

2023 Oregon Plumbing Specialty Code (OPSC) Code adoption



Department of Consumer
and Business Services

Summary of amendments

Effective Oct. 1, 2023

Matrix of significant changes

The 2023 Oregon Plumbing Specialty Code (OPSC) became effective Oct. 1, 2023. The 2023 OPSC is based on the 2021 OPSC. The following is a summary matrix of adopted amendments to the 2021 OPSC. This summary is intended to help with the transition from the previous edition and to be used for the Oregon Inspector Certification (OIC) plumbing code update. The code language for each change is available on [page 5](#) of this summary.

Section	Change summary and commentary	Outcome/ source
206.0	<p>Added new definitions for <i>On-site Treated Nonpotable Water</i> and <i>Rainwater Diverter Valves</i>. <i>Gray Water Diverter Valve</i> is defined in Section 209.0.</p> <p><i>Commentary:</i> As the industry becomes more familiar with sustainable systems and looks at ways to provide off-grid systems, model code is adding more language to address these types of systems, DEQ allows “when approved” grey water and non-potable rainwater systems to discharge to the exterior, these new valves will allow this and still connect to the drainage system.</p>	New definitions 2024 UPC
209.0	<p>Added a new definition for <i>Groundwater</i>.</p>	New definition 2024 UPC
210.0	<p>Added a new definition for <i>Health care facility</i>.</p> <p><i>Commentary:</i> Adding this new definition confirms that health care facilities are only facilities that treat humans. Before this addition there was confusion on veterinary clinics; question was, are they health care facilities; now it’s confirmed they are not health care facilities.</p>	New definition NFPA 99
215.0	<p>Added a new definition for <i>Mid-story Guide</i>.</p> <p><i>Commentary:</i> IAPMO approved this proposal to clarify what a mid-story guide is, this code requirement confirms that the guide should be in the middle of the wall, this does not have to be exact, just close to the middle.</p>	New definition 2024 UPC
309.5	<p>Revised the section to require a method of flushing for dead legs to be accessible.</p> <p><i>Commentary:</i> This Oregon public proposal incorporates language from a Statewide Code Interpretation clarifying what constitutes a dead leg and the requirement that the flushing method be accessible. The interpretation is also being retained to clarify what is considered a flushing device.</p>	New amendment PP-04 – Mike Ditty
310.9	<p>Added a new section to clarify that female plastic threaded connections cannot be used with male metallic connections.</p> <p><i>Commentary:</i> This new section in general regulations is in alignment with current 605.12.3 and 605.2.3, these two sections already have similar language prohibiting this installation, putting this in chapter 3 confirms this.</p>	New amendment 2024 UPC
310.10	<p>Added a new section to clarify the only place you can use transition glue is outside the building.</p> <p><i>Commentary:</i> This new section from the 2024 UPC clarifies that the only place allowable for a glue transition joint between ABS and PVC is from the building drain to building sewer in section 705.9.4, there is no other allowance inside or outside the structure for a transition glue joint.</p>	New amendment 2024 UPC
311.1	<p>Added clarification from the 2024 UPC that the exception applies where no public or private sewer is available.</p> <p><i>Commentary:</i> The 2024 UPC added “public” to this section to clarify the exception applies to the absence of both private and public sewer connections.</p>	New amendment 2024 UPC
313.0/313.1	<p>Added “anchors” to the title.</p> <p><i>Commentary:</i> Clarify that seismic restraints shall be in accordance with the building code.</p>	New amendment 2024 UPC

