

Changes Created by the 2008 Oregon Plumbing Specialty Code Adoption

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Errors in this publication: Section 718.1, exception should be 3” pipe and not 4” pipe for 1/8th inch per foot grade. Table 14-1, page 164, should include IAPMO IGC–161-2002 for Non-Flushing Urinals.

1. The plumbing specialty code will be a single document which will be applicable to both the residential specialty code and all other types of construction. The residential code will reference the plumbing code and will not contain a plumbing code section. The 2008 Oregon plumbing code will be a complete document and will not require insert pages or have colored pages.

2. Chapter 1, Administration, contains Oregon administrative rules applicable to plumbing. The model UPC administrative provisions are not adopted in Oregon.

3. Chapter 2, Definitions, almost all of the changes made to this chapter are model code changes. Tentative Interim Amendments (TIAs) have been added to the code for the first time. TIAs are the result of new regulations adopted by the International Association of Plumbing and Mechanical Officials (IAPMO) as part of the American National Standards Institute accreditation process. These are amendments which are made in between the IAPMO code adoption process and have specific criteria which they must meet to become a part of the code on an interim bases and must be formally adopted at a future date to become a regular code change.

a. The following TIAs have been added in Chapter 2: Definition of “Design Flood Elevation”, “Flood Hazard Area”, “Flood Hazard Area Subject to High Velocity Wave Action”. These changes were made at the request of the Federal Emergency Management Administration (FEMA) and are intended to be consistent with the National Flood Insurance Program (NFIP). New model code changes were made to better define grease removal equipment including: Definitions for “FOG Disposal System”, Gravity Grease Interceptor”, “Grease Interceptor”, “Grease Removal Device”, “Hydromechanical Grease Interceptor”, “Vented Flow Control Device”. Other model code changes to Chapter 2, include the following: Add a definition for “Hot Water”, “PVDF” (Polyvinylidene Fluoride).

b. Oregon changes to Chapter 2 are as follows: Delete the definition of “Excess Flow Valve”, “Grease Trap”, and all references to fuel gas. Change the temperature referenced in the definition of “Joint, Brazed” to be consistent with the temperatures used in section 316.1.7. Change the reference in the definition of “Private Sewage Disposal System” to address the appropriate regulating authority.

4. Chapter 3, General Regulations, most of the model code changes to this chapter are intended to make the code more literal and remove, where possible, subjective language. Most of this language is in the form of “or as approved by the Authority Having Jurisdiction.”

a. The following model code changes have been made to the chapter: Model code changes to section 301.2, addressing alternate materials and methods equivalency, these are to make it clear that alternate methods must be approved and be determined equivalent or superior to the appropriate code provisions. Flood hazard provisions were added to section 301.3 as TIA at the request of FEMA. Several sections removed the reference to the “Authority Having Jurisdiction” when an actual code requirement was not defined. This includes sections 307.2, 311.5, 313.3, 313.11, 314.3, 315.1, and 318.7. Other model code changes to Chapter 3 include: In section 313.9, changes were made to nail plate requirements to protect copper and plastic piping which penetrates framing members by adding a requirement that the nail plates will extend along the framing member to a minimum of 1-1/2” beyond the outside diameter of the piping being protected. New provisions were added to eliminate pipe sleeves for drilled or board holes in concrete (section 313.10.1), ratproofing provisions for tub waste openings in crawl spaces on the first floor installations (section 313.12.4), provisions were deleted for cast iron support in seismic zones because there is no section of the code which defines the seismic zones addressed (section 314.5.1), changes were made to reference the manufacturer’s installation standards for solvent cement and to clarify that transition solvent cement joints are only permitted between the building drain and building sewer (section 316.1.6), the temperature for brazing is defined as above 1,000 degrees F. (section 316.1.7), language was added to further define brazed, flared or pressed joints (section 316.2), and water testing provisions for soil and drain pipes in food-handling establishments were removed because they were inconsistent with the testing provisions of Chapter 7 (section 318.3).

b. Oregon amendments to Chapter 3 include: Deleting provisions in section 301.4 addressing alternative engineered design because alternate method approval is addressed in statute in ORS 455.060. Remove the exception in section 313.9 addressing fuel gas. Change the reference in section 316.1.6 from “IAPMO Installation Standards” to “manufacturer’s installation standard.” Adding an exception for solvent cement joints to allow PVC/DWV joints to be made without the use of a primer in section 316.1.6. Remove reference to fuel gas piping in section 316.2.2.

