



ADMINISTRATIVE RULES OF MONTANA



36.21.634 DEFINITIONS

For purposes of this chapter, the following terms shall apply.

- (1) "Abandoned water well":
 - (a) "permanent" means a well whose use has been permanently discontinued; and
 - (b) "temporary" means a well from which a drilling rig has been removed from the well site prior to completing or altering the well.
- (2) "Access port" means an opening in the upper terminus of a well casing in the form of a tapped hole and plug or a capped pipe welded onto the casing to permit entry of water-level measuring devices into the well.
- (3) "Annular space" or "annulus" means the space between a drill hole and a casing pipe, or between two well casings.
- (4) "Aquifer" means any geological formation which is capable of yielding water or is capable of recharge.
 - (a) Any discrete water bearing unit with a specific water chemistry, temperature, or hydrostatic head shall be considered a separate aquifer.
- (5) "Artesian well" means a well in which the water level rises above the point at which it was first encountered. This term includes both flowing and non-flowing wells.
- (6) "Bentonite" means a highly plastic, highly absorbent, colloidal clay composed primarily of swelling sodium montmorillonite.
- (7) "Board" means the Montana Board of Water Well Contractors.
- (8) "Capped well" means a well that is not in use and has a permanent seal or locked cap installed on top of the casing.
- (9) "Casing":
 - (a) "inner" means the inner tubing, pipe, or conduit installed inside the well casing or lower well drill hole, which is used to protect against caving formations or to seal out polluted or mineralized water zones; and
 - (b) "outer" means an impervious durable pipe placed in a well to:
 - (i) prevent the walls from caving;

- (ii) seal off surface drainage or undesirable water, gas, or other fluids to prevent their entering the well; and
 - (iii) prevent the waste of groundwater.
- (10) "Casing seal" means the watertight seal established in the drill hole between the well casing and the drill hole wall to prevent the inflow and movement of surface water or shallow ground water in the well annulus, or to prevent the outflow or movement of water under artesian or hydrostatic pressures.
- (11) "Clay" means a fine-grained, inorganic material having plastic properties and with a predominant grain size of less than 0.005 mm (0.0002 inches).
- (12) "Community water system" means any public water supply system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.
- (13) "Concrete" means a mixture of not more than two parts sand and one part cement, and not more than six gallons of clear water per 94-pound bag of Portland cement. Up to five percent, by weight, of bentonite clay may be used to improve flow and reduce shrinkage.
- (14) "Confining formation" means a body of impermeable or distinctly less permeable material adjacent to one or more aquifers.
- (15) "Consolidated formation" means any geologic formation in which the earth materials have become firm and coherent through natural rock forming processes, including, but is not limited to basalt, granite, sandstone, shale, conglomerate, and limestone.
- (16) "Construction of water wells" means all acts necessary to obtain groundwater by wells, including:
 - (a) the contracting for, and excavation of the well;
 - (b) installation of casing, sealing material, and screens; and
 - (c) developing and testing, whether in the installation of a new well or the alteration of an existing well. The term does not include the installation of permanent pumps and pumping equipment.
- (17) "Contamination" means an impairment of water quality by chemicals, radionuclides, heat, or biologic life to a degree that may or may not affect the potential or intended use of water.
- (18) "Department" means the Department of Natural Resources and Conservation.
- (19) "Disinfection" means the introduction of chlorine or other disinfecting agents using a method approved by the board, in a sufficient concentration and followed by an adequate exposure contact time so as to inactivate coliform or other indicator organisms.
- (20) "Drawdown" means the extent of lowering of the water level in a well when pumping is in progress or when water is discharging from a flowing well. Drawdown is the difference between the static water level and the pumping level.
- (21) "Gravel pack":
 - (a) "artificial gravel pack" means placement of gravel in the annular space around the well casing or screen. A gravel pack is frequently used to:

