Chapter Comm 81

DEFINITIONS AND STANDARDS

Comm 81.01 Definitions.
Comm 81.20 Incorporation of standards by reference.

Comm 81.01 Definitions. In chs. Comm 81 to 87, 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.

(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.

(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 inlet 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. Comm 82 and 84.

(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.

(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. Comm 82 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.

(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 device or assembly.

(18) "Backflow preventer with intermediate atmospheric vent" means a type of cross connection control device which consists of 2 independently acting check valves, internally force–loaded to a normally closed position and separated by an intermediate chamber with a means for automatically venting to atmosphere where the venting means is internally force–loaded to a normally open position. The terms "backflow preventer" or "dual check valve type with atmospheric port backflow preventer" has the same meaning as backflow preventer with intermediate atmospheric vent.

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

(20) "Back siphonage backflow vacuum breaker" means a type of cross connection control device which contains a check valve force–loaded closed and an air inlet vent valve force–loaded open to atmosphere, positioned downstream of the check valve, and located between and including 2 tightly closing shut–off valves and 2 test cocks. The term "SVB" has the same meaning as back siphonage backflow vacuum breaker.

(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.

(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.

(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_5" 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 the vertical distance along a drain stack measured from immediately below a branch drain connection to immediately below the first lower branch drain connection that is 8 feet or more below.

Note: See ch. Comm 82 Appendix for an illustration depicting branch intervals.

(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 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 wastes or clear water wastes, 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 a building which conveys its discharge to a public sewer, private interceptor main sewer, private onsite wastewater treatment system or other point of disposal.

(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 wastes or clear water wastes, 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.

(51) "Camping unit transfer container" means a type of stationary holding tank used to collect and hold wastewater discharges generated by an individual camping trailer or recreational vehicle.

(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 wastes" means liquids 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.

(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.

(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.

Note: Section 50.01 (1g), Stats., reads: "Community–based residential facility" means a place where 5 or more adults who are not related to the operator or administrator and who do not require care above intermediate level nursing care reside and receive care, treatment or services that are above the level of room and board but that include no more than 3 hours of nursing care per week per resident. "Community–based residential facility" does not include any of the following:

(a) A convent or facility owned or operated by members of a religious order exclusively for the reception and care or treatment of members of that order.

(b) A facility or private home that provides care, treatment and services only for victims of domestic abuse, as defined in s. 46.95 (1) (a), Stats., and their children.

(c) A shelter facility as defined under s. 16.352 (1) (d), Stats.

(d) A place that provides lodging for individuals and in which all of the following conditions are met:

1. Each lodged individual is able to exit the place under emergency conditions without the assistance of another individual.

2. No lodged individual receives from the owner, manager or operator of the place or the owner's, manager's or operator's agent or employee any of the following:

a. Personal care, supervision or treatment, or management, control or supervision of prescription medications.

b. Care or services other than board, information, referral, advocacy or job guidance; location and coordination of social services by an agency that is not affiliated with the owner, manager or operator, for which arrangements were made for an individual before he or she lodged in the place; or, in the case of an emergency, arrangement for the provision of health care or social services by an agency that is not affiliated with the owner, manager or operator.

(e) An adult family home.

(f) A residential care apartment complex.

(g) A residential facility in the village of Union Grove that was authorized to operate without a license under a final judgment entered by a court before January 1, 1982, and that continues to comply with the judgment notwithstanding the expiration of the judgment.

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

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

(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.

(66) "Cross connection control device" means any mechanical device which automatically prevents backflow from a contaminated source into a potable water supply system.

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

(67e) "DC detector" has the same meaning as specified in sub. (80).

(67m) "DCV detector" has the same meaning as specified in sub. (79).

(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 commerce.

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

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

Note: Section 145.245 (1) (a), Stats., reads: "Determination of failure" means any of the following:

1. A determination that a private sewage system is failing, according to the criteria under sub. (4), based on an inspection of the private sewage system by an employee of the state or a governmental unit who is certified to inspect private sewage systems by the department.

2. A written enforcement order issued under s. 145.02 (3) (f), 145.20 (2) (f) or 281.19 (2).

3. A written enforcement order issued under s. 254.59 (1) by a governmental unit.

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

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

(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 type of cross connection control device which is composed of 2 independently acting check valves internally force-loaded to a normally closed position, tightly closing shut-off valves located at each end of the assembly and fitted with test cocks. The terms "backflow preventer, double check valve type" or "DCV" have the same meaning as double check backflow prevention assembly.

(80) "Double check detector assembly backflow preventer" means a type of a double check backflow prevention assembly which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly. The terms "DC detector" and "double check detector valve type backflow preventer" have the same meaning as double check detector backflow preventer. The terms "DC detector" and "double check detector valve type backflow preventer" have the same meaning as double check detector backflow preventer.

Note: Downspout, see "leader".

(81) "Drain" means any pipe that carries wastewater or water-borne wastes.

(82) "Drain system" includes all the piping or any portion of the piping within public or private premises which conveys wastewater 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.

(82m) "Dual check valve type with atmospheric port backflow 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 POWTS treatment component.

(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.

Note: Section 160.01 (2), Stats., reads: "Enforcement standard" means a numerical value expressing the concentration of a substance in groundwater which is adopted under ss. 160.07 and 160.09.

(88) "Engineered soil" means a mineral product that is equivalent to in situ soil for which treatment capability has been credited under Table 83.44-3, 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 specified in sub. (91).

