



# **SPS 381 Definitions & Standards 2023 Edition**

**6 Continuing Education Hours  
Course Identification # 23478**

This course has been approved for the following credential types: Commercial Plumbing Inspector Certification; Cross Connection Control Tester Registration; Journeyman Plumber License; Journeyman Plumber-Restricted Appliance License; Journeyman Plumber-Restricted Service License; Master Plumber License; Master Plumber-Restricted Service License; Master Plumber Restricted Appliance License; UDC-Plumbing Inspector Certification; Utility Contractor License

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## SPS 381

### Definitions and Standards

**SPS 381.01 Definitions.** In chs. SPS 381 to 387, except as otherwise specifically defined:

- (1)** "Accepted engineering practice" means a specification, standard, guideline or procedure in the field of plumbing or related thereto, generally recognized and accepted as authoritative documented through national standards or specifications.
- (2)** "Accessible" when applied to a fixture, appliance, pipe, fitting, valve or equipment, means having access for maintenance, but which first may require the removal of an access panel or similar obstruction.
- (2m)** "Accessory building" means a detached building, not used as a dwelling unit but is incidental to that of the dwelling.
- (2r)** "Adult day care center" or "ADCC" has the meaning given in s. DHS 105.14 (1) (b) 5.
- (3)** "Aerobic treatment component" means a unit for the treatment of wastewater that utilizes the principle of oxidation for biological decomposition.
- (4)** "Agent" means an individual or agency recognized by the department to act on the department's behalf relative to a specific activity or function.
- (4m)** "Air admittance valve" or "AAV" means a device designed to allow air to enter the drainage system to balance the pressure and prevent siphonage of the water trap when negative pressure develops in the system.
- (5)** "Air-break" means a piping arrangement for a drain system where the wastes from a fixture, appliance, appurtenance or device discharge by means of indirect or local waste piping terminating in a receptor at a point below the flood level rim of the receptor and above the outlet of the trap serving the receptor.
- (6)** "Air-gap, drain system" means the unobstructed vertical distance through the free atmosphere between the outlet of indirect or local waste piping and the flood level rim of the receptor into which it discharges.
- (7)** "Air-gap, water supply system" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank or plumbing fixture and the flood level rim or spill level of the receptacle.
- (7e)** "Alternate plumbing system" means a type of plumbing system designed in such a manner that valid and reliable data shall demonstrate to the department that the plumbing system is in compliance with the intent of chs. SPS 381 to 384.
- (7m)** "Ambulatory surgery center" means a health care facility that accepts federal funding in accordance with 42 CFR 416 of the federal register for health care finance and where 4 or more individuals that undergo a surgical procedure for which federal reimbursement is based.

**(8)** "Anaerobic treatment component" means a unit for the treatment of wastewater which utilizes molecular oxygen in the absence of free oxygen for biological respiration and decomposition.

**(9)** "Approved" means acceptance documented in writing by the department.

**(10)** "Appurtenance" means a manufactured device or prefabricated assembly of component parts which is an adjunct to a plumbing product or plumbing system.

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## Exam Questions

1. ' \_\_\_\_\_ ' means a detached building, not used as a dwelling unit but is incidental to that of the dwelling.
  - a. Aerobic Treatment center
  - b. Accepted Engineering Practice
  - c. Accessory Building
  - d. Agent
2. ' \_\_\_\_\_ ' means a unit for the treatment of wastewater that utilizes the principle of oxidation for biological decomposition.
  - a. Accessory building
  - b. Aerobic treatment component
  - c. Air-break
  - d. Anaerobic treatment component
3. ' \_\_\_\_\_ ' means the unobstructed vertical distance through the free atmosphere between the outlet of indirect or local waste piping and the flood level rim of the receptor into which it discharges.
  - a. Air-break
  - b. Air-gap, drain system
  - c. Air-gap, water supply system
  - d. Anaerobic treatment component
4. 'Ambulatory surgery center' means a health care facility that accepts federal funding in accordance with 42 CFR 416 of the federal register for health care finance and where \_\_\_\_\_ or \_\_\_\_\_ more individuals that undergo a surgical procedure for which federal reimbursement is based.
  - a. 2
  - b. 3
  - c. 4
  - d. 5

5. ' \_\_\_\_\_ ' means a manufactured device or prefabricated assembly of component parts which is an adjunct to a plumbing product or plumbing system.

- Accessible
- Agent
- Approved
- Appurtenance

6. True or false? 'Anaerobic treatment component' means a unit for the treatment of wastewater which utilizes molecular oxygen in the presence of free oxygen for biological respiration and decomposition.

- True
- False

7. ' \_\_\_\_\_ ' means acceptance documented in writing by the department.

- Accepted
- Acceptable
- Approved
- Acknowledged

8. True or false? 'Appurtenance' means a manufactured device or prefabricated assembly of component parts which is an adjunct to a plumbing product or plumbing system.

- True
- False

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**(11)** "Area drain" means a receptor designed to collect storm waters from an open area.

**(12)** "Areawide water quality management plan" means those plans prepared by the department of natural resources, including those plans prepared by agencies designated by the governor under the authority of ss. 281.11, 281.12 (1), 281.15, and 283.83, Stats., for the purpose of managing, protecting and enhancing groundwater and surface water of the state.

**Note:** See ch. SPS 382 Appendix for a list of water quality management agencies and their addresses.

**(13)** "Aspirator" means a fitting or device supplied with water or other fluid under positive pressure which passes through an integral orifice or constriction causing a vacuum.

**(13e)** "Atmospheric type vacuum breaker" means a type of cross connection control device where the flow of water into the device causes a float to close an air inlet port and when the flow of water stops the float falls and forms a check valve against back siphonage and at the same time opens the air inlet port to allow air to enter and satisfy the vacuum.

**(13m)** "At-risk" means a POWTS serving a new public or commercial facility that may produce influent to a POWTS treatment or dispersal component, consisting in part of in situ soil in excess of the quantities specified in s. SPS 383.44 (2). This definition does not include existing facilities where the influent has been tested and determined to produce influent below the quantities specified in s. SPS 383.44 (2) or facilities that are known to produce influent exceeding the influent quantities.

(14) "Autopsy table" means a fixture or table used for post- mortem examination.

(15) "Automatic fire sprinkler system" has the meaning specified under s. 145.01 (2), Stats.

**Note:** Section 145.01 (2), Stats., reads:

"Automatic fire sprinkler system", for fire protection purposes, means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the supply side of an approved gate valve located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

(16) "Backflow" means the unwanted reverse flow of liquids, solids or gases.

(17) "Back pressure" means a pressure greater than the supply pressure that may cause backflow.

(17e) "Backflow preventer" means any generic backflow prevention method, device, or assembly.

(18) "Backflow preventer with an intermediate atmospheric vent" means a cross connection control device having 2 independently operating check valves separated by an intermediate chamber with a means for automatically venting it to the atmosphere. This can be installed in the horizontal, vertical up, or vertical down orientations. The check valve are force-loaded to a normally closed position and the venting means is force-loaded to a normally open position.

(19) "Back siphonage" means the creation of a backflow as a result of negative pressure.

(21) "Backwater valve" means a device designed to prevent the reverse flow of wastewater in a drain system.

(22) "Ballcock" means a water supply valve opened or closed by means of a float or similar device used to supply water to a tank.

(22m) "Barometric loop" means a continuous section of supply piping that abruptly rises to a height of approximately 35 feet before returning to the originating level. Barometric loop is used to protect against back-siphonage but not against back pressure.

(23) "Bathroom group" means a water closet, lavatory and a bathtub or shower located together on the same floor level.

(24) "Battery of fixtures" means any group of 2 or more fixtures that discharge into the same horizontal branch drain.

(25) "Bedpan sterilizer" means a fixture used for sterilizing bedpans or urinals by direct application of steam, boiling water or chemicals.

**(26)** “Bedpan washer and sanitizer” means a fixture designed to wash bedpans and to flush the contents into the sanitary drain system and which may also provide for disinfecting utensils by scalding with steam or hot water.

**(27)** “Bedpan washer hose” means a device supplied with hot or cold water, or both, and located adjacent to a water closet or clinical sink to be used for cleansing bedpans.

**(28)** “Bedrock” means rock that is exposed at the earth’s surface or underlies soil material and includes:

- (a) Weathered in-place consolidated material, larger than 2 mm in size and greater than 50% by volume; and
- (b) Weakly consolidated sandstone at the point of increased resistance to penetration of a knife blade.

**(29)** “Bell” means the portion of a pipe that is enlarged to receive the end of another pipe of the same diameter for the purpose of making a joint.

**(30)** “Bench mark” or “BM” means a permanently established point, the elevation of which is assumed or known, which serves as a vertical reference point, and which may also serve as a horizontal reference point.

**(30m)** “Bidet sprayer” means a component of a personal hygiene device intended for genital and perineal cleanliness and intended for installation in water closets and water closet seats.

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## Exam Questions

9. ‘\_\_\_\_\_’ means a fitting or device supplied with water or other fluid under positive pressure which passes through an integral orifice or constriction causing a vacuum.

- a. Area drain
- b. Areawide water quality management plan
- c. Aspirator
- d. Automatic fire sprinkler system

10. ‘Autopsy table’ means a fixture or table used for post-mortem examination.

- a. True
- b. False

11. ‘Backflow’ means the \_\_\_\_\_ reverse flow of liquids, solids or gases.

- a. Continuous
- b. Sporadic
- c. Wanted
- d. Unwanted

12. ‘Backflow preventer with intermediate atmospheric vent’ means a type of cross connection control device which consists of \_\_\_\_\_ independently acting check valves.

- a. 2
- b. 3
- c. 4
- d. 5

13. True or false? ‘Back siphonage’ means the creation of a backflow as a result of positive pressure.

- a. True
- b. False

14.

‘B

athroom group’ means a water closet, lavatory and a bathtub or shower located together \_\_\_\_\_.

- a. Within one floor level
- b. Within two floor levels
- c. On a variety of floor levels
- d. On the same floor level

15. ‘\_\_\_\_\_’ means a fixture used for sterilizing bedpans or urinals by direct application of steam, boiling water or chemicals.

- a. Ballcock
- b. Bedpan sterilizer
- c. Bedpan washer and sanitizer
- d. Bedpan washer hose

16. True or False? “Bidet sprayer” means a component of a personal hygiene device intended for genital and perineal cleanliness and intended for installation in water closets and water closet seats.

- a. True
- b. False

17. ‘\_\_\_\_\_’ means the portion of a pipe that is enlarged to receive the end of another pipe of the same diameter for the purpose of making a joint.

- a. Bedpan washer hose
- b. Bench mark
- c. Bell
- d. Bulb

18. ‘Bench mark’ can be abbreviated by \_\_\_\_.

- a. BM
- b. BEM
- c. BMK
- d. BE

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(31) “Blackwater” means wastewater contaminated by human body waste, toilet paper and any other material intended to be deposited in a receptor designed to receive urine or feces.

(32) “BOD<sub>5</sub>” or “biochemical oxygen demand 5 day” means a measure of the amount of biodegradable organic matter in water.

(33) “Boiler blow-off basin” means a vessel designed to receive the discharge from a boiler blow-off outlet and to cool the discharge to a temperature that permits safe entry into the drain system.

(34) "Branch" means a part of a piping system other than a riser, main or stack.

(35) "Branch interval" means a vertical measurement of distance, 8 feet or more in length, between the connections of horizontal branches to a drainage stack. **Note:** See ch. SPS 382 Appendix for explanatory material.

