to ensure the oxygen concentrator unit can produce oxygen complying with Section 1309.1 and shall not be subject to normally anticipated contamination (e.g., vehicle or other exhausts, gas leakage, discharge from vents, flooding). [NFPA 99:5.1.3.9.1.6] | | | | | | | | | | | | |
| Electrical Components | | 1309.7 | | 1309.7 | | | Updated Code Language | | **Accept Change** |  |  | |
| **1309.7 Electrical Components.** The oxygen concentrator supply unit and any associated electrical equipment shall be provided with, at a minimum, the following electrical components:  (1) Either a disconnect switch for each major electrical component or a single disconnect that deactivates all electrical components in the concentrator unit.  (2) Motor starting devices with overload protection for any component with an electrical motor over 2 hp (1.5 kW). [NFPA 99:5.1.3.9.1.7] | | | | | | | | | | | | |
| Location | | 1311.4 | | 1311.4 | | | Adding WAGD discharge to the requirement | | **Accept Change** |  |  | |
| **1311.4 Location.** Medical air intakes shall be located as follows:  (1) The medical air intake shall be located a minimum of 25 feet (7620 mm) from ventilating system exhausts, fuel storage vents, combustion vents, plumbing vents, vacuum and WAGD discharges, or areas that can collect vehicular exhausts or other noxious fumes.  (2) The medical air intake shall be located a minimum of 20 feet (6096 mm) above ground level.  (3) The medical air intake shall be located a minimum of 10 feet (3048 mm) from any door, window, or other opening in the building. [NFPA 99:5.1.3.6.3.11(B-D)] | | | | | | | | | | | | |
| Vacuum Filtration | | 1312.4 | | 1312.4 | | | Putting in information about ring pumps, Upgrading efficiency to .3 from .03 | | **Accept Change** |  |  | |
| **1312.4 Vacuum Filtration.** Central supply systems for vacuum other than liquid ring pumps shall be provided with inlet filtration with the following characteristics:  (1) Filtration shall be at least duplex to allow one filter to be exchanged without impairing the vacuum system.  (2) Filtration shall be located on the patient side of the vacuum producer.  (3) Filters shall be efficient to 0.3 μ and 99.97 percent HEPA or better, per DOE-STD-3020.  (4) Filtration shall be sized for 100 percent of the peak calculated demand while one filter or filter bundle is isolated.  (5) It shall be permitted to group multiple filters into bundles to achieve the required capacities.  (6) The system shall be provided with isolation valves on the source side of each filter or filter bundle and isolation valves on the patient side of each filter or filter bundle, permitting the filters to be isolated without shutting off flow to the central supply system.  (7) A means shall be available to allow the user to observe any accumulations of liquids.  (8) A vacuum relief petcock shall be provided to allow vacuum to be relieved in the filter canister during filter replacement.  (9) Filter elements and canisters shall be permitted to be constructed of materials as deemed suitable by the manufacturer.  (10) In normal operation, one filter or filter bundle shall be isolated from the system to be available for service should a blockage in the operating filter occur or rotation  of the filters be desired after filter element exchange.[NFPA 99:5.1.3.7.4] | | | | | | | | | | | | |
| Multiple Pumps | | 1313.5 | | 1313.5 | | | Code language update | | **Accept Change** |  |  | |
| **1313.5 Multiple Pumps.** Vacuum exhausts from multiple pumps shall be permitted to be joined together to one common exhaust where the following conditions are met:  (1) The common exhaust is sized to minimize back pressure in accordance with the pump manufacturer’s recommendations.  (2) Each pump can be isolated by manual or check valve, blind flange, or tube cap to prevent open exhaust piping when the pump(s) is removed for service from consequent flow of exhaust air into the room. [NFPA 99:5.1.3.7.7.6] | | | | | | | | | | | | |
| Valve Types | | 1314.5 | | 1314.5 | | | Referenced updated table, and added 2 new conditions | | **Accept Change** |  |  | |
| **1314.5 Valve Types.** New or replacement valves shall be permitted to be of any type as long as they meet the following conditions:  (1) They have a minimum Cv factor in accordance with Table 1314.5(1) or Table 1314.5(2).  (2) They use a quarter turn to off.  (3) They are constructed of materials suitable for the service.  (4) They are provided with copper tube extensions by the manufacturer for brazing or with corrugated medical tubing (CMT) fittings.  (5) They indicate to the operator if the valve is open or closed.  (6) They permit in-line serviceability.  (7) They are cleaned for oxygen service by the manufacturer  if used for any positive-pressure service.  (8) They have threaded purge ports on the patient side and the source side.  (9) They have a minimum working pressure equal to or greater than the relief valve protecting the piping system on which the valve is installed for any positive-pressure  service. [NFPA 99:5.1.4.1.6] | | | | | | | | | | | | |
| POSITIVE PRESSURE GASES | | TABLE 1314.5(1) | | TABLE 1314.5(1) | | | Updated title | | **Accept Change** |  |  | |
| **TABLE 1314.5(1)**  **POSITIVE PRESSURE GASES**  **[NFPA 99: TABLE 5.1.4.1.6(a)]**  Table  Description automatically generated | | | | | | | | | | | | |
| VACUUM AND WAGD | | (N/A) | | TABLE 1314.5(2) | | | New table added | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| Readily Accessible | | 1314.10.1 | | 1314.10.1 | | | Updated code language, and added a new requirement | | **Accept Change** |  |  | |
| **1314.10.1 Readily Accessible.** A zone valve in each medical gas or vacuum line shall be provided for each Category 1 space and anesthetizing location for moderate  sedation, deep sedation, or general anesthesia specific for the occupancy, and shall be located as follows:  (1) They are installed immediately outside the area controlled.  (2) They are installed where they are visible and accessible at all times. [NFPA 99:5.1.4.6.2] | | | | | | | | | | | | |
| **Category 1** | | **1317.1** | | **1317.1** | | | **Updated code language** | | **Accept Change** |  | |  |
| **1317.1 Category** 1. All master, area, and local alarm systems used for medical gas and vacuum systems shall include the following:  (1) Separate visual indicators for each condition monitored, except as permitted in Section 1317.1.2 for local alarms that are displayed on master alarm panels.  (2) Visual indicators that remain in alarm until the situation that has caused the alarm is resolved.  (3) Cancelable audible indication of each alarm condition that produces a sound with a minimum level of 80 dBA at 3 feet (914 mm).  (4) Means to indicate a lamp or LED failure and audible failure.  (5) Visual and audible indication that the communication with an alarm-initiating device is disconnected.  (6) Labeling of each indicator, indicating the condition monitored.  (7) Labeling of each alarm panel for its area of surveillance.  (8) Reinitiating of the audible signal if another alarm condition occurs while the audible alarm is silenced.  (9) Power for master alarms, area alarms, sensors, and switches from the life safety branch of the essential electrical system as described in NFPA 99.  (10) Power for local alarms, dew point sensors, and carbon monoxide sensors permitted to be from the same essential electrical branch as is used to power the air compressor system.  (11) Where used for communications, wiring from switches or sensors that is supervised or protected as required by NFPA 70 for life safety and critical branches circuits in which protection is any of the following types:  (a) Conduit  (b) Free air  (c) Wire  (d) Cable tray  (e) Raceways  (12) Communication devices that do not use electrical wiring for signal transmission and are supervised such that failure of communication initiates an alarm.  (13) Assurance by the responsible authority of the facility that the labeling of alarms, where room numbers or designations are used, is accurate and up-to-date.  (14) Provisions for automatic restart after a power loss of 10 seconds (e.g., during generator start-up) without giving false signals or requiring manual reset.  (15) Alarm switches/sensors installed so as to be removable and accessible for service and testing. [NFPA 99:5.1.9.1] | | | | | | | | | | | | |
| **Medical Vacuum Systems** | | **1320.2.1** | | **1320.2.1** | | | **Updated to add WAGD** | | **Accept Change** |  |  | |
| **1320.2.1 Medical Vacuum Systems**. Vacuum systems and WAGD systems fabricated from copper tubing shall be permitted to have branch connections made using mechanically formed, drilled, and extruded teebranch connections that are formed in accordance with the tool manufacturer’s instructions. Such branch connections shall be joined by brazing, as described in Section 1321.0. [NFPA 99:5.1.10.3.3] | | | | | | | | | | | | |
| **Cut Ends** | | **1321.7.2** | | **1321.7.2** | | | **Updated code language** | | **Accept Change** |  |  | |
| **1321.7.2 Cut Ends.** The cut ends of the tube shall be rolled smooth or deburred with a sharp, clean deburring tool, taking care to prevent chips from entering the tube.  [NFPA 99:5.1.10.4.2.3] | | | | | | | | | | | | |
| **On-Site Recleaning** | | **1321.8.7** | | **1321.8.7** | | | **Updated code language** | | **Accept Change** |  |  | |
| **1321.8.7 On-Site Recleaning.** The interior surfaces of tube ends, fittings, and other components that were cleaned for oxygen service by the manufacturer, but that became contaminated prior to being installed, shall be permitted to be recleaned on-site by the installer by thoroughly scrubbing the interior surfaces with a clean, hot water–alkaline solution, such as sodium carbonate or trisodium phosphate, using a solution of 1 pound (0.5 kg) of sodium carbonate or trisodium phosphate to 3 gallons (11 L) of potable water, and thoroughly rinsing them with clean, hot, potable water. Other aqueous cleaning solutions shall be permitted to be used for on-site recleaning permitted in this section, provided that they are in accordance with the mandatory requirements of CGA G-4.1. [NFPA99:5.1.10.4.3.10,5.1.10.4.3.11] | | | | | | | | | | | | |
| Axially Swaged Fittings. | | **1322.4** | | **1322.4** | | | **Updated code language** | | **Accept Change** |  |  | |
| **1322.4 Axially Swaged Fittings.** Axially swaged fittings providing metal-to-metal seals, suitable for service at 300 psig (2070 kPa) and able to withstand a temperature of 1000°F (538°C) and that, when complete, are permanent and non-separable shall be permitted to be used to join copper or stainless steel tube. Axially swaged fittings shall be installed by qualified technicians in accordance with the manufacturer’s instructions. [NFPA 99:5.1.10.7.1, 5.1.10.7.2] | | | | | | | | | | | | |
| Qualifications of Installers | | **1323.10** | | **1323.10** | | | **Updated reference location** | | **Accept Change** |  |  | |
| **1323.10 Qualifications of Installers.** The installation of medical gas and vacuum systems shall be made by qualified, competent technicians who are experienced in performing such installations, including all personnel who actually install the piping system. Installers of medical gas and vacuum piped distribution systems, all appurtenant piping supporting pump and compressor source systems, and appurtenant piping supporting source gas manifold systems not including permanently installed bulk source systems, shall be certified in accordance with ASSE/IAPMO/ANSI 6010. [NFPA 99:5.1.10.11.10.1, 5.1.10.11.10.2] | | | | | | | | | | | | |
| **Pipe Labeling** | | **1323.13.1** | | **1323.13.1** | | | **Updated code language** | | **Accept Change** |  |  | |
| **1323.13.1 Pipe Labeling.** Piping shall be labeled by stenciling or adhesive markers that identify the patient medical gas, the medical support gas, or the vacuum system and include the following:  (1) Name of the gas or vacuum system or the chemical symbol per Table 1305.1.  (2) Gas or vacuum system color code per Table 1305.1. [NFPA 99:5.1.11.1.1] | | | | | | | | | | | | |
| **Pipe Pressure Labeling** | | **1323.13.2** | | **1323.13.2** | | | **Updated Title and Reference location** | | **Accept Change** |  |  | |
| **1323.13.2 Pipe Pressure Labeling.** Where positive pressure gas piping systems operate at pressures other than the standard gauge pressure in Table 1305.1, the  operating pressure in addition to the name of the gas shall be labeled. [NFPA 99:5.1.11.1.2] | | | | | | | | | | | | |
| **Identification of Shutoff Valves** | | **1323.14** | | **1323.14** | | | **Added shutoff requirements** | | **Accept Change** |  |  | |
| **1323.14 Identification of Shutoff Valves.** Shutoff valves shall be identified with the following:  (1) Name or chemical symbol for the specific medical gas or vacuum system  (2) Gas or vacuum system color code in accordance with Table 1305.1  (3) Room or areas served  (4) Caution to not close or open the valve except in emergency [NFPA 99:5.1.11.2.1] | | | | | | | | | | | | |
| **Main Line Valves** | | **1323.14.3** | | **1323.14.3** | | | **Updated code language** | | **Accept Change** |  |  | |
| **1323.14.3 Main Line Valves.** Main line valves shall be labeled in substance as follows:  MAIN LINE VALVE FOR THE  (GAS/VACUUM NAME)  SERVING (NAME OF THE BUILDING)  [NFPA 99:5.1.11.2.5] | | | | | | | | | | | | |
| **Identification** | | **1323.15** | | **1323.15** | | | **Update to medical gas, and table requirements** | | **Accept Change** |  |  | |
| **1323.15 Identification.** Station outlets and inlets shall be identified as to the name or chemical symbol for the specific medical gas or vacuum provided and shall include the following:(1) Name of the gas or vacuum system or the chemical symbol in accordance with Table 1305.1  (2) Gas or vacuum system color code in accordance with Table 1305.1 In sleep labs, where the outlet is downstream of a flow control device, the station outlet identification shall include a warning not to use the outlet for ventilating patients. Where medical gas systems operate at pressures other than the standard gauge pressure of 50 psi to 55 psi (345 kPato 380 kPa) or a gauge pressure of 160 psi to 185 psi (1103kPa to 1275 kPa) for nitrogen, the station outlet identification  shall include the nonstandard operating pressure in addition to the name of the gas. [NFPA 99:5.1.11.3.1 – 5.1.11.3.2] | | | | | | | | | | | | |
| **Time Frame for Testing** | | **1324.5.4.1** | | **1324.5.4.1** | | | **Updated code language and reference location** | | **Accept Change** |  |  | |
| **1324.5.4.1 Time Frame for Testing.** Tests shall be conducted after the final installation of station outlet valve bodies, faceplates, and all other distribution system components. [NFPA 99:5.1.12.2.6.1] | | | | | | | | | | | | |
| **Conclusion of Test** | | **1324.5.4.5** | | **1324.5.4.5** | | | **Updated length of testing** | | **Accept Change** |  |  | |