5. Chapter 4, Plumbing Fixtures and Fixture Fittings, again many model code changes were made to remove subjective references to the AHJ in the following sections: 401.1, 402.3, 407.3, and 411.4.

a. Model code changes to Chapter 4, include: Referencing NSF 61 for fixture fittings in section 401.3. Removing the reference to concealed fouling surfaces in section 405.4. Moving and amending the provisions for special use fixtures and zinc alloy components from section 403.3 & 403.1 to 406.3 & 406.4. Address automatic seat cover dispensers in section 408.2.2 to allow closed front seats for public use water closets. Remove provisions addressed in section 411.5 for flush valves in flush tanks because these are covered in Chapter 6. Add new provisions in section 411.7 through a TIA which allow shower compartments with an overall dimension of 30 inches in width and 60 inches in length. Add language in section 414.1 which clarifies whirlpool pump access requirements to be located no more than 20 feet from crawl space access. Adding language in section 414.5 clarifying that water heater thermostats may not be used to control the water temperature limits for a bathtub or whirlpool bathtub.

b. Oregon amendments to Chapter 4 include the following: Retain Oregon amendments to section 402.4 which clarify when self-closing or metered faucets are required in public restrooms. Add a new Oregon amendment allowing the use of non-flush urinals in section 402.3.1. Amend the model code TIA in section 411.7, to allow a reduced size shower compartment without the limitation of “where an existing bathtub has been.” Retain the Oregon amendments which delete all reference to the minimum number of required fixtures which is covered in the Oregon structural code.

6. Chapter 5, Water Heaters, most of the changes to Chapter 5 address retaining current Oregon amendments which eliminate references to fuel gas, gas venting, combustion air and other Oregon mechanical code provisions. In fact most of the chapter is deleted by amendment. Also, changes have been made to make the provisions of the chapter compatible with the Oregon mechanical code and mechanical provisions of the Oregon residential code. This chapter, as with all of the code, has been amended to remove subjective AHJ requirements.

a. Model code changes to this chapter include: Added language in section 502.11 and 506.4 addressing Indirect-Fired Water Heaters. This new language allows the use of single-wall heat exchangers under specific conditions. Added language in section 505.1 allowing fuel-burning water heaters to be installed in closets located in a bedroom or bathroom. Oregon already has amended language allowing this. New model code language was added in section 509.4 to clarify water heater access provisions for attics.

b. Oregon amendments include the following: Removing all references to fuel gas, gas venting, combustion air and other Oregon mechanical code provisions. Retaining language to define when a water heater is regulated by the plumbing code and when it is regulated under the provisions of the boiler code. New Oregon language has been added to better define when an instantaneous water heater is regulated under the plumbing code and when it is regulated under the boiler code in section 502.0. Retain amendments for water heaters located in a closet or other confined space opening into a bath or bedroom in section 505.1. Add a new Oregon amendment in section 508.14, allowing electric water heaters to be installed at floor level in garages.

7. Chapter 6, Water Supply and Distribution, again the provisions referencing the AHJ were removed as model code changes where possible.

a. Model code changes to Chapter 6 includes the following: In section 602.2 language was added to clarify that cross-connection control is applicable to each point of use. In section 603.1 language was changed to allow the AHJ to require backflow device testing at least annually or more often. Language was also added to the section to require testing by a certified backflow assembly tester. Oregon did not adopt this language and retained the 2003 code language. Pressure vacuum breaker “spill proof” was changed to “spill resistant-type backflow prevention assembly. New model code provisions were added to sections 603.3.9 & 603.3.10, addressing drains for backflow devices and proper plumbing fitting use to prevent cross-connections. Single-wall heat exchanger provisions were added to section 603.4.4.1 as referenced in section 506.4.2. Spill-resistant pressure vacuum breakers are added to section 603.4.6.1 for lawn sprinkler and irrigation use. A new TIA was added in section 603.4.21 to address dialysis water

and pure water process systems. Language was added in section 603.4.22 to address plumbing fixture fitting standards for backflow protection. In section 604.1 which addresses piping materials, new provisions were added to simplify the section. A new Table 6-4 is referenced and adds a new matrix of approved water piping and where it may be used. A new section 604.14 is added to address non-metallic water heater flexible connectors. The reference to “soft solder” was removed in section 606.1.3. Under section 608.2, Excessive Water Pressure, new provisions were added to address pressure regulation in a building. Section 608.3 was amended to address thermal expansion and clarify where and how thermal expansion protection is to be provided. New language was adopted to not allow termination of a relief valve into a buildings crawl space in section 608.5. In section 609.10, air chamber devices for water hammer protection are eliminated. Clarification was added to section 610.1 to not allow maximum water velocities to be exceeded.