(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. Comm 82 to 84.

(92) "Failing private onsite wastewater treatment system" has the meaning specified under s. 145.245 (4), Stats.

Note: Section 145.245 (4) reads: "Failing private sewage system" means a private sewage system which causes or results in any of the following conditions:

(a) The discharge of sewage into surface water or groundwater.

(b) The introduction of sewage into zones of saturation which adversely affects the operation of a private sewage system.

(c) The discharge of sewage to a drain tile or into zones of bedrock.

(d) The discharge of sewage to the surface of the ground.

(e) The failure to accept sewage discharges and backup of sewage into the structure served by the private sewage system.

(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 (1) and (5), Stats.

Note: Section 91.01 (1) and (5), Stats., reads: (1) "Agricultural use" means beekeeping; commercial feedlots; dairying; egg production; floricultural; fish or fur farming; forest and game management; grazing; livestock raising; orchards; plant greenhouses and nurseries; poultry raising; raising of grain, grass, mint and seed crops; raising of fruits, nuts and berries; sod farming; placing land in federal programs in return for payment in kind; owning land, at least 35 acres of which is enrolled in the conservation reserve program under 16 USC 3831 to 3836; participating in the milk production termination program under 7 USC 1446 (d); and vegetable raising.

(5) "Devoted primarily to agricultural use" means under agricultural use for at least 12 consecutive months during the preceding 36–month period.

(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.

(101) "Floodfringe" has the meaning specified under s. NR 116.03 (14).

Note: Section NR 116.03 (14) reads: "Floodfringe" means that portion of a floodplain which is outside of the floodway, which is covered by flood water during the regional flood. The term "floodfringe" is generally associated with standing water rather than flowing water.

(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).

Note: Section NR 116.03 (16) reads: "Floodplain" means that land which has been or may be covered by flood water during the regional flood. The floodplain includes the floodway, floodfringe, shallow depth flooding, flood storage and coastal floodplain areas.

(104) "Floodway" has the meaning specified under s. NR 116.03 (22).

Note: Section NR 116.03 (22) reads: "Floodway" means the channel of a river or stream, and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.

(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.

(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.

Note: Section 145.01 (5), Stats., reads: "Governmental unit responsible for the regulation of private sewage systems" or "governmental unit", unless otherwise qualified, means the county, except that in a county with a population of 500,000 or more these terms mean the city, village or town where the private sewage system is located.

(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.

Note: Section 160.01 (4), Stats., reads: "Groundwater" means any of the waters of the state, as defined under s. 281.01 (18), occurring in a saturated subsurface geological formation of rock or soil.

(115) "Hand–held shower" means a type of plumbing fixture that includes a cross connection control device, a hose and a hand–held discharge piece such as a shower head or spray.

(116) "Health care and related facility" means a hospital, nursing home, community–based residential facility, county home, infirmary, inpatient mental health center, inpatient hospice, ambulatory surgery center, adult daycare center, end stage renal facility, facility for the developmentally disabled, institute for mental disease, urgent care center, clinic or medical office, child caring institution, or school of medicine, surgery or dentistry.

(117) "Health care plumbing appliance" means a plumbing appliance, the function of which is unique to health care activities.

(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 solution.

(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.

Note: Section 254.01 (2), Stats., reads: "Human health hazard" means a substance, activity or condition that is known to have the potential to cause acute or chronic illness or death if exposure to the substance, activity or condition is not abated.

(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.

(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.

(134) "Infiltrative surface" means the plane within a POWTS 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.

(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.

(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.

(141) "Lead–free" mean a chemical composition equal to or less than 0.2% of lead.

(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.

(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.

(150) "Manufactured dwelling" has the meaning specified under s. Comm 20.07 (52) (a).

Note: Section Comm 20.07 (52) (a) reads: "Manufactured dwelling" means any structure or component thereof which is intended for use as a dwelling and:

1. Is of closed construction and fabricated or assembled on site or off site in manufacturing facilities for installation, connection or assembly and installation at the building site; or

2. Is a building of open construction which is made or assembled in manufacturing facilities away from the building site for installation, connection or assembly and installation on the building site and for which certification is sought by the manufacturer.

(151) "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.

(152) "Mobile home" means a vehicle as defined under s. 66.058 (1) (d), Stats.

Note: Section 66.058 (1) (d), Stats., reads: "Mobile home" is that which is, or was as originally constructed, designed to be transported by any motor vehicle upon a public highway and designed, equipped and used primarily for sleeping, eating and living quarters, or is intended to be so used; and includes any additions, attachments, annexes, foundations and appurtenances.

(153) "Mobile home drain connector" means the pipe that joins the drain piping for a mobile or manufactured home to the building sewer.

(154) "Mobile home park" has the meaning specified under s. 66.058 (1) (e), Stats.

Note: Section 66.058 (1) (e), Stats., reads: "Mobile home park" means any plot or plots of ground upon which 2 or more units, occupied for dwelling or sleeping purposes are located, regardless of whether or not a charge is made for such accommodation.

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

(156) "Multipurpose piping system" means a type of water distribution system conveying potable water to plumbing fixtures and appliances and automatic fire sprinklers with the intention of serving both domestic water needs and fire protection needs within an one– or 2– family dwelling or manufactured dwelling.

(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).