| **1324.5.4.5 Conclusion of Test.** The leakage over the 24-hour test shall not exceed 0.5 percent of the starting pressure [e.g., 0.3 psi (2 kPa) starting at 60 psig (414 kPa)] except that attributed to specific changes in ambient temperature. [NFPA 99:5.1.12.2.6.5] | | | | | | | | | | | | |
| **Proof of Testing** | | **1324.5.4.7** | | **1324.5.4.7** | | | **Updated Reference location** | | **Accept Change** |  | |  |
| **1324.5.4.7 Proof of Testing.** The 24-hour standing pressure test of the positive pressure system shall be witnessed by an ASSE/IAPMO/ANSI 6020 inspector, an ASSE/IAPMO/ANSI 6030 verifier, or the Authority Having Jurisdiction or its designee. A form indicating that this test has been performed and witnessed shall be provided to the verifier at the start of the tests required in Section 1324.5.7 through Section 1324.5.11. [NFPA 99:5.1.12.2.6.7] | | | | | | | | | | | | |
| **Conclusion of Test** | | **1324.5.5.5** | | **1324.5.5.5** | | | **Update on reference to the standard code language** | | **Accept Change** |  | |  |
| **1324.5.5.5 Conclusion of Test.** The leakage over the 24-hour test shall not exceed 0.5 percent of the starting pressure [e.g., 0.125 inch (0.3 mm) HgV starting at 25 inches (635 mm) HgV] except that attributed to specific changes in ambient temperature. [NFPA 99:5.1.12.2.7.5] | | | | | | | | | | | | |
| **Inspection Qualification** | | **1324.5.6.2** | | **1324.5.6.2** | | | **Update on reference location** | | **Accept Change** |  | |  |
| **1324.5.6.2 Inspection Qualification.** Inspections shall be conducted by a party technically competent and experienced in the field of medical gas and vacuum pipeline inspections and testing and meeting the requirements of ASSE/IAPMO/ANSI 6020, or ASSE/IAPMO/ANSI 6030. [NFPA 99:5.1.12.3.1.3] | | | | | | | | | | | | |
| **Inspections** | | **1324.5.6.5** | | **1324.5.6.5** | | | **Update on reference location** | | **Accept Change** |  | |  |
| **1324.5.6.5 Inspections**. The initial pressure tests performed by the installing contractor shall be witnessed by an ASSE/IAPMO/ANSI 6020 inspector, an ASSE/IAPMO/ANSI 6030 verifier, or the Authority Having Jurisdiction or its designee. A form indicating that this test has been performed and witnessed shall be provided to the verifier at the start of the tests required in Section 1324.5.7 through Section 1324.5.11. The presence and correctness of labeling and valve tagging required by this code for all concealed components and piping distribution systems shall be inspected. [NFPA 99:5.1.12.3.2 –5.1.12.3.2.2] | | | | | | | | | | | | |
| Approved Tester | | 1324.5.7.2 | | 1324.5.7.2 | | | Update on reference location | | **Accept Change** |  | |  |
| **1324.5.7.2 Approved Tester.** Testing shall be conducted by a party technically competent and experienced in the field of medical gas and vacuum pipeline testing and meeting the requirements of ASSE/IAPMO/ANSI 6030, except as required by Section 1324.5.7.3. [NFPA 99:5.1.12.4.1.3] Testing shall be performed by a party other than the installing contractor. [NFPA 99:5.1.12.4.1.5] Where systems have not been installed by inhouse personnel, testing shall be permitted by personnel of that organization who meet the requirements of Section 1324.5.7.2. [NFPA 99:5.1.12.4.1.6] | | | | | | | | | | | | |
| **Cryogenic Fluid Testing** | | **1324.5.7.3** | | **1324.5.7.3** | | | **Update on reference location** | | **Accept Change** |  | |  |
| **1324.5.7.3 Cryogenic Fluid Testing.** Testing of the cryogenic fluid central supply system shall be conducted by a party technically competent and experienced in the field of cryogenic fluid systems and meeting the requirements of ASSE/IAPMO/ANSI 6035, in accordance with the mandatory requirements in CGA M-1. [NFPA 99:5.1.12.4.1.4] | | | | | | | | | | | | |
| **General** | | **1325.1** | | **1325.1** | | | **Update on code language** | | **Accept Change** |  | |  |
| **1325.1 General.** Category 2 piped gas or piped vacuum system requirements shall be permitted when all of the following criteria are met:  (1) Only moderate sedation (as defined in Chapter 2), minimal sedation (as defined in Chapter 2); or no sedation is performed. Deep sedation and general anesthesia shall not be permitted.  (2) The loss of the piped gas or piped vacuum systems is likely to cause minor injury to patients, staff, or visitors.  (3) The facility piped gas or piped vacuum systems are intended for Category 2 patient care space as defined in Chapter 2. [NFPA 99:5.2.1.2] | | | | | | | | | | | | |
| **Warning Systems** | | **1325.10** | | **1325.10** | | | **Updated title** | | **Accept Change** |  | |  |
| **1325.10 Warning Systems.** Warning systems associated with Category 2 systems shall provide the master, area, and local alarm functions of a Category 1 system as required in Section 1317.0, except as follows:  (1) Warning systems shall be permitted to be a single alarm panel.  (2) The alarm panel shall be located in an area of continuous surveillance while the facility is in operation.  (3) Pressure and vacuum switches/sensors shall be mounted at the source equipment with a pressure indicator at the master alarm panel. [NFPA 99:5.2.9] | | | | | | | | | | | | |
| **Category 2 Distribution** | | **1325.11** | | **1325.11** | | | **Updated code language** | | **Accept Change** |  | |  |
| **1325.11 Category 2 Distribution.** Category 2 systems shall comply with Section 1318.0 through Section 1323.12.[NFPA 99:5.2.10] | | | | | | | | | | | | |
| **Performance Criteria and Testing** | | **1325.13** | | **1325.13** | | | **Updated to include WAGD** | | **Accept Change** |  | |  |
| **1325.13 Performance Criteria and Testing** — Gas, Medical–Surgical Vacuum, and WAGD. Category 2 systems shall comply with Section 1324.0. [NFPA 99:5.2.12] | | | | | | | | | | | | |
| **General** | | **1326.1** | | **1326.1** | | | **Update to requirement 1** | | **Accept Change** |  | |  |
| **1326.1 General.** Category 3 piped gas and vacuum systems shall be permitted when all of the following criteria are met:  (1) Only minimal sedation, as defined in Chapter 2; or no sedation is performed. Deep sedation, moderate sedation, and general anesthesia are not performed.  (2) The loss of the piped gas and vacuum systems is not likely to cause injury to patients, staff, or visitors, but can cause discomfort.  (3) The facility piped gas and vacuum systems are intended for Category 3 patient care rooms as defined in Chapter 2. [NFPA 99:5.3.1.2] | | | | | | | | | | | | |
| **Medical Air Supply Systems** | | **1326.3** | | **1326.3** | | | **Updated two include 8 new requirements** | | **Accept Change** |  | |  |
| **1326.3 Medical Air Supply Systems.** Category 3 central supply systems shall be permitted to consist of the following:  (1) Gas cylinder or cryogenic liquid container headers in accordance with NFPA 99.  (2) Oxygen concentrator supply units in accordance with NFPA 99.  (3) Cylinder manifolds for gas cylinders in accordance with NFPA 99.  (4) Manifolds for cryogenic liquid containers in accordance with NFPA 99.  (5) Cryogenic fluid central supply systems in accordance with NFPA 99.  (6) Medical air compressor systems in accordance with NFPA 99.  (7) Proportioning air systems in accordance with NFPA 99.  (8) Medical-surgical vacuum systems in accordance with of NFPA 99.  (9) Waste anesthetic gas disposal systems (WAGDs) in accordance with NFPA 99.  (10) Instrument air compressor systems in accordance with NFPA 99. {NFPA 99:5.3.3.5} | | | | | | | | | | | | |
| **Medical–Surgical Vacuum Systems** | | **1326.4** | | **1326.4** | | | **Update to code requirements and NFPA location** | | **Accept Change** |  | |  |
| **1326.4 Medical–Surgical Vacuum Systems.** Category 3 systems shall comply with Section 1307.3 through Section 1309.13 and Section 1312.0 through Section 1313.5, except as follows:  (1) Medical–surgical vacuum systems shall be permitted to be simplex.  (2) The facility staff shall develop an emergency plan to deal with the loss of medical–surgical vacuum.  (3) Emergency electrical service shall conform to the requirements of Section 6.6 of NFPA 99 and NFPA 70. [NFPA 99:5.3.3.7] | | | | | | | | | | | | |
| **Warning Systems** | | **1326.8** | | **1326.8** | | | **Updated to 1st requirement and new NFPA location** | | **Accept Change** |  | |  |
| **1326.8 Warning Systems.** Warning systems associated with Category 3 systems shall provide the master, area, and local alarm functions of a Category 1 system as required in Section 1317.0, except as follows:  (1) Warning systems shall be permitted to be a single alarm panel (i.e., a combination master/area alarm panel).  (2) The alarm panel shall be located in an area of continuous surveillance while the facility is in operation.  (3) Pressure and vacuum switches/sensors shall be mounted at the source equipment with a pressure indicator at the master alarm panel.  (4) Electrical power for warning systems shall be in accordance with Section 6.6 of NFPA 99 for Category 3 and Category 4 spaces. [NFPA 99:5.3.9] | | | | | | | | | | | | |
| **Emergency Shutoff Valves (Oxygen and Nitrous Oxide** | | **1327.2** | | **1327.2** | | | **Update to include all category 2** | | **Accept Change** |  | |  |
| **1327.2 Emergency Shutoff Valves (Oxygen and Nitrous Oxide).**  (1) All Category 2 medical gas systems shall have an emergency shutoff valve accessible from all use-point locations in an emergency.  (2) Where a central medical gas supply system supplies two treatment facilities, each facility shall be provided with an emergency shutoff valve located in that treatment facility so as to be accessible from all use-point locations in an emergency.  (3) Emergency shutoff valves shall be labeled to indicate the gas controlled by the shutoff valve and shall shut off only the gas to the treatment facility that they serve.  (4) A remotely activated shutoff valve at a gas supply manifold shall not be used for emergency shutoff. For clinical purposes, such a remote valve actuator shall not fail-close in the event of loss of electric power. Where remote actuators are the type that fail-open, it shall be mandatory that cylinder shutoff valves be closed whenever the system is not in use. [NFPA 99:15.4.2.6.1 – 15.4.2.6.4.2] | | | | | | | | | | | | |
| **Chapter 14 Firestop Protection** | | | | | | | | | | | | | |
|  | **No Change** | | | | | | | | | | | | |
| **Chapter 15 Alternative Water Sources for Nonpotable Applications** | | | | | | | | | | | | | |
|  | **Minimum Water Quality Requirements** | | 1501.7 | | 1501.7 | | | Update to reference location | | **Accept Change** |  |  | |
| **1501.7 Minimum Water Quality Requirements.** The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. In the absence of water quality requirements, for on-site treated nonpotable systems, the water quality requirements of IAPMO IGC 324 or NSF/ANSI 350 shall apply. **Exception:** Water treatment is not required for gray water used for subsurface irrigation. | | | | | | | | | | | | |
| Separation Requirements | | 1502.4 | | 1502.4 | | | Updated code language | | **Accept Change** |  |  | |
| **1502.4 Separation Requirements.** Underground alternate water source service piping other than gray water shall be separated from the building sewer in accordance with this code. Pipes carrying treated nonpotable water shall be permitted to be run or laid in the same trench as potable water pipes with a 12 inch (305 mm) minimum vertical and horizontal separation where both pipe materials are approved for use within a building. Where horizontal piping materials do not comply with this requirement, the minimum separation shall be increased to 60 inches (1524 mm). The potable water piping shall be installed at an elevation above the treated nonpotable water piping. | | | | | | | | | | | | |
| Water Pressure | | 1505.5 | | 1505.5 | | | New Section | | **Accept Change** |  |  | |
| **1505.5 Water Pressure.** Reclaimed (recycled) water systems supplying water to water closets, urinals, and trap primers shall be capable of delivering not less than 15 pounds-force per square inch (psi) (103 kPa) residual pressure at the highest and most remote outlet served. Where the water pressure in the reclaimed water supply system within the building exceeds 80 psi (552 kPa), a pressure reducing valve reducing the pressure to 80 psi (552 kPa) or less to water outlets in the building shall be installed. | | | | | | | | | | | | |
| Water Pressure | | 1506.5 | | 1506.5 | | | New Section | | **Accept Change** |  |  | |
| **1506.5 Water Pressure.** On-site treated non-potable water systems supplying water to water closets, urinals, and trap primers shall be capable of delivering not less than 15 pounds-force per square inch (psi) (103 kPa) residual pressure at the highest and most remote outlet served. Where the water pressure in the on-site treated non-potable water supply system within the building exceeds 80 psi (552 kPa), a pressure reducing valve reducing the pressure to 80 psi (552 kPa) or less to water outlets in the building shall be installed. | | | | | | | | | | | | |
| On-Site Treated Non-potable Water Devices and Systems | | 1506.8 | | 1506.8 | | | Update to code and new Reference location | | **Accept Change** |  |  | |
| **1506.8 On-Site Treated Non-potable Water Devices and Systems.** Devices or equipment used to treat on-site treated nonpotable water to maintain the minimum water quality requirements determined by the Authority Having Jurisdiction shall be listed and labeled (third-party certified) by a listing agency (accredited conformity assessment body) or approved for the intended application. Devices or equipment used to treat on-site treated nonpotable water for use in the water closet and urinal flushing, surface irrigation, and similar applications shall comply with IAPMO IGC 324, NSF/ANSI 350 or approved by the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Chapter 16 Nonpotable Rainwater Catchment Systems** | | | | | | | | | | | | | |
|  | General | | 1602.1 | | 1602.1 | | | New Reference location | | **Accept Change** |  |  | |
| **1602.1 General.** The installation, construction, alteration, and repair of rainwater catchments systems intended to supply uses such as water closets, urinals, trap primers for floor drains and floor sinks, irrigation, industrial processes, water features, cooling tower makeup and other uses shall be approved by the Authority Having Jurisdiction. Rainwater catchment systems for collecting precipitation from rooftops shall comply with ARCSA/ASPE/ANSI 63. | | | | | | | | | | | | |
| **Rainwater Catchment Collection Surfaces** | | 1603.4 | | 1603.3 | | | Moved Location | | **Accept Change** |  |  | |
| **1603.3 Rainwater Catchment Collection Surfaces**. Rainwater shall be collected from roof surfaces or other manmade, aboveground collection surfaces. | | | | | | | | | | | | |