Section	Change summary and commentary	Outcome/ source
313.2	Added “supports” to be consistent with 313.1. <i>Commentary: Adding the term “supports” gives additional allowances for securement of piping systems.</i>	New amendment 2024 UPC
Table 401.3	Reduced the maximum flow rates for showerheads to 1.8 gpm at 80 psi in alignment with EPA. [HB 2062 (2021)]	New amendment
408.2	Reduced the maximum flow rates for showerheads to 1.8 gpm at 80 psi in alignment with EPA. [HB 2062 (2021)]	New amendment
415.1	Modified to require that “bottle filling stations” also comply with NSF 61.	New amendment 2024 UPC
420.3	Aligned with the EPA by changing the maximum flow rate for commercial food service pre-rinse spray valves from 1.6 gpm to 1.28 gpm. Remove the 60 pounds-force language.	New amendment 2024 UPC
505.3.2	Modified to require unlisted water heaters be approved by the Building Official prior to installation.	New amendment 2024 UPC
Table 603.2	Added ASSE 1055 for chemical dispensers.	New amendment 2024 UPC
Table 603.2	Added ASSE 1022 for low-hazard backpressure, high-hazard backsiphonage and high-hazard backpressure.	New amendment 2024 UPC
603.5.6	Added to the list of backflow protection devices: A valve complying with IAPMO PS 72. Updated Table 1701.1 to include IAPMO PS 72 – 2019 Updated Table 1701.2 to exclude IAPMO PS 72	New amendment 2024 UPC
604.13	Added an exception allowing CPVC, PE-RT, PEX, and PP for hot and cold potable water distribution to be installed within the first 18 inches of piping to instantaneous on-demand tankless water heater. Direct connection of PEX and PP piping to on-demand water heaters is approved by PPI and MII. <i>Commentary: This new language allows these plastic piping materials to be connected within the first 18 inches of an on-demand water heater, this allowance is only for on-demand not tankless with storage or return (closed loop system) lines. The Plastic Piping Institute published a document on Nov. 19, 2020, stating this is an acceptable and safe installation.</i>	New amendment 2024 UPC
605.2.2	Added ‘green’ to the permitted primer colors. Green is now being manufactured. <i>Commentary: The 2024 UPC added this new color available for CPVC glue without the use of primer, green is easier to verify.</i>	New amendment 2024 UPC
605.15 605.16.1 & 3	Added IAPMO PS 66, a new standard for dielectric unions and updated Table 1701.1 to include IAPMO PS 66.	New amendment 2024 UPC
608.2 / 608.3	Modified to require expansion tanks to be securely fastened to the structure. <i>Commentary: There are installation where expansion tanks are supported by the piping system and the piping system might be installed with non-metallic materials that may not support the tank, new language requires the tank to be securely fasten, which can be done many different ways, but the piping system should not be the support if materials are not able to support the tank.</i>	New amendment 2024 UPC
608.3	Added an exception not requiring on-demand water heaters to have an expansion tank. <i>Commentary: IAPMO approved this proposal allowing on-demand water heaters to be installed without the requirement for an expansion tank.</i>	New amendment 2024 UPC
Table 610.3	Added “nonwater” to correlate with other sections of these types of urinals. These urinals require a water connection. Also aligns with Table 702.1.	Alignment
Table 702.1	Removed footnote 10, which was added in the 2021 OPSC, as it has been confusing to installers. <i>Commentary: This 2021 OPSC FN was a proposal submitted during the 2021 code adoption process, the original proposal had conflicting requirements elsewhere in code, the outcome was confusing to industry and was voted to be taken out of the 2023 OPSC.</i>	Rescinded amendment

