

## REGULATION 5: DRINKING WATER WELL PROTECTION

Adopted October 15, 2009

Effective Date January 01, 2010

### 1. GENERAL.

A. Purpose. The purpose of this regulation is to protect the quality and potability of water for public water supplies and domestic uses by tracking and verifying the location of new wells and to ensure compliance with Missoula City-County Health Code Regulation 1, ARM 36.21.638, ARM 17.36.323, and the Missoula Municipal Code, Section 13.26.090.

B. Authority. Authority for this regulation is provided in 50-2-116, MCA and 76-4-108 MCA.

### 2. DEFINITIONS.

Community water system: any public water supply system which serves at least ten service connections used by year round residents or regularly serves at least 25 year-round residents.

Contaminant: a biological, chemical, physical, or radiological constituent in water that is or may become injurious to public health, safety, welfare, or to the environment.

Contamination: an impairment to the quality of water to a degree that creates or may create a hazard to public health through poisoning or through spread of disease or otherwise affects the aesthetic quality of the groundwater.

Department: the Missoula City-County Health Department.

Drainfield: that part of an on-site sewage system that provides for the infiltration of sewage below the ground surface.

Groundwater: the water in the zone of saturation that fills all pore spaces of the subsurface geologic material.

Maintenance: includes, but is not limited to, repair or replacement of a pump, well screen, pressure tank, piping, wiring, controls, or treatment device that is part of a well or water system.

Potable water: water that is free of coliform bacteria and contaminants in concentrations that may cause disease or harmful physiological effects, is safe for human consumption and meets the State drinking water standards set forth in MCA 75-6-201 and ARM 17.30.100.

Public water supply system: a system for the provision of water for human consumption from any community well or other water supply that is designed to serve or serves 25 or more persons daily at least 60 days out of the calendar year or has at least 15 service connections.

Test or exploratory hole: an excavation, or direct push used for determining the nature of underground geological or hydrological conditions, by direct observation, or by any other means.

#### Wells

1) "Well" means an excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed and includes any related system(s) of pumps, pipes, controls, reservoirs, or mechanical devices used for the purpose(s) of: location, diversion, artificial recharge, acquisition of groundwater or for any other similar purpose.

Wells include, but are not limited to:

a) Extraction well: any well used to extract water for treatment or other processes.

b) Heat exchange well: a well used for extracting and injecting groundwater for heating or air conditioning purposes.

- c) Industrial well: a well that is used to supply water for industrial processes, fire protection, or similar nonpotable uses.
- d) Irrigation well: a well that is used to provide water for plants, livestock, or other agricultural processes.
- e) Test well: a well that is used to obtain information on groundwater quantity, suitability as a drinking water source, or aquifer characteristics for the purpose of designing or operating a water supply well.
- f) Water supply well: a well that is used to provide potable water for drinking or domestic purposes.

- 2) Wells, for the purpose of this regulation do not include:
  - a) Monitoring wells used solely to detect the presence of a contaminant in groundwater or soil, or monitor groundwater levels;
  - b) Oil and gas wells constructed under the jurisdiction of the Montana Department of Environmental Quality (MDEQ), except those wells converted to use as water wells; or
  - c) Wells used solely for the purpose of:
    - i) Dewatering wells less than twenty-five (25) feet in depth during construction,
    - ii) Stabilizing hillsides or earth embankments,
  - d) The following excavations:
    - i) Holes or excavations for drainfield soil evaluation tests,
    - ii) Drill holes for seismic exploration where such drill holes are less than twenty-five (25) feet in depth,
    - iii) Other geotechnical exploratory borings.