| **Other Surfaces.** | | 1603.4.1 | | 1603.3.1 | | | Moved Location | | **Accept Change** |  |  | |
| **1603.3.1 Other Surfaces.** Natural precipitation collected from surface water runoff, vehicular parking surfaces, or manmade surfaces at or below grade shall be in accordance with the stormwater requirements for on-site treated nonpotable water systems in Section 1506.0. | | | | | | | | | | | | |
| **Prohibited Discharges** | | 1603.4.2 | | 1603.3.2 | | | Moved Location | | **Accept Change** |  |  | |
| **1603.3.2 Prohibited Discharges.** Overflows and bleed-off pipes from roof-mounted equipment and appliances shall not discharge onto roof surfaces that are intended to collect rainwater without prior approval from the Authority Having Jurisdiction. | | | | | | | | | | | | |
| Minimum Water Quality | | 1603.5 | | 1603.4 | | | New Reference location | | **Accept Change** |  |  | |
| **1603.4 Minimum Water Quality.** The minimum water quality for harvested rainwater shall meet the applicable water quality requirements for the intended applications as determined by the Authority Having Jurisdiction. In the absence of water quality requirements determined by the Authority Having Jurisdiction, the minimum treatment and water quality shall be in accordance with Table 1603.4, IAPMO IGC 324 or NSF/ANSI 350.  **Exception:** No treatment is required for rainwater used for subsurface or nonsprinkled surface irrigation where the maximum storage volume is less than 360 gallons (1363 L). | | | | | | | | | | | | |
| **MINIMUM WATER QUALITY** | | TABLE 1603.5 | | TABLE 1603.4 | | | Moved Location | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| Rainwater Storage Tanks | | 1603.6 | | 1603.5 | | | New Reference location | | **Accept Change** |  |  | |
| **1603.5 Rainwater Storage Tanks.** Rainwater storage tanks shall comply with IAPMO/ANSI Z1002 and be installed in accordance with Section 1603.6 through Section 1603.12. | | | | | | | | | | | | |
| **Location** | | **1603.7** | | **1603.6** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.6 Location.** Rainwater storage tanks shall be permitted to be installed above or below grade. | | | | | | | | | | | | |
| **Above Grade** | | **1603.8** | | **1603.7** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.7 Above Grade.** Above grade, storage tanks shall be of an opaque material, approved for aboveground use in direct sunlight or shall be shielded from direct sunlight. Tanks shall be installed in an accessible location to allow for inspection and cleaning. The tank shall be installed on a foundation or platform that is constructed to accommodate loads in accordance with the building code. | | | | | | | | | | | | |
| **Below Grade** | | **1603.9** | | **1603.8** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.8 Below Grade.** Rainwater storage tanks installed below grade shall be structurally designed to withstand anticipated earth or other loads. Holding tank covers shall be capable of supporting an earth load of not less than 300 pounds per square foot (lb/ft2) (1465 kg/m2) where the tank is designed for underground installation. Below grade rainwater tanks installed underground shall be provided with manholes. The manhole opening shall be not less than 20 inches (508 mm) in diameter and located not less than 4 inches (102 mm) above the surrounding grade. The surrounding grade shall be sloped away from the manhole. Underground tanks shall be ballasted, anchored, or otherwise secured, to prevent the tank from floating out of the ground where empty. The combined weight of the tank and hold down system shall meet or exceed the buoyancy force of the tank. | | | | | | | | | | | | |
| **Drainage and Overflow** | | **1603.10** | | **1603.9** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.9 Drainage and Overflow.** Rainwater storage tanks shall be provided with a means of draining and cleaning. The overflow drain shall not be equipped with a shutoff valve. The overflow outlet shall discharge in accordance with this code for storm drainage systems. Where discharging to the storm drainage system, the overflow drain shall be protected from backflow of the storm drainage system by a backwater valve or other approved method. | | | | | | | | | | | | |
| **Overflow Outlet Size** | | **1603.10.1** | | **1603.9.1** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.9.1 Overflow Outlet Size.** The overflow outlet shall be sized to accommodate the flow of the rainwater entering the tank and not less than the aggregate cross-sectional area of inflow pipes. | | | | | | | | | | | | |
| **Opening and Access Protection** | | **1603.11** | | **1603.10** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.10 Opening and Access Protection.** Rainwater tank openings shall be protected to prevent the entrance of insects, birds, or rodents into the tank. Rainwater tank access openings exceeding 12 inches (305 mm) in diameter shall be secured to prevent tampering and unintended entry by either a lockable device or other approved method. | | | | | | | | | | | | |
| **Marking** | | **1603.12** | | **1603.11** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.11 Marking.** Rainwater tanks shall be permanently marked with the capacity and the language: “NONPOTABLE RAINWATER.” Where openings are provided to allow a person to enter the tank, the opening shall be marked with the following language: “DANGER-CONFINED SPACE.” | | | | | | | | | | | | |
| **Storage Tank Venting** | | **1603.13** | | **1603.12** | | | Moved Location | |  |  |  | |
| **1603.12 Storage Tank Venting.** Where venting using drainage or overflow piping is not provided or is considered insufficient, a vent shall be installed on each tank. The vent  shall extend from the top of the tank and terminate not less than 6 inches (152 mm) above grade and shall be not less than 11⁄2 inches (40 mm) in diameter. The vent terminal shall be directed downward and covered with a 3⁄32 of an inch (2.4mm) mesh screen to prevent the entry of vermin and insects. | | | | | | | | | | | | |
| **Pumps** | | **1603.14** | | **1603.13** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.13 Pumps.** Pumps serving rainwater catchment systems shall be listed. Pumps supplying water to water closets, urinals, and trap primers shall be capable of delivering not less than 15 pounds-force per square inch (psi) (103 kPa) residual pressure at the highest and most remote outlet served. Where the water pressure in the rainwater supply system within the building exceeds 80 psi (552 kPa), a pressure reducing valve reducing the pressure to 80 psi (552 kPa) or less to water outlets in the building shall be installed in accordance with this code. | | | | | | | | | | | | |
| **Roof Drains** | | **1603.15** | | **1603.14** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.14 Roof Drains.** Primary and secondary roof drains, conductors, leaders, and gutters shall be designed and installed in accordance with this code. | | | | | | | | | | | | |
| **Water Quality Devices and Equipment** | | **1603.16** | | **1603.15** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.15 Water Quality Devices and Equipment.** Devices and equipment used to treat rainwater to maintain the minimum water quality requirements determined by the Authority Having Jurisdiction shall be listed or labeled (third party certified) by a listing agency (accredited conformity assessment body) and approved for the intended application. | | | | | | | | | | | | |
| **Freeze Protection** | | **1603.17** | | **1603.16** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.16 Freeze Protection.** Tanks and piping installed in locations subject to freezing shall be provided with an approved means of freeze protection. | | | | | | | | | | | | |
| **Debris Removal.** | | **1603.18** | | **1603.17** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.17 Debris Removal.** The rainwater catchment conveyance system shall be equipped with a debris excluder or other approved means to prevent the accumulation of leaves, needles, other debris and sediment from entering the storage tank. Devices or methods used to remove debris or sediment shall be accessible and sized and installed in accordance with manufacturer’s installation instructions. | | | | | | | | | | | | |
| **Required Filters** | | **1603.19** | | **1603.18** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.18 Required Filters.** A filter permitting the passage of particulates not larger than 100 microns (100 μm) shall be provided for rainwater supplied to water closets, urinals, trap primers, and drip irrigation system. | | | | | | | | | | | | |
| **Roof Gutters** | | **1603.20** | | **1603.19** | | | Moved Location | | **Accept Change** |  |  | |
| **1603.19 Roof Gutters.** Gutters shall maintain a minimum slope and be sized in accordance with Section 1103.3. | | | | | | | | | | | | |
| **Rainwater Diversion Valves** | | (N/A) | | **1603.20** | | | New Section | | **Accept Change** |  |  | |
| **1603.20 Rainwater Diversion Valves.** Rainwater diversion valves ranging from 2 inches (50 mm) through 4 inches (100 mm) in diameter shall comply with IAPMO PS 59.  Rainwater diversion valves ranging from 6 inches (150 mm) to 12 inches (300 mm) in diameter shall comply with IAPMO IGC 352. Valves shall be accessible and include a filter located upstream of the valve when required. | | | | | | | | | | | | |
| **Chapter 17 Referenced Standards** | | | | | | | | | | | | | |
|  | The following standards were **updated:** | | | | | | | | | | | | |
| **REFERENCED STANDARDS** | | TABLE 1701.1 | | TABLE 1701.1 | | | Updated Reference standard location | | **Accept Change** |  | |  |
| **TABLE 1701.1**  **REFERENCED STANDARDS** | | | | | | | | | | | | |
| **.** | | | | | | | | | | | | |
|  | STANDARDS, PUBLICATIONS, PRACTICES, AND GUIDES | | **TABLE 1701.2** | | **TABLE 1701.2** | | | **Update to Reference Location** | | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
|  |  | | | | | | | | | | | | |
| **Adopted Appendices (A, B and I)** | | | | | | | | | | | | | |
|  | **Residual Pressure** | | **A 104.1** | | **A 104.1** | | | Clarifying code language | | **Accept Change** |  |  | |
| **A 104.1 Residual Pressure.** Decide what is the desirable minimum residual pressure that shall be maintained at the highest fixture in the supply system. The available residual pressure shall be not less than 15 pounds-force per square inch (psi) (103 kPa). Where fixtures, fixture fittings, or both are installed that require a residual pressure exceeding 15 psi (103 kPa), that minimum residual pressure shall be provided. | | | | | | | | | | | | |
| **WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES3** | | **TABLE A 103.1** | | **TABLE A 103.1** | | | Update to add With or without dishwasher | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| **General Requirements** | | **B 101.2** | | **B 101.2** | | | Update to define what amendment for combination vent systems | | **Accept Change** |  |  | |
| **B 101.2 General Requirements.** Combination waste and vent systems, (which at best are merely an expedient designed to be used in locations where it would be structurally impractical to provide continuous venting of fixtures) as outlined in Section 910.0 of this code, cover the horizontal wet venting of a series of traps using a common waste and vent pipe. Pipe sizes not less than two pipe sizes larger than those required for a conventional system are designed to maintain a wetted perimeter or flow line low enough in the waste pipe to allow adequate air movement in the upper portion, thus balancing the system. One and two unit fixtures that rough in above the floor, shall be permitted to connect to a combination waste and vent system when located as required in Section 910.7. Combination waste and vent systems are intended primarily for extensive floor or shower drain installations where separate venting is not practical, for floor sinks in markets, demonstration or work tables in school buildings, or for similar applications where the fixtures are not adjacent to walls or partitions. Due to its oversize characteristics, such a waste system is not self-scouring and, consequently, care shall be exercised as to the type of fixtures connected to it and the location of cleanouts. Given its grease-producing potential, restaurant kitchen equipment shall not be connected to a combination waste and vent system. | | | | | | | | | | | | |
| **General** | | **C 201.1** | | **C 201.1** | | | Updating language | | **Accept Change** |  |  | |
| **C 201.1 General.** For the purpose of this appendix, the following definitions shall apply: Branch Interval. A length of soil or waste stack corresponding in general to a story height, but in no case less than 8feet (2438 mm), within which the horizontal branches from one floor or story of the building are connected to the stack. Engineered Plumbing System. A system designed for a specific building project with drawings and specifications indicating plumbing materials to be installed, all as prepared by a registered design professional. | | | | | | | | | | | | |
| **WATER SUPPLY FIXTURE UNITS (WSFU) FOR BATHROOM GROUPS1, 2** | | **TABLE C 303.2** | | **TABLE C 303.2** | | | Update for serving 3 or more bathrooms | | **Accept Change** |  |  | |
|  | | | | | | | | | | | | |
| **DRAINAGE FIXTURE UNIT VALUES (DFU) FOR BATHROOM GROUPS1, 2** | | **TABLE C 303.3** | | **TABLE C 303.3** | | | Update for serving 3 or more bathrooms | | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **Where Permitted** | | **C 601.1** | | **C 601.1** | | | Update to Table Location | | **Accept Change** |  | |  |
| **C 601.1 Where Permitted.** Single-stack venting shall be designed by a registered design professional as an engineered design. A drainage stack shall be permitted to serve as a single-stack vent system where sized and installed in accordance with Section C 601.2 through Section C 601.10. The drainage stack and branch piping in a single-stack vent system shall provide for the flow of liquids, solids, and air without exceeding the pressure differential described in Section 901.3. | | | | | | | | | | | | |
| **Length of Vertical Piping** | | **C 601.4.2** | | **C 601.4.2** | | | Code language update | | **Accept Change** |  | |  |
| **C 601.4.2 Length of Vertical Piping.** The length of vertical piping from a fixture trap to a horizontal branch shall not be considered in computing the fixture’s horizontal distance from the stack. | | | | | | | | | | | | |
| **Additional Venting Required** | | **C 601.6** | | **C 601.6** | | | Code language update | | **Accept Change** |  | |  |