Section	Change summary and commentary	Outcome/ source
705.10.3	Revised to prohibit PVC and ABS pipe and fittings from being solvent welded to any other like material except as provided in Section 705.9.4. <i>Commentary: Confirms again like in 310.10 that the only place to have a transition joint between ABS and PVC is outside between the building sewer and the building drain.</i>	New amendment 2024 UPC
707.9	Removed the code language requiring an underfloor cleanout to be located within 5 feet of the access to the underfloor space.	New amendment PP-05 – Area 1 JATC
710.4	Revised to clarify the requirements for fittings in sewage ejector lines. <i>Commentary: This new language comes from a new Oregon proposal clarifying that not only the piping needs to meet the pressure rating, but also the fittings and clarifies that the fittings need to be full-way type and not restrict flow.</i>	New amendment PP-07 – Mike Ditty
710.6	Added IAPMO IGC 305, a new standard for deep backwater valves with liftable / replaceable center sections and updated Table 1701.1 to include IAPMO IGC 305 – 2019.	New amendment 2024 UPC
Table 721.1	Increased the minimum horizontal distance required between the sewer and buildings or structures from 2 ft. to 5 ft. <i>Commentary: This is just an alignment with existing Oregon provisions, no changes.</i>	Alignment
1101.4.2	Created a 2-foot location that defines where the storm sewer begins. <i>Commentary: The 2021 OPSC had eliminated the 2-foot rule and allowed medium turn fittings, the new language for 2023 returns to 2-foot separation between the building storm sewer and storm drainage and also now requires fittings covered in section 706 for storm sewer change of direction.</i>	New amendment PP-10 – Mike Ditty
1101.4.8	Revised to prohibit the use of short turn fittings in the storm sewer system. <i>Commentary: See commentary above.</i>	New amendment PP-11 – Mike Ditty
Ch. 13	<i>Commentary: Dental facility piping requirements. With the change in the 2018 NFPA 99 to add a chapter 15 dealing with Dental facilities, refer to Chapter 15 for those sections that deal with piping installations.</i>	Informational
1312.4	Revised the filter efficiency for inlet filtration from 0.03 μ to 0.3 μ.	New amendment 2024 UPC
1314.5	Added two new line items covering additional valve requirements, threaded port and working pressure meeting or exceeding relief valve.	New amendment 2024 UPC
Table 1314.5.2 (New)	Added a valve Cv table for vacuum valves.	New amendment 2024 UPC
1323.14	Added a line item pointing back to Table 1305.1 which is just the color designations.	New amendment 2024 UPC
1601.2 / 1601.3	Revised to clarify that rainwater catchment systems may be designed by a “certified plumbing contractor or registered design professional” and the exceptions to both sections were removed	New amendment 2024 UPC
1603.21 (New)	Added diversion valves for rainwater systems.	New amendment 2024 UPC
Table A103.1	Added ‘with or without dishwasher’ to ‘Kitchen, domestic’ to align with Chapter 6. The combined domestic dishwasher and domestic kitchen sink, as well as the “stand alone” domestic dishwasher would have a total of 1.5 wsfu.	Alignment
SCI	Statewide Code Interpretations	
	20-01: Drainage fixture unit loading – clarifies the loading on a 1½” line with up to 8 lavatories installed.	Rescinded
	22-01: Dead legs – clarifies the distance allowed before a line becomes a dead leg and also defines a flushing devise.	Retained SCI 22-01
	22-04: Finished curb, dam or threshold – clarifies that a finished curb or dam is not required and defines a threshold.	Retained SCI 22-04

Code language

The changes are denoted as follows:

<u>Blue/underline:</u>	Added language to the 2021 OPSC
Red/strikethrough:	Deleted language from the 2021 OPSC
[...]	Unamended language in the section

Chapter 1 – Administration

Section 104.3 / 104.3.1	The option to submit submissions applications, construction documents, engineering calculations, diagrams, and other data digitally where permitted by the Building Official was added to the code.	104.3 Application for Permit. To obtain a permit, the applicant shall first file an application therefore in writing <u>or digitally</u> , on a form furnished by the Building Official for that purpose. Such application shall: [...] 104.3.1 Construction Documents. Where required under OAR 918-780-0040, construction documents, engineering calculations, diagrams, and other data shall be submitted in two or more sets, <u>or in a digital format where permitted by the Building Official</u> , with each application for a permit. [...]
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Chapter 2 – Definitions