### 3. PERMIT REQUIRED

- A) A person may not construct a well within Missoula County without first obtaining a permit from the Department.
- B) Application for a permit must be made by the property owner(s) or his/her authorized representative on forms provided by the Department. The application must include:
  - 1) Name and address of owner and applicant if different, and a complete legal description and address of the property on which construction of the well is proposed.
  - 2) Either of the following:
    - a) A lot layout approved by the DEQ as part of a Certificate of Subdivision Approval, showing the proposed building location and any deviations or changes to the approved layout; or
    - b) A site plan showing the location of:
      - i) The proposed well
      - ii) Existing and proposed sewage facilities
      - iii) Existing and proposed buildings
      - iv) Property lines and easements
      - v) Any flood plain or surface water within 100' of proposed well location
      - vi) Any applicable non-degradation mixing zones.
  - 3) The intended use of the well. Applications for non-drinking water wells must include the diameter of the well.
  - 4) The appropriate fee established by the Board,
- C) The Department may issue a permit for a well after all the requirements of this section have been met.
- D) A permit expires if the well for which the permit was issued is not installed, inspected, and approved by the Department within one year after issuance.
- E) A permit may be extended one time by the Department for one year if:

- 1) the permit holder requests an extension from the Department prior to the expiration of the permit; and
- 2) the requirements of the permit and this regulation are met; and
- 3) any differences in permit application fees are paid in full.

- F) If a well is constructed in the approved location and fails to produce adequate water:
- 1) the driller must notify the Department; and
  - 2) a new site plan must be submitted showing both well locations unless proof that the original well has been abandoned is submitted to the Department; and
  - 3) a new permit and fees may be required.

G) The Department shall charge a fee three times the permit application fee when the construction of a well starts prior to a valid permit being issued. This provision shall become effective 90 days following the effective date of this regulation.

#### 4. SITING REQUIREMENTS

- A) A person may not construct a water supply well where the location of that well would cause:
- 1) A violation of an approved Certificate of Subdivision Approval;
  - 2) A violation of an approved location for a sewage treatment or disposal system;
  - 3) The requirements of Regulation 1.

B) The property owner has the ultimate responsibility to determine the location of the well prior to construction. The owner or driller may request a site inspection by the Department prior to drilling to confirm that the proposed well location meets the requirements of this rule. The Department may charge a fee to be determined by the Board to cover the cost of an additional site inspection.

C) If a parcel has a Certificate of Subdivision Approval all wells must be constructed in the locations shown on the approved site plan. If there is no Certificate of Subdivision Approval for the parcel, the location of the well(s) must conform to the minimum setback requirements shown in Table 1. In addition, wells should remain 100 feet from surface water and 10 feet from any floodplain.

D) Wells that cannot meet the requirements of Table 1 must be sited and constructed to provide the most setback distances practicable. Wells that cannot meet the minimum setback requirements in ARM 36.21.638 must receive approval from the Montana Board of Water Well Contractors pursuant to ARM 36.21.680 before a permit may be issued.

Table 1.

Well Use	Absorption Systems	Septic Tanks & other components*	Sealed Sewer Lines
Residential Drinking Water	100	50	10
Community or Public Water Supply	100	100	100
Extraction	100	50	10
Heat Exchange	100	50	10
Industrial	100	50	10
Irrigation	100	50	10
Testing	100	50	10

\*Other components include sewer lines without water tight connections, grease traps, dosing tanks, pumping chambers, intermittent and recirculating filters, package plants and evapotranspiration systems.

## **5. INSPECTIONS**

A) Prior to being used all wells require a final inspection by the Department unless specific permission has been granted by the Department. When final approval is withheld, a written notice of deficiencies and required corrective action must be provided to the applicant within ten (10) business days of the inspection. The applicant or licensed well driller must notify the Department upon correction of any and all deficiencies. A reinspection must be made to confirm the deficiencies have been corrected and the system is in compliance with these regulations.

B) The applicant or licensed well driller must notify the Department that a well is ready for inspection within two (2) business days of completion of the well.

C) The applicant or licensed well driller need not be present during the inspection.

D) A site inspection may be required by the Department or requested by the applicant before construction of a well commences to verify the correct location of the well. A fee established by the Board may be required for a site inspection conducted prior to construction of a well.

E) Acceptance of a permit by the applicant confers upon the Department the authority to access the well construction site at reasonable times for the purpose of making examinations and investigations to determine compliance with these Regulations.