| **C 601.6 Additional Venting Required.** Additional venting shall be provided where more than one water closet is on a horizontal branch and where the distance from a fixture trap to the stack exceeds the limits in Section C 601.4. Where additional venting is required, the fixture(s) shall be vented by one of the methods described in Sections 908.0 through Section 911.5. The dry vent extensions for the additional venting shall connect to a branch vent, vent stack, stack vent, or be extended outdoors and terminate to the open air. | | | | | | | | | | | | |
| **Prohibited Connections Near Base of Stack** | | C 601.8 | | C 601.8 | | | Code language update | | **Accept Change** |  | |  |
| **C 601.8 Prohibited Connections Near Base of Stack.** Where stacks are more than 75 feet (22 860 mm) high, a separate stack shall be provided for the fixtures on the lower two stories. The stack for the lower two stories shall be permitted to be connected to the branch of the building drain that serves the stack for the upper stories at a point that is not less than 8 feet (2438 mm) downstream from the base of the upper stack. Where stacks are less than 75 feet (22 860 mm) high but more than two stories high, the lowest story shall not connect within 8 feet (2438 mm) downstream from the base of the stack. Venting for the lowest story shall be provided in accordance with Section C 601.8.1 and Section C 601.8.2. | | | | | | | | | | | | |
| **Conditional Vent** | | **(N/A)** | | | **C 601.8.1** | | | **New Section** | **Accept Change** |  | |  |
| **C 601.8.1 Conditional Vent. Venting of fixtures on the lowest floor shall be in accordance with Section 908.0 through Section 911.5 and may connect into the single-stack as a conditional vent. The conditional vent connects into the stack by means of a wye-fitting to prevent ingress of drainage into the vent. No more than 12 drainage fixture units (DFU) may be connected into the conditional vent and shall connect not less than 8 feet (2438 mm) above the stack base.** | | | | | | | | | | | | |
| **Other Branch Vent** | | **(N/A)** | | | **C 601.8.2** | | | **New Section** | **Accept Change** |  | |  |
| **C 601.8.2 Other Branch Vent. Other branch vents shall be vented in accordance with Section 908.0 through Section 911.5.** | | | | | | | | | | | | |
| **Parallel Vent Stacks** | | **(N/A)** | | | **C 601.10** | | | **New Section** | **Accept Change** |  | |  |
| **C 601.10 Parallel Vent Stacks. Drainage stacks extending more than 75 feet (22 860 mm) shall be provided with a parallel vent stack and shall meet the requirements of Section 907.0.** | | | | | | | | | | | | |
| **General.** | | **E 201.1** | | | **E 201.1** | | | **Update Code language** | **Accept Change** |  | |  |
| **E 201.1 General. For the purpose of this appendix, the following definitions shall apply:** | | | | | | | | | | | | |
| **Size** | | **403.3** | | | **403.3** | | |  | **Accept Change** |  | |  |
| **E 403.3 Size.** The size of each section of a gas piping system shall be determined in accordance with NFPA 54/ANSI Z223.1 or by other standard engineering methods acceptable to the Authority Having Jurisdiction. [NFPA 501A:4.3.5.1] | | | | | | | | | | | | |
| **Plastic Piping** | | **E 403.7** | | | **E 403.7** | | | **Updated to CFR requirement** | **Accept Change** |  | |  |
| **E 403.7 Plastic Piping.** Plastic piping shall only be used underground and shall meet the requirements of ASTM D2513 or ASTM D2517, as well as the design pressure and  design limitations of 49 CFR 192.123 and shall otherwise conform to the installation requirements thereof. {NFPA501A:4.3.6.3} | | | | | | | | | | | | |
| **Oil Supply Connections** | | **E 403.13** | | | **E 403.13** | | | **Update to code requirements** | **Accept Change** |  | |  |
| **E 403.13 Oil Supply Connections**. Oil supply connections at manufactured home sites, where provided from a centralized oil distribution system, shall be located and arranged to permit attachment to a manufactured home utilizing the stand. [NFPA 501A:4.3.11.1] The installation of such facilities shall comply with the following requirements:  (1) The main distribution pipeline shall be permitted to be connected to a tank or tanks having an aggregate capacity not exceeding 20 000 gallons (75 708 L) at a point below the liquid level.  (2) Where this piping is so connected, a readily accessible internal or external shutoff valve shall be installed in the piping as close as practicable to the tank.  (3) If external and aboveground, the shutoff valve and its tank connections shall be made of steel.  (4) Connections between the tank(s) and the main pipeline shall be made with double swing joints or flexible connectors, or shall otherwise be arranged to permit the tank(s) to settle without damaging the system.  (5) If located aboveground, the connections specified in Section E 403.13(4) shall be located within the diked area.  (6) A readily accessible and identified manual shutoff valve shall be installed either inside or outside of the structure in each branch supply pipeline that enters a building,  mobile home, travel trailer, or other structure. If inside, the valve shall be located directly adjacent to the point at which the supply line enters the structure. If outside, the  valve shall be protected from weather and damage.  (7) A device shall be provided in the supply line at or ahead of the point where it enters the interior of the structure that will automatically shut off the oil supply, if the supply  line between this device and the appliance is broken. This device shall be located on the appliance side of the manual shutoff valve required in Section E 403.13(6) and  shall be solidly supported and protected from damage.  (8) Means shall be provided to limit the oil pressure at the appliance inlet to a maximum gauge pressure of 3 pounds-force per square inch gauge (psig) (21 kPa). If a  pressure-reducing valve is used, it shall be a type approved for the service.  (9) A device shall be provided that will automatically shut off the oil supply to the appliance if the oil pressure at the appliance inlet exceeds a gauge pressure of 8 psig (55  kPa). The device shall not be required under either of the following conditions:  (a) Where the distribution system is supplied from a gravity tank and the maximum hydrostatic head of oil in the tank is such that the oil pressure at the appliance inlet will not exceed a gauge pressure of 8psig (55 kPa).  (b) Where a means is provided to automatically shut off the oil supply if the pressure-regulating device provided in accordance with Section E 403.13(8) fails to regulate the pressure as required.  (10) Only appliances equipped with primary safety controls specifically listed for the appliance shall be connected to a centralized oil distribution system. [NFPA 31:9.2.10 –  9.2.15] | | | | | | | | | | | | |
| **General** | | **F 201.1** | | | **F 201.1** | | | **Updated Code Language** | **Accept Change** |  | |  |
| **F 201.1 General**. For the purpose of this appendix, the following definitions shall apply | | | | | | | | | | | | |
| **General** | | **H 301.1** | | | **H 301.1** | | | **Update to code and added new section** | **Accept Change** |  | |  |
| **H 301.1 General. The minimum effective absorption area in disposal fields in square feet (m2), and in seepage pits in square feet (m2) of sidewall, shall be predicated on the required septic tank capacity of gallons (liters), estimated waste/sewage flow rate, or whichever is greater, and shall be in accordance with Table H 201.1(2) as determined by the type of soil found in the excavation, and shall be as follows:**  **(1) Where disposal fields are installed, not less than 150 square feet (13.9 m2) of trench bottom shall be provided for each system exclusive of any hard pan, rock, clay, or other impervious formations. Sidewall area more than the required 12 inches (305 mm) and not exceeding 36inches (914 mm) below the leach line shall be permitted to be added to the trench bottom area where computing absorption areas.**  **(2) Where leaching beds are permitted instead of trenches, the area of each such bed shall be not less than 50 percent greater than the tabular requirements for trenches. Perimeter sidewall area more than the required 12 inches (305 mm) and not exceeding 36 inches (914 mm) below the leach line shall be permitted to be added to the trench bottom area where computing absorption areas.**  **(3) No excavation for a leach line or leach bed shall be located within 5 feet (1524 mm) of the water table nor to a depth where sewage is capable of contaminating the underground water stratum that is usable for domestic purposes. Exception: In areas where the records or data indicate that the groundwaters are grossly degraded, the 5 foot (1524 mm) separation requirement shall be permitted to be reduced by the Authority Having Jurisdiction. The applicant shall supply evidence of groundwater depth to the satisfaction of the Authority Having Jurisdiction.**  **(4) The minimum effective absorption area in any seepage pit shall be calculated as the excavated sidewall area below the inlet exclusive of any hardpan, rock, clay, or other impervious formations. The minimum required area of porous formation shall be provided in one or more seepage pits. No excavation shall extend within 10 feet (3048 mm) of the water table nor to a depth where sewage is capable of contaminating underground water stratum that is usable for domestic purposes. Exception: In areas where the records or data indicate that the groundwaters are grossly degraded, the 10 foot (3048 mm) separation requirement shall be permitted to be reduced by the Authority Having Jurisdiction. The applicant shall supply evidence of groundwater depth to the satisfaction of the Authority Having Jurisdiction.**  **(5) Leaching chambers that comply with IAPMO PS 63 and bundled expanded polystyrene synthetic aggregate units that comply with IAPMO IGC 276 shall be sized using a 0.70 multiplier applied to the required area in Table H201.1(2).**  **(6) Systems that combine treatment and disposal of sewage within a single footprint and comply with NSF 40 Class 1 shall be sized using a 0.70 multiplier applied to the required area in Table H 201.1(2) for both leach lines and leach beds. No system component for a combined treatment and disposal leach line or leach bed shall be located within 2 feet (610 mm) of the water table nor to a depth where sewage is capable of contaminating the underground water stratum that is usable for domestic purposes. Combined treatment and disposal system operation and maintenance shall be in accordance with the manufacturer's instructions. Exception: Combined treatment and disposal systems tested and certified in a bed configuration in accordance with NSF 40 Class 1 are exempted from the requirements of Section H 301.1(2).** | | | | | | | | | | | | |
| **Prefabricated Septic Tanks** | | **H 501.14** | | | **H 501.14** | | | **Updated Reference Location** | **Accept Change** |  | |  |
| **H 501.14 Prefabricated Septic Tanks.** Prefabricated septic tanks shall comply with the following requirements:  (1) Manufactured or prefabricated septic tanks shall comply with IAPMO/ANSI Z1000, IAPMO IGC 262, or CSA B66 and be approved by the Authority Having Jurisdiction.  Prefabricated bituminous coated septic tanks shall comply with UL 70.  (2) Independent laboratory tests and engineering calculations certifying the tank capacity and structural stability shall be provided as required by the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Bundled Expanded Polystyrene Synthetic Aggregate Units** | | H 601.1.1 | | | H 601.1.1 | | | New Section Added | **Accept Change** |  | |  |
| **H 601.1.1 Bundled Expanded Polystyrene Synthetic Aggregate Units.** Bundled expanded polystyrene synthetic aggregate units with an integrated distribution line consisting of perforated, corrugated high-density polyethylene pipe that complies with IAPMO IGC 276 shall be permitted. | | | | | | | | | | | | |
| **Filter Material** | | H 601 | | | H 601 | | | Update to the Exception | **Accept Change** |  | |  |
| **H 601.2 Filter Material**. Before placing filter material or drain lines in a prepared excavation, smeared or compacted surfaces shall be removed from trenches by raking to a depth of 1 inch (25.4 mm) and the loose material removed. Clean stone, gravel, slag, or similar filter material acceptable to the Authority Having Jurisdiction, varying in size from 3⁄4 of an inch to 21⁄2 inches (19.1 mm to 64 mm), shall be placed in the trench to the depth and grade required by this section. Drainpipe shall be placed on filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this section, and this material covered with untreated building paper, straw, or similar porous material to prevent the closure of voids with earth backfill. No earth backfill shall be placed over the filter material cover until after inspection and acceptance. Exception: Listed or approved plastic leaching chambers bundled expanded polystyrene synthetic aggregate units, and systems that treat and dispose of sewage within a single footprint, as described in Section H 301.1(5) and Section H301.1(6), shall be permitted to be used in lieu of pipe and filter material. Chamber, bundled expanded polystyrene synthetic aggregate unit, and systems that treat and dispose of sewage within a single footprint, installations shall follow the rules for disposal fields, where applicable, and shall be in accordance with the manufacturer’s instructions. | | | | | | | | | | | | |
| **Example of Combination Indoor and Outdoor Combustion Air Opening Design.** | | **J 101.2** | | | **J 101.2** | | | **Update to the title** | **Accept Change** |  | |  |
| **J 101.2 Example of Combination Indoor and Outdoor Combustion Air Opening Design.** Determine the required combination of indoor and outdoor combustion air opening sizes for the following appliance installation example. Example Installation: A fan-assisted furnace and a drafthood-equipped water heater with the following inputs are located in a 15 foot by 30 foot (4572 mm by 9144 mm) basement with an 8 foot (2438 mm) ceiling. No additional indoor spaces can be used to help meet the appliance combustion air needs. Fan-Assisted Furnace Input: 100 000 British thermal units per hour (Btu/h) (29 kW) Draft Hood-Equipped Water Heater Input: 40 000 Btu/h (11.7kW)  Solution:  (1) Determine the total available room volume. Appliance room volume: 15 feet by 30 feet (4572 mm by 9144 mm) with an 8 foot  (2438 mm) ceiling = 3600 cubic feet (101.94 m3)  (2) Determine the total required volume. The standard method to determine combustion air is used to calculate the required volume. The combined input for the appliances located in the basement is calculated as follows: 100 000 Btu/h (29 kW) + 40 000 Btu/h (11.7 kW) =140 000 Btu/h (41 kW) The standard method requires that the required volume be determined based on 50 cubic feet per 1000 Btu/h (4.83 m3/kW). Using Table J 101.2, the required volume for a 140 000 Btu/h (41 kW) combined input is 7000 cubic feet (198.22 m3). | | | | | | | | | | | | |