Diverter valves	New definitions were added for <i>On-site Treated Nonpotable Water</i> and <i>Rainwater Diverter Valves</i> . The definition for <i>Gray Water Diverter Valve</i> was reprinted from Section 209.0.	<u>Diverter Valve, Gray Water. A valve that directs gray water to the sanitary drainage system or a subsurface irrigation system.</u> <u>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.</u> <u>Diverter Valve, Rainwater. A component in commercial rainwater catchment systems to control high inflow and overflow volumes in rainwater storage tanks.</u>
Groundwater	A new definition was added for <i>Groundwater</i> , a term used throughout the code.	<u>Groundwater. Water that exists beneath the earth's surface.</u>
Health Care Facilities	A new definition was added for <i>Health Care Facilities</i> from NFPA 99.	<u>Health Care Facilities. Buildings or portions of buildings in which human medical, dental, psychiatric, nursing, obstetrical, or surgical care is provided.</u>
Mid-Story Guide	A new definition was added for <i>Mid-Story Guide</i> , a term used in Chapter 3 of the code.	<u>Mid-Story Guide. A support designed to keep piping in alignment, located half-way between floors or a floor and ceiling.</u>
Plumbing System	The definition of <i>Plumbing Systems</i> was revised to align with the statutory authority of this code.	Plumbing System. Includes all potable water, alternate water sources, building supply, and distribution pipes; all plumbing fixtures and traps; all drainage and vent pipes; and all building drains and building sewers, including their respective joints and connections, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, medical gas and medical vacuum systems, liquid and fuel gas piping, and water heaters and vents for same.
Vented Line	The definition of <i>Vented Line</i> was revised.	Vented Line. A horizontal soil or waste pipe with a vented fixture upstream, <u>on the same floor level.</u>

Chapter 3 – General regulations

Section 309.5	This section was revised to clarify what constitutes a dead leg, which is where the pipe section exceeds 1.5 times the diameter of the pipe served, and that the required method of flushing for a dead leg be accessible.	309.5 Dead Legs. Dead legs shall have an accessible method of flushing and shall not exceed 1.5 times the diameter of the pipe.
Section 310.9	This section was added to clarify that female plastic threaded connections shall not be used with male metallic connections.	310.9 Female Plastic Connections. Female plastic threaded connections shall not be allowed to be used when threaded onto a male metallic connection.
Section 310.10	This section was added to clarify that the only place you can use transition glue is outside the building.	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 any other unlike material.
Section 311.1	This section was revised to clarify that the exception applies where no “public” or private sewer is available.	311.1 General. The drainage system of each new building and 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.
Section 313.0, 313.1, and 313.2	The term “anchors” was added to the title. Section 313.1 was revised to clarify that seismic restraints shall comply with the building code except as provided in Section 507.2 for water heaters. The term “supports” was added in Section 313.2, giving additional allowances for the securement of piping systems.	313.0 Hangers, and Supports, and Anchors. 313.1 General. Piping, fixtures, appliances, and appurtenances shall be supported in accordance with this code and the manufacturer’s installation instructions. Except as provided in Section 507.2, seismic restraints shall be in accordance with the building code. 313.2 Material. Hangers, supports, and anchors shall be of sufficient strength to support the weight of the pipe and its contents. Piping shall be isolated from incompatible materials.

Chapter 4 – Plumbing fixtures and fixture fittings

Table 401.3	The maximum flow rates for showerheads was reduced to 1.8 gpm at 80 psi.	<table border="1"> <tr> <td data-bbox="727 1392 1084 1438">Showerheads</td> <td data-bbox="1084 1392 1419 1438">2.0 1.8 gpm at 80 psi</td> </tr> </table>	Showerheads	2.0 1.8 gpm at 80 psi
Showerheads	2.0 1.8 gpm at 80 psi			
Section 408.2	The maximum flow rates for showerheads was reduced to 1.8 gpm at 80 psi.	408.2 Water Consumption. Showerheads shall have a maximum flow rate of not more than 2.0 1.8 gpm at 80 psi (7.5 6.8 L/m at 552 kPa).		
Section 415.0	This section was revised by adding that “bottle filling stations” shall also comply with NSF 61.	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 61. Permanently installed electric water coolers shall also comply with UL 399. Electric water coolers and water heaters connected to potable water that are vented to the atmosphere shall comply with ASSE 1023.		