(35m) "Branch tailpiece" means a fitting or combination of fittings consisting of a combination tail piece and a wye.

(36) "Branch vent" means a vent serving more than one fixture drain.

(37) "B.T.U." means British Thermal Units.

(38) "Building" means a structure for support, shelter or enclosure of persons or property.

(39) "Building drain" means horizontal piping within or under the fully enclosed portion of a building, installed below the lowest fixture or the lowest floor level from which fixtures can drain by gravity to the building sewer.

(40) "Building drain branch" means a fixture drain which is individually connected to a building drain and is vented by means of a combination drain and vent system.

(41) "Building drain, sanitary" means a building drain which conveys wastewater consisting in part of domestic wastewater.

(42) "Building drain, storm" means a building drain which conveys storm water, clear water, or both.

(43) "Building permit" means any written permission from a municipality that allows construction to commence on a structure.

(44) "Building sewer" means that part of the drain system not within or under the fully enclosed portion of a building which conveys its discharge to a public sewer, private interceptor main sewer, private onsite wastewater treatment system, or other point of discharge or dispersal.

(45) "Building sewer, sanitary" means a building sewer which conveys wastewater consisting in part of domestic wastewater.

(46) "Building sewer, storm" means a building sewer which conveys storm water, clear water, or both.

(47) "Building subdrain" means the horizontal portion of a drain system which does not flow by gravity to the building sewer.

(48) "Building subdrain branch" means a fixture drain which is individually connected to a building subdrain and is vented by means of a combination drain and vent system.

**(49)** "Burr" means a roughness or metal protruding from the walls of a pipe usually as the result of cutting the pipe.

**(50)** "Business establishment" means any industrial or commercial organization or enterprise operated for profit, including but not limited to a proprietorship, partnership, firm, business trust, joint venture, syndicate, corporation or association.

**(50c)** "Campground or recreational vehicle park drain system, sanitary" means all piping or any portion thereof, within public or private premises, that conveys domestic wastewater from a campground or recreational vehicle park.

**(50e)** "Campground or recreational vehicle park drain system, storm" means all plumbing or any portion thereof, within public or private premises, that conveys any of the following:

- a. Storm water from a campground or recreational vehicle park.
- b. Groundwater from a campground or recreational vehicle park.
- c. Clear water from a campground or recreational vehicle park.

**(50h)** "Campground or recreational vehicle park water sup- ply system" means the piping through which potable water is conveyed to points of usages intended to serve sites in a campground or recreational vehicle park.

**(50l)** "Camping trailer" has the definition under s. 340.01 (6m), Stats.

**(50m)** "Camping unit" has the meaning given in s. SPS 327.08 (9).

**(50r)** "Camping unit transfer tank" means a type of portable container used to collect and hold wastewater discharges generated by an individual camping unit.

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## Exam Questions

19. '\_\_\_\_\_' means wastewater contaminated by human body waste, toilet paper and any other material intended to be deposited in a receptor designed to receive urine or feces.

- a. Blackwater
- b. BOD
- c. B.T.U.
- d. Burr

20. 'Biochemical oxygen demand 5 day' can be abbreviated by \_\_\_\_.

- a. Bio O5
- b. BOD
- c. BODD
- d. BIOS

21. ‘Branch interval’ means a vertical measurement of distance, \_\_\_\_ feet or more in length, between the connections of horizontal branches to a drainage stack.

- 5
- 6
- 7
- 8

22. ‘\_\_\_\_\_’ means a vent serving more than one fixture drain.

- Boiler blow-off basin
- Branch tailpiece
- Branch vent
- Building subdrain branch

23. ‘British Thermal Units’ can be abbreviated by \_\_\_\_.

- BRTU
- BTUS
- U.K. T.U.
- B.T.U.

24. ‘Building’ means \_\_\_\_\_.  
a. A structure for support  
b. Shelter  
c. Enclosure of persons or property  
d. All of the above

25. True or false? ‘Building permit’ means any written permission from a municipality that allows construction to commence on a structure.  
a. True  
b. False

26. ‘Building sewer, storm’ means a building sewer which conveys wastewater consisting in part of domestic wastewater.  
a. True  
b. False

27. ‘Building subdrain’ means the \_\_\_\_\_ portion of a drain system which does not flow by gravity to the building sewer.  
a. Vertical  
b. Horizontal  
c. Top  
d. Bottom

28. ‘Business establishment’ means any industrial or commercial organization or enterprise operated for profit, including but not limited to a proprietorship, partnership, and \_\_\_\_\_.  
a. Firm  
b. Business trust  
c. Joint venture  
d. All of the above

29. ‘\_\_\_\_\_’ means a type of portable container used to collect and hold wastewater discharges generated by an individual camping unit.

- Camping unit transfer tank
- Camping trailer
- Business Establishment
- None of the above

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(51) “Campsite receptor” means the vertical drain piping and trap combination that receives wastewater from recreational vehicles.

(52) “Catch basin” means a watertight receptacle built to arrest sediment of surface, subsoil or other waste drainage, and to retain oily or greasy wastes, so as to prevent their entrance into the building drain or building sewer.

(53) “Cesspool” means an excavation which receives domestic wastewater by means of a drain system without pretreatment of the wastewater and retains the organic matter and solids permitting the liquids to seep from the excavation.

(54) “Circuit vent” means a method of venting 2 to 8 traps or trapped fixtures without providing an individual vent for each trap or fixture.

(55) “Cleanout” means an accessible opening in a drain system used for the removal of obstructions.

(56) “Clear water” means wastewater other than storm water, having no impurities or where impurities are below a minimum concentration considered harmful by the department, including but not limited to noncontact cooling water and condensate drainage from refrigeration compressors and air conditioning equipment, drainage of water used for equipment chilling purposes and cooled condensate from steam heating systems or other equipment.

(56e) “Clinic sink” means a fixture having an integral trap and a flushing rim so that water cleanses the interior surface. **Note:** This fixture has flushing and cleansing characteristics similar to a water closet. A clinic sink may also be referred to as a clinic service sink, a bedpan washing sink or a flushing rim sink.

(57) “Cold water” means water at a temperature less than 85°F.

(58) “Combination fixture” means a fixture combining one sink and laundry tray or a 2- or 3-compartment sink or laundry tray in one unit.

(59) “Combination drain and vent system” means a specially designed system of drain piping embodying the wet venting of one or more fixtures by means of a common drain and vent pipe adequately sized to provide free movement of air in the piping.

(59m) “Combination private water main” means a private water main that serves a fire protection system and any number of plumbing fixtures.

**(59s)** "Combination water service" means a water service that serves a fire protection system and any number of plumbing fixtures.

**(60)** "Common vent" means a branch vent connecting at or downstream from the junction of 2 fixture drains and serving as a vent for those fixture drains.

**(60e)** "Community-based residential facility" has the meaning specified under s. 50.01 (1g), Stats.

**(61)** "Conductor" means a drainpipe inside the building which conveys storm water from a roof to the storm drain or storm sewer.

**(61m)** "Containment" means the installation of a cross connection control method, device or assembly to prohibit the flow of contamination from a building or facility into a water supply system.

**(62)** "Contaminant load" means the concentrations of substances in a wastewater stream.

**(62e)** "Containment tank" means a device with a valved outlet designed to temporarily hold potentially hazardous wastewater for evaluation before discharging to a POWTS or municipal sewer.

**(62m)** "Continuous pressure" means a pressure greater than atmospheric and exerted for a period of more than 12 continuous hours.

**(62s)** "Conveyance system" means that portion of a drain system that consists of a series of pipes that transport water from one area to another without providing detention.

**(63)** "Corporation cock" means a valve:

- (a) Installed in a private water main or a water service at or near the connection to a public water main; or
- (b) Installed in the side of a forced main sewer to which a forced building sewer is connected.

**(64)** "Critical level" means the reference point on a vacuum breaker that must be submerged before backflow can occur. When the critical level is not indicated on the vacuum breaker, the bottom of the vacuum breaker shall be considered the critical level.

**(65)** "Cross connection" means a connection or potential connection between any part of a water supply system and another environment containing substances in a manner that, under any circumstances, would allow the substances to enter the water supply system by means of back siphonage or back pressure.

**(65m)** "Cross connection control assembly" means a mechanical backflow preventer used to prevent backflow into a water supply system that requires shut-off valves and a test cock or test cocks to meet any specific standard, such as a reduced pressure principle backflow preventer, a double check backflow preventer, a pressure vacuum breaker, or a spill resistant vacuum breaker.

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## Exam Questions

30. 'Campsite receptor' means the \_\_\_\_\_ drain piping and trap combination that receives wastewater from recreational vehicles.

- Horizontal
- Vertical
- Perpendicular
- Parallel

31. '\_\_\_\_\_' means an excavation which receives domestic wastewater by means of a drain system without pretreatment of the wastewater and retains the organic matter and solids permitting the liquids to seep from the excavation.

- Cesspool
- Catch basin
- Contaminant load
- Cleanout

32. 'Circuit vent' means a method of venting \_\_\_ to \_\_\_ traps or trapped fixtures without providing an individual vent for each trap or fixture.

- 3, 6
- 4, 6
- 2, 8
- 6, 9

33. 'Cold water' means water at a temperature less than \_\_\_°F.

- 75
- 75
- 80
- 85

34. True or false? 'Combination water service' means a water service that serves a fire protection system and any number of plumbing fixtures.

- True
- False

35. "Conductor" means a drainpipe inside the building which conveys storm water from a \_\_\_\_\_ to the storm drain or storm sewer.

- Street
- Sink
- Roof
- None of the above

36. 'Common vent' means a branch vent connecting at or downstream from the junction of \_\_\_ fixture drains and serving as a vent for those fixture drains.

- 2
- 3
- 4
- 5

37. ‘\_\_\_\_\_’ means a drain pipe inside the building which conveys storm water from a roof to the storm drain or storm sewer.

- a. Corporation cock
- b. Common vent
- c. Conductor
- d. Cross connection

38. ‘\_\_\_\_\_’ means the concentrations of substances in a wastewater stream.

- a. Contaminant
- b. Contaminant load
- c. Contaminant tank
- d. All of the above

39. ‘Continuous pressure’ means a pressure greater than atmospheric and exerted for a period of more than \_\_\_\_\_ continuous hours.

- a. 8
- b. 9
- c. 10
- d. 12

40. ‘Corporation cock’ means a valve \_\_\_\_\_.

- a. Installed in a private water main or a water service
- b. Installed at or near the connection to a public water main
- c. Installed in the side of a forced main sewer to which a forced building sewer is connected.
- d. All of the above

41. True or false? ‘Critical level’ means the reference point on a vacuum breaker that must be submerged before backflow can occur.

- a. True
- b. False

42. ‘\_\_\_\_\_’ means a testable backflow preventer consisting of an arrangement of components.

- a. Circuit vent
- b. Combination drain and vent system
- c. Cross connection control assembly
- d. Corporation cock

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**(66)** “Cross connection control device” means a mechanical backflow preventer used to prevent backflow into a water supply system that does not require a shut-off valve or test cock to meet any specific standard, such as an atmospheric type vacuum breaker, a hose connection vacuum breaker, or a backflow preventer with an atmospheric vent.

**(66m)** “Cross connection control method” means a mechanism used to prevent backflow into a water supply system other than a backflow prevention device or backflow prevention assembly, such as an air gap, vacuum breaker tee, or barometric loop.

**(67)** "Curb stop" means a valve placed in a water service or a private water main, usually near the lot line.

**(68)** "Dead end" means a branch leading from a drain pipe, vent pipe, building drain or building sewer and terminating at a developed length of 2 feet or more by means of a plug, cap or other closed fitting.