| **System Design** | | **K 101.2** | | | **K 101.2** | | | **Rainwater catchment requirement** | **Accept Change** |  | |  |
| **K 101.2 System Design.** Potable rainwater catchment systems in accordance with this appendix shall be designed by a registered design professional or person deemed competent by the Authority Having Jurisdiction to perform potable rainwater catchment system design work. Where required, rainwater catchment systems shall be seismically restrained against earthquakes in accordance with the building code. | | | | | | | | | | | | |
| **Minimum Water Quality Requirements** | | **K 101.7** | | | **K 101.7** | | | **Update to EPA requirement** | **Accept Change** |  | |  |
| **K 101.7 Minimum Water Quality Requirements.** The minimum water quality for potable rainwater catchment systems shall comply with the applicable water quality requirements as determined by the Authority Having Jurisdiction. In the absence of water quality requirements, the guidelines EPA/600/R-12/618 contains recommended water reuse guidelines to assist regulatory agencies develop, revise, or expand alternate water source water quality standards. | | | | | | | | | | | | |
| **Filtration Devices** | | K 104.4.1 | | | K 104.4.1 | | | **New Reference location** | **Accept Change** |  | |  |
| **K 104.4.1 Filtration Devices.** Potable water filters shall comply with NSF/ANSI 53 and shall be installed in accordance with the manufacturer’s installation instructions. | | | | | | | | | | | | |
| **Above Grade** | | K 105.3 | | | K 105.3 | | | **Updated Code Language** | **Accept Change** |  | |  |
| **K 105.3.1 Above Grade.** Above grade, storage tanks shall be of an opaque material, approved for aboveground use in direct sunlight, or shall be shielded from direct sunlight. Tanks shall be installed in an accessible location to allow for inspection and cleaning. The tank shall be installed on a foundation or platform that is constructed to accommodate the weight and loads when filled to maximum capacity in accordance with the building code. | | | | | | | | | | | | |
| **Size** | | **K 106.2** | | | **K 106.2** | | | **New Reference Location** | **Accept Change** |  | |  |
| **K 106.2.1 Size.** The roof washer shall be sized to direct rainwater containing debris that has accumulated on the collection surface away from the storage tank. ARCSA/ASPE/ANSI 63 contains additional guidance on acceptable methods of sizing roof washers. | | | | | | | | | | | | |
| **L. General** | | **L 201.1** | | | **L 201.1** | | | **Updated Code Definition** | **Accept Change** |  | |  |
| **L 201.1 General.** For the purpose of this appendix, the following definitions shall apply: | | | | | | | | | | | | |
| **Definitions** | | **L 201.1** | | | **L 201.1** | | | **New Definition** | **Accept Change** |  | |  |
| **Dedicated Meter. A water measuring device used at a subsection or end use of a water supply system for any of the following purposes: billing, water management, collecting and analyzing water usage data, detection of leaks, equipment failure, water waste, and irregular or abnormal use for a specific application. Also called a submeter.** | | | | | | | | | | | | |
| **Definitions** | | **L 201.1** | | | **L 201.1** | | | **New Definition** | **Accept Change** |  | |  |
| **Dry Weather Runoff. Water that flows along a surface, in a channel or sub-surface including groundwater seepage, and is not associated with a rain event.** | | | | | | | | | | | | |
| Definitions | | L 201.1 | | | L 201.1 | | | New Definition | **Accept Change** |  | |  |
| **ETc. Evapotranspiration rate of the plants derived by multiplying ETo by the appropriate plant factor or coefficient.** | | | | | | | | | | | | |
| Definitions | | L 201.1 | | | L 201.1 | | | New Definition | **Accept Change** |  | |  |
| **ETo. Reference evapotranspiration for a cool-season grass as calculated by the standardized Penman-Monteith equation based on weather-station data.** | | | | | | | | | | | | |
| Definitions | | L 201.1 | | | L 201.1 | | | **Update to definition** | **Accept Change** |  | |  |
| **Kitchen and Bar Sink Faucets.** A faucet that discharges into a kitchen or bar sinks in domestic or commercial installations. Supply fittings that discharge into other type sinks, including clinical sinks, floor sinks, service sinks and laundry sinks are not included. | | | | | | | | | | | | |
| Definitions | | L 201.1 | | | L 201.1 | | | Update to definition | **Accept Change** |  | |  |
| **Low Flow Emitter**. Low-flow irrigation emission device designed to dissipate water pressure and discharge a small uniform flow or trickle of water at a constant flow rate. | | | | | | | | | | | | |
| Definitions | | L 201.1 | | | L 201.1 | | | New definition | **Accept Change** |  | |  |
| **On-Site Renewable Energy.** Energy generated from renewable sources produced at the building site. [ASHRAE 90.1:3.2] | | | | | | | | | | | | |
| Definitions | | | L 201.1 | | | L 201.1 | | New definition | **Accept Change** |  | |  |
| **Renewable Energy Resources.** Energy from solar, wind, biomass or hydro, or extracted from hot fluid or steam heated within the earth. [ASHRAE 90.1:3.2**]** | | | | | | | | | | | | |
| **MAXIMUM FIXTURE AND FIXTURE FITTINGS FLOW RATES** | | | TABLE L 402.1 | | | TABLE L 402.1 | | **Update to table code language and new EPA standards for notes** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **Nonwater Urinals with Drain Cleansing Action** | | | **(N/A)** | | | **402.3.2** | | **Added new section** | **Accept Change** |  | |  |
| **L 402.3.2 Nonwater Urinals with Drain Cleansing Action. Nonwater urinals with drain cleansing action shall comply with ASME A112.19.19 and shall be cleaned, maintained, and installed in accordance with the manufacturer’s installation instructions.** | | | | | | | | | | | | |
| **Bath and Shower Diverters** | | | **402.6.2** | | | **402.6.2** | | **Updated leakage requirement** | **Accept Change** |  | |  |
| **L 402.6.2 Bath and Shower Diverters.** Tub spout bath and shower diverters, while operating in the shower mode, shall not exceed 0.1 gpm (0.4 L/m) rate of leakage in accordance with ASME A112.18.1/CSA B125.1. | | | | | | | | | | | | |
| **Shower Valves** | | | **402.6.3** | | | **402.6.3** | | **Updated Reference Location** | **Accept Change** |  | |  |
| **L 402.6.3 Shower Valves.** Shower valves shall comply with the temperature control performance requirements of ASSE 1016/ASME A112.1016/CSA B125.16 when tested for the rated flow rate of the installed showerhead. | | | | | | | | | | | | |
| **Marking** | | | **(N/A)** | | | **L 402.6.3.1** | | **Added New Section** | **Accept Change** |  | |  |
| **L 402.6.3.1 Marking.** Control valves for showers and tub/shower combinations shall be tagged, labeled, or marked in accordance with the applicable standards. | | | | | | | | | | | | |
| **Bath and Shower Flow-Reduction Devices** | | | **(N/A)** | | | **402.8** | | **Added New Section** | **Accept Change** |  | |  |
| **L 402.8 Bath and Shower Flow-Reduction Devices.** Bath and shower flow-reduction devices shall comply with IAPMO IGC 244. | | | | | | | | | | | | |
| **Commercial Pre-Rinse Spray Valves.** | | | **L 402.8** | | | **L 402.9** | | **Moved location and updated table location** | **Accept Change** |  | |  |
| **L 402.9 Commercial Pre-Rinse Spray Valves**. The flow rate for a pre-rinse spray valve installed in a commercial kitchen to remove food waste from cookware and dishes before cleaning shall not be more than the maximum flow rate, as specified in Table L 402.9. Where pre-rinse spray valves with maximum flow rates of 1.0 gpm (3.8 L/m) or less are installed, the static pressure shall be not less than 30 psi (207 kPa). Commercial kitchen pre-rinse spray valves shall be equipped with an integral automatic shutoff. | | | | | | | | | | | | |
| **COMMERCIAL PRE-RINSE SPRAY VALVE**  **MAXIMUM FLOW RATE** | | | **TABLE L 402.9** | | | **TABLE L 402.9** | | **New Commercial spray flow rate** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **Emergency Safety Showers and Eye Wash Stations.** | | | **L 402.9** | | | **L 402.10** | | **Moved location** | **Accept Change** |  | |  |
| **L 402.10 Emergency Safety Showers and Eye Wash Stations.** Emergency safety showers and emergency eyewash stations shall not be limited to their water supply flow rates. | | | | | | | | | | | | |
| **Drinking Fountains and Bottle Filling Stations** | | | **L 402.10** | | | **L 402.11** | | **Moved location** | **Accept Change** |  | |  |
| **L 402.11 Drinking Fountains and Bottle Filling Stations.** Bottle filling stations shall be included on or used as a substitute to meet the requirements of drinking fountains in at least 50 percent of the requirements for drinking fountains. Bottle filling stations and drinking fountains shall be self-closing. | | | | | | | | | | | | |
| **Ice Makers** | | | **L 404.2** | | | **L 404.2** | | Updated to add requirements | **Accept Change** |  | |  |
| **L 404.2 Ice Makers.** Ice makers shall be air cooled and shall be in accordance with Energy Star for energy use for commercial ice machines. Ice makers producing cubed-type ice shall not exceed 20 gallons (75.7 L) of water per 100 pounds (45.4 kg) of ice produced. Ice makers producing nugget and flake ice shall not exceed 14 gallons (63.6 L) of water per 100 pounds (45.4 kg) of ice produced. | | | | | | | | | | | | |
| **Temperature** | | | **(N/A)** | | | **L 404.5.1** | | New Section added | **Accept Change** |  | |  |
| **L 404.5.1 Temperature.** Grease Interceptors shall be designed and installed to maintain a mean temperature not exceeding 95°F (35°C). FOG (fats, oils, and greases) disposal systems in compliance with ASME A112.14.6 using biological cultures shall not exceed 104°F (40°C). Passive or active cooling and heat recovery to be employed where applicable. | | | | | | | | | | | | |
| **Dipper Well Faucets** | | | **L 404.6** | | | **L 404.6** | | **Updated code language, and removed unneeded sections** | **Accept Change** |  | |  |
| **L 404.6 Dipper Well Faucets.** Where dipper wells have a permanent water supply, the faucet shall have metered or sensor activated flow. The volume of water dispensed into a dipper well in each activation cycle of a self-closing fixture fitting shall not exceed the water capacity of the dipper well, and the maximum flow shall not exceed 0.2 gpm (0.8 L/m) at a supply pressure of 60 psi (414 kPa)**.** | | | | | | | | | | | | |
| **Pulpers and Mechanical Strainers.** | | | **L 404.7.1** | | | **L 404.7.1** | | **Updated gpm requirement** | **Accept Change** |  | |  |
| **L 404.7.1 Pulpers and Mechanical Strainers.** The water use for pulpers or mechanical strainers shall not exceed 2 gpm (7.6 L/m). A flow restrictor shall be installed on the water supply to limit the water flow. | | | | | | | | | | | | |
| **Tempering Water** | | | **(N/A)** | | | **L 404.8** | | **New section for 140\* requirement** | **Accept Change** |  | |  |
| **L 404.8 Tempering Water.** The discharge waste from commercial dishwashers, ware washers, combination ovens, and food steamers that exceeds 140°F (60°C) shall not be tempered with potable water. | | | | | | | | | | | | |
| **Medical and Laboratory Facilities** | | | **L 404.8** | | | **L 404.9** | | **Moved locations** | **Accept Change** |  | |  |
| **L 404.9 Medical and Laboratory Facilities. Medical and laboratory facilities shall comply with the water efficiency requirements in Section L 404.10 through Section L 404.12.** | | | | | | | | | | | | |
| **Steam Sterilizers** | | | **L 404.9** | | | **L 404.10** | | Moved locations | **Accept Change** |  | |  |
| **L 404.10 Steam Sterilizers. Controls shall be installed to limit the discharge temperature of condensate or water from steam sterilizers to 140°F (60°C) or less. A venturi-type vacuum system shall not be utilized with vacuum sterilizers.** | | | | | | | | | | | | |
| **X-Ray Film Processing Units** | | | **L 404.10** | | | **L 404.11** | | Moved locations | **Accept Change** |  | |  |
| **L 404.11 X-Ray Film Processing Units. Processors for X-ray film exceeding 6 inches (152 mm) in any dimension shall be equipped with water recycling units.** | | | | | | | | | | | | |
| **Exhaust Hood Liquid Scrubber Systems** | | | **L 404.11** | | | **L 404.12** | | Moved locations | **Accept Change** |  | |  |
| **L 404.12 Exhaust Hood Liquid Scrubber Systems. Liquid scrubber systems for exhaust hoods and ducts shall be of the recirculation type. Liquid scrubber systems for perchloric acid exhaust hoods and ducts shall be equipped with a timer-controlled water recirculation system. The collection sump for perchloric acid exhaust systems shall be designed to drain automatically after the wash down process has completed.** | | | | | | | | | | | | |
| **General** | | | **L 405.1** | | | **L 405.1** | | Updated reference location, and code regulations | **Accept Change** |  | |  |
| **L 405.1 General.** Where installed, leak detection and control devices shall comply with ANSI/CAN/IAPMO Z1349.Leak detection with control devices shall not be installed where they isolate fire sprinkler systems. | | | | | | | | | | | | |
| **Required** | | | **L 407.1** | | | **L 407.1** | | **Updated model code language** | **Accept Change** |  | |  |
| **L 407.1 Required.** A water meter shall be required for each building site connected to a public water system, including municipally supplied reclaimed (recycled) water. In other than single-family houses, a dedicated meter shall be installed in accordance with Table L 407.1. | | | | | | | | | | | | |
| **Remote Data Transfer Requirements** | | | **L 407.3** | | | **L 407.3** | | **Updated code section on multiple water utility’s** | **Accept Change** |  | |  |
| **L 407.3 Remote Data Transfer Requirements.** Where more than 10 non-utility-owned water meters are located at a building site, the meters shall include remote data transfer capability to collect and analyze the data at a single location. | | | | | | | | | | | | |
| **DEDICATED WATER METERING REQUIREMENTS** | | | **(N/A)** | | | **TABLE L 407.1** | | **Created a new table** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **General** | | | **L 409.1** | | | **L 409.1** | | **Updated Reference Location** | **Accept Change** |  | |  |
| **L 409.1 General.** Sump pumps powered by potable or reclaimed (recycled) water pressure shall be used as an emergency backup pump and shall comply with IAPMO PS 119. The water-powered pump shall be equipped with a battery powered alarm having a minimum rating of 85 dBa at 10 feet (3048 mm). Water-powered pumps shall have a water efficiency factor of pumping at least 1.4 gallons (5.3 L) of water to a height of 10 feet (3048 mm) for every gallon of water used to operate the pump, measured at a water pressure of 60 psi (414 kPa). Pumps shall be labeled as to the gallons of water pumped per gallon of potable water consumed. Water-powered stormwater sump pumps shall be equipped with a reduced pressure principle backflow prevention assembly. | | | | | | | | | | | | |