Section 420.3 The maximum flow rate for commercial food service pre-rinse spray valves from 1.6 gpm to 1.28 gpm in alignment with EPA. **420.3 Pre-Rinse Spray Valve.** Commercial food service pre-rinse spray valves shall have a maximum flow rate of ~~1.6~~ 1.28 gallons per minute (gpm) ~~at 60 pounds force per square inch (psi) (6.0 L/m at 414 kPa)~~ and shall be equipped with an integral automatic shutoff.

Chapter 5 – Water heaters

Section 505.3.2 This section was revised to require unlisted water heaters be approved by the Building Official prior to installation. **505.3.2 Unlisted Water Heaters.** Except as otherwise permitted in this code, unlisted water heaters shall be approved by the Building Official prior to being installed. Clearances for unlisted water heaters shall be not less than 12 inches (305 mm) on all sides and rear. Combustible floors under unlisted water heaters shall be protected in an approved manner. ~~{NFPA 54-2018:10.27.2.2}~~

Section 507.2 This section was revised to clarify that the exception also applies to water heaters in one- and two-family dwellings and townhouses in Seismic Design Category B as wells as C. **507.2 Seismic Provisions. [...]**
Exception: Water heaters in one- and two-family dwellings and townhouses in Seismic Design Category B and C are not required to be strapped or anchored to resist horizontal displacement due to earthquake motion.

Chapter 6 – Water supply and distribution

Table 603.2 ASSE 1055 for chemical dispensers and ASSE 1022 for low-hazard backpressure, high-hazard backsiphonage and high-hazard backpressure was added to Table 603.2.

Backflow preventer for Carbonated Beverage Dispensers (two independent check valves with a vent to the atmosphere)	ASSE 1022	X	<u>X</u>	<u>X</u>	Installation includes carbonated beverage machines or dispensers. These devices operate under intermittent or continuous pressure conditions.
<u>Chemical Dispenser with integral backflow protection</u>	<u>ASSE 1055</u>	<u>X</u>	<u>X</u>	-	<u>Shall be installed in accordance with manufacturer's installation instructions with dedicated water supply whenever possible.</u>

Section 603.5.6 This section was revised to include a valve complying with IAPMO PS 72 to the list of backflow protection devices. **603.5.6 Protection from Lawn Sprinklers and Irrigation Systems.** Potable water supplies to systems having no pumps or connections for pumping equipment, and 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) Double check valve backflow prevention assembly (DC)
 (6) A valve complying with IAPMO PS 72

Section 604.13 An exception was added to this section allowing CPVC, PE-RT, PEX, and PP for hot and cold potable water distribution to be installed within the first 18 inches of piping to instantaneous on-demand tankless water heater. Direct connection of PEX and PP piping to on-demand water heaters is approved by PPI and MII. **604.13 Water Heater Connectors.** Flexible metallic (copper and stainless steel), reinforced flexible, braided stainless steel, or polymer braided with EPDM core connectors that connect a water heater to the piping system shall comply with ASME A112.18.6/CSA B125.6. Copper, copper alloy, or stainless steel flexible connectors shall not exceed 24 inches (610 mm). PEX, PEX-AL-PEX, PE-AL-PE, or PE-RT tubing shall not be installed within the first 18 inches (457 mm) of piping connected to a water heater.
Exception: CPVC, PE-RT, PEX, and PP tubing in accordance with the manufacturer's installation instructions and approved for hot and cold potable water distribution in accordance with Table 604.1 shall be permitted to be installed within the first 18 inches (457 mm) of piping connected to an instantaneous on-demand tankless water heater.

Section 605.2.2 ‘Green’ was added to the permitted primer colors. Green primer is now being manufactured.

605.2.2 Solvent Cement Joints. [...] 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, ½ of an inch (15 mm) through 2 inches (50 mm) in diameter or ASTM F442, ½ of an inch (15 mm) through 3 inches (80 mm) in diameter. [...]