**(69)** "Department" means the department of safety and professional services.

**(70)** "Design wastewater flow" means 150% of the estimated wastewater flow generated by a dwelling, building or facility.

**(70m)** "Detention" means the collection and temporary storage of water for subsequent gradual discharge.

**(71)** "Determination of failure" has the meaning specified under s. 145.245 (1) (a), Stats.

**(72)** "Developed length" means the length of pipe line measured along the centerline of the pipe and fittings.

**(72e)** "Dfu" means drainage fixture unit.

**(73)** "Diameter" means in reference to a pipe the nominal inside diameter of the pipe.

**(73e)** "Dishwasher, commercial-type" or "dishwashing machine, commercial-type" means a machine or appliance that is manufactured and marketed for a use other than residential that mechanically washes, rinses, and sanitizes dishes or utensils and discharges to the plumbing drainage system.

**(73m)** "Dishwasher, residential-type" or "Dishwashing machine, residential-type" means a machine or appliance manufactured and marketed for residential use that mechanically washes, rinses, and sanitizes dishes or utensils and discharges to the plumbing drainage system.

**(73s)** "Disinfection" means the process of killing or inactivating microorganisms, particularly pathogens.

**(74)** "Disinfection unit" means a type of POWTS treatment component, excluding a soil-based POWTS treatment component, that utilizes a chemical or photoelectric process to reduce the wastewater fecal coliform contaminant load.

**(75)** "Dispersal zone" means a dimensional volume of in situ soil that receives wastewater for treatment or distributes final effluent for dispersal.

**(76)** "Distribution cell" means a dimensional zone that is part of a POWTS treatment or dispersal component where wastewater is disseminated into in situ soil or engineered soil.

**(77)** "Documented data" means data which is developed in accordance with scientifically valid analytical protocols including field trials where appropriate, is subjected to peer review, results from more than one study, and consistent with other credible research.

**(78)** "Domestic wastewater" means the type of wastewater, not including storm water, normally discharged from or similar to that discharged from plumbing fixtures, appliances and devices including, but not limited to sanitary, bath, laundry, dishwashing, garbage disposal and cleaning wastewaters.

**(79)** "Double check backflow prevention assembly" means a cross connection control assembly consisting of 2 independently acting check valves, internally force-loaded to a normally closed position, 2 tightly closing shut-off valves that are properly located, and test cocks that are properly located.

**(80)** "Double check detector fire protection backflow preventer-assembly" means an assembly serving a fire protection system and consisting of 2 independently acting check valves, internally forced loaded to a normally closed position, 2 tightly closing shut-off valves, and properly located test cocks which also includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly.

**(80m)** "Double check fire protection backflow prevention assembly" means an assembly serving a fire protection system and consisting of 2 independently acting check valves, internally forced loaded to a normally closed position, 2 tightly closing shut-off valves, and properly located test cocks. The term "double check valve backflow preventer for fire protection systems" has the same meaning as double check fire protection backflow prevention assembly.

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## Exam Questions

43. 'Curb stop' means a valve placed in a water service or a private water main, usually far away from the lot line.

- a. True
- b. False

44. 'Dead end' means a branch leading from a drain pipe, vent pipe, building drain or building sewer and terminating at a developed length of \_\_\_\_ feet or more by means of a plug, cap or other closed fitting.

- a. 2
- b. 3
- c. 4
- d. 5

45. 'Design wastewater flow' means \_\_\_\_% of the estimated wastewater flow generated by a dwelling, building or facility.

- a. 95
- b. 100
- c. 125
- d. 150

46. 'Detention' means the collection and \_\_\_\_\_ storage of water for subsequent gradual discharge.

- a. Permanent
- b. Temporary
- c. Long-term
- d. Stable

47. 'Developed length' means the length of pipe line measured along the \_\_\_\_\_ of the pipe and fittings.

- a. Edge
- b. Sides
- c. Centerline
- d. All of the above

48. True or false? 'Dfu' means drainage fixture unit.

- a. True
- b. False

49. " \_\_\_\_\_ " means the process of killing or inactivating microorganisms, particularly pathogens.

- a. Disinfection
- b. Disease
- c. Detergent
- d. None of the above

50. ' \_\_\_\_\_ ' means a dimensional volume of in situ soil that receives wastewater for treatment or distributes final effluent for dispersal.

- a. Dimension region
- b. Dispersal zone
- c. Distribution cell
- d. Double check backflow prevention assembly

51. True or false? The term 'double check valve backflow preventer' cannot be used interchangeably with 'double check backflow prevention assembly'.

- a. True
- b. False

52. ' \_\_\_\_\_ ' means a dimensional zone that is part of a POWTS treatment or dispersal component where wastewater is disseminated into in situ soil or engineered soil.

- a. Documented data
- b. Distribution cell
- c. Domestic wastewater
- d. Double check backwater

53. 'Double check fire protection backflow prevention assembly' means an assembly serving a fire protection system and consisting of \_\_\_\_\_ independently acting check valves.

- a. 2
- b. 3
- c. 4
- d. 5

**(82)** "Drain system" includes all the piping or any portion of the piping within public or private premises which conveys waste- water to a legal point of disposal, but does not include the mains of public sewer systems or a private onsite wastewater treatment system or public sewage treatment or disposal plant.

**(82e)** "Dual check backflow preventer wall hydrant-freeze resistant type" means a type of hose bibb that provides protection of the potable water supply from contamination due to back siphonage or backpressure without damage to the device due to freezing, and is field testable to verify protection under the high hazard conditions present at a hose threaded outlet.

**(82m)** "Dual check valve type with atmospheric port back- flow preventer" has the same meaning as specified in sub. (18).

**(83)** "Dwelling" means a structure, or that part of a structure, which is used or intended to be used as a home, residence or sleeping place by one person or by 2 or more persons maintaining a common household, to the exclusion of all others.

**(84)** "Effluent" means liquid discharged from a process, device, appurtenance or piping system.

**(85)** "Ejector" means an automatically operated device to elevate wastewater by the use of air under higher than atmospheric pressure.

**(86)** "Elevation" or "EL" means the vertical distance from the datum to a point under investigation.

**(87)** "Enforcement standard" or "ES" has the meaning specified under s. 160.01 (2), Stats.

**(88)** "Engineered soil" means a mineral product that is equivalent to in situ soil for which treatment capability has been credited under Table 383.44-3, or superior to in situ soil in its ability to treat or disperse domestic wastewater from a POWTS.

**(89)** "Engineered system" means a system designed to meet the intent of the code but not the enumerated specifications of the state plumbing code.

**(90)** "Estimated wastewater flow" means the typical quantity of domestic wastewater generated daily by a dwelling, building or facility.

**(90e)** "Experimental plumbing system" has the same meaning as experimental system as specified in sub. (9)

**(90m)** "Exam sink" means a plumbing fixture used for hand washing in health care and related facilities.

**Note:** An exam sink may also be referred to as a treatment sink.

**(91)** "Experimental system" means a type of plumbing system from which valid and reliable data are being sought to demonstrate compliance with the intent of chs. SPS 382 to 384.

**(92)** "Failing private onsite wastewater treatment system" has the meaning specified under s. 145.01 (4m), Stats.

**(93)** "Farm" means a parcel of 35 or more acres of contiguous land that is devoted primarily to agricultural use, as defined under s. 91.01 (2), Stats.

**(93m)** "Fats, oil, and grease" and "FOG" mean organic polar compounds derived from vegetable, plant, or animal sources that are composed of long chain triglycerides that are insoluble in water. Fats are generally solid particles, oils are usually liquid at room temperature, and grease is usually solid at room temperature.

**(94)** "Faucet" means a valve end of a water pipe by means of which water can be drawn from or held within the pipe.

**(95)** "Final effluent" means the effluent from the last POWTS treatment component.

**(96)** "Fixture drain" means the drain from a fixture to a junction with another drain pipe.

**(97)** "Fixture supply" means that portion of a water distribution system serving one plumbing fixture, appliance or piece of equipment.

**(98)** "Fixture supply connector" means that portion of water supply piping which connects a plumbing fixture, appliance or a piece of equipment to the water distribution system.

**(99)** "Fixture unit, drainage" or "dfu" means a measure of the probable discharge into the drain system by various types of plumbing fixtures. The drainage fixture unit value for a particular fixture depends on its volume rate of drainage discharge, on the time duration of a single drainage operation, and on the average time between successive operations.

**(100)** "Fixture unit, supply" or "sfu" means a measure of the probable hydraulic demand on the water supply by various types of plumbing fixtures.

**Note:** The supply fixture unit value for a particular fixture depends on its volume rate of supply, on the time duration of a single supply operation, and on the average time between successive operations.

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## Exam Questions

54. \_\_\_\_\_ ' means any pipe that carries wastewater or water-borne wastes.

- a. Drain
- b. Drain system
- c. Drain apparatus
- d. Dwelling

55. ' \_\_\_\_\_ ' means liquid discharged from a process, device, appurtenance or piping system.

- a. Dwelling
- b. Effluent
- c. Ejector
- d. Elevation

56. ‘Elevation’ can be abbreviated with \_\_\_\_.

- a. EN
- b. ELEV
- c. EL
- d. EVT

57. ‘Enforcement standard’ can be abbreviated with \_\_\_\_.

- a. ENS
- b. EFST
- c. EN
- d. ES

58. ‘\_\_\_\_\_’ means the typical quantity of domestic wastewater generated daily by a dwelling, building or facility.

- a. Engineered soil
- b. Engineered system
- c. Estimated wastewater flow
- d. Experimental plumbing system

59. “\_\_\_\_, \_\_\_\_, and \_\_\_\_ or ‘FOG’ means organic polar compounds derived from vegetable, plant, or animal sources that are composed of long chain triglycerides that are insoluble in water.

- a. Fat, Oil, and Garbage
- b. Food, Oil, and Grease
- c. Food, Organisms, and Garbage
- d. Fat, Oil and Grease

60. ‘Farm’ means a parcel of \_\_\_\_\_ or more acres of contiguous land that is devoted primarily to agricultural use, as defined under s. 91.01 (2), Stats.

- a. 20
- b. 25
- c. 30
- d. 35

61. ‘\_\_\_\_\_’ means a valve end of a water pipe by means of which water can be drawn from or held within the pipe.

- a. Exam sink
- b. Faucet
- c. Final effluent
- d. Fixture drain

62. ‘\_\_\_\_\_’ means that portion of water supply piping which connects a plumbing fixture, appliance or a piece of equipment to the water distribution system.

- a. Fixture supply connector
- b. Fixture unit, drainage
- c. Fixture unit, supply
- d. Failing private onsite wastewater treatment system

63. ‘Sfu’ means ‘fixture unit, supply’.

- a. True
- b. False

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**(101)** “Floodfringe” has the meaning specified under s. NR 116.03 (14).

**(102)** “Flood level rim” means the edge of the receptacle from which water overflows.

**(103)** “Floodplain” has the meaning specified under s. NR 116.03 (16).

**(104)** “Floodway” has the meaning specified under s. NR 116.03 (22).

**(105)** “Floor sink” means a receptor for the discharge from indirect or local waste piping installed with its flood level rim even with the surrounding floor.

**(106)** “Flow” means the volumetric measure of a liquid stream in a specified time.

**(107)** “Flushometer valve” means a device which discharges a predetermined quantity of water to fixtures for flushing purposes and is closed by direct water pressure.