Note: Section NR 115.03 (5) reads: "Navigable waters" means Lake Superior, Lake Michigan, all natural inland lakes within Wisconsin and all streams, ponds, sloughs, flowages and other waters within the territorial limits of this state, including the Wisconsin portion of boundary waters, which are navigable under the laws of this state. Under s. 281.31 (2) (d), Stats., notwithstanding any other provision of law or administrative rule promulgated thereunder, shoreland ordinances required under s. 59.971, Stats., and this chapter do not apply to lands adjacent to farm drainage ditches if:

(a) Such lands are not adjacent to a natural navigable stream or river;

(b) Those parts of such drainage ditches adjacent to such lands were nonnavigable streams before ditching or had no previous stream history; and

(c) Such lands are maintained in nonstructural agricultural use.

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

(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 probable human oral lethal dose of greater than 15 grams of solution per kilogram of body weight.

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

Note: Section 50.01 (3), Stats., reads: "Nursing home" means a place where 5 or more persons who are not related to the operator or administrator reside, receive care or treatment and, because of their mental or physical condition require access to

24–hour nursing services, including limited nursing care, intermediate level nursing care and skilled nursing services. "Nursing home" does not include any of the following:

(c) A convent or facility owned or operated exclusively by and for members of a religious order that provides reception and care or treatment of an individual.

(d) A hospice, as defined in s. 50.90 (1), Stats., that directly provides inpatient care.

(e) A residential care apartment complex.

(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 which brings 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.

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

Note: Section NR 115.03 (6), reads: "Ordinary high–water mark" means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic. Where the bank or shore at any particular place is of such character that it is difficult or impossible to ascertain where the point of ordinary high–water mark is, recourse may be had to the opposite bank of a stream or to other places on the shore of a lake or flowage to determine whether a given stage of water is above or below the ordinary high–water mark.

(170) "Participating governmental unit" means a governmental unit which applies to the department for financial assistance under s. Comm 87.60, 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.

(172) "Pipe applied 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.

(173) "Pit privy" means an enclosed nonportable toilet into which nonwater–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.

Note: Section 101.01 (11), Stats., reads: "Place of employment" includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming. "Farming" includes those activities specified in s. 102.04 (3), and also includes the transportation of farm products, supplies or equipment directly to the farm by the operator of said farm or employees for the use thereon, if such activities are directly or indirectly for the purpose of producing commodities for market, or as an accessory to such production. When used with relation to building codes, "place of employment" does not include an adult family home, as defined in s. 50.01 (1), or, except for the purposes of s. 101.11, a previously constructed building used as a community–based residential facility, as defined in s. 50.01 (1g), which serves 20 or fewer unrelated residents.

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

Note: Section 145.01 (10), Stats., reads: "Plumbing" means and includes:

(a) All piping, fixtures, appliances, equipment, devices and appurtenances in connection with the water supply, water distribution and drainage systems, including hot water storage tanks, water softeners and water heaters connected with such water and drainage systems and also includes the installation thereof.

(b) The construction, connection or installation of any drain or waste piping system from the outside or proposed outside foundation walls of any building to the mains or other sewage system terminal within bounds of, or beneath an area subject to easement for highway purposes, including private sewage systems, and the alteration of any such systems, drains or waste piping.

(c) The water service piping from the outside or proposed outside foundation walls of any building to the main or other water utility service terminal within bounds of, or beneath an area subject to easement for highway purposes and its connections.

(d) The water pressure system other than municipal systems as provided in ch. 281.

(e) A plumbing and drainage system so designed and vent piping so installed as to keep the air within the system in free circulation and movement; to prevent with a margin of safety unequal air pressures of such force as might blow, siphon or affect trap seals, or retard the discharge from plumbing fixtures, or permit sewer air to escape into the building; to prohibit cross–connection, contamination or pollution of the potable water supply and distribution systems, and to provide an adequate supply of water to properly serve, cleanse and operate all fixtures, equipment, appurtenances and appliances served by the plumbing system.

(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:

(a) Is either permanently or temporarily connected to the water distribution system of the premises, and demands a supply of water from the system;

(b) Discharges used water, waste materials, or sewage either directly or indirectly to the drain system of the premises; or

(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.

Note: Section 160.01 (5) Stats., reads: "Point of standards application" means the specific location, depth or distance from a facility, activity or practice at which the concentration of a substance in groundwater is measured for purposes of determining whether a preventive action limit or an enforcement standard has been attained or exceeded.

(181) "Potable water" means water that is:

(a) Safe for drinking, personal or culinary use; and

(b) Free from impurities present in amounts sufficient to cause disease or harmful physiological effects and conforming in its bacteriological and chemical quality to the requirements specified in ch. NR 809.

(182) "POWTS" means a private onsite wastewater treatment system.

(183) "POWTS component" means any subsystem, subassembly 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.

(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 wastewater.

(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.

(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 device which consists of an independently operating internally loaded check valve and an independently operating loaded air inlet located on the discharge side of the check valve, a tightly closing shut–off valve located at each end of the assembly, and test cocks. The term "PVB" has the same meaning as pressure vacuum breaker assembly.

(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.

Note: Section 160.01 (6), Stats., reads: "Prevention action limits" means a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.15, Stats., and specified under s. NR 140.10 or 140.12.

(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 privately owned sewer serving 2 or more buildings and not directly controlled by a public authority.

(194) "Private onsite wastewater treatment system" has the meaning given for 'private sewage system' under s. 145.01 (12), Stats.