Sections 605.15, 605.16.1 and 605.16.3 IAPMO PS 66, Dielectric Fittings, was added as referenced standard in the following sections:

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](#).

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.

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.

Section 608.2 and 608.3 The following sections were revised to require that expansion tanks be securely fastened to the structure and an exception was added to no require an expansion tank for an instantaneous on-demand water-heater.

608.2 Excessive Water Pressure. [...] The expansion tank shall be properly sized, [securely fastened](#), and installed in accordance with the manufacturer’s installation instructions and listing. [...]

608.3 Expansion Tanks, and Combination Temperature and Pressure-Relief Valves. [...] 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](#), and installed in accordance with the manufacturer’s installation instructions. [...]

Exception: An expansion tank shall not be required for an instantaneous on-demand water heater.

Table 610.3 “Nonwater” was added to correlate with other sections with these types of urinals. These urinals require a water connection.

Nonwater Urinal with Drain Cleansing Action	½	1.0	1.0	1.0
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Chapter 7 – Sanitary drainage

Table 702.1 Footnote 10 was removed because it has been confusing to installers.

Laundry ²⁻¹⁰ (with or without discharge from a clothes washer)	1½	2.0	2.0	2.0
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~~¹⁰ A 2-inch (50 mm) trap serving a laundry tub shall be permitted to also receive, through a wye connection, the waste from a clothes washer set adjacent thereto.~~

Table 703.2 Footnote 7 was revised to provide clarity on the permitted number of drainage fixtures for one to eight public lavatories.

⁷ Up to 8 public lavatories are permitted to be installed on a 1½ inch (40 mm) vertical branch or horizontal sanitary branch sloped at ¼ inch per foot (20.8 mm/m). [Up to 8 public lavatories shall not exceed a total of 2 drainage fixture units.](#)

Section 705.10.3 This section was revised to prohibit PVC and ABS pipe and fittings from being solvent welded to any other like material except as provided in Section 705.9.4.

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.](#)

Section 707.9	The requirement for underfloor cleanouts to be located within 5 feet of the access to the underfloor space was removed.	707.9 Clearance. Each cleanout in piping 2 inches (50 mm) or less in size shall be so installed that there is a clearance of not less than 18 inches (457 mm) by 18 inches (457 mm) in front of the cleanout. Cleanouts in piping exceeding 2 inches (50 mm) shall have a clearance of not less than 24 inches (610 mm) by 24 inches (610 mm) in front of the cleanout. Cleanouts in under-floor piping shall be extended to or above the finished floor or shall be extended outside the building where there is less than 18 inches (457 mm) vertical overall, allowing for obstructions such as ducts, beams, and piping, and 30 inches of (762 mm) horizontal clearance from the means of access to such cleanout. No under floor cleanout shall be located exceeding 5 feet (1524 mm) from an access door, trap door, or crawl hole.
Section 710.4	This section was revised to clarify the requirements for fittings in sewage ejector lines.	710.4 Discharge Line. The discharge line from such ejector, pump, or another mechanical device shall be of approved pressure rated material and be provided with an accessible backwater or swing check valve and gate or ball valve. <u>Fittings shall be a fullway type, shall not restrict flow, and shall be approved for use with the pressure discharge piping.</u> Where the gravity drainage line to which such discharge line connects is horizontal, the method of connection shall be from the top through a wye branch fitting. The gate or ball valve shall be located on the discharge side of the backwater or check valve. Gate or ball valves, where installed in drainage piping, shall be fullway type with working parts of corrosion-resistant metal. Sizes 4 inches (100 mm) or more in diameter shall have cast-iron bodies and sizes less than 4 inches (100 mm), cast-iron or copper alloy bodies.
Section 710.6	IAPMO IGC 305, a new standard for deep backwater valves with liftable / replaceable center sections was added as a reference standard.	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, <u>or IAPMO IGC 305</u> 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.