**(108)** “Flush valve” means a device located at the bottom of a tank for flushing water closets and similar fixtures.

**(108m)** “Foundation drain” means a subsoil drain that serves the area of the foundation of a building.

**(108s)** “Freeze resistant sanitary yard hydrant with backflow protection” means a device, typically installed with a portion below ground surface, to supply potable water without danger of damage to the device due to freezing and to provide protection of the potable water supply and groundwater from contamination due to back-siphonage or back-pressure.

**(109)** “Garage, private” means a building or part of a building used for the storage of vehicles or other purposes, by a family or less than 3 persons not of the same family and which is not available for public use.

**(110)** “Garage, public” means a building or part of a building which accommodates or houses self-propelled land, air or water vehicles for 3 or more persons not of the same family.

**(111)** “Governmental unit” has the meaning specified under s. 145.01 (5), Stats.

**(112)** “Graywater” means wastewater contaminated by waste materials, exclusive of urine, feces or industrial waste, deposited into plumbing drain systems.

**(113)** “Grease interceptor” means a receptacle designed to intercept and retain or remove grease or fatty substances.

**(114)** “Groundwater” has the meaning specified under s. 160.01 (4), Stats.

**(115)** “Hand-held shower” means a hose and a hand-held discharge piece such as a shower head or spray connecting to a fixture fitting.

**(116)** “Health care facility” means a hospital, nursing home, community-based residential facility, or ambulatory surgery center.

**(117)** “Health care plumbing appliance” means a plumbing appliance used in health care facilities and health care related facilities, the function of which involves a potential for exposure to infectious wastes. Examples of health care plumbing appliances include autoclaves, dialysis units, endoscope reprocessors, sterilizers, surgical suction systems, therapeutic tubs, and washer or disinfecting units. Examples of appliances or fixtures that are not regarded as health care plumbing appliances are auto-analyzers, bathtubs, high-purity water systems, and wheelchair washers.

**(117m)** “Health care related facility” means an assisted living, residential care apartment complex, memory care, infirmary, inpatient mental health center, inpatient hospice, adult day care center, renal dialysis center, facility for the developmentally disabled, institute for mental disease, urgent care center, medical clinic or office, dental clinic or office, residential care center for children and youth, or school of medicine, surgery, or dentistry.

**(118)** “High groundwater” means zones of soil saturation which include perched water tables, shallow regional groundwater tables or aquifers, or zones that are seasonally, periodically or permanently saturated.

**(119)** “High groundwater elevation” means the higher of either the elevation to which the soil is saturated when observed as a free water surface, or the elevation to which the soil has been seasonally or periodically saturated as indicated by the highest elevation of redoximorphic features in the soil profile.

**(120)** “High hazard” means a situation where the water supply system could be contaminated with a toxic substance or solution so as to make the water unsuitable for the designated use.

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## Exam Questions

64. True or false? ‘Flood fringe’ and ‘floodplain’ have the same meaning.

- a. True
- b. False

65. ‘\_\_\_\_\_’ means the edge of the receptacle from which water overflows.

- a. Flood area
- b. Flood plane
- c. Flood level rim
- d. Floodway

66. ‘Flow’ means the volumetric measure of a liquid stream in a specified time.

- a. True
- b. False

67. '\_\_\_\_\_' means a receptor for the discharge from indirect or local waste piping installed with its flood level rim even with the surrounding floor.

- a. Flood fringe
- b. Floor basin
- c. Floor flooder
- d. Floor sink

68. 'Flushometer valve' means a device which discharges a \_\_\_\_\_ quantity of water to fixtures for flushing purposes and is closed by direct water pressure.

- a. Random
- b. Predetermined
- c. High
- d. Low

69. True or false? The term 'freeze resistant sanitary yard hydrant with backflow protection' has the same meaning as 'freeze resistant sanitary yard hydrant'.

- a. True
- b. False

70. 'Garage, private' means a building or part of a building used for the storage of vehicles or other purposes, by a family or less than \_\_\_\_ persons not of the same family and which is not available for public use.

- a. 3
- b. 4
- c. 5
- d. 6

71. 'Graywater' means wastewater contaminated by waste materials and \_\_\_\_\_ deposited into plumbing drain systems.

- a. Exclusive of urine
- b. Exclusive of Feces
- c. Exclusive of Industrial waste
- d. All of the above

72. 'Grease interceptor' means a receptacle designed to intercept and retain or remove grease or \_\_\_\_\_ substances.

- a. Lean
- b. Opaque
- c. Fatty
- d. All of the above

73. True or false? 'Health care and related facility' does not include adult daycare centers.

- a. True
- b. False

74. ‘\_\_\_\_\_’ means zones of soil saturation which include perched water tables, shallow regional groundwater tables or aquifers, or zones that are seasonally, periodically or permanently saturated.

- a. High groundwater
- b. High groundwater elevation
- c. High hazard
- d. Highlands

75. ‘\_\_\_\_\_’ means a situation where the water supply system could be contaminated with a toxic substance or solution so as to make the water unsuitable for the designated use.

- a. Hazard area
- b. Hazardous region
- c. High hazard
- d. Highland hazard

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(121) “Holding tank” means a watertight receptacle for the collection and holding of wastewater.

(122) “Horizontal pipe” means any pipe or fitting which makes an angle of less than 45° with the horizontal.

(123) “Horizontal reference point” means a stationary, identifiable point to which horizontal dimensions can be related.

(124) “Hose connection backflow preventer” means a type of cross connection control device which consists of 2 independent checks, force-loaded or biased to a closed position, with an atmospheric vent located between the 2 check valves, which is force-loaded or biased to an open position, and a means for attaching a hose.

(125) “Hose connection vacuum breaker” means a type of cross connection control device which consists of a check valve member force-loaded or biased to a closed position and an atmospheric vent valve or means force-loaded or biased to an open position when the device is not under pressure.

(126) “Hot water” means water at a temperature of 110° F. or more.

(127) “Hot water storage tank” means a tank used to store water that is heated indirectly by a circulating water heater or by steam or hot water circulating through coils or by other heat exchange methods internal or external to the tank.

(128) “Human health hazard” has the meaning specified under s. 254.01 (2), Stats.

(129) “Hydrostatic test” means a test performed on a plumbing system or portion thereof in which the system is filled with a liquid, normally water, and raised to a designated pressure.

(129m) “Imminent health hazard” means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury or illness based on any of the following:

- a. The number of potential injuries or illnesses.
- b. The nature, severity, or duration of the potential injury or illness.

**(130)** “Indian lands” means lands owned by the United States and held for the use or benefit of Indian tribes or bands or individual Indians, and lands within the boundaries of a federally recognized reservation that are owned by Indian tribes or bands or individual Indians.

**(131)** “Indirect waste piping” means drain piping which does not connect directly with the drain system, but which discharges into the drain system by means of an air break or air gap into a receptor.

**(132)** “Individual vent” means a pipe installed to vent a fixture trap.

**(133)** “Industrial wastewater” means the liquid wastes that result from industrial processes.

**(133s)** “Infiltration component” means any device or method that is intended to promote the assimilation of water into in situ soil.

**(134)** “Infiltrative surface” means the plane within a treatment or dispersal component at which effluent is applied to in situ soil or engineered soil.

**(135)** “In situ soil” means soil naturally formed or deposited in its present location or position and includes soil material that has been plowed using normal tillage implements and depositional material resulting from erosion or flooding.

**(136)** “Interceptor” or “separator” means a device designed and installed so as to separate and retain deleterious, hazardous or undesirable matter from wastes flowing through it.

**(136s)** “Irrigation” means the application of water to the root zone of plants or plantings.

**(137)** “Laboratory faucet backflow preventer” means a type of cross connection control device which consists of 2 independently acting check valves force-loaded or biased to a closed position and, between the check valves, a means for automatically venting to atmosphere which is force-loaded or biased to an open position.

**(138)** “Laboratory plumbing appliance” means a plumbing appliance, the function of which is unique to scientific experimentation or research activities.

**(138m)** “Lavatory” means a sink or washbasin designed for washing of the hands and face.

**(139)** “Leaching chamber” means a product designed to support soil and create a cavity for the temporary storage of effluent and to provide an infiltrative surface for the distribution cell POWTS dispersal or treatment component.

**(140)** “Leader” means a pipe or channel outside a building which conveys storm water from the roof or gutter drains to a storm drain, storm sewer or to grade.

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## Exam Questions

76. 'Horizontal pipe' means any pipe or fitting which makes an angle of less than \_\_\_\_° with the horizontal.

- a. 45
- b. 50
- c. 75
- d. 90

77. 'Hot water' means water at a temperature of \_\_\_\_°F or more.

- a. 85
- b. 90
- c. 100
- d. 110

78. '\_\_\_\_\_' means a tank used to store water that is heated indirectly by a circulating water heater or by steam or hot water circulating through coils or by other heat exchange methods internal or external to the tank.

- a. Holding tank
- b. Horizontal reference point
- c. Hose connection vacuum breaker
- d. Hot water storage tank

79. 'Hydrostatic test' means a test performed on a plumbing system or portion thereof in which the system is filled with a liquid, normally \_\_\_\_\_, and raised to a designated pressure.

- a. Alkaline solutions
- b. Hydrogen peroxide
- c. Water
- d. Bleach

80. '\_\_\_\_\_' means drain piping which does not connect directly with the drain system, but which discharges into the drain system by means of an air break or air gap into a receptor.

- a. Individual vent
- b. Indirect waste piping
- c. Indirect piping system
- d. Industrial wastewater

81. '\_\_\_\_\_' means soil naturally formed or deposited in its present location or position and includes soil material that has been plowed using normal tillage implements and depositional material resulting from erosion or flooding.

- a. In natural soil
- b. In initial soil
- c. In situ soil
- d. In original soil

82. '\_\_\_\_\_' means a sink or washbasin designed for washing of the hands and face.

- a. Leaching chamber
- b. Lavatory
- c. Leader
- d. None of the above

83. ‘\_\_\_\_\_’ means a product designed to support soil and create a cavity for the temporary storage of effluent and to provide an infiltrative surface for the distribution cell POWTS dispersal or treatment component.

- a. Laboratory plumbing appliance
- b. Leaching chamber
- c. Leader
- d. Irrigation

84. ‘Leader’ means a pipe or channel \_\_\_\_\_ a building which conveys storm water from the roof or gutter drains to a storm drain, storm sewer or to grade.

- a. Within
- b. Inside
- c. Outside
- d. Above

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**(141)** “Lead-free” means:

- a. When used with respect to solders and flux, containing not more than 0.2 percent lead.
- b. When used with respect to pipe and pipe fittings and fixtures, containing not more than 8.0 percent lead.
- c. When used with respect to the wetted surface material of pipe and pipe fittings and fixtures, containing a weighted average of not more than 0.25 percent lead.

**Note:** Calculation procedures for determining the weighted average lead concentration in a product that consists of several components are listed in NSF/ANSI Standard 61, annex G, including how to comply with amended sec. 1417(d)(2) of the federal Safe Drinking Water Act (SDWA) of 2011.

**(142)** “Linear loading rate” means the amount of effluent applied daily along the landscape contour expressed in gallons per day per linear foot along a site contour.

**(143)** “Load factor” means the percentage of the total connected fixture unit flow rate which is likely to occur at any point in a drain system.

**(144)** “Local station” means a National Weather Service (NWS) precipitation station or other station accepted by the department as collecting precipitation data in accordance with NWS methods.

**(145)** “Local waste piping” means a portion of drain piping which receives the wastes discharged from indirect waste piping and which discharges those wastes by means of an air break or air gap into a receptor.