Note: Section 145.01 (12), Stats., reads: "Private sewage system" means a sewage treatment and disposal system serving a single structure with a septic tank and soil absorption field located on the same parcel as the structure. This term also means an alternative sewage system approved by the department including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel than the structure. A private sewage system may be owned by the property owner or by a special purpose district.

(195) "Private water main" means a privately owned water main serving 2 or more buildings and not directly controlled by a public authority.

(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.

Note: Section 101.01 (12), Stats., reads: "Public building" means any structure, including exterior parts of such building, such as a porch, exterior platform or steps providing means of ingress or egress, used in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy, or use by the public or by 3 or more tenants. When used in relation to building codes, "public building" does not include a previously constructed building used as a community–based residential facility as defined in s. 50.01 (1g) which serves 20 or fewer unrelated residents or an adult family home, as defined in s. 50.01 (1).

(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.

(199e) "PVB" has the same meaning as specified in sub. (189).

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

(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 backflow preventer" means a type of reduced pressure principle type backflow preventer which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly. The term "RP detector" has the same meaning as reduced pressure detector backflow preventer.

(204) "Reduced pressure principle backflow preventer" means a type of cross connection control device which contains 2 independently acting check valves, separated by an intermediate chamber or zone in which there is a hydraulically operated means for venting to atmosphere, and includes 2 shut–off valves and 4 test cocks. The term "RP" has the same meaning as reduced pressure principle backflow preventer.

(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) "Row house" has the meaning specified under s. Comm 51.01 (114a).

Note: Under s. Comm 51.01 (114a) "row house" means a place of abode not more than 3 stories in height, arranged to accommodate 3 or more attached, side by side or back to back living units.

(209e) "RP" has the same meaning as specified in sub. (204).

(209m) "RP detector" has the same meaning as specified in sub. (203).

(210) "Safing" means a pan or other collector placed beneath a pipe or 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.

(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 commerce or designee.

(215) "Servicing" has the meaning as specified under s. NR 113.03 (57).

Note: Under s. NR 113.03 (57) "servicing" means removing the scum, liquid, sludge or other wastes from a private sewage system such as septic or holding tanks, dosing chambers, grease interceptors, seepage beds, seepage pits, seepage trenches, privies or portable restrooms and properly disposing or recycling of the contents as provided in this chapter.

(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.

(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.

(221) "Small commercial establishment" means a commercial establishment or business place with a maximum daily wastewater 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.

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

(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.

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

Note: See ch. Comm 82 Appendix for an illustration depicting the spring line of a pipe.

(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 top of a drain 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. Comm 81 to 87.

(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.

Note: A pressure sterilizer is also referred to as an autoclave.

(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 nonpressure 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 that carries storm water, surface water, groundwater and clear water wastes.

(246) "Storm water wastes" means the wastewater collected from a precipitation event.

(247) "Subsoil drain" means that part of a drain system which conveys the ground or seepage water from the footings of walls or below the basement floor under buildings to the storm sewer or other point of disposal.

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

(249) "Sump pump" means an automatic water pump for storm water or clear water wastes from a sump, pit or low point.

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

(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.

(252e) "SVB" has the same meaning as specified in sub. (20).

(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.

(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).

(258) "Toxic" means a probable human oral lethal dose of 15 or less grams of solution per kilogram of body weight.

(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.

(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.

(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.

(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 which extends one or more stories.

(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.

(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.

(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 wastes, storm water wastes, 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.

(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 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.

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

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

Note: Section 281.01 (18), Stats., reads: "Waters of the state" 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 or groundwater, natural or artificial, public or private within the state or under its jurisdiction.

(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.

(286) "Wetland" has the meaning as specified under s. NR 322.03 (11).

Note: Section NR 322.03(11) reads: "Wetland" means an area where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soil indicative of wet conditions.

(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 which receives the discharge of wastes from other than water closets, urinals or other fixtures which discharge like sewage or fecal matter.

(288e) "Whirlpool" has the meaning as specified under s. Comm 90.03 (11) (k).

Note: Section Comm 90.03 (11) (k) reads: "Whirlpool" means a relatively small pool which uses high temperature water and which may include a water agitation system. A "whirlpool" is sometimes called a spa.

Note: A fill and dump bathtub is not a whirlpool.

(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.

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

History: Cr. Register, April, 2000, No. 532, eff. 7–1–00; cr. (7e), (17e), (60e), (67e), (67m), (82m), (90e), (163e), (170e), (199e), (209e), (209m), (252e), (288e) and (288m), am. (18), (20), (79), (80), (189), (203) and (204), r. and recr. (116), Register, December, 2000, No. 540, eff. 1–1–01.

Comm 81.20 Incorporation of standards by reference. (1) CONSENT. Pursuant to s. 227.21, Stats., the attorney general and the revisor of statutes have consented to the incorporation by reference of the standards listed in sub. (2).

(2) ADOPTION OF STANDARDS. The standards referenced in Tables 81.20–1 to 81.20–13 are hereby incorporated by reference into this chapter.

Note: Copies of the adopted standards are on file in the offices of the department, the secretary of state and the revisor of statutes. Copies of the standards may be purchased through the respective organizations listed in Tables 81.20–1 to 81.20–13.

Note: Refer to chs. Comm 82 to 86 for additional information regarding specific installations, uses and limitations of these standards.