Chapter 10 – Traps and interceptors

Section 1006.2	The references to Table 1006.1 were changed to Table 1006.2 to align with the referring section.	1006.2 Vents Not Required. Traps for floor drains, floor sinks, funnel drains, area drains, catch basins and receptors within a building discharging to a vented horizontal soil or waste pipe are exempt from the provision requiring individual vents for each trap, provided that the trap arm, or distance from the trap to the vented horizontal soil or waste pipe to which it discharges, measuring the developed length, does not exceed the maximum distances as shown in Table 1006.1 <u>Table 1006.2</u> , and that the branch waste pipe from the trap connects to a soil or waste pipe which is vented with a pipe having a diameter not less than that which would be required to vent a floor drain, floor sink, funnel drain, area drain, catch basin and receptors, computed on the units allowed in Table 702.1 and Table 703.2. Common vent sizing shall be the sum of fixture units served, but in no case smaller than the minimum vent size required for any fixture served or as determined from Table 703.2 whichever is larger. Exception: Floor sinks installed to receive the discharge waste from sinks shall be permitted to be individually vented. Trap arms shall not exceed distances as per Table 1006.1 <u>Table 1006.2</u> . Priming of traps for above vented floor sinks are not required.
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Table 1006.0 / 1006.2	This table was renumbered to 1006.2 to align with the referring section; and the reference to Section 706.0 in the footnote 2 was revised to 707.0.	Table 1006.2 Floor Drains ² Cleanouts required in Section 706.0-707.0 do not apply when utilizing Table 1006.0 Table 1006.2 , except for catch basins.
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Chapter 11 – Storm drainage

Section 1101.4.2	This section was revised to create a 2-foot location that defines where the storm sewer begins.	1101.4.2 Location. Building storm sewers located <u>2 feet (610 mm) or more away from any building or property line</u> outside of a building , except roads, streets or alleys, shall be of cast iron, vitrified clay, concrete, asbestos cement, ABS, PVC, CPE, or other pipe meeting applicable standards in Table 701.2, Table 1101.4.9, and Chapter 17. <u>Fittings shall be in accordance with Section 706.0 of this code.</u>
Section 1101.4.3	Reference correction	1101.4.3 Cleanouts. Cleanouts shall be required and shall be installed as per Section 707.0-719.0 of this code.
Section 1101.4.8	The section was revised to prohibit the use of short turn fittings in the storm sewer system.	1101.4.8 Fittings. Sanitary tee branch fittings and 90-degree medium turns shall be permitted for interior and exterior storm drain and storm sewer piping. Exception: Approved taps shall be permitted on storm sewers per manufacturer’s listing.

Chapter 13 – Health care facilities and medical gas and medical vacuum systems

Table 1305.1 Dental facility piping requirements. With the change in the 2018 NFPA 99 to add a chapter 15 dealing with Dental facilities, refer to Chapter 15 for those sections that deal with piping installations.

Nonmedical air (Category 3 gas-powered device) <u>and dental air</u>	—	Yellow-and-white diagonal stripe/black	None
Nonmedical and Category 3 vacuum <u>and dental vacuum</u>	—	White-and-black diagonal stripe/black boxed	None

Section 1312.4	The filter efficiency for inlet filtration was revised from 0.03 μ to 0.3 μ.	1312.4 Vacuum Filtration. Central supply systems for vacuum 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 vacuum system. (2) Filtration shall be located on the patient side of the vacuum producer. (3) Filters shall be efficient to 0.03 μ <u>0.3 μ</u> and 99.97 percent HEPA or better, per DOE-STD-3020. [...]
Section 1314.5 Tables 1314.5.1 / 1314.5.2	Add two new line items covering additional valve requirements, threaded port and working pressure meeting or exceeding relief valve.	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 C _v factor in accordance with Table 1314.5.1 or <u>Table 1314.5.2.</u> [...] (8) <u>They have threaded purge ports on the patient side and the source side.</u> (9) <u>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.</u> [NFPA 99:5.1.4.1.6]