**(146)** “Local vent” means a pipe connecting to a fixture and extending to outside air through which vapor or foul air is removed from the fixture.

**(147)** “Low hazard” means a situation where the water supply system could be contaminated with a nontoxic substance or solution so as to make the water unsuitable for the designated use.

**(148)** “Main” means the principal pipe artery to which branches may be connected.

**(149)** “Manhole” means an opening constructed to permit access by a person to a sewer or any

underground portion of a plumbing system.

**(151)** "Manufactured home" has the meaning specified under s. 101.91 (2), Stats.

**(152)** "Manufactured home drain connector" means the pipe that joins the drain piping for a manufactured home to the building sewer.

**(153)** "Manufactured home community" has the meaning specified under s. 101.91 (5m), Stats.

**(153e)** "Manufactured home community drain system, sanitary" means all piping or any portion thereof, within public or private premises, which conveys domestic wastewater from a manufactured home in a manufactured home community.

**(153m)** "Manufactured home community drain system, storm" means all piping or any portion thereof, within public or private premises, that conveys any of the following:

- (a) Storm water from a manufactured home community.
- (b) Groundwater from a manufactured home community.
- (c) Clear water from a manufactured home community.

**(153s)** "Manufactured home community water supply system" means the piping through which potable water is conveyed to points of connection to a manufactured home or homes in a manufactured home community.

**(154)** "Mechanical joint" means a connection between pipes, fittings or pipes and fittings by means of a device, coupling, fitting or adapter where compression is applied around the center line of the pieces being joined, but which is not caulked, threaded, soldered, solvent cemented, brazed or welded.

**(154g)** "Medical or high purity water" means water that has uncommon stringent specifications with specific resistance measured in microsiemens per centimeter ( $\mu\text{S}/\text{cm}$ ) or megohm-centimeters ( $\text{Mohm}\cdot\text{cm}$ ).

**(154m)** "Mixed wastewater" means a combination of domestic and non-domestic wastewater.

**(155)** "Multiple dwelling" means a building containing more than 2 dwelling units.

**(156)** "Multipurpose piping system" means a water distribution system conveying water to plumbing fixtures and appliances and automatic fire sprinklers with the intention of serving both domestic and fire protection needs.

**(157)** "Municipality" means any city, village, town or county in this state.

**(158)** "Munsell soil color" means a color classification that specifies the relative degrees of the color variables in terms of hue, value and chroma.

**(159)** "Navigable waters" has the meaning specified under s. NR 115.03 (5).

**(160)** "Negative pressure" means a pressure less than atmospheric.

**(160e)** "Noncontinuous pressure" means a pressure greater than atmospheric and exerted for a period of no

more than 12 continuous hours.

(160m) "Non-domestic wastewater" means any wastewater that is not domestic wastewater or storm water.

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## Exam Questions

85. With regards to solders and flux, containing not more than \_\_\_\_ percent lead means 'lead-free'.

- 0.2
- 0.3
- 0.4
- 0.5

86. With regards to pip and pipe fittings and fixtures, containing not more than \_\_\_\_ percent lead means 'lead-free'.

- 8.0
- 9.0
- 10.0
- 11.0

87. '\_\_\_\_\_' means the amount of effluent applied daily along the landscape contour expressed in gallons per day per linear foot along a site contour.

- Linear factor
- Linear loading rate
- Load factor
- Local station

88. '\_\_\_\_\_' means a pipe connecting to a fixture and extending to outside air through which vapor or foul air is removed from the fixture.

- Local station
- Local waste piping
- Local vent
- Local pipe fixture

89. True or false? 'Low hazard' means a situation where the water supply system could be contaminated with a nontoxic substance or solution so as to make the water unsuitable for the designated use.

- True
- False

90. '\_\_\_\_\_' means an opening constructed to permit access by a person to a sewer or any underground portion of a plumbing system.

- Main
- Manhole
- Manufactured dwelling
- Manufactured hole

91. 'Mixed wastewater' means a combination of domestic and \_\_\_\_\_.

- a. Potable
- b. Nonpotable
- c. Non-domestic wastewater
- d. All of the above

92. 'Multiple dwelling' means a building containing more than \_\_\_ dwelling units.

- a. 2
- b. 3
- c. 4
- d. 5

93. 'Multipurpose piping system' means a water distribution system conveying water to plumbing fixtures and appliances and automatic fire sprinklers with the intention of serving both domestic and \_\_\_\_\_ needs.

- a. Public
- b. Private
- c. Local
- d. Fire protection

94. ' \_\_\_\_\_' means the piping through which potable water is conveyed to points of connection to a manufactured home or homes in a manufactured home community.

- a. Manufactured home community water supply system
- b. Manufactured home community drain system, sanitary
- c. Manufactured home community drain system, storm
- d. None of the above

95. 'Munsell soil color' means a color classification that specifies the relative degrees of the color variables in terms of hue, value and \_\_\_\_\_.

- a. Tint
- b. Light
- c. Number
- d. Chroma

96. 'Negative pressure' means a pressure greater than atmospheric.

- a. True
- b. False

97. 'Noncontinuous pressure' means a pressure greater than atmospheric and exerted for a period of no more than \_\_\_ continuous hours.

- a. 6
- b. 8
- c. 10
- d. 12

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**(161)** "Nonpotable water" means water not safe for drinking, personal or culinary use.

**(162)** "Nonpublic" means, in the classification of plumbing fixtures, those fixtures in residences, apartments, living units of hotels and motels, and other places where the fixtures are intended for the use by a family or an individual to the exclusion of all others.

**(163)** "Nontoxic" means a substance in the diluted form that meets one of the following requirements:

- a. Is listed by the National Sanitation Foundation (NSF) as meeting the NSF evaluation criteria for nonfood compounds.
- b. Is acceptable to the United States Food and Drug Administration (FDA) Title 21 section 175.300 of the Federal Regulation on Food Additives.
- c. Is acceptable for contact with potable water or is deemed non-toxic by a third party certification that is acceptable to the department.
- d. Is deemed non-toxic by the department.

**(163e)** "Nursing home" has the meaning specified under s. 50.01 (3), Stats.

**(163s)** "Occasional occupancy" means occupying a building that is served by a POWTS for less than 120 calendar days per year.

**(164)** "Occupancy" means the purpose for which a building, structure, equipment, materials, or premises, or part thereof, is used or intended to be used.

**(165)** "Oil interceptor" means a device designed to intercept and retain oil, lubricating grease or other similar materials.

**(166)** "Offset" means a combination of fittings or bends that makes two changes in direction bringing one section of the pipe out of line but into a line parallel with the other section.

**(167)** "One or 2-family dwelling" means a building containing not more than 2 dwelling units.

**(168)** "Open air" means outside the building.

**(168m)** "Open bodies of water" means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water, natural or artificial, public or private within the state or under its jurisdiction.

**(169)** "Ordinary high-water mark" has the meaning specified under s. NR 115.03 (6).

**(170)** "Participating governmental unit" means a governmental unit which applies to the department for financial assistance under ss. SPS 387.04 and 387.05, and which meets the conditions specified under s. 145.245 (9), Stats.

**(170e)** "Patient area plumbing fixture" means a plumbing fixture that is accessible to patients in a health care facility and is intended to be used for culinary, hygienic or domestic purposes.

**(171)** "Peak flow" means the largest anticipated recurrent wastewater discharge to a private onsite wastewater treatment system.

**(171e)** "Peak flow, stormwater" means the largest anticipated flow from a given storm event.

**(173)** "Pit privy" means an enclosed nonportable toilet into which nonwatery carried human wastes are deposited to a subsurface storage chamber that is not watertight.

**(174)** "Pitch" means the gradient or slope of a line of pipe in reference to a horizontal plane.

**(175)** "Place of employment" has the meaning specified under s. 101.01 (11), Stats.

**(176)** "Plumbing" has the meaning specified under s. 145.01 (10), Stats.

**(177)** "Plumbing appliance" means any one of a special class of plumbing devices which is intended to perform a special function. The operation or control of the appliance may be dependent upon one or more energized components, such as motors, controls, heating elements, or pressure or temperature sensing elements. The devices may be manually adjusted or controlled by the user or operator, or may operate automatically through one or more of the following actions: a time cycle, a temperature range, a pressure range, or a measured volume or weight.

**(178)** "Plumbing fixture" means a receptacle or device which meets at least one of the following:

- a. Is either permanently or temporarily connected to the water supply system of the premises, and demands a supply of water from the system;
- b. Discharges wastewater or waste materials either directly or indirectly to the drain system of the premises.
- c. Requires both a water supply connection and a discharge to the drain system of the premises.

**(179)** "Plumbing system" includes the water supply system, the drain system, the vent system, plumbing fixtures, plumbing appliances and plumbing appurtenances that serve a building, structure or premises.

**(180)** "Point of standards application" has the meaning specified under s. 160.01 (5), Stats.

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## Exam Questions

98. 'Nonpotable water' means \_\_\_\_\_.

- a. Not safe for drinking, personal or culinary use
- b. Is listed by the National Sanitation Foundation (NSF) as meeting the NSF evaluation criteria for nonfood compounds
- c. Is deemed non-toxic by the department
- d. All of the above

99. 'Occasional occupancy' means occupying a building that is served by a POWTS for less than \_\_\_\_\_ calendar days per year.

- a. 90
- b. 100
- c. 110
- d. 120

100. True or false? 'Occupancy' means the purpose for which a building, structure, equipment, materials, or premises, or part thereof, is used or intended to be used.

- True
- False

101. 'Offset' means a combination of fittings or bends that makes \_\_\_\_ changes in direction bringing one section of the pipe out of line but into a line parallel with the other section.

- Two
- Three
- Four
- Five

102. True or false? 'One or 2-family dwelling' means a building containing not more than 2 dwelling units.

- True
- False

103. 'Open bodies of water' means those portions of Lake Michigan and \_\_\_\_\_ within the boundaries of Wisconsin, all lakes, bays, rivers, etc.

- Lake Ontario
- Lake Huron
- Lake Superior
- Lake Erie

104. '\_\_\_\_\_' means the largest anticipated flow from a given storm event.

- Open air
- Ordinary high-water mark
- Peak flow
- Peak flow, stormwater

105. 'Pitch' means the gradient or slope of a line of pipe in reference to a \_\_\_\_\_ plane.

- Horizontal
- Vertical
- Parallel
- Perpendicular

106. True or false? 'Plumbing appliance' means any one of a special class of plumbing devices which is intended to perform a special function.

- True
- False

107. 'Plumbing fixture' means a receptacle or device which \_\_\_\_\_.

- Is either permanently or temporarily connected to the water supply system of the premises, and demands a supply of water from the system
- Discharges wastewater or waste materials either directly or indirectly to the drain system of the premises.
- Requires both a water supply connection and a discharge to the drain system of the premises.
- All of the above

108. ‘Plumbing system’ includes the water supply system, the drain system, plumbing fixtures, plumbing appliances, plumbing appurtenances—but not the vent system—that serve a building, structure or premises.

- True
- False

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**(181)**“Potable water” means water that is both:

- Safe for drinking, personal or culinary use.
- Free from impurities present in amounts sufficient to cause disease or harmful physiological effects.

**(182)**“POWTS” means a private onsite wastewater treatment system.

**(183)**“POWTS component” means any subsystem, sub assembly or other system designed for use in or as part of a private onsite wastewater treatment system which may include treatment, dispersal or holding and related piping.