- (i) prevent the movement of finer material into the well casing;
 - (ii) increase the ability of the well to yield water; and
 - (iii) lend lateral support to screens in unstable formations; and
 - (b) "natural gravel pack" means a gravel pack which leaves the coarser, naturally occurring gravels around the screen. The finer sands are removed from the formation by development.
- (22) "Monitoring well" means a well that will be used for pollutant recovery or monitoring of groundwater quality, groundwater levels, or flow direction but whose primary purpose is not withdrawal or acquisition of groundwater.
- (23) "Montana Bureau of Mines and Geology (MBMG)" means the Montana Bureau of Mines and Geology located in Butte, Montana.
- (24) "Multiple-user water supply system" means a nonpublic water supply system designed to provide water for human consumption. In estimating the population served, the reviewing authority shall multiply the number of living units based on the most recent census data. The supply system shall provide water for:
- (a) 3 through 14 living units; or
 - (b) 3 through 14 commercial units. The total people served shall not exceed 24.
- (25) "Noncommunity water system" means any public water supply system which is not a community water system.
- (26) "Pitless adapter or pitless unit" means a commercially manufactured unit or device designed for attachment to a well casing which permits buried pump discharge from the well and allows access to the interior of the well casing for installation or removal of the pump or pump appurtenances, while preventing the entrance of contaminants from surface or near surface sources from entering the well.
- (27) "Pollution" means a serious impairment of water quality by chemicals, radionuclides, heat, biologic organisms, or other extraneous matter to the degree that impairs the potential or intended use of water or creates a hazard to the public health and safety.
- (28) "Potable water" means water which is safe for human consumption in that it is free from impurities in amounts sufficient to cause disease or harmful physiological effects.
- (29) "Public water supply system" means a system for the provision of water for human consumption from any community well, water hauler for cisterns, water bottling plant, water dispenser, or other water supply that has at least 15 service connections or that regularly serves at least 25 persons daily for any period of 60 days or more in a calendar year.
- (30) "Pump test" means the procedure used to determine the yield characteristics of a water well by installing and operating a pump for an extended period of time.
- (31) "Pumps" and "pumping equipment" mean any equipment or materials utilized or intended for use, including seals and tanks, together with fittings and controls, in withdrawing or obtaining groundwater for any use.
- (32) "Sand" means a detrital material having a prevalent grain size ranging from 2 millimeters to 0.06 millimeters (0.08 inch to 0.002 inch).

- (33) "Sanitary well seal" means a manufactured seal installed at the top of the well casing which, when installed, creates a watertight seal to prevent contaminated or polluted water from gaining access to the ground water supply.
- (34) "Sealing material" means neat cement, bentonite water slurry or grout, or bentonite chips or pellets. Bentonite water slurry shall be mixed according to the manufacturer's instructions as a sealing material, and shall contain no less than 1.5 pounds of bentonite per gallon of freshwater. The mixed slurry shall weigh no less than nine pounds per gallon.
- (a) "Bentonite clay grout" means a mixture consisting of not less than one-half pound of commercial bentonite clay to one gallon of clear water.
- (b) "Neat cement grout" means a mixture of not more than six gallons of clear water per 94-pound bag of Portland cement. Up to five percent, by weight, of bentonite clay may be used to improve flow and reduce shrinkage. No sand or gravel is to be used in cement grout.
- (c) Any slurry or cement shall be pumped from the bottom up. Chip or pellet placement may be gravity fed at a controlled rate that equals or is slower than the manufacturer's recommendation, and in such a manner that will prevent bridging.
- (35) "Sewage lagoon" means any holding or detention pond that is used for treatment or storage of water-carried waste products from residences, public buildings, institutions, or other buildings, including discharge from human beings or animals, together with ground water infiltration and surface water present. For purposes of this rule, the term includes concentrated animal feeding operations but does not include storm water facilities or subsurface wastewater treatment systems.
- (36) "Silt" means an unconsolidated clastic sediment composed predominantly of particles between 0.06 and 0.005 mm (0.002 inch to 0.0002 inch) in diameter.
- (37) "Static water level" means the vertical distance from the surface of the ground to the water level in a well when no water is being taken from the aquifer, either by pumping or by free flow.
- (38) "Transient noncommunity water system" means a public water supply system that is not a community water system and that does not regularly serve at least 25 of the same persons for at least six months per year.
- (39) "Unconsolidated formation" means naturally occurring, noncemented materials including, but not limited to clay, sand, silt, and gravel.
- (40) "Water table" means the upper surface of an unconfined water body, the surface of which is at atmospheric pressure and fluctuates seasonally.
- (41) "Well drilling machine" means any power-driven machine used in the construction or alteration of water wells, including, but not limited to percussion, jetting, rotary, boring, digging, or augering machines.
- (42) "Well log report" means DNRC Form No. 603 (see ARM 36.12.102). The water well driller/contractor shall record the well information on the wells constructed and file the report as required by ARM 36.21.639 and 85-2-516 and 85-2-527, MCA.

Implementing statute(s): 37-43-202, MCA

History: NEW, 1986 MAR p. 1699, Eff. 10/17/86; AMD, 1991 MAR p. 913, Eff. 6/14/91; AMD, 1997 MAR p. 65, Eff. 1/17/97; AMD, 2010 MAR p. 1614, Eff. 7/16/10; AMD, 2019 MAR p. 851, Eff. 6/22/19.