TABLE 1314.5.1
POSITIVE PRESSURE GASES
 [NFPA 99: [Table 5.1.4.1.6\(a\)](#)]

VALVE SIZE (inch)	MINIMUM Cv (full open)
1/2	17
3/4	31
1	60
1 1/4	110
1 1/2	169
2	357
2 1/2	390
3	912
4	1837

For SI units: 1 inch = 25.4 mm

TABLE 1314.5.2
VACUUM AND WAGD
 [NFPA 99: [Table 5.1.4.1.6\(b\)](#)]

VALVE SIZE (inch)	MINIMUM Cv (full open)
1/2	17
3/4	31
1	60
1 1/4	110
1 1/2	169
2	357
2 1/2	196
3	302
4	600
5	1022
6	1579
8	3136

For SI units: 1 inch = 25.4 mm

Section 1323.14 A line item was added pointing back to Table 1305.1 which is just the color designations.

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) Room or areas served.
- (3) Caution to not close or open valve except in emergency.
- (4) [Gas or vacuum system color code in accordance with Table 1305.1.](#) [NFPA 99:5.1.11.2.1]

Section 1327.1 This section was revised to include a reference to Chapter 11 of NFPA 99

1327.1 General. Dental gas and vacuum systems shall comply with [the applicable sections in Chapter 15 of the NFPA 99 and](#) this Code ~~and NFPA 99.~~

Chapter 16 – Nonpotable rainwater catchment systems

Section 1601.2 / 1601.3 This section was revised to clarify that rainwater catchment systems may be designed by a certified plumbing contractor. The exceptions were removed.

1601.2 System Design. Rainwater catchment systems shall be designed in accordance with this chapter by a [certified plumbing contractor or](#) registered design professional. Components, piping, and fittings used in a rainwater catchment system shall be listed.

Exceptions:

- ~~(1) A registered design professional is not required to design rainwater catchment systems used for irrigation with a maximum storage capacity of 360 gallons (1363 L).~~
- ~~(2) A registered design professional is not required to design rainwater catchment systems for single family dwellings where outlets, piping, and system components are located on the exterior of the building.~~

1601.3 Permit. It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered a rainwater catchment system in a building or on a premise without first obtaining a permit to do such work from the Building Official.

Exceptions:

- ~~(1) A permit is not required for exterior rainwater catchment systems used for outdoor drip and subsurface irrigation with a maximum storage capacity of 360 gallons (1363 L).~~
- ~~(2) A plumbing permit is not required for rainwater catchment systems for single family dwellings where outlets, piping, and system components are located on the exterior of the building. This does not exempt the need for permits where required for electrical connections, tank supports, or enclosures.~~

Section 1603.21 A new section addressing rainwater diversion valves was added.

1603.21 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. Where required, valves shall be accessible and shall include a filter located upstream of the valve.

Chapter 17 – Referenced standards

Table 1701.1 This table was updated to align with the adopted changes within the body of the code.

Amended the following row:

ASSE/IAPMO 1055-2020	Chemical Dispensers with Integral Backflow Protection	Backflow Protection	Table 603.2, 603.5.21
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Added the following rows:

IAPMO IGC 305-2019	ABS and PVC Horizontal Backwater Valves with Lifting Devices	Valves	710.6
IAPMO PS 66-2015	Dielectric Fittings	Fittings	605.15, 605.16.1, 605.16.3
IAPMO PS 72-2019	Valves with Atmospheric Vacuum Breakers	Valves	603.5.6

Table 1701.2 This table was updated to align with the adopted changes within the body of the code.

Deleted the following rows:

IAPMO PS 66-2015	Dielectric Fittings	Fittings
IAPMO PS 72-2007⁺	Valves with Atmospheric Vacuum Breakers	Valves

Appendix A – Recommended Rules for Sizing the Water Supply System

Table A103.1 “Nonwater” was added to correlate with other sections with these types of urinals. These urinals require a water connection.

Kitchen, domestic with or without dishwasher	1/2	1.5	1.5	–
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