**(183m)** “POWTS component manual” means a document that contains detailed design, installation, and operation and maintenance procedures for POWTS components. A component manual that is approved under s. SPS 384.10 (3) (c) is an acceptable method under s. SPS 383.61.

**(184)**“POWTS dispersal component” means a device or method that is intended to promote the assimilation of treated wastewater by the environment.

**(185)**“POWTS holding component” means any receptacle intended to collect wastewater for a period of time, including holding and dosing tanks.

**(186)**“POWTS treatment component” means a device or method that is intended to reduce the contaminant load of waste- water.

**(186s)** “Pre-development” means the condition of the topography of vegetation, including that resulting from human activities that existed prior to land disturbance for construction.

**(187)**“Prefabricated plumbing” means concealed drain piping, vent piping or water supply or a combination of these types of piping, contained in a modular building component, which will not be visible for inspection when delivered to the final site of installation.

**(187e)** “Prefabricated sump and pump system” means a simplex or duplex pump and sump designed as a combined unit.

**(188)**“Pressure relief valve” means a pressure actuated valve held closed by a spring or other means and designed to automatically relieve pressure at a designated pressure.

**(189)**“Pressure vacuum breaker assembly” means a type of cross connection control assembly which consists of an independently acting check valve force-loaded to the closed position and an independently acting

air inlet valve located downstream of the check valve that is force-loaded to the open position. The assembly also includes two tightly closing shutoffs, one at the inlet of the assembly and one at the outlet of the assembly, and two tightly closing test cocks, one immediately upstream and one immediately downstream of the check valve.

**(190)** “Pressurized flushing device” means a device that uses the water supply to create a pressurized discharge to flush a fixture exclusive of gravity type flushing systems.

**(191)** “Preventive action limit” or “PAL” has the meaning as specified under s. 160.01 (6), Stats.

**(192)** “Principal residence” means a residence that is occupied at least 51% of the year by the owner. Principal residence includes a residence owned by a trust or estate of an individual, if the residence is occupied at least 51% of the year by a person who has an ownership interest in the residence as a beneficiary of the trust or estate.

**(193)** “Private interceptor main sewer” means a sewer serving 2 or more buildings and not part of the municipal sewer system.

**(194)** “Private onsite wastewater treatment system” has the meaning given under s. 145.01 (12), Stats.

**(195)** “Private water main” means a water main serving 2 or more buildings and not part of the municipal water system.

**(195m)** “Process piping” means that piping which is separated from a water supply system or drain system by the acceptable methods or means specified under ch. SPS 382 and is part of a system used exclusively for refining, manufacturing, industrial, or shipping purposes of every character and description.

**(196)** “Public” means, in the classification of plumbing fixtures, those fixtures which are available for use by the public or employees.

**(197)** “Public building” has the meaning specified under s. 101.01 (12), Stats.

**(197m)** “Public lavatory” means a lavatory located in a public restroom or located outside of a public restroom. Hand wash sinks required by Department of Agriculture, Trade and Consumer Protection (DATCP), Department of Health Services (DHS), National Institutes of Health (NIH), or United States Department of Agriculture (USDA) are considered public lavatory fixtures.

**(198)** “Public sewer” means a sewer owned and controlled by a public authority

**(199)** “Public water main” means a water supply pipe for public use owned and controlled by a public authority.

**(199m)** “Push-fit fitting” means a mechanical fitting that joins pipes or tubes and achieves a seal by pushing the mating pipe or tube into the fitting.

**(200)** “Quick closing valve” means a valve or faucet that closes automatically when released manually or controlled by mechanical means for fast action closing.

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## Exam Questions

109. True or false? ‘Potable water’ means water is safe for drinking, personal or culinary use, but not necessarily free from impurities present in amounts sufficient to cause disease or harmful physiological effects

- True
- False

110. ‘Private onsite wastewater treatment system’ can be abbreviated by \_\_\_\_\_.

- PROWT
- POWTS
- POWWT
- PWTS

111. ‘\_\_\_\_\_’ means a device or method that is intended to promote the assimilation of treated wastewater by the environment.

- POWTS
- POWTS component
- POWTS dispersal component
- POWTS holding component

112. ‘\_\_\_\_\_’ means a device or method that is intended to reduce the contaminant load of wastewater.

- POWTS
- POWTS component
- POWTS holding component
- POWTS treatment component

113. ‘Pressure relief valve’ means a pressure actuated valve held closed by a spring or other means and designed to \_\_\_\_\_ relieve pressure at a designated pressure.

- Manually
- Automatically
- Chemically
- Periodically

114. True or false? The term ‘pressure vacuum breaker’ has the same meaning as ‘pressure vacuum breaker assembly’.

- True
- False

115. ‘Pressurized flushing device’ means a device that uses the water supply to create a pressurized discharge to flush a fixture exclusive of \_\_\_\_\_ type flushing systems.

- Manual
- Automatic
- Gravity
- Newer

116. ‘Preventive action limit’ can be abbreviated by \_\_\_\_\_.  
a. PL  
b. PAL  
c. PRL  
d. PREL

117. ‘Principal residence’ means a residence that is occupied at least \_\_\_\_% of the year by the owner.  
a. 51  
b. 60  
c. 75  
d. 90

118. ‘Private interceptor main sewer’ means a sewer serving \_\_\_\_ or more buildings and not part of the municipal sewer system.  
a. 2  
b. 3  
c. 4  
d. 5

119. ‘\_\_\_\_\_’ means a mechanical fitting that joins pipes or tubes and achieves a seal by pushing the mating pipe or tube into the fitting.  
a. Public sewer  
b. Public water main  
c. Push-fit fitting  
d. None of the above

120. ‘Quick closing valve’ means a valve or \_\_\_\_\_ that closes automatically when released manually or controlled by mechanical means for fast action closing.  
a. Pipe  
b. Receptacle  
c. Faucet  
d. Basin

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**(201)** “Receptor” means a fixture or device that receives the discharge from indirect or local waste piping.

**(202)** “Redoximorphic feature” means a feature formed in the soil matrix by the processes of reduction, translocation and oxidation of iron and manganese compounds in seasonally saturated soil.

**(203)** “Reduced pressure detector fire protection backflow prevention assembly” means a type of reduced pressure principle type backflow preventer serving a fire protection system and which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly.

**(203m)** “Reduced pressure fire protection principle backflow preventer” means an assembly serving a fire protection system and consisting of 2 independently-acting check valves, internally force loaded to a normally closed position, and separated by an intermediate chamber or zone in which there is a hydraulically operated

relief means of venting to atmosphere, internally forced loaded to a normally open position. The term "reduced pressure principle backflow preventer for fire protection systems" has the same meaning as reduced pressure fire protection principle back-flow preventer.

**(204)** "Reduced pressure principle backflow preventer" means a cross connection control assembly consisting of 2 independently-acting check valves, internally force-loaded to a normally closed position and separated by an intermediate chamber or zone in which there is a hydraulically operated relief means for venting to atmosphere, internally force-loaded to a normally open position. These assemblies are designed to operate under continuous pressure conditions. The assembly shall include 2 properly located, tightly closing shut-off valves and properly located test cocks.

**(205)** "Relief vent" means a vent which permits additional circulation of air in or between drain and vent systems.

**(206)** "Riser" means a water supply pipe that extends vertically one full story or more.

**(207)** "Roof drain" means a drain installed to receive water collecting on the surface of a roof and to discharge it into a conductor.

**(208)** "Roughing in" means the installation of all parts of the plumbing system which can be completed prior to the installation of fixtures including drain, water supply and vent piping and the necessary fixture supports.

**(209)** "Rowhouse" means a building which is not more than 3 stories in height and which contains only 3 or more attached, vertically separated, side-by-side or back-to-back dwelling units, with each dwelling unit served by an individual exterior exit within 6 feet of the exit discharge grade.

**(209m)** "RV transfer tank" means a type of stationary container used to collect and hold wastewater discharges generated by an individual camping trailer or recreational vehicle.

**(210)** "Safing" means a membrane or material installed beneath a fixture to prevent leakage from escaping to the floor, ceiling or walls.

**(211)** "Sand interceptor" means a receptacle designed to intercept and retain sand, grit, earth and other similar solids.

**(212)** "Sanitary sewer" means a pipe that carries wastewater consisting in part of domestic wastewater.

**(212e)** "Scrub sink" means a plumbing fixture used for hand and arm washing prior to surgery or other medical procedures.

**Note:** A scrub sink may also be referred to as a surgeon washup sink.

**(213)** "Scum" means the accumulated floating solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of wastewater.

**(214)** "Secretary" means the secretary of the department of safety and professional services or designee.

**(214m)** "Service sink" means a fixture designed to be used for building or facility maintenance.

**Note:** A service sink may also be referred to as a mop sink, mop basin or janitor's sink.

**(215)**“Servicing” has the meaning as specified under s. NR 113.03 (57).

**(216)**“Sewage” means wastewater containing fecal coliform bacteria exceeding 200 CFU, colony forming units, per 100 ml.

**(217)**“Sewage grinder pump” means a type of sewage pump which macerates wastewater consisting in part of sewage.

**(218)**“Sewage pump” means an automatic pump for the removal of wastewater from a sanitary sump.

**(218m)** “Siphonic roof drain system” means a drainage system designed to receive water collecting on a roof surface via negative pressure conditions created by roof drains that allow water to enter the stormwater piping system while minimizing the ingress of air, generating a negative differential fluid pressure within the piping system thereby inducing full-bore flow without pipe gradient.

**(219)**“Slip-joint” means a connection in which one pipe slips into another, the joint of which is made tight with a compression type fitting.

**(220)**“Sludge” means the accumulated solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of water or wastewater.

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## Exam Questions

121. ‘Receptor’ means a fixture or device that receives the discharge from indirect or \_\_\_\_\_ waste piping.

- a. Direct
- b. Local
- c. Remote
- d. Private

122. ‘Reduced pressure principle backflow preventer’ means a type of cross connection control assembly which contains \_\_\_\_\_ independently acting check valves

- a. 2
- b. 3
- c. 4
- d. 5

123. ‘\_\_\_\_\_’ means a vent which permits additional circulation of air in or between drain and vent systems.

- a. Redoximorphic feature
- b. Reduced pressure detector fire protection backflow prevention assembly
- c. Relief vent
- d. Roof drain

124. 'Riser' means a water supply pipe that extends vertically \_\_\_\_\_ or more.

- One full story
- Two full stories
- Three full stories
- Four full stories

125. 'Rowhouse' dwelling units must be served by an individual exterior exit within \_\_\_\_\_ feet of the exit discharge grade.

- 2
- 3
- 5
- 6

126. '\_\_\_\_\_' means a membrane or material installed beneath a fixture to prevent leakage from escaping to the floor, ceiling or walls.

- Roughing in
- Rising
- Safing
- Sand intercepting

127. 'Sanitary sewer' means a pipe that carries wastewater consisting in part of \_\_\_\_\_ wastewater.

- Local
- Domestic
- Private
- Public

128. 'Scrub sink' means a plumbing fixture used for hand and arm washing prior to surgery or other \_\_\_\_\_ procedures.

- Scientific
- Plumbing
- Medical
- All of the above

129. '\_\_\_\_\_' means the accumulated floating solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of wastewater.

- Scum
- Secretary
- Service sink
- Servicing

130. 'Sewage' means wastewater containing fecal coliform bacteria exceeding \_\_\_\_\_ CFU, colony forming units, per 100 ml.

- 50
- 100
- 150
- 200

131. ‘\_\_\_\_\_’ means an automatic pump for the removal of wastewater from a sanitary sump.