b. Oregon amendments to Chapter 6 include the following: Removing the exception in section 601.1 addressing fixtures that do not require water. Amend section 603.1 and 603.3.3 to remove certification requirements for backflow testers and only require testing upon installation. Local water purveyors under the health divisions authority determine the frequency of backflow testing. Retain the existing amendments in section 603.4.6.1 & 603.4.6.3 allowing double check valve assemblies for lawn sprinklers. Clarifying section 603.4.7 to allow exterior yard hydrants. Retain Oregon amendments for relief valve drains adding a new provision requiring a drain funnel if the valve is terminated at a floor drain. Create a new Oregon amendment allowing air testing of plastic piping in section 609.4. Retain the existing Oregon amendment in section 609.6.1, requiring tracer wire for under ground nonmetallic piping. Create a new Oregon amendment in section 609.10.1, requiring mechanical water hammer shock absorbers to be accessible. Remove all references to Appendix L. Add a reference to the Oregon structural code for the occupancy definition of “public” in foot note 6 of Table 6-5.

8. Chapter 7, Sanitary Drainage, model code changes were made to remove AHJ subjective language in several sections.

a. The following model code changes were made to Chapter 7: Changes were made in sections 701.1, 701.1.5, 701.2, and 707.1 to add and address stainless steel drainage piping. Changes were made to section 710.1 to clarify code requirements for fixtures located below the next upstream manhole cover. The provisions of section 710.13 were changed to allow macerating toilet systems in all public and private structures. Changes were made to section 714.4 to address installation of commercial food waste grinders. A new TIA was added to section 715.3 addressing trenchless sewers and IAPMO IS 26.

b. Oregon amendments were made to Chapter 7 as follows: Retain current amendment allowing the use of CPE for exterior storm drainage piping in section 701.1.6. Add a new code provision to foot note 8, Table 7-3 referencing the structural code for the definition of “Public Use.” Delete references to Appendix L. Delete section 704.3, addressing commercial kitchen sinks and dishwasher connections which may conflict with state health division rules. Retain the Oregon amendments to Table 7-5, allowing 2 fixture units on horizontal 1-1/2 inch drain piping and footnotes revisions as per current code. Delete the Oregon amendment allowing removable fixture traps as a cleanout equivalent and revert back to model code. Retain the Oregon

amendment in section 708.0 allowing 3 inch drainage piping to be at 1/8th in per foot grade. Retain current code requirements in section 710.14 for elevator pit drains. Create a new amendment to section 712.1 to allow air testing of plastic DWV piping. Create a new amendment to section 713.1 removing a reference to the model code section 101.4.1.3. Retain current amendment to section 718.1, which allows 3 inch building sewers to be run at 1/8th inch per foot grade. Retain current Oregon amendment in section 718.2, for tracer wire. Delete reference to appendix K & L in Table 7-8.

9. Chapter 8, Indirect Wastes, few changes were made to Chapter 8.

a. Model code changes were made as follows: In section 807.3, Exceptions (2), change the language to clarify that condensate waste may be disposed through regular DWV piping when adequately diluted. In section 811.7, allows case-by-case review of chemical waste disposal.

b. The following Oregon amendments were made: Retain the current amendment allowing indirect wastes connection for domestic dishwashers without the use of an air gap fitting in section 807.4. Remove the model code provisions addressing condensate waste pipe sizing and other standards in sections 814.0 through 814.3.

10. Chapter 9, Vents, subjective AHJ language was removed from the chapter and references to stainless steel DWV was added. An Alternate Method Ruling No. 07-1 was issued on December 14, 2007 on AAVs.

a. The following model code changes were also made: Section 903.2.4 was amended to reference the appropriate standards for copper DWV piping. Section 910.6 was amended to simply move the requirements for cleanouts for each vent in a combination waste and vent system to the beginning of the section.

b. Oregon amendment to Chapter 9 includes the following: Delete the model code provisions for bathroom horizontal wet venting in sections 908.4 through 908.4.3.