| **Water Softeners** | | | **L 410.1** | | | **L 410.1** | | **Updated Reference Location** | **Accept Change** |  | |  |
| **L 410.1 Water Softeners.** Water softeners shall be listed to NSF/ANSI 44. Water softeners shall have a rated salt efficiency exceeding 3400 grains (gr) (0.222 kg) of total hardness exchange per pound (0.5 kg) of salt, based on sodium chloride (NaCl) equivalency, and shall not generate more than 4 gallons (15.1 L) of water per 1000 grains (0.0647 kg) of hardness removed during the service cycle. | | | | | | | | | | | | |
| **Point-of-Use Reverse Osmosis Water Treatment Systems** | | | **L 410.3** | | | **L 410.3** | | **Update code language** | **Accept Change** |  | |  |
| **L 410.3 Point-of-Use Reverse Osmosis Water Treatment Systems.** Reverse osmosis water treatment systems shall be equipped with automatic shutoff valves to prevent discharge when there is no call for producing treated water. Reverse osmosis water treatment systems shall comply with NSF/ANSI 58 and ASSE 1086. | | | | | | | | | | | | |
| **Drinking Water Treatment Systems** | | | **L 410.4** | | | **L 410.4** | | **New section added to code** | **Accept Change** |  | |  |
| **L 410.4 Drinking Water Treatment Systems.** Drinking water treatment systems shall be listed to WQA/ASPE/ANSIS-803. | | | | | | | | | | | | |
| **General** | | | **L 411.1** | | | **L 411.1** | | **Irrigation requirement to meet with new sections** | **Accept Change** |  | |  |
| L 411.1 General. Where landscape irrigation systems are installed, they shall be in accordance with Section L 411.1.1 through Section L 411.17. | | | | | | | | | | | | |
| **Irrigation Design and Installation.** | | | **L 411.1.1** | | | **L 411.1.1** | | **New Requirements for Irrigation installation** | **Accept Change** |  | |  |
| L 411.1.1 **Irrigation Design and Installation**. The Authority Having Jurisdiction shall have the authority to require landscape irrigation contractors, installers, or designers to demonstrate competency. The system shall be designed and record drawings showing changes during installation shall be made available for the owner and for any required inspections. Where required by the Authority Having Jurisdiction, the contractor, installer, or designer shall be licensed, certified, or both to perform such work. | | | | | | | | | | | | |
| **Plant and Irrigation System Limitations** | | | **(N/A)** | | | **L 411.2** | | **New Requirements for Irrigation installation** | **Accept Change** |  | |  |
| **L 411.2 Plant and Irrigation System Limitations.** Nuisance, invasive and noxious plants as defined by the Authority Having Jurisdiction shall not be used in the landscape. Plants not requiring supplement irrigation and not principally used as an athletic field or public recreation shall be used in no less than 60 percent of the landscape that is not principally used as an athletic field or public recreation. Inground irrigation system shall not be installed in more than 40 percent of the landscaped area.  Exceptions:  (1) Where average annual rainfall is less than 12 inches (305mm) and in landscape areas where the plant materials have an annual ETc of not exceeding 15 inches (381mm), an in-ground irrigation system shall be allowed.  (2) Where neither potable or reclaimed (recycled) water is used in the irrigation system, an in-ground irrigation system shall be allowed in 100 percent of the landscaped area and vegetative roofs. | | | | | | | | | | | | |
| **Vegetative Roofs and Walls** | | | **(N/A)** | | | **L 411.3** | | **New Requirements for Irrigation walls** | **Accept Change** |  | |  |
| **L 411.3 Vegetative Roofs and Walls. Irrigation systems using potable water for vegetative roofs and walls are prohibited.** | | | | | | | | | | | | |
| **Maximum Velocity** | | | **L 411.4** | | | **L 411.4** | | **New section for velocity of water flow** | **Accept Change** |  | |  |
| **L 411.4 Maximum Velocity.** Velocity of water flow shall not exceed 5 feet per second (1.5 m/s) for thermoplastic irrigation pipes. Velocity of water flow shall not exceed 7.5 feet per second (2.3 m/s) for metal irrigation pipes. | | | | | | | | | | | | |
| **Backflow Protection** | | | **L 411.5** | | | **L 411.5** | | **Updated Backflow requirements** | **Accept Change** |  | |  |
| **L 411.5 Backflow Protection.** Potable water and reclaimed water supplies to landscape irrigation systems shall be protected from backflow in accordance with this code and the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Use of Alternate Water Sources for Landscape Irrigation** | | | **(N/A)** | | | **L 411.6** | | **Requirement for when there is adequate alternative water to use it.** | **Accept Change** |  | |  |
| **L 411.6 Use of Alternate Water Sources for Landscape Irrigation.** Where available by pre-existing treatment, storage, or distribution network, and where approved by the Authority Having Jurisdiction, alternative water source(s) shall be utilized for landscape irrigation. Where adequate capacity and volumes of pre-existing alternative water sources are available, the irrigation system shall be designed to use a minimum of 75 percent of alternative water for the annual irrigation demand before supplemental potable water is used. Exception: Plants grown for food production for direct human consumption. | | | | | | | | | | | | |
| **Master Valve.** | | | (N/A) | | | L 411.6.1 | | **Requirement to have a valve** | **Accept Change** |  | |  |
| **L 411.6.1 Master Valve**. Where continuously pressurized alternate water sources supply an existing irrigation system, a master valve shall be installed at the point where the alternate water sources supply piping connects to the existing irrigation system downstream of the backflow preventer where required. | | | | | | | | | | | | |
| **Identification** | | | **(N/A)** | | | **L 411.6.2** | | **Requirement to follow previous chapter requirements** | **Accept Change** |  | |  |
| **L 411.6.2 Identification.** Where alternate water sources supply an existing irrigation system, the existing sprinkler heads, valve boxes, the continuously pressurized line supplying the irrigation master valve, or any other components required by the Authority Having Jurisdiction, shall be colored purple. The piping supplying the irrigation master valve shall be identified in accordance with Chapter 15 of this code. | | | | | | | | | | | | |
| **Additional Zones** | | | **(N/A)** | | | **L 411.6.2.1** | | **Pipe color requirement** | **Accept Change** |  | |  |
| **L 411.6.2.1 Additional Zones.** Newly installed zones shall have purple pipe. | | | | | | | | | | | | |
| **Irrigation Control Systems** | | | **L 411.4** | | | **L 411.7** | | **Updated irrigation requirements to meet up with EPA standard** | **Accept Change** |  | |  |
| **L 411.7 Irrigation Control Systems. Where installed as**  **part of a landscape irrigation system, irrigation control systems**  **shall:**  **(1) Automatically adjust the irrigation schedule to respond to plant water needs determined by weather or soil moisture conditions. Shall be listed to the EPA WaterSense Specification for Weather-Based Irrigation Controllers or the EPA WaterSense Specification for Soil Moisture-Based Irrigation Controllers.**  **(2) Utilize onsite sensors or remote weather data to inhibit or to suspend irrigation when adequate soil moisture is present or during a rainfall or freezing conditions.**  **(3) Utilize either one or more on-site sensors or a weather based irrigation controller listed to the US EPA WaterSense Weather Based Irrigation Controllers Specification to suspend irrigation where adequate soil moisture is present for plant growth.**  **(4) Have the capability to program multiple and different run times for each irrigation zone to enable cycling of water applications and durations to mitigate water flowing off of the intended irrigation zone.**  **(5) Be capable of indicating to the user when it is not receiving a signal or local sensor input.**  **(6) Be capable of allowing for a manual operation troubleshooting test cycle and shall automatically return to sensor input mode within some period of time as designated by the manufacturer, even when the switch is still positioned for manual operation.**  **(7) The site-specific settings of the irrigation control system shall be posted at the control system location. The posted data, where applicable to the settings of the controller, shall include:**  **(a) Precipitation rate for each zone.**  **(b) Plant evapotranspiration coefficients for each zone.**  **(c) Soil absorption rate for each zone.**  **(d) Rain sensor settings.**  **(e) Soil moisture setting.**  **(f) Peak demand schedule including run times for each zone and the number of cycles to mitigate runoff and monthly adjustments or percentage change from peak demand schedule** | | | | | | | | | | | | |
| **Irrigation Flow Sensing System** | | | **(N/A)** | | | **L 411.8** | | **New section on irrigation flow senser** | **Accept Change** |  | |  |
| **L 411.8 Irrigation Flow Sensing System.** On commercial landscape irrigation systems, an irrigation flow sensing system shall be installed that shall interface with the control system to suspend irrigation for abnormal flow conditions. If equipped with totalizer capabilities, the irrigation flow sensing system shall also function as a meter for irrigation water. | | | | | | | | | | | | |
| **Low Flow Irrigation** | | | **L 411.8** | | | **L 411.9** | | **Update to code reference location** | **Accept Change** |  | |  |
| **L 411.9 Low Flow Irrigation**. Irrigation zones using low flow irrigation emitters [with emitter flow rates not to exceed 6.3 gallons (24 L) per hour] shall comply with ASABE/ICC 802 Landscape Irrigation Sprinkler and Emitter Standard and shall be equipped with filters sized according to the manufacturer’s recommendation for the specific low flow emitter, and with a pressure regulator installed upstream of the irrigation emission devices as necessary to reduce the operating water pressure in accordance with the manufacturers’ equipment requirements. | | | | | | | | | | | | |
| **Mulched Planting Areas** | | | **L 411.6** | | | **L 411.10** | | **Flow maximum requirement** | **Accept Change** |  | |  |
| **L 411.10 Mulched Planting Areas. Only low flow emitters with flow rates not to exceed 6.3 gallons (24 L) per hour are allowed to be installed in mulched planting areas with vegetation taller than 12 inches (305 mm).** | | | | | | | | | | | | |
| **System Performance Requirements** | | | **L 411.7** | | | **L 411.11** | | **Updated to add exception** | **Accept Change** |  | |  |
| **L 411.11 System Performance Requirements.** The landscape irrigation system shall be designed and installed to:  (1) Prevent irrigation water from runoff out of the irrigation zone.  (2) Prevent water in the supply line drainage from draining out between irrigation events.  (3) Not allow irrigation water to be applied onto or enter nontargeted areas including adjacent property and vegetation areas, adjacent hydrozones not requiring the irrigation  water to meet its irrigation demand, non-vegetative areas, impermeable surfaces, roadways, and structures. Exception: Landscape features outside of the public right of way such as paved walkways, jogging paths, and golf cart paths, are exempted from this requirement where run off drains into the same hydrozone without puddling. | | | | | | | | | | | | |
| **Narrow or Irregularly Shaped Landscape Areas** | | | **L 411.12** | | | **L 411.12** | | **Flow maximum requirement** | **Accept Change** |  | |  |
| **L 411.12 Narrow or Irregularly Shaped Landscape Areas.** Narrow or irregularly shaped landscape areas, less than 4 feet (1219 mm) in any direction across opposing boundaries, shall not be irrigated by an irrigation emission device except low flow emitters with flow rates not to exceed 6.3 gallons (24 L) per hour. | | | | | | | | | | | | |
| **Irrigation System Inspection and Performance Check** | | | **(N/A)** | | | **L 411.13** | | **Code requirements added for irrigation** | **Accept Change** |  | |  |
| **L 411.13 Irrigation System Inspection and Performance Check**. The irrigation system shall be inspected to verify compliance with the irrigation design in accordance with the following:  (1) Inspection and performance check shall be by an independent third party having credentials in accordance with the US EPA WaterSense program or the Authority Having Jurisdiction.  (2) Sprinklers shall be installed as specified with proper spacing and required nozzle.  (3) Sprinklers shall be activated and visually inspected for covering areas without causing overspray or runoff.  (4) Valves shall be installed as specified.  (5) Drip irrigation systems shall be inspected to verify the proper valve, pressure regulation, filtering device, location of flush valves, and that the installed emitters comply with the irrigation plan.  (6) Control system shall be installed as specified and listed as a US EPA Water Sense labeled controller, and all sensors shall be installed and verified for proper installation and operation.  (7) The peak demand irrigation schedule shall be posted near the controller, or the scheduling parameters for the controller shall be listed for each station including cycle and soak times.  (8) Record drawings of the irrigation system shall be completed and provided for the irrigation inspection.  (9) An inspection report shall be provided to the property owner or management company identifying problems and what corrective actions are required. | | | | | | | | | | | | |
| **Sprinkler Head Installations** | | | **411.10** | | | **L 411.14** | | **Moved in code book** | **Accept Change** |  | |  |
| **L 411.14 Sprinkler Head Installations.** All installed sprinkler heads shall comply with ASABE/ICC 802 or other approved standard(s). | | | | | | | | | | | | |
| **Sprinkler Heads in Common Irrigation Zones** | | | **L 411.10.1** | | | **L 411.14.1** | | **Moved in code book, and code requirement for performance** | **Accept Change** |  | |  |
| **L 411.14.1 Sprinkler Heads in Common Irrigation Zones**. Sprinkler heads installed in irrigation zones served by a common valve shall be limited to applying water to plants with similar irrigation needs, and shall have matched precipitation rates (identical inches of water application per hour plus or minus 7 percent as labeled or declared in manufacturer’s published performance data). | | | | | | | | | | | | |
| **Sprinkler Head Pressure Regulation** | | | **L 411.10.2** | | | **L 411.14.2** | | **Moved in code book and code requirement to meet EPA standards** | **Accept Change** |  | |  |