- Sewage grinder pump
- Sewage auto grinder
- Sewage pump
- Slip-joint

132. ‘\_\_\_\_\_’ means a drainage system designed to receive water collecting on a roof surface via negative pressure conditions created by roof drains that allow water to enter the stormwater piping system while minimizing the ingress of air, generating a negative differential fluid pressure within the piping system thereby inducing full-bore flow without pipe gradient.

- Siphonic roof drain system
- Slip-joint
- Sludge
- Sewage pump

133. True or false? ‘Sludge’ means the accumulated solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of water or wastewater.

- True
- False

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**(221)**“Small commercial establishment” means a commercial establishment or business place with a maximum daily waste- water flow rate of less than 5,000 gallons per day as determined from the design criteria of the state plumbing code. Small commercial establishment includes a farm, including a residence on a farm, if the residence is occupied by a person who is an operator of the farm and if the maximum daily wastewater flow rate of the farm and the residence on the farm is less than 5,000 gallons-per- day as determined from the design criteria of the state plumbing code.

**(222)**“Soil” means the naturally occurring pedogenically developed and undeveloped regolith overlying bedrock.

**(223)**“Soil consistence” means the resistance of soil material to deformation or rupture as related to the degree of adhesion and cohesion of a soil mass.

**(224)**“Soil horizon” means a layer of soil material approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, or biologic characteristics.

**(225)**“Soil morphology” means the physical or structural characteristics of a soil profile particularly as related to the arrangement of soil horizons based on color, texture, structure, consistence, and porosity.

**(226)**“Soil profile” means a vertical section of soil containing one or more soil horizons.

**(227)**“Soil profile evaluation” means a determination of soil properties or characteristics as they relate to wastewater or non- water-carried human waste treatment or dispersal.

**(228)** "Soil structure" means the combination or arrangement of individual soil particles into definable aggregates or peds, which are characterized and classified on the basis of size, shape, and degree of distinctness.

**(229)** "Soil texture" means the relative proportions of sand, silt and clay (soil separates) in a soil.

**(229m)** "Special wastewater" means any wastewater containing deleterious waste material as defined in s. SPS 382.34 (3) (b).

**(230)** "Spigot" means the end of a pipe which fits into a bell or hub.

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## Exam Questions

134. 'Small commercial establishment' means a commercial establishment or business place with a maximum daily waste-water flow rate of less than \_\_\_\_\_ gallons per day as determined from the design criteria of the state plumbing code.

- a. 2,000
- b. 3,000
- c. 4,000
- d. 5,000

135. True or false? 'Soil consistence' means the naturally occurring developed and undeveloped regolith overlying bedrock.

- a. True
- b. False

136. 'Soil horizon' means a layer of soil material approximately \_\_\_\_\_ the land surface and differing from adjacent genetically related layers in physical, chemical, or biologic characteristics.

- a. Perpendicular to
- b. Parallel to
- c. Two inches away from
- d. Two inches above

137. 'Soil profile' means a vertical section of soil containing \_\_\_\_\_ or more soil horizons.

- a. One
- b. Two
- c. Three
- d. Four

138. '\_\_\_\_\_ ' means the physical or structural characteristics of a soil profile particularly as related to the arrangement of soil horizons based on color, texture, structure, consistence, and porosity.

- a. Soil morphology
- b. Soil composition
- c. Soil profile evaluation
- d. Soil characterization

139. 'Soil texture' means the relative proportions of sand, silt and \_\_\_\_\_ in a soil.  
a. Iron  
b. Clay  
c. Water  
d. All of the above

140. 'Spigot' means the \_\_\_\_\_ of a pipe which fits into a bell or hub.  
a. Size  
b. Side  
c. Front  
d. End

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**(231)** "Spill level" means the horizontal plane to which water will rise to overflow through channels or connections which are not directly connected to any drainage system, when water is flowing into a fixture, vessel or receptacle at the maximum rate of flow.

**(231m)** "Spill resistant vacuum breaker" means a cross connection control assembly consisting of one check valve force-loaded closed and an air inlet force loaded open to atmosphere located downstream of the check valve. The assembly also includes 2 tightly closing shut-off valves and 2 test cocks or a no. 1 test cock and a bleed valve.

**(232)** "Spring line, pipe" means the line or place from which the arch of a pipe or conduit rises.

**(233)** "Stack" means a drain or vent pipe that extends vertically one full story or more.

**(234)** "Stack vent" means a vent extending from the highest horizontal drain connected to a stack.

**(235)** "Standpipe" means a drain pipe serving as a receptor for the discharge wastes from indirect or local waste piping.

**(236)** "State" means the state of Wisconsin, its agencies and institutions.

**(237)** "State plumbing code" means chs. SPS 381 to 387.

**(238)** "Sterilizer, boiling type" means a device of nonpressure type, used for boiling instruments, utensils, or other equipment for disinfecting.

**(239)** "Sterilizer, instrument" means a device for the sterilization of various instruments.

**(240)** "Sterilizer, pressure" means a pressure vessel fixture designed to use steam under pressure for sterilizing.

**(241)** "Sterilizer, pressure instrument washer" means a pressure vessel designed to both wash and sterilize instruments during the operating cycle of the device.

**(242)** "Sterilizer, utensil" means a device for the sterilization of utensils.

**(243)** "Sterilizer vent" means a separate pipe or stack, indirectly connected to the drain system at the lower terminal, which receives the vapors from non pressure sterilizers, or the exhaust vapors from pressure sterilizers, and conducts the vapors directly to the outer air.

**(244)** "Sterilizer, water" means a device for sterilizing water and storing sterile water.

**(245)** "Storm sewer" means a pipe, other than a pipe located inside a building, that carries any of the following: storm water, groundwater or clear water.

**(246)** "Storm water" means wastewater from a precipitation event.

**(247)** "Subsoil drain" means that part of a drain system that conveys groundwater to a point of discharge or dispersal.

**(248)** "Sump" means a tank or pit that receives wastewater that must be emptied by mechanical means.

**(249)** "Sump pump" means an automatic device located in a sump, pit or low point that is designed to elevate storm water, groundwater or clear water.

**(250)** "Sump vent" means a vent pipe from a nonpressurized sump.

## Exam Questions

141. '\_\_\_\_\_' means the horizontal plane to which water will rise to overflow through channels or connections which are not directly connected to any drainage system, when water is flowing into a fixture, vessel or receptacle at the maximum rate of flow.

- a. Spill rate
- b. Spill level
- c. Spill height
- d. Spill resistant vacuum breaker

142. 'Stack' means a \_\_\_\_\_ or vent pipe that extends vertically one full story or more.

- a. Basin
- b. Sump
- c. Drain
- d. Pit

143. 'Stack vent' means a vent extending from the \_\_\_\_\_ horizontal drain connected to a stack.

- a. Lowest
- b. Highest
- c. Shortest
- d. Widest

144. ‘\_\_\_\_\_’ means a drain pipe serving as a receptor for the discharge wastes from indirect or local waste piping.

- Spring line, pipe
- Spring receptor pipe
- Stand drain pipe
- Standpipe

145. True or false? ‘State’ means the state of Wisconsin, its agencies and institutions.

- True
- False

146. ‘State plumbing code’ means chs. SPS \_\_\_\_ to \_\_\_\_.

- 312, 316
- 352, 371
- 381, 387
- 384, 388

147. ‘\_\_\_\_\_’ means a pressure vessel designed to both wash and sterilize instruments during the operating cycle of the device.

- Sterilizer
- Sterilizer, instrument
- Sterilizer, pressure
- Sterilizer, pressure instrument washer

148. True or false? ‘Storm water’ includes wastewater from thunderstorms and hailstorms, but not blizzards.

- True
- False

149. ‘\_\_\_\_\_’ means that part of a drain system that conveys groundwater to a point of discharge or dispersal.

- Storm sewer
- Subsoil drain
- Storm drain
- Subsoil sewer

150. ‘Sump’ means a tank or pit that receives wastewater that must be emptied by \_\_\_\_\_ means.

- Mechanical
- Electrical
- Chemical
- Geothermal

151. True or false? ‘Sump pump’ and ‘sump vent’ do not have the same meaning.

- True
- False

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**(251)** "Supports" means hangers, anchors and other devices for supporting and securing pipes or fixtures to structural members of a building.

**(252)** "Surface water" means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, impounding reservoirs, marshes, water courses, drainage systems, and other surface water, natural or artificial, public or private within the state or under its jurisdiction, except those waters which are entirely confined and completely retained upon the property of a facility.

**(253)** "Swimming pool" means a structure, basin, chamber or tank containing an artificial body of water for swimming, diving or recreational bathing.

**(254)** "Temperature and pressure relief valve" means a combination relief valve designed to function as both a temperature relief and pressure relief valve.

**(255)** "Temperature relief valve" means a temperature actuated valve designed to automatically discharge at a designated temperature.

**(256)** "Tempered water" means water ranging in temperature from 85°F. to less than 110°F.

**(256e)** "Ten-year, 24-hour storm" or "10-year, 24-hour storm" means a discrete rainstorm event characterized by a specific duration, temporal distribution, rainfall intensity, return frequency and total depth of rainfall.

**(256m)** "Thermal disinfection" means a method of providing bacterial control within a water distribution system using water that is heated and initially circulated to a minimum temperature of 140°F and with a minimum temperature of 124°F at the point of return to the heat source.

**(257)** "Total suspended solids" or "TSS" means solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/ L).

**(259)** "Trap" means a fitting, device or arrangement of piping so designed and constructed as to provide, when properly vented, a liquid seal which prevents emission of sewer gases without materially affecting the flow of wastewater through it.

**(260)** "Trap seal" means the vertical distance between the top of the trap weir and the top of the dip separating the inlet and outlet of the trap.

**(260m)** "Trap seal primer, drainage and electric types" means a device designed to supply water to a drain trap to provide and maintain its water seal by using a supply fixture drain line, an anti-siphon fill valve for water closet tanks, flushometer valve tail-piece, or an electric trap seal primer.

**(261)** "Trap seal primer, water supply fed" means a type of valve designed to supply water to the trap in order to provide and maintain the water seal of the trap.

**(262)** "Trap weir" means that part of a trap that forms a dam over which wastes must flow to enter the drain piping.

**(263)** "Turf sprinkler system" means a system of piping, appurtenances and devices installed underground to distribute water for lawn or other similar irrigation purposes.

**(264)** "Unsaturated soil" means soil in which the pore spaces contain water at less than atmospheric pressure, as well as air and other gases.

**(265)** "Vacuum" means any pressure less than that exerted by the atmosphere.

**(265e)** "Vacuum breaker tee" means an assembly of fittings designed to eliminate the possibility of back siphonage in a system by allowing air to enter through a tee fitting.

**(266)** "Vacuum relief valve" means a device that admits air into the water distribution system to prevent excessive vacuum in a water storage tank or heater.

**(266m)** "Vector control" means any method to limit or eradicate the mammals, birds, insects or other arthropods, collectively called "vectors," which transmit disease pathogens.

**(267)** "Vent" means a part of the plumbing system used to equalize pressures and ventilate the system.

**(268)** "Vent header" means a branch vent which connects 2 or more stack vents or vent stacks or both and extends to the outside air.

**(269)** "Vent stack" means a vertical vent pipe that provides air for a drain stack of 5 or more branch intervals.

**(270)** "Vent system" means a pipe or pipes installed to provide a flow of air to or from a drain system, or to provide a circulation of air within the system to protect trap seals from siphonage and back pressure.