Table 81.20–1

AHAM	Association of Home Appliance Manufacturers 20 North Wacker Drive Chicago, Illinois 60606
Standard Reference Number	**Title**
DW–1–92	Household Electric Dishwashers

Table 81.20–2

ANSI	American National Standards Institute, Inc. 1430 Broadway New York, New York 10018
Standard Reference Number	**Title**
1. Z21.22a–90	Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems
2. Z21.61–83	Gas–Fried Toilets
3 Z124.1–95	Plastic Bathtub Units
4. Z124.2–95	Plastic Shower Receptors and Shower Stalls
5. Z124.3–95	Plastic Lavatories
6. Z124.4–96	Plastic Water Closet Bowls and Tanks
7. Z124.6–97	Plastic Sinks
8. Z124.9–94	Fixtures, Plastic Urinal, American National Standard for

Table 81.20–3

ARI	Air–Conditioning and Refrigeration Institute 1815 North Fort Myer Drive Arlington, Virginia 22209
Standard Reference Number	**Title**
ARI–1010–94	Self–Contained Mechanically–Refrigerated Drinking–Water Coolers

Table 81.20–3e

ASME	American Society of Mechanical Engineers 345 East 47th Street New York, New York 10017
Standard Reference Number	**Title**
1. A112.1.2–91 (R1998)	Air Gaps in Plumbing Systems
2. A112.6.1M–97	Floor–Affixed Supports for Off–the–Floor Plumbing Fixtures for Public Use
3. A112.14.1–75 (R1998)	Backwater Valves
4. A112.18.1M–96	Plumbing Fixture Fittings
5. A112.19.1M–94	Enameled Cast Iron Plumbing Fixtures
6. A112.19.2M–95	Vitreous China Plumbing Fixtures
7. A112.19.3M–87 (R1996)	Stainless Steel Plumbing Fixtures (Designed for Residential Use)
8. A112.19.4–94	Porcelain Enameled Formed Steel Plumbing Fixtures
9. A112.19.5–79 (R1998)	Trim for Water–Closet Bowls, Tanks, and Urinals (Dimensional Standards)
10. A112.19.6–95	Hydraulic Performance Requirements for Water Closets and Urinals
11. A112.21.1M–91	Floor Drains
12. A112.21.2M–83	Roof Drains
13. B1.20.1–83 (R1992)	Pipe Threads, General Purpose (Inch)
14. B16.1–89	Cast Iron Pipe Flanges and Flanged Fittings
15. B16.3–92	Malleable Iron Threaded Fittings
16. B16.4–92	Gray Iron Threaded Fittings

Table 81.20–3e – Continued

ASME	American Society of Mechanical Engineers 345 East 47th Street New York, New York 10017	
	Standard Reference Number	**Title**
17.	B16.5a–98	Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24 (and addenda)
18.	B16.9–93	Factory–Made Wrought Steel Buttwelding Fittings
19.	B16.11–96	Forged Fittings, Socket–Welding and Threaded
20.	B16.12–91	Cast Iron Threaded Drainage Fittings
21.	B16.15–85 (R1994)	Cast Bronze Threaded Fittings, Classes 125 and 250
22.	B16.18–84 (R1994)	Cast Copper Alloy Solder Joint Pressure Fittings
23.	B16.22–95	Wrought Copper and Copper Alloy Solder–Joint Pressure Fittings
24.	B16.23–92	Cast Copper Alloy Solder Joint Drainage Fittings–DWV
25.	B16.24–91	Cast Copper Alloy Pipe Flanges and Flanged Fittings, Class 150, 300, 400, 600, 900, 1500 and 2500
26.	B16.26–88	Cast Copper Alloy Fittings for Flared Copper Tubes
27.	B16.28–94	Wrought Steel Buttwelding Short Radius Elbows and Returns
28.	B16.29–94	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings – DWV
29.	B16.42–87 (R1997)	Ductile Iron Pipe Flanges and Flanged Fittings
30.	B16.45–87 (R1997)	Cast Iron Fittings for Sovent® Drainage Systems
31.	B36.19M–85 (R1994)	Stainless Steel Pipe

Table 81.20–4

ASSE	American Society of Sanitary Engineering P.O. Box 9712 Bay Village, Ohio 44140	
	Standard Reference Number	**Title**
1.	1001–90	Pipe Applied Atmospheric Type Vacuum Breakers
2.	1002–86	Water Closet Flush Tank Ball Cocks
3.	1003–95	Water Pressure Reducing Valves
4.	1004–90	Commercial Dishwashing Machines
5.	1005–86	Water Heater Drain Valves
6.	1006–89	Residential Use (Household) Dishwashers
7.	1007–92	Home Laundry Equipment
8.	1008–89	Household Food Waste Disposer Units
9.	1009–90	Commercial Food Waste Grinder Units
10.	1010–96	Water Hammer Arresters
11.	1011–95	Hose Connection Vacuum Breakers
12.	1012–93	Backflow Preventers with Intermediate Atmospheric Vent
13.	1013–99	Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies
14.	1014–90	Hand–Held Showers
15.	1015–99	Double Check Fire Protection Backflow Prevention
15e.	1016–96	Individual Thermostatic, Pressure Balancing, and Combination Pressure Balancing and Thermostatic Control Valves for Individual Fixture Fittings
16.	1018–88	Trap Seal Primer Valves, Water Supply Fed
17.	1019–97	Vacuum Breaker Wall Hydrants, Freeze Resistant Automatic Draining Type
18.	1020–89	Pressure Vacuum Breaker Assembly
18e.	1022–96	Backflow Preventer for Carbonated Beverage Machines
19.	1023–79	Hot Water Dispensers, Household Storage Type, Electrical
20.	1025–78	Diverters for Plumbing Faucets with Hose Spray, Anti–Siphon Type, Residential Applications
21.	1035–95	Laboratory Faucet Backflow Preventers