| **L 411.14.2 Sprinkler Head Pressure Regulation.** Sprinkler heads shall utilize pressure regulating devices (as part of an irrigation system or integral to the sprinkler body) to maintain manufacturer’s recommended operating pressure for each sprinkler and nozzle type. Spray sprinkler bodies with integral pressure regulation shall be listed to the EPA Water Sense Specification for Spray Sprinkler Bodies | | | | | | | | | | | | |
| **Pop-up Type Sprinkler Heads.** | | | **(N/A)** | | | **L 411.14.3** | | **Moved in code book** | **Accept Change** |  | |  |
| **L 411.14.3 Pop-up Type Sprinkler Heads**. Where pop-up type sprinkler heads are installed, the sprinkler heads shall rise to a height above vegetation level and of not less than 4 inches (102 mm) above the soil level where emitting water. | | | | | | | | | | | | |
| **Sprinkler Head Maximum Precipitation Rate** | | | **(N/A)** | | | **L 411.14.4** | | **New section added to code book** | **Accept Change** |  | |  |
| **L 411.14.4 Sprinkler Head Maximum Precipitation Rate**. Where the slope of the landscape exceeds 25 percent, the precipitation rate of sprinkler heads shall not exceed 1.75 inches (44 mm) per hour when tested to ASABE/ICC 802. | | | | | | | | | | | | |
| **Outside Hose Bibbs** | | | **(N/A)** | | | **L 411.15** | | **This code allows hose bibs on alternative water piping** | **Accept Change** |  | |  |
| **L 411.15 Outside Hose Bibbs.** Outside hose bibbs shall be allowed on irrigation pipe downstream of the backflow preventer. Hose bibbs supplying water from the irrigation system shall be indicated by posted signs marked with the words: “CAUTION: NONPOTABLE WATER. DO NOT DRINK” and the symbol in Figure 1505.10 of this code. | | | | | | | | | | | | |
| **Depth of Irrigation Pipe** | | | **L 411.12** | | | **L 411.16** | | **Moved in code book** | **Accept Change** |  | |  |
| **L 411.16 Depth of Irrigation Pipe.** Irrigation pipe downstream from the backflow preventer shall be buried at a minimum depth according to Section L 411.16.1 and Section L 411.16.2. | | | | | | | | | | | | |
| **Landscape Areas** | | | **L 411.12.1** | | | **L 411.16.1** | | **Moved in code book** | **Accept Change** |  | |  |
| **L 411.16.1 Landscape Areas.** Irrigated landscaped areas not exceeding 10 000 square feet (929 m2) shall have irrigation main lines buried a minimum of 12 inches (305mm) and irrigation lateral lines buried a minimum of 8 inches (203 mm). Irrigated landscaped areas greater than 10 000 square feet (929 m2) shall have irrigation main lines buried a minimum of 18 inches (457 mm) and irrigation lateral lines buried a minimum of 12 inches (305 mm). | | | | | | | | | | | | |
| **Vehicular Surfaces** | | | **L 411.12.2** | | | **L 411.16.2** | | **Moved in code book** | **Accept Change** |  | |  |
| **L 411.16.2 Vehicular Surfaces.** Irrigation pipe installed under vehicular paving and pervious pavers, including landscaped fire lanes, shall be sleeved with a minimum of one 1-inch pipe (25 mm) size greater than the irrigation pipe and buried at a minimum depth of 24 inches (610 mm) in all cases. | | | | | | | | | | | | |
| **Backfill** | | | **L 411.13** | | | **L 411.17** | | Moved in code book | **Accept Change** |  | |  |
| **L 411.17 Backfill.** All excavation for irrigation pipe installation shall be backfilled in thin layers to 12 inches (305 mm) with clean earth, which shall not contain stones, boulders, cinderfill, frozen earth, construction debris, or other materials that would damage or break the piping. Fill shall be properly compacted. Suitable precautions shall be taken to ensure permanent stability for pipe laid in filled or made ground. | | | | | | | | | | | | |
| **Water Supplied Trap Primers** | | | **L 412.1** | | | **L 412.1** | | **Updated Reference Location** | **Accept Change** |  | |  |
| **L 412.1 Water Supplied Trap Primers.** Water supplied trap primers shall be electronic or pressure activated and shall use not more than 30 gallons (114 L) per year per drain. Where an alternate water source, as defined by this code, is used for fixture flushing or other uses in the same room, the alternate water source shall be used for the trap primer water supply. Exception: Flushometer tailpiece trap primers in accordance with ASSE 1044 or IAPMO PS 76. | | | | | | | | | | | | |
| **Building Cavities** | | | **(N/A)** | | | L 501.2.2 | | **New section about sizing for cavities** | **Accept Change** |  | |  |
| **L 501.2.2 Building Cavities.** Building cavities used for hot water supply and return piping shall be large enough to accommodate the combined diameter of the pipe plus the insulation, plus any other objects in the cavity that the piping must cross. | | | | | | | | | | | | |
| **Hot Water On-Demand Pumping Systems.** | | | **(N/A)** | | | **L 501.4.1** | | **New section to comply with IAPMO Water On-Demand water heater** | **Accept Change** |  | |  |
| **L 501.4.1 Hot Water On-Demand Pumping Systems.** Hot water on-demand pumping systems manually actuated or automatically activated hot water pumping systems shall comply with IAPMO PS 115. | | | | | | | | | | | | |
| **Maximum Volume and Length of Hot Water.** | | | **L 502.7** | | | **L 502.7** | | **Updated Code language for easier reading** | **Accept Change** |  | |  |
| **L 502.7 Maximum Volume and Length of Hot Water.** The maximum volume of water contained in a hot water branch shall be in accordance with Section L 502.7.1. The maximum length per volume of piping shall comply with Section L 502.7.2 | | | | | | | | | | | | |
| **Maximum Volume of Hot Water in a Branch** | | | **L 502.7.1** | | | **L 502.7.1** | | **Set standard for both sing and series branch lines** | **Accept Change** |  | |  |
| **L 502.7.1 Maximum Volume of Hot Water in a Branch.** The water volume per foot of piping shall be calculated using Table L 502.7.1. The maximum volume of water in a fixture branch between any source of hot water (water heaters, recirculation loops and electrically heat traced pipe shall be considered sources of hot water) and the fixture fitting shall be:  (1) 24 oz (710 mL) where a single branch serves a single fixture.  (2) 40 oz (1183 mL) where a series branch incorporating one or more flow-through design configurations that serves two or more fixtures. (3) 60 oz (1774 mL) where a ring branch incorporating two or more flow-through design configurations that serves two or more fixtures.  **Exceptions:**  (1) The maximum volume of a single branch or series branch between any source of hot water and a kitchen sink and dishwasher located on an island or a peninsula where the floor is a concrete slab shall not contain more than 40 oz (1183 mL).  (2) The maximum volume of a single branch to a standalone tub shall not contain more than 80 oz (2366mL). | | | | | | | | | | | | |
| **Maximum Length Per Volume of Water in a Branch.** | | | **L 502.7.2** | | | **L 502.7.2** | | **Updated code language** | **Accept Change** |  | |  |
| **L 502.7.2 Maximum Length Per Volume of Water in a Branch.** For fixture branches in accordance with Section L 502.7.1, the maximum length of piping shall be calculated using Table L 502.7.2(1) through Table 502.7.2(4). Where a fixture fitting shut off valve (supply stop) is installed ahead of the fixture fitting, the maximum length is measured between the source of hot water and the fixture fitting shut off valve (supply stop). | | | | | | | | | | | | |
| **Requirements for All Compliance Paths** | | | **L 503.2.1** | | | **L 503.2.1** | | **Updated table location. Updated title** | **Accept Change** |  | |  |
| **L 503.2.1 Requirements for All Compliance Paths.** Service water heating systems and equipment shall comply with Section L 503.1, Section L 503.3, and Section L **503.5. [ASHRAE 90.1:7.2.1]** | | | | | | | | | | | | |
| **WATER VOLUME FOR DISTRIBUTION PIPING MATERIALS\*** | | | TABLE L 502.7.1 | | | TABLE L 502.7.1 | | **Updated table location, and water value distribution** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **LENGTH (FT) PER VOLUME OF PIPING** | | | **(N/A)** | | | **TABLE L 502.7.2(1)** | | **New Table** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **LENGTH (FT) PER VOLUME OF PIPING** | | | **(N/A)** | | | **TABLE L 502.7.2 (2)** | | **New Table** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **LENGTH (FT) PER VOLUME OF PIPING** | | | **(N/A)** | | | **TABLE L 502.7.2 (3)** | | **New Table** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **LENGTH (FT) PER VOLUME OF PIPING** | | | **(N/A)** | | | **TABLE L 502.7.2 (4)** | | **New Table** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **LENGTH (FT) PER VOLUME OF PIPING** | | | **(N/A)** | | | **L 503.2.2** | | **New section on servicing water heater** | **Accept Change** |  | |  |
| **L 503.2.2 Additional Requirements for Service Water Heating**. Service water heating systems and equipment shall comply with Section L 503.4.1 through Section L 503.4.3. [ASHRAE 90.1:7.2.2] | | | | | | | | | | | | |
| **Load Calculations** | | | **L 503.3.1** | | | **L 503.3.1** | | **New regulation to follow manufacture guidelines** | **Accept Change** |  | |  |
| **L 503.3.1 Load Calculations.** Service water-heating system design loads for the purpose of sizing systems and equipment shall be determined in accordance with manufacturer’s published sizing guidelines or generally accepted engineering standards and handbooks acceptable to the adopting authority (e.g., ASHRAE Handbook– HVAC Applications). [ASHRAE 90.1:7.4.1] | | | | | | | | | | | | |
| **Service Hot Water Piping Insulation** | | | **(N/A)** | | | **L 503.3.3** | | **New section and refers to new table** | **Accept Change** |  | |  |
| **L 503.3.3 Service Hot Water Piping Insulation.** Insulation of hot water and return piping shall meet the provisions in Section L 501.2. | | | | | | | | | | | | |
| **Hot Water System Design** | | |  | | | **L 503.3.4** | | **Update code language new rule to follow** | **Accept Change** |  | |  |
| **L 503.3.4 Hot Water System Design.** Hot water systems shall comply with the following:  (1) Circulating hot water systems shall be arranged so that the circulating pump(s) are capable of being turned off (automatically or manually) where the hot water system is not in operation. Exception: For healthcare facilities, long term care facilities, hotels, or motels, devices that automatically turn off the circulation pump(s) shall not be required.  (2) Where used to maintain storage tank water temperature, circulating pump(s) shall be equipped with controls limiting operation to a period from the start of the heating cycle to a maximum of 5 minutes after the end of the heating cycle.  (3) The maximum volume of water contained in hot water distribution lines between the water heater and the fixture stop or connection to showers, kitchen faucets, and lavatories shall be determined in accordance with Section L 502.7. | | | | | | | | | | | | |
| **Service Water Heating System Controls** | | | **L 503.3.5** | | | **L 503.3.5** | | **Updated code language** | **Accept Change** |  | |  |
| **L 503.3.5 Service Water Heating System Controls.** Service water heating system controls shall comply with Section L 503.3.5(1) and Section L 503.3.5(2).  (1) Temperature controls shall be provided that allow for storage temperature adjustment from 120°F (49°C) or lower to a maximum temperature compatible with the intended use. Exception: Where the manufacturer’s installation instructions specify a higher minimum thermostat setting to minimize condensation and resulting corrosion. [ASHRAE 90.1:7.4.4.1] (2) Temperature controlling means shall be provided to limit the maximum temperature of water delivered from lavatory faucets in public facility restrooms to 110°F (43°C). [ASHRAE 90.1:7.4.4.3] | | | | | | | | | | | | |
| **Pools** | | | **L 503.3.6** | | | **L 503.3.6** | | **Updated reference location** | **Accept Change** |  | |  |
| **L 503.3.6 Pools. Pool heating systems shall comply with Section L 503.3.6(1) through Section L 503.3.6(3).**  **(1) Pool heaters shall be equipped with a readily accessible ON/OFF switch to allow shutting off the heater without adjusting the thermostat setting. Pool heaters fired by natural gas shall not have continuously burning pilot lights. [ASHRAE 90.1:7.4.5.1]**  **(2) Heated pools shall be equipped with a vapor retardant pool cover on or at the water surface. Pools heated to more than 90°F (32°C) shall have a pool cover with a minimum insulation value of R-12. Exception: Pools that are deriving over 60 percent of the energy for heating from site-recovered energy or on-site renewable energy. [ASHRAE 90.1:7.4.5.2]**  **(3) Time switches shall be installed on swimming pool heaters and pumps. Exceptions:**  **(1) Where public health standards require 24-hour pump operation.**  **(2) Where pumps are required to operate solar and waste heat recovery pool** **heating systems.[ASHRAE 90.1:7.4.5.3]** | | | | | | | | | | | | |
| **Space Heating and Service Water Heating** | | | **L 503.4.1** | | | **L 503.4.1** | | **Updated Code Title** | **Accept Change** |  | |  |
| **L 503.4.1 Space Heating and Service Water Heating.** The use of a gas-fired or oil-fired space heating boiler system, otherwise in accordance with Section L 503.0, to provide the total space heating and service water heating for a building is allowed where one of the following conditions is met:  (1) The single space-heating boiler, or the component of a modular or multiple boiler system that is heating the service water, has a standby loss in Btu/h (kW) not exceeding (13.3 × pmd + 400)/n, where (pmd) is the probable maximum demand in gallons per hour, determined in accordance with the procedures described in generally accepted engineering standards and handbooks, and (n) is the fraction of the year where the outdoor daily mean temperature exceeds 64.9°F (18.28°C). The standby loss is to be determined for a test period of 24 hours duration while maintaining a boiler water temperature of not less than 90°F (50°C) above ambient, with an ambient temperature between 60°F (16°C) and 90°F (32°C). For a boiler with a modulating burner, this test shall be conducted at the lowest input.  (2) It is demonstrated to the satisfaction of the Authority Having Jurisdiction that the use of a single heat source will consume less energy than separate units.  (3) The energy input of the combined boiler and water heater system is less than 150 000 British thermal units per hour (Btu/h) (44 kW). [ASHRAE 90.1:7.5.1] | | | | | | | | | | | | |
| **Service Water-Heating Equipment** | | | **L 503.4.2** | | | **L 503.4.2** | | **Updated code language** | **Accept Change** |  | |  |
| **L 503.4.2 Service Water-Heating Equipment.** Service water-heating equipment used to provide the additional function of space heating as part of a combination (integrated) system shall satisfy all stated requirements for the service water-heating equipment. [ASHRAE 90.1:7.5.2] | | | | | | | | | | | | |
| **3 Large Service Water-Heating Systems** | | | **L 503.4.3** | | | **L 503.4.3** | | Raises efficiency standards, adds clearer definitions | **Accept Change** |  | |  |