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## Exam Questions

152. 'Tempered water' means water ranging in temperature from \_\_\_\_°F. to less than \_\_\_\_°F.

- a. 75, 100
- b. 85, 110
- c. 95, 115
- d. 100, 110

153. 'Ten-year, 24-hour storm' or '10-year, 24-hour storm' means a discrete rain storm event characterized by a specific duration, temporal distribution, and \_\_\_\_\_.  

- a. Rainfall intensity
- b. Return frequency
- c. Total depth of rainfall.
- d. All of the above

154. "Thermal disinfection" means a method of providing bacterial control within a water distribution system using water that is heated and initially circulated to a minimum temperature of \_\_\_\_\_ °F and with a minimum temperature of 124°F at the point of return to the heat source.

- a. 130
- b. 140
- c. 150
- d. 160

155. 'Trap seal' means the \_\_\_\_\_ distance between the top of the trap weir and the top of the dip separating the inlet and outlet of the trap.

- a. Total
- b. Horizontal
- c. Vertical
- d. Average

156. '\_\_\_\_\_' means a type of valve designed to supply water to the trap in order to provide and maintain the water seal of the trap.

- a. Trap
- b. Trap valve
- c. Trap supply seal
- d. Trap seal primer, water supply fed

157. True or false? 'Trap weir' means that part of a trap that forms a dam over which wastes must flow to exit the drain piping.

- a. True
- b. False

158. 'Turf sprinkler system' means a system of piping, appurtenances and devices installed \_\_\_\_\_ to distribute water for lawn or other similar irrigation purposes.

- a. Aboveground
- b. Underground
- c. Seasonally
- d. Far from farmland

159. 'Unsaturated soil' means soil in which the pore spaces contain water at \_\_\_\_\_ atmospheric pressure, as well as air and other gases.

- a. Less than
- b. Greater than
- c. Equal too
- d. Less than or greater than

160. '\_\_\_\_\_' means a device that admits air into the water distribution system to prevent excessive vacuum in a water storage tank or heater.

- a. Vacuum
- b. Vacuum breaker tee
- c. Vacuum relief valve
- d. Vacuum release system

161. ‘Vent header’ means a branch vent which connects \_\_\_\_ or more stack vents or vent stacks or both and extends to the outside air.

- a. 2
- b. 3
- c. 4
- d. 5

162. ‘\_\_\_\_\_’ means a part of the plumbing system used to equalize pressures and ventilate the system.

- a. Vent
- b. Vent header
- c. Ventilator system
- d. Vent and plumbing system

163. ‘Vent stack’ means a vertical vent pipe that provides air for a drain stack of \_\_\_\_ or more branch intervals.

- a. 2
- b. 3
- c. 4
- d. 5

---

**(271)** “Vertical pipe” means any pipe or fitting which makes an angle of 45° or less with the vertical.

**(272)** “Wall hydrant, freeze resistant automatic draining type vacuum breaker” means a type of device which is designed and constructed with anti-siphon and back pressure preventive capabilities and with means for automatic post shut-off draining to prevent freezing.

**(273)** “Wall mounted water closet” means a water closet attached to a wall in such a way that it does not touch the floor.

**(273e)** “Washer sanitizer” means a plumbing appliance used for washing and disinfecting equipment.

**(274)** “Waste” means the discharge from any fixture, appliance, area or appurtenance.

**(275)** “Waste sink” means a receptor for the discharge from indirect or local waste piping installed with its flood level rim above the surrounding floor.

**(276)** “Wastewater” means clear water, storm water, domestic wastewater, industrial wastewater, sewage or any combination of these.

**(277)** “Wastewater, treated” means the effluent conveyed through one or more POWTS treatment components to a POWTS dispersal component.

**(277e)** “Wastewater treatment device” means a device or method that is intended to beneficially alter the characteristics of wastewater.

**(278)** "Water closet" means a water-flushed plumbing fixture designed to receive human excrement directly from the user of the fixture.

**(279)** "Water conditioner" means an appliance, appurtenance or device used for the purpose of ion exchange, demineralizing water or other methods of water treatment.

**(280)** "Water distribution system" means that portion of a water supply system from the outlet of the building control valve to the connection of a fixture supply connector, plumbing fixture, plumbing appliance, water-using equipment, or other piping systems to be served.

**(281)** "Water heater" means any heating device with piping connections to the water supply system that is intended to supply hot water for domestic or commercial purposes other than space heating.

**(281m)** "Water operator-in-charge" means the person designated by the owner of the building waterworks to be directly responsible for the day-to-day operations of the waterworks.

**(282)** "Water service" means that portion of a water supply system from the water main or private water supply up to and including the building control valve.

**(283)** "Waters of the state" has the meaning specified under s. 281.01 (18), Stats.

**(284)** "Water supply system" means the piping of a private water main, water service and water distribution system, fixture supply connectors, fittings, valves, and appurtenances through which water is conveyed to points of usage such as plumbing fixtures, plumbing appliances, water using equipment or other piping systems to be served.

**(285)** "Water treatment device" means a device which:

- a. Renders inactive or removes microbiological, particulate, inorganic, organic or radioactive contaminants from water which passes through the device or the water supply system downstream of the device; or
- b. Injects into the water supply system gaseous, liquid or solid additives other than water, to render inactive microbiological, particulate, inorganic, organic or radioactive contaminants.

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## Exam Questions

164. 'Vertical pipe' means any pipe or fitting which makes an angle of \_\_\_\_° or less with the vertical.

- a. 25
- b. 30
- c. 40
- d. 45

165. True or false? 'Wall mounted water closet' means a water closet attached to a wall in such a way that it does not touch the floor.

- a. True
- b. False

166. ‘\_\_\_\_\_’ means a plumbing appliance used for washing and disinfecting equipment.

- Washing cleanse
- Washing sanitizer
- Water cleaner
- Water sterilizer

167. True or false? ‘Waste’ means the discharge from any fixture, appliance, area or appurtenance.

- True
- False

168. ‘Waste sink’ means a receptor for the discharge from indirect or local waste piping installed with its flood level rim \_\_\_\_\_ the surrounding floor.

- Far from
- Near
- Above
- Below

169. ‘Wastewater’ means clear water, storm water, and \_\_\_\_\_.

- Domestic wastewater
- Industrial wastewater
- Sewage
- All of the above

170. ‘Wastewater, treated’ means the effluent conveyed through \_\_\_\_\_ or more POWTS treatment components to a POWTS dispersal component.

- One
- Two
- Three
- Four

171. ‘\_\_\_\_\_’ means a device or method that is intended to beneficially alter the characteristics of wastewater.

- Wastewater treated
- Wastewater treatment device
- Water closet
- Water treatment system

172. ‘\_\_\_\_\_’ means any heating device with piping connections to the water supply system that is intended to supply hot water for domestic or commercial purposes other than space heating.

- Water conditioner
- Water warmer
- Water heater
- Water service

173. ‘\_\_\_\_\_’ means the person designated by the owner of the building waterworks to be directly responsible for the day-to-day operations of the waterworks.

- Water distribution system
- Water operator-in-charge
- Water closet
- None of the above

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**(286)** “Wetland” has the meaning given in s. 23.32 (1), Stats.

**(287)** “Wetland, constructed” means a man-made design complex of saturated substrates, emergent and submergent vegetation, and water that simulate natural wetlands for human use and benefits.

**(288)** “Wet vent” means that portion of a vent pipe that receives the discharge from other fixtures.

**(288e)** “Whirlpool” has the meaning as specified under s. SPS 390.03 (23) (j).

**(288m)** “Whirlpool bath tub” means a plumbing appliance consisting of a bathtub fixture that is equipped and fitted with a circulation piping system designed to accept, circulate and discharge bathtub water upon each use.

**(288s)** “Yard hydrant” means a device with a water supply outlet, or faucet, that has a valve control and outlet above ground and a connection to the water supply system below ground.

**(289)** “Yoke vent” means a vent connected to a drain stack for the purpose of preventing pressure changes in the drain stack.

#### **SPS 381.20 Incorporation of standards by reference.**

##### **(1) CONSENT.**

- Pursuant to s. 227.21 (2), Stats., the attorney general has consented to the incorporation by reference of the standards listed in sub. (3).
- The codes and standards that are referenced in this chapter, and any additional codes and standards that are subsequently referenced in those codes and standards, shall apply to the prescribed extent of each such reference, except as modified by this chapter.

**Note:** Copies of the adopted standards are on file in the offices of the department and the legislative reference bureau. Copies of the standards may be purchased through the respective organizations listed in Tables 381.20-1 to 381.20-13.

##### **(2) ALTERNATE STANDARDS.**

- Alternate standards that are equivalent to or more stringent than the standards referenced in chs. SPS 381 to 387 may be used in lieu of the referenced standards when approved by the department or if written approval is issued by the department in accordance with par. (b).
  - Upon receipt of a fee and a written request, the department may issue an approval for the use of the alternate standard.
  - The department shall review and make a determination on an application for approval within 40

business days of receipt of all forms, fees and documents required to complete the review.

**Note:** Review fees for standards under this paragraph are listed in ch. SPS 302.

- b) Determination of approval shall be based on an analysis of the alternate standard and the standard referenced in chs. SPS 381 to 387, prepared by a qualified independent third party or the organization that published the standard contained in chs. SPS 381 to 387.
- c) The department may include specific conditions in issuing an approval, including an expiration date for the approval. Violations of the conditions under which an approval is issued shall constitute a violation of chs. SPS 381 to 387.
- d) If the department determines that the alternate standard is not equivalent to or more stringent than the referenced standard, the request for approval shall be denied in writing.
- e) The department may revoke an approval for any false statements or misrepresentations of facts on which the approval was based.
- f) The department may reexamine an approved alternate standard and issue a revised approval at any time.

**(3) ADOPTION OF STANDARDS.** The standards referenced in Tables 381.20–1 to 381.20–13 are incorporated by reference into chs. SPS 381 to 387.

**Note:** The tables in this section provide a comprehensive listing of all of the standards adopted by reference in chs. SPS 381 to 387. For requirements or limitations in how these standards are to be applied, refer to the code section that requires compliance with the standard.

**(4) DEPARTMENT AUTHORITY.** A department interpretation of an adopted standard under this chapter shall supersede any differing interpretation by either a lower level jurisdiction or an issuer of the adopted standard.

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## Exam Questions

174. ‘\_\_\_\_\_’ means that portion of a vent pipe that receives the discharge from other fixtures.

- a. Wetland
- b. Wetland, constructed
- c. Wet vent
- d. Whirlpool

175. True or false? Yard hydrant” means a device with a water supply outlet, or faucet, that has a valve control and outlet above ground and a connection to the water supply system below ground.

- a. True
- b. False

176. ‘Yoke vent’ means a vent connected to a \_\_\_\_\_ for the purpose of preventing pressure changes in the drain stack.

- a. Pipe
- b. Basin
- c. Whirlpool bath tub
- d. Drain stack

177. The department shall review and make a determination on an application for approval within \_\_\_\_ business days of receipt of all forms, fees and documents required to complete the review.

- a. 10
- b. 20
- c. 30
- d. 40

178. True or false? The department may include specific conditions in issuing an approval, including an expiration date for the approval.

- a. True
- b. False

179. If the department determines that the alternate standard is not equivalent to or more stringent than the referenced standard, the request for approval shall be denied \_\_\_\_\_.

- a. In person
- b. In an email
- c. In writing
- d. All of the above

180. True or false? The department may not reexamine an approved alternate standard to issue a revised approval.

- a. True
- b. False