Table 81.20–4 – Continued

	ASSE	American Society of Sanitary Engineering P.O. Box 9712 Bay Village, Ohio 44140
	Standard Reference Number	**Title**
22.	1037–90	Pressurized Flushing Devices (Flushometers) for Plumbing Fixtures
22e.	1043–92	Cast Iron Sovent® Sanitary Drain Systems
23.	1047–99	Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies
24.	1048–99	Double Check Fire Protection Backflow Prevention Assemblies
25.	1052–94	Hose Connection Backflow Preventers
25e.	1055–97	Chemical Dispensing Systems
26.	1056–95	Back Siphonage Vacuum Breakers
26e.	1066–97	Individual Pressure Balancing In–Line Valves for Individual Fixture Fittings

Table 81.20–5

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428–2959
	Standard Reference Number	**Title**
1.	A53–97	Pipe, Steel, Black and Hot–Dipped, Zinc–Coated Welded and Seamless, Specification for
2.	A74–96	Cast Iron Soil Pipe and Fittings, Specification for
3.	A123/A123M–97a	Zinc (Hot–Galvanized) Coatings on Products, Specification for
4.	A270–95a	Seamless and Welded Austenitic Stainless Steel Sanitary Tubing, Specification for
5.	A377–95	Ductile–Iron Pressure Pipe, Standard Index of Specifications for
6.	A403/A403M–97a	Wrought Austenitic Stainless Steel Piping Fittings, Specification for
7.	A450/A450M–96	Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes
7e.	A888–96	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Pipe Applications, Specifications for
8.	B32–96	Solder Metal
9.	B42–93	Pipe, Seamless Copper, Standard Sizes
10.	B43–96	Seamless Red Brass Pipe, Standard Sizes, Specification for
11.	B88/B88M–96	Water, Seamless, Copper Tube
12.	B152/B152M–97a	Copper Sheet, Strip, Plate, and Rolled Bar, Specification for
13.	B251/B251M–97	Tube, Wrought Seamless Copper and Copper
14.	B302–97	Threadless Copper Pipe, Specification for
15.	B306–96	Standard Specifications for Copper Drainage Tube (DWV)
16.	C4–97	Clay Drain Tile and Perforated Clay Drain Tile, Specification for
17.	C14/C14M–95	Concrete Sewer, Storm Drain, and Culvert Pipe, Specification for
18.	C33–97	Concrete Aggregates
19.	C76–98	Culvert, Storm Drain, and Sewer Pipe, Reinforced Concrete
20.	C76M–97	Reinforced Concrete Culvert, Storm Drain, and Culvert Pipe (metric), Specifications for
21.	C425–97	Clay Pipe and Fittings for Vitrified Compression Joints
22.	C443/C443M–94	Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
22e.	C507/C507M–95a	Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer, Specifications for
23.	C564–97	Rubber Gaskets for Cast Iron Soil Pipe and Fittings, Specification for
24.	C700–97	Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated, Specification for
24e.	C877/C877M–94	External Sealing Bands for Noncircular Concrete Sewer, Storm Drain, and Culvert Pipe, Specifications for
24m.	C990/C990M–96	Joints for Concrete Pipe, Manholes, Precast Box Sections Using Preformed Flexible Joint Sealants, Specifications for

Table 81.20–5 – Continued

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428–2959
	Standard Reference Number	**Title**
24s.	C1306–95	Hydrostatic Pressure Resistance of a Liquid–Applied Waterproofing Membrane, Standard Test Method for
25.	D1527–96a	Acrylonitrile–Butadiene–Styrene (ABS), Schedules 40 and 80
26.	D1785–96b	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120, Specification for
27.	D2104–96	Standard Specifications for Polyethylene (PE) Plastic Pipe, Schedule 40
28.	D2235–96a	Standard Specifications for Solvent Cement for Acrylonitrile–Butadiene–Styrene (ABS) Plastic Pipe and Fittings
29.	D2239–96a	Polyethylene (PE) Plastic Pipe (SIDR–PR) Based on Controlled Inside Diameter, Specification for
30.	D2241–96b	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR–Series)
31.	D2282–96a	Acrylonitrile–Butadiene–Styrene (ABS) Plastic Pipe (SDR–PR), Specification for
32.	D2321–89	Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity–Flow Applications, Practice for
33.	D2447–95	Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter, Specification for
34.	D2464–96a	Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Specification for
35.	D2466–97	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40, Specification for
36.	D2467–96a	Socket–Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Specification for
37.	D2468–96a	Acrylonitrile–Butadiene–Styrene (ABS), Plastic Pipe Fittings, Schedule 40, Specification for
38.	D2564–96a	Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Systems, Specification for
39.	D2609–97	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe, Specification for
40.	D2657–97	Heat Fusion Joining of Polyolefin Pipe and Fittings, Standard Practice of
41.	D2661–97a	Acrylonitrile–Butadiene–Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings, Specification for
42.	D2662–96a	Polybutylene (PB) Plastic Pipe (SIDR–PR), Based on Controlled Inside Diameter, Specification for
43.	D2665–97a	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings, Specification for
44.	D2666–96a	Polybutylene (PB) Plastic Tubing, Specification for
45.	D2672–96a	Joints for IPS PVC Pipe Using Solvent Cement, Specification for
46.	D2680–95a	Acrylonitrile–Butadiene–Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping, Specification for
47.	D2683–98	Socket–Type Polyethylene Fittings for Outside Diameter–Controlled Polyethylene Pipe and Tubing, Specification for
48.	D2729–96a	Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Specification for
49.	D2737–96a	Polyethylene (PE) Plastic Tubing, Specification for
50.	D2751–96a	Acrylonitrile–Butadiene–Styrene (ABS) Sewer Pipe and Fittings, Specification for
51.	D2774–94	Underground Installation of Thermoplastic Pressure Piping, Standard Practice for
52.	D2846/D2846M–97	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot– and Cold–Water Distribution Systems, Specification for
53.	D2852–95	Styrene–Rubber (SR) Plastic Drain Pipe and Fittings, Specification for
54.	D2855–96	Making Solvent–Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings, Practice for
55.	D3000–95a	Polybutylene (PB) Plastic Pipe (SDR–PR) Based on Outside Diameter, Specification for
56.	D3034–97	Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Specification for
57.	D3035–95	Polyethylene (PE) Plastic Pipe (SDR–PR) Based on Controlled Outside Diameter, Specification for
58.	D3139–96a	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals, Specification for

