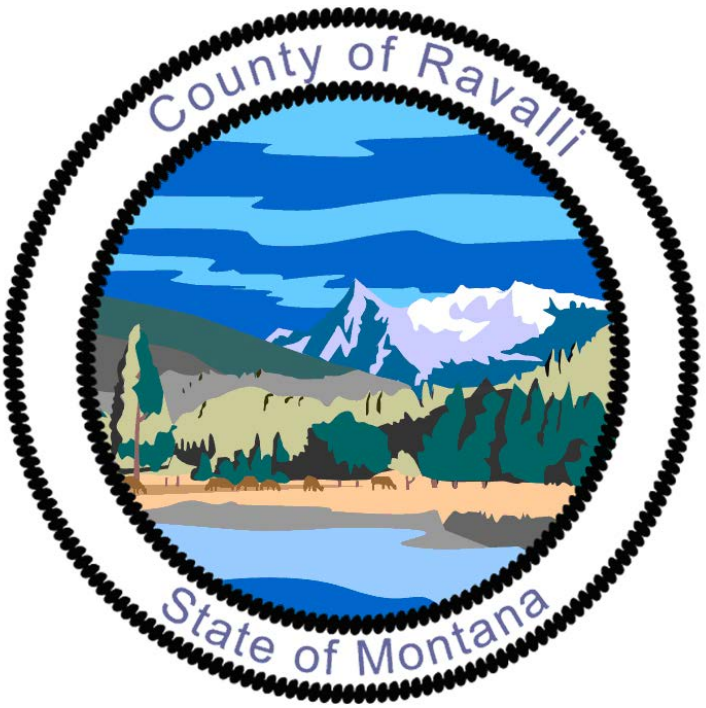
RAVALLI COUNTY GROUNDWATER MONITORING APPLICATION REQUIREMENTS 2026



GROUNDWATER MONITORING APPLICATION REQUIREMENTS

Read carefully before signing and retain for reference.

GENERALREQUIREMENTS-steps to take prior to March 1, 2025

1. A completed and signed application for groundwater monitoring and the accompanying fees must be received by the Ravalli County Environmental Health Department before March 1st, 2026 to ensure groundwater monitoring resultsforthe2026 monitoringyear. Please include the **Parcel# (Tax** I. **D. number),** and **location of each monitoring pipe.** Please obtain a parcel map from the RCEH office and label the map with the names of roads, access points) distances, pipe locations and numbers. If the site is difficult to find, you should also include a vicinity map.
2. The phone number of a local contact person is required in the event there are issues locating the site or obtaining access, or in the event that RCEH employee's encounter problematic situations.
3. A site evaluation is required prior to the approval of a wastewater (septic) treatment system, and **we strongly recommend the site evaluation be completed prior to groundwater monitoring to help verify that the site is suitable for a drainfield. If** approved, the drainfield will have to be installed within 25 feet of the monitoring pipe at the same or higher elevation, and it must not be placed any closer than the monitoring pipe to surface water. If the monitored site is not suitable for a drainfield, a wastewater (septic) treatment permit cannot be issued for the site, even if it has already passed groundwater monitoring.

MONITORING PIPE REQUIREMENTS

1. A four-inch (4") diameter, ten-foot (10') long, perforated PVC pipe must be placed vertically at least eight feet {8') below the natural ground surface. For alternative monitoring pipe design, please contact our office.
2. Any tampering with the pipes, such as adding material that would interfere with monitoring or change the results may subject you to penalties and could void the monitoring results and void any permits issued based on these results.
3. Backfill around the pipes must be level with the natural existing topography of the site. Please do not mound soil around the pipe, pinch, or bend the pipe during the backfilling process.
4. Ground water pipes must be sealed to prevent surface runoff from entering the pipe. The ground should be slightly sloped away from thepipe.
5. The top of the well must have a watertight cap.
6. All monitoring pipes will have an assigned ear tag attached to the top of the pipe with the numbers facing outward and easily readable. The tag must remain on pipe. Pipes must be exposed at least 10" above the ground surface. If the pipe is damaged or is obstructed from view it is the owners' responsibility to take immediate action to resolve the issue so the monitoring is not interrupted. If monitoring is missed it may be terminated for that year & fees & application will need to be reapplied for the following year.

7. Access to pipes must be provided throughout the season. RCEH must be able to drive to within 100 feet of each pipe. Access gates need to be clearly marked and easy to open. Driving through fields with crops may cause damage. This is the responsibility of the homeowner if they are wishing to monitor in a cropped field. RCEH is not liable for damage to crops while driving to monitor pipes. County vehicles cannot drive across ditches, or any creeks, streams or channels. We will not move irrigation pipes, this is the homeowners' responsibility to make sure pipes and paths are marked clearly so the county vehicle can get to the monitoring pipe safely without damage to county vehicle, crops or irrigation pipes. If the field is prone to be wet or muddy it is the owners' responsibility to provide a suitable roadway with material that will prevent the county vehicle from getting stuck. Ravalli County is not liable for damage to crops, irrigation pipes or monitoring pipes that have been obstructed or not clearly marked.
8. No ground modifications are allowed anywhere in the vicinity of the pipe. An area of at least 100 feet surrounding the pipe must not be artificially drained, filled, cut or otherwise disturbed or altered. The pipe must be at least 25 feet from a slope of 35% or greater and not located on a slope greater than 15% unless an engineered system is proposed for slopes greater than 15% and less than 25%.
9. It is the current property owner's responsibility to ensure that irrigation or water use practices do not cause the groundwater to rise above the level used for systems approval.

Monitoring generally begins in March. We encourage you to check water levels in your pipes. If a pipe is not marked by April 1st with spray paint, ribbon or an ear tag please contact our office.
Measurements will be taken weekly until the groundwater level peaks and continues to go down for at least 2 weekly readings. The season can run from generally March to October depending on your area.
Results may be void if the yearly precipitation or snow pack in the Bitterroot Valley is more than 30% below the 30-year average.

Groundwater monitoring results will be mailed out at the end of the season.
If you have any questions, please contact our office. Applications are available online or in our office

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Website www.ravalli.us - Environmental Health

3.7 Groundwater Monitoring

The Department may require groundwater monitoring in the area of the proposed Absorption System. Generally, the Department will require groundwater monitoring if it has evidence that groundwater will be within 7 feet of the surface at any time of the year within the boundaries of the Absorption System. Groundwater monitoring shall be achieved by installation of one or more Groundwater Observation Wells. Groundwater Monitoring will be perfonned per MDEQ-4 requirements.

3.7.1 The top of any Groundwater Observation Wells shall be 2