11. Chapter 10, Traps and Interceptors, several model code changes were made to Chapter 10. Most of them address grease interceptors. The code now contains provisions for sizing grease interceptors.

a. The following model code changes were made to Chapter 10: Additional language was added to section 1003.2, to make it clear that listed plastic trap adaptors may be used to connect listed metal tubing traps to drainage piping. Subjective language was altered in sections 1004.0, 1005.0, 1010.0 and 1011.0 for clarification. Sections 1014.0 through 1015.5 were amended to address new grease interceptor requirements.

b. The following Oregon amendments were made: Trap priming and venting provisions of section 1006.0, Table 10-1.1, sections 1007.0 through 1007.6 were retained as in current Oregon amendments. The provisions of section 1014.8 referencing appendix H were removed. A new Oregon amendment deleting sections 1017.0 through 1017.2 for oil and flammable liquid interceptors was adopted.

12. Chapter 11, Storm Drainage, many new Oregon amendments were made to Chapter 11.

a. The following model code changes were made to the chapter: Stainless steel drainage piping is addressed in sections 1101.3 & 1102.1.2. Section 1101.11.2, was completely rewritten in the 2006 UPC and allows combined roof drainage and overflow drainage piping systems. Scupper sizing provisions have been changed in section 1108.1(9), for simplification.

b. The following Oregon amendments have been adopted for Chapter 11: In section 1101.1 & 1101.1.1 provisions were amended to delete reference to one and two-family dwellings and add provisions for storm water disposal. New Oregon amendments were made in section 1101.2.1 to address combined sewers. Existing Oregon amendments were retained allowing short-turn fittings for interior storm drainage piping and reference CPE for exterior storm drainage piping under section 1101.3. New Oregon amendments were made adding sections 1101.3.1 through 1101.3.6 addressing storm drainage pipe and fittings. A new Oregon amendment was adopted in section 1101.4.1, addressing expansion for rain drain piping within a building. Existing Oregon amendments deleting section 1101.5 through 1101.5.6, were retained which address subsoil drains. New provisions were adopted to address storm and groundwater drainage in sections 1101.5 through 1101.5.3.4, addressing materials, tracer wire, subsoil drains, sumps, backwater valves, venting, and dry wells. New amendments were adopted to address catch basin specifications in sections 1101.10 through 1101.10.5. A new Oregon amendment was adopted to exempt cleanout requirements for residential rain leaders and conductors in section 1101.12.2. Existing Oregon amendments were retained deleting section 1102.2 through 1102.2.2, addressing leaders. A new Oregon amendment was added to clarify that fittings for exterior storm drainage and sewers are required to be long sweep fittings in section 1102.4.1. Existing Oregon amendment deleting the provisions of section 1102.5 through 1102.5.2 and 1104.0 through 1104.2 were retained and address subsoil drains and leaders. A new Oregon amendment was added to allow for air testing of plastic storm drainage piping in section 1109.2.2 & 1109.2.3. A new section was added addressing abandoned storm sewers in section 1110.0. Existing Oregon amendments deleting sizing of gutters and leaders were retained.

13. Chapter 12, Fuel Piping, was deleted in its entirety.

14. Chapter 13, Health Care Facilities and Medical Gas and Vacuum Systems, many changes were made to Chapter 13 to bring the chapter in line with the latest edition of the NFPA 99C standard. Oregon made several changes to remove potential conflicts with the Oregon adopted 2002 edition of the NFPA 99C and the model code changes in the 2006 UPC.

a. Model code changes include the following: A new section 1301 was added to make it clear that breathing air replenishment systems are not medical gas. Changes were made to section 1316.3, adding stainless steel piping to approve materials for level 1 vacuum. Changes were made to sections 1316.4 through 1316.6 addressing fittings including pressed joints. Changes were made to section 1318.2 & 1318.4 addressing installation of piping. New labeling provisions were added to section 1218.11. Provisions for threaded joints were removed from section 1319.1. Provisions regarding purge gas pressure, welded joints and flow were changed in section 1319.6. Source shutoff valve provisions were changed in sections 1320.5 & 1320.5.3.

Labeling provisions were changed in section 1313.1. Changes were made to section 1324.0 regarding alarms for medical gas and vacuum systems. Changes were made in the provisions for medical air in sections 1325.1 through 1325.3 and for medical vacuum in sections 1326.0 through 1326.3. Provisions were changed regarding testing in sections 1327.8.1 through 1327.11. All new language was added in sections 1329.0 through 1330.8 to address level 2 & 3 medical gas and vacuum systems.

b. Oregon amendments to Chapter 13 includes the following: Amending sections 1309.3 and 1310.6 to include nitrogen as a medical gas regulated under the chapter. Definitions were added to clarify medical gas and vacuum systems regulated under level 1, 2 & 3 in sections 1310.19 through 1310.30. Reference standards to the NFPA 99C have been changed to reflect the 2002 edition. Amendments were made to Table 13-1 to address the current minimum outlets and inlets required by the State Health Division for various patient rooms and other medical facility locations.