Table 81.20–5 – Continued

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428–2959
	Standard Reference Number	Title
59.	D3140–90	Flaring Polyolefin Pipe and Tubing, Practice for
60.	D3212–96a	Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals, Specification for
61.	D3261–97	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing, Specification for
62.	D3309–96a	Polybutylene (PB) Plastic Hot– and Cold–Water Distribution Systems, Specification for
63.	D3311–94	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns, Specification for
64.	D4068–96	Chlorinated Polyethylene (CPE) Sheeting for Concealed Water–Containment Membrane, Standard Test Method for
65.	D4491–89	Water Permeability of Geotextile by Permittivity, Standard Test Method for
66.	D4533–91	Trapezoid Tearing Strength of Geotextiles, Standard Test Method for
67.	D4632–91	Grab Breaking Load and Elongation of Geotextiles, Standard Test Method for
68.	D4751–87	Determining the Apparent Opening Size of a Geotextile, Standard Test Method for
69.	D4833–88	Index Puncture Resistance of Geotextile, Geomembranes, and Related Products, Standard Test Methods for
70.	F402–93	Safe Handling of Solvent Cements, Primers and Cleaners Used for Joining Thermoplastic Pipe and Fittings, Practice for
71.	F405–97	Corrugated Polyethylene (PE) Tubing and Fittings, Specification for
72.	F409–97	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings, Specification for
73.	F437–96a	Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Specification for
74.	F438–97	Socket–Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40, Specification for
75.	F439–97	Socket–Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Specification for
76.	F441/F441M–97	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80, Specification for
77.	F442/F442M–97	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR–PR), Specification for
78.	F477–96a	Elastomeric Seals (Gaskets) for Joining Plastic Pipe, Specification for
78e.	F492–95	Propylene and Polypropylene (PP) Plastic–Lined Ferrous Metal Pipe Fittings
79.	F493–97	Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings, Specification for
80.	F628–97a	Acrylonitrile–Butadiene–Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core, Specification for
81.	F656–96a	Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings, Specification for
81e.	F679–95	Poly (Vinyl Chloride) (PVC) Large–Diameter Plastic Gravity Sewer Pipe and Fittings
81m.	F789–95a	Type PS–46 and Type PS–115 PVC Plastic Gravity Flow Sewer Pipe and Fittings
81s.	F794–97	Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter
82.	F810–93	Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields, Specification for
83.	F845–96	Plastic Insert Fittings for Polybutylene (PB) Tubing, Specification for
84.	F876–97	Crosslinked Polyethylene (PEX) Tubing, Specification for
85.	F877–97a	Crosslinked Polyethylene (PEX) Plastic Hot– and Cold–Water Distribution Systems, Specification for
86.	F891–97	Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe With a Cellular Core, Specification for
87.	F949–96a	Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe With a Smooth Interior and Fittings

Table 81.20–5 – Continued

	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428–2959
	Standard Reference Number	**Title**
88.	F1281–98	Crosslinked Polyethylene / Aluminum / Crosslinked Polyethylene (PEX–AL–PEX) Pressure Pipe
89.	F1282–97	Polyethylene / Aluminum / Polyethylene (PE–AL–PE) Composite Pressure Pipe
90.	F1336–93	Poly (Vinyl Chloride) (PVC) Gasketed Sewer Fittings
91.	F1807–98A	Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross–linked Polyethylene (PEX) Tubing

Table 81.20–6

	AWS	American Welding Society 550 N.W. LeJune Road Miami, Florida 33126
	Standard Reference Number	**Title**
AWS A5.8–92		Filler Metals for Brazing Welding, Specification for