| **L 503.4.3 Large Service Water-Heating Systems.** New buildings with service water-heating systems with a total installed input capacity of 1 000 000 Btu/h (293 kW) or greater, provided by high-capacity gas-fired service water-heating equipment shall meet either or both of the following requirements:  (1) Where a single unit of high-capacity gas-fired service water-heating equipment is installed, it shall have a minimum thermal efficiency (Et) of 92 percent.  (2) Multiple units of high-capacity gas-fired service water-heating equipment connected to the same service water-heating system shall have a total input-capacity-weighted average thermal efficiency (Et) of at least 90 percent, and a minimum of 30 percent of the input of the high-capacity gas-fired service water-heating equipment in the service water heating-system shall have a thermal efficiency (Et)of at least 92 percent.  High-capacity gas-fired service water-heating equipment comprises gas-fired instantaneous water heaters with a rated input both greater than 200 000 Btu/h (58.6 kW) and not less than 4000 British thermal units per hour per gallon [Btu/(h•gal)] (0.3097 kW/L) of stored water, and gas-fired storage water heaters with a rated input both greater han 105 000 Btu/h (30.8 kW) and less than 4000 British thermal units per hour per gallon [Btu/(h•gal)] (0.3097 kW/L) of stored water. Exceptions:  (1) Water heaters installed in individual dwelling units.  (2) Individual gas water heaters with input capacity not greater than 100 000 Btu/h (29.3 kW). [ASHRAE90.1:7.5.3] | | | | | | | | | | | | |
| **Heat Recovery for Service Water Heating** | | | **L 503.4.4** | | | **L 503.4.4** | | **Updated code language** | **Accept Change** |  | |  |
| **L 503.4.4 Heat Recovery for Service Water Heating.** Condenser heat recovery systems shall be installed for heating or preheating of service hot water provided all of the following are true:  (1) The facility operates 24 hours a day.  (2) The total installed heat rejection capacity of the water-cooled systems exceeds 6 000 000 Btu/h (1758 kW) of heat rejection.  (3) The design service water-heating load exceeds 1 000000 Btu/h (293 kW). [ASHRAE 90.1:6.5.6.2.1] | | | | | | | | | | | | |
| **Capacity** | | | **L 503.4.5** | | | **L 503.4.5** | | **Updated code language new code reference location** | **Accept Change** |  | |  |
| **L 503.4.5 Capacity.** The required heat recovery system shall have the capacity to provide the smaller of:  (1) Sixty percent of the peak heat-rejection load at design conditions or  (2) Preheat of the peak service hot-water draw to 85°F (29°C).  Exceptions:  (1) Facilities that employ condenser heat recovery for space heating with a heat recovery design exceeding 30 percent of the peak water-cooled condenser load at design conditions.  (2) Facilities that provide 60 percent of their service water heating from onsite renewable energy or siterecovered energy or from other sources. [ASHRAE90.1:6.5.6.2.2] | | | | | | | | | | | | |
| **PERFORMANCE REQUIREMENTS FOR WATER-HEATING EQUIPMENT MINIMUM EFFICIENCY REQUIREMENTS (continued)** | | | **TABLE L 503.3.2** | | | **TABLE L 503.3.2** | | **Updated table with new test procedure** | **Accept Change** |  | |  |
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|  |  | | | | | | | | | | | | |
| **Applicability** | | | **N 101.1** | | | **N 101.1** | | **Updating Code language. New reference location** | **Accept Change** |  | |  |
| **N 101.1 Applicability**. This appendix provides guidelines on the impact of water temperature in minimizing both scalding and Legionella growth potential associated with occupiable commercial, institutional, multi-unit residential, and industrial building plumbing systems. This appendix shall not include single-family residential buildings. This appendix shall not be considered a risk management guidance document for scalding or Legionella. Where required by the Authority Having Jurisdiction, Legionella risk management shall be in accordance with ASHRAE 188 and ASHRAE Guideline 12. Note: There are additional factors associated with the potential for scalding and Legionella growth other than temperature. For scalding potential, other factors include, but are not limited to, user age, health, body part, length of contact time, and water source. For Legionella growth potential other factors include, but are not limited to, water source and plumbing system: size, design, circulation rate, water age, disinfectant residual, piping material and component complexity. | | | | | | | | | | | | |
| **General** | | | **N 102.1** | | | **N 102.1** | | **Updating code language** | **Accept Change** |  | |  |
| **N 102.1 General. For the purpose of this appendix, the following definitions shall apply:** | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Biofilm.** Microorganisms and the slime they secrete that grow on any continually moist surface. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Cold Water.** Water at a temperature less than 77°F (25°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Control.** The management of the operating conditions to maintain compliance with established criteria. {ASHRAE 188:3} | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Disinfecting Hot Water.** Water at a temperature not less than 160°F (71°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Disinfection.** The process of killing or inactivating microorganism. [ASHRAE 188:3] | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Halogenation.** A chemical reaction that involves the addition of one or more halogens, including, but not limited to, chlorine, bromine, or iodine, commonly used to disinfect water systems. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Hazard.** See Risk. | | |  | | |  | |  |  |  | |  |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Hot Water**. Water at a temperature not less than 130°F (54°C) and less than 140°F (60°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Legionella Growth Potential.** The likelihood that Legionella bacteria will reproduce. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Monitor.** Observing and checking the progress or quality of (something) or measuring the physical and chemical characteristics of control measures. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update. Reference location update** | **Accept Change** |  | |  |
| **Risk.** The potential for harm to humans resulting from exposure to Legionella. [ASHRAE 188:3]. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Scald Potential.** The likelihood of burning the skin. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Tempered Hot Water.** Water at a temperature not less than 120°F (49°C) and less than 130°F (54°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Tepid Cold Water.** Water at a temperature not less than 77°F (25°C) and less than 85°F (29°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Tepid Water**. Water at a temperature not less than 85°F (29°C) and less than 110°F (43°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Test.** The measurement of the physical, chemical, or microbial characteristics or quality of water. | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Very Hot Water.** Water at a temperature not less than 140°F (60°C) and less than 160°F (71°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Warm Water.** Water at a temperature not less than 110°F (43°C) and less than 120°F (49°C). | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **Water Management Plan**. A plan to reduce the risk of Legionella growth and spread**.** | | | | | | | | | | | | |
| **Definition** | | | **N 102.1** | | | **N 102.1** | | **Definition Update** | **Accept Change** |  | |  |
| **N 103.1 Design Documentation.** Construction documents shall be required for new construction, renovation, refurbishment, replacement, or repurposing of an occupiable building water system, including a water management plan, and shall be submitted to the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Onsite Documentation.** | | | **(N/A)** | | | **N 103.2** | | **New Definition** | **Accept Change** |  | |  |
| **N 103.2 Onsite Documentation.** Documentation shall be maintained onsite and shall be readily accessible to the Authority Having Jurisdiction. | | | | | | | | | | | | |
| **Legionella Growth Potential** | | | **(N/A)** | | | **N 104.1** | | **Updated table reference** | **Accept Change** |  | |  |
| **N 104.1 Legionella Growth Potential.** The Authority Having Jurisdiction shall have the authority to require documentation to address Legionella growth potential, where water temperatures in a water distribution system are within ranges shown in Figure N 104.1 that pose a Legionella growth potential. | | | | | | | | | | | | |
| **Scald Potential** | | | **N 104.1** | | | **N 104.2** | | **Updated table reference** | **Accept Change** |  | |  |
| **N 104.2 Scald Potential.** Where the water distribution system’s water temperature(s) range poses a scald potential in accordance with Table N 104.2, protection shall be provided in accordance with Chapter 4. | | | | | | | | | | | | |
| **Disinfection Documentation** | | | **N 105.1** | | | **N 105.1** | | **Section separated** | **Accept Change** |  | |  |
| **N 105.1 Disinfection Documentation.** Where required by the Authority Having Jurisdiction, documentation for disinfection of all building water systems shall be provided by the registered design professional in the construction documents. | | | | | | | | | | | | |
| **Copper-Silver Ionization** | | | **(N/A)** | | | **N 105.1.1** | | **New Section** | **Accept Change** |  | |  |
| **N 105.1.1 Copper-Silver Ionization**. Copper-silver ionization methods and procedures, shall include the following documentation:  (1) Copper and silver ionization concentrations.  (2) Methods and documentation for monitoring ion levels.  (3) Electrode cleaning cycles and methods. | | | | | | | | | | | | |
| **Ultraviolet Light** | | | **(N/A)** | | | **N 105.1.2** | | **New Section** | **Accept Change** |  | |  |
| **N 105.1.2 Ultraviolet Light.** Ultraviolet light methods shall include the following documentation:  (1) Locations of ultraviolet light units.  (2) Cleaning cycles and methods of the quartz sleeves and housing. | | | | | | | | | | | | |
| **Chemical Disinfection** | | | **(N/A)** | | | **105.2** | | **Updated new table** | **Accept Change** |  | |  |
| **N 105.2 Chemical Disinfection.** Chemical biocide treatment shall be permitted to be used in accordance with the following:  (1) Oxidizing biocides in accordance with manufacturer’s guidelines, or as required by the Authority Having Jurisdiction.  (2) Non-oxidizing biocides in accordance with manufacturer’s guidelines.  (3) Alternating the use of different types of biocides, dose, and frequency is recommended.  (4) These treatment methods can be used for continuous, online disinfection or shock treatment online or offline.  (5) Biocides intended for potable water applications shall listed in accordance with NSF/ANSI/CAN 60 and approved by the Authority Having Jurisdiction.  For SI units: °C = (°F-32)/1.8  \* Temperature ranges reported are experimentally determined in a laboratory setting in the absence of a realistic microbial community. Legionella can survive for longer periods of time at temperatures higher and lower than the growth temperature ranges indicated due to changes in their metabolic state and/or protection from thermal disinfection within biofilm or amoeba host organisms. | | | | | | | | | | | | |
| **WATER TEMPERATURE RANGES AND SCALD POTENTIAL** | | | **(N/A)** | | | **TABLE N 104.2** | | **New table with requirements for scalding requirements** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **LEGIONELLA REMEDIATION ACTIONS DOMESTIC WATER SYSTEMS** | | | **(N/A)** | | | **TABLE N 201.1** | | **New table for requirements for domestic water systems** | **Accept Change** |  | |  |
|  | | | | | | | | | | | | |
| **New Appendices** | | | | | | | | | | | | | |
| **New Appendix O**  **Non-Sewered Sanitation Systems** | | | | | | | | This new appendix covers the essential considerations when a non-sewered sanitation system (NSSS) is installed in a building. Designed for operation without a sewer connection and, in many cases, without a dedicated water supply, NSSSs are anticipated to meet critical public health needs in areas with limited water and wastewater infrastructure, water supply constraints, and/or unfavorable soils for traditional on-site disposal methods. Certain key protections, such as backflow prevention, proper ventilation of combustion-based units, and proper location of storage tanks external to the unit, are each specified in the new appendix | | Do not adopt/conflicts with RCW 19.27.031 and local health jurisdiction |  |  | |
| **New Appendix Q**  **Indoor Horticultural Facilities** | | | | | | | | The UPC Indoor Horticulture Facilities Task Group has captured important minimum requirements that do not conflict with Federal Regulations and will ensure that local laws and guidelines are followed for the protection of the public. It was important to identify the different categories of “horticulture facilities” as they exist in current federal laws. This will minimize confusion and make the language standard throughout the industry. Just as important also is to identify the occupancy type to determine required toilet facilities. Water sources permitted for indoor horticulture facilities were identified with provisions to protect the potable water supply. The language pertaining to water sources was based on research of existing sources such as technical research documents, standards, local laws, and Federal Regulation. | | Do not adopt statewide  Can be adopted locally by AHJ or proposed through petition for code change |  |  | |
| **New Appendix R**  **Tiny Houses** | | | | | | | | Guidance for tiny house communities to provide safe and reliable plumbing systems by requiring appropriate listed fixtures that prevent contamination to the potable water system. Tiny homes are becoming more popular, and a need exists to address plumbing provisions specific to these structures since they are not considered manufactured homes, recreational vehicles, or campgrounds. | |  |  |  | |
| **New Appendix S**  **Onsite Stormwater Treatment Systems** | | | | | | | | Appendix S for onsite water treatment systems includes comprehensive requirements related to the water quality, monitoring, design, construction, commissioning, alteration, repair, and operation requirements of stormwater systems for non-potable water reuse. These requirements for a properly designed system, together with appropriate construction, operation, and maintenance, will help ensure stormwater systems will be implemented safely and reliably. | |  |  |  | |