15. Chapter 14, Table 14-1, Plumbing Materials Standards. The entire table was revised to reference the most current standards available.

16. Chapter 15, Firestop Protection, only model code changes were made to Chapter 15 as follows: Remove subjective language from section 1501.1 and remove the reference to NFPA 5000 building code. Remove subjective AHJ language in section 1502.1. Remove subjective language in sections 1505.2 & 1506.2. Remove reference to the NFPA 5000 Building Code in section 1507.1.

17. Chapter 16, Reclaimed Water Systems, the chapter used to be in appendixes G and J. The following Oregon amendments have been made to the chapter: Delete Part 1, Gray Water Systems. Delete reference to gray water systems in the title and section 1614.0.

18. Appendix A, Recommended Rules for Sizing the Water Supply System, no changes were made to Appendix A.

19. Appendix D, Sizing Storm Water Drainage Systems, no changes were made to Appendix D.

20. Appendix E, Manufactured/Mobile Home Parks and Recreational Vehicle Parks, no model code changes were made to this appendix. Existing Oregon amendments were retained to delete fuel gas provisions. Also, new Oregon amendments were made to clarify some of the code language.

a. The following new Oregon amendments were created: Definitions in section E1 and E3 of “manufactured dwelling,” & “ manufactured dwelling lot,” were deleted because they are defined in statute. Sections E10 and E15 addressing location of lot drain and water service were deleted because they are obsolete. All of part D is deleted because it addresses mechanical code provisions. Sections E48 and E51 were deleted because they address the minimum number of plumbing fixtures required for recreational vehicle (RV) parks which is addressed in statute and rule. Sections E68 and E77 were deleted because they deal with RV hook ups for water and drainage and are no longer meeting industry standards. Sections E79 and E82 are deleted and

address RV sanitary disposal stations. Part M was deleted because it addresses RV fuel gas equipment. A table was added for reference only, which shows the number of plumbing fixtures for RV parks under administrative rule.

21. Appendix F, Firefighter Breathing Air Replenishment Systems, is not adopted because it is beyond the scope of the Oregon plumbing code.

22. Appendix G, Graywater Systems for Single-Family Dwellings, was moved to Chapter 16 in the model code and was not adopted because it may be beyond the scope of the Oregon plumbing code.

23. Appendix H, Recommended Procedures for Design, Construction, and Installation of Commercial Kitchen Grease Interceptors, was deleted from the model code.

24. Appendix I, Installation Standards, few changes were made to the installations standards.

a. New model code changes were made as follows: Installation standard 20 for CPVC Solvent Cemented Hot and Cold Water Distribution Systems was updated. In section 2.1.2, and exception is made for listed solvent cements which do not require a primer. In section 2.2.3.1, provisions were added to address single step solvent cements which require them to be yellow in color. In section 2.7.4, and 2.7.6 (Step 7), language addressing primer was also amended. Provisions addressing water hammer arrestors in 2.8 were removed. In section 2.9.2, provisions were added addressing protection of piping on the exterior of a building and include “protected by paint” for UV.

b. New Oregon amendments were made as follows: Installation standard 1A for Corrugated Polyethylene (CPE) and Fittings was increased to cover piping up to 60” in diameter. The previous code provisions only went up to 36” pipe. Also, changes were made to reference the larger diameter manufacturing standard ASTM F 2306. Installation standards 12 and 13 for gas yard piping and protectively coated gas pipe were deleted. Two new standards were added as model code changes for whirlpool spas and flexible PVC, which were deleted because they are beyond the scope of the Oregon plumbing code. The existing Oregon amendment adopting Installation standard 29 for corrugated metal storm sewers was retained.

25. Appendix L, Alternate Plumbing Systems, was deleted because alternate methods are addressed in statute in ORS 455.060.

26. Appendix M, Rainwater Harvesting, the requirements of appendix M are included as an alternate method statewide. This means that it is not adopted as code and is a voluntary installation. However, if a person chooses to install a rainwater harvesting system appendix M must be used statewide. This is the first state code provision created to address rainwater harvesting. It is intended to create some uniformity throughout the state. The appendix addresses both potable and non-potable use of rainwater in commercial or residential applications. The division is working to develop a more comprehensive reference to non-potable water reuse in the future. We are hoping to address various non-potable water supplies and potential recycling methods.