Table 81.20–7

	AWWA	American Water Works Association Data Processing Department 6666 West Quincy Avenue Denver, Colorado 80235
	Standard Reference Number	**Title**
1.	C110/A21.10–95	American National Standard for Ductile–Iron and Gray–Iron Fittings, 3 in. through 48 in., for Water and Other Liquids
2.	C111/A21.11–95	American National Standard for Rubber–Gasket Joints for Ductile–Iron Pressure Pipe and Fittings
3.	C115/A21.15–94	American National Standard for Flanged Ductile–Iron Pipe with Ductile–Type Iron or Gray–Iron Pipe Threaded Flanges
4.	C151/A21.51–96	American National Standard for Ductile–Iron Pipe, Centrifugally Cast for Water
5.	C153/A21.53–94	American National Standard for Ductile–Iron Compact Fittings, 3 in. through 16 in., for Water and Other Liquids
5e.	C651–92	Water Mains, Disinfecting
6.	C700–95	Cold Water Meters – Displacement Type with Bronze Main Case (w/ 1991 Addendum)
7.	C701–88	Cold Water Meters – Turbine Type for Customer Service
8.	C702–92	Cold Water Meters – Compound Type
9.	C704–92	Cold Water Meters – Propeller Type for Main Line Applications
10.	C706–96	Cold Water Meters, Direct–Reading, Remote–Registration Systems for
11.	C707–82(R92)	Cold Water Meters, Encoder–Type, Remote–Registration Systems for
12.	C708–96	Cold Water Meters – Multi–Jet Type
13.	C710–95	Cold Water Meters, Displacement Type – Plastic Main Case (w/1991 Addendum)
14.	C900–89	American Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for Water Distribution (w/1992 Addendum)
15.	C906–90	Polyethylene Pressure Pipe and Fittings, 4 in. through 63 in., for Water Distribution

Table 81.20–7e

	CAN/CSA	**Canadian Standards Association** **178 Rexdale Boulevard** **Rexdale (Toronto), Ontario, Canada** **M9W 1R3**
	Standard Reference Number	**Title**
1.	B64–94	Backflow Preventers and Vacuum Breakers
2.	B125–93	Plumbing Fittings
3.	B137.9–98	Polyethylene / Aluminum / Polyethylene Composite Pressure Pipe Systems
4.	B137.10–98	Crosslinked Polyethylene /Aluminum / Crosslinked Polyethylene Composite Pressure Pipe Systems
5.	B181.1–96	ABS Drain, Waste, and Vent Pipe and Pipe Fittings
6.	B181.2–96	PVC Drain, Waste, and Vent Pipe and Pipe Fittings

Table 81.20–8

	CISPI	**Cast Iron Soil Pipe Institute** **5959 Shallowford Road, Suite 419** **Chattanooga, Tennessee 37421**
	Standard Reference Number	**Title**
1.	F1281–97	Crosslinked Polyethylene / Aluminum / Crosslinked (PEX–AL–PEX) Polyethylene Pressure Pipe
2.	301–97	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Standard Specification for
3.	310–97	Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Specification for

Table 81.20–9

	FMRC	**Factory Mutual Research Corp.** **1151 Boston–Providence Turnpike** **Norwood, Massachusetts 02062**
	Standard Reference Number	**Title**
	1680	Couplings used in Hubless Cast Iron Systems for Drain, Waste or Vent, Sewer, Rainwater or Storm Drain Systems Above and Below Ground, Industrial/Commercial and Residential, January 1989

Table 81.20–10

	MSS	**Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.** **127 Park Street, N.E.** **Vienna, Virginia 22180**
	Standard Reference Number	**Title**
	SP–103	Wrought Copper and Copper Alloy Insert Fittings for Polybutylene Systems, 1995 Edition

Table 81.20–10m

	NFPA	**National Fire Protection Association** **11 Tracy Drive** **Avon, MA 02322–9908**
	Standard Reference Number	**Title**
	NFPA 13D–1999	Installation of Sprinkler Systems in One– and Two–Family Dwellings and Manufactured Homes

Table 81.20–11

	NSF	NSF International 3475 Plymouth Road P.O. Box 130140 Ann Arbor, Michigan 48113–0140
	Standard Reference Number	**Title**
1.	Standard 14–90	Plastic Piping Compounds and Related Materials
2.	Standard 40–99	Residential Wastewater Treatment Systems
3.	Standard 41–98	Non–Liquid Saturated Treatment Systems
4.	Standard 44–98	Residential Cation Exchange Water Softeners
5.	Standard 61–97b	Drinking Water System Components Health Effects

Table 81.20–12

	STI	Steel Tank Institute 570 Oakwood Road Lake Zurich, Illinois 60047
	Standard Reference Number	**Title**
STI–P_3		External Corrosion Protection of Underground Steel Storage Tanks, Specifications and Manual for, 1996 edition

Table 81.20–13

	UL	Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, Illinois 60062
	Standard Reference Number	**Title**
1.	Standard 58–86	Steel Underground Tanks for Flammable and Combustible Liquids
2.	Standard 1746–89	External Corrosion Protection Systems for Steel Underground Storage Tanks

History: Cr. Register, April, 2000, No. 532, eff. 7–1–00; r. (2), renum. (3) to be (2) and am., r. and recr. Table 81.20–2, cr. Tables 81.20–3e, 81.20–7e and 81.20–10m, am. Tables 81.20–4 to 81.20–8 and 81.20–11, r. Table 81.20–14, Register, December, 2000, No. 540, eff. 1–1–01; correction in (1) made under s. 13.93 (2m) (b) 7., Stats., Register, December, 2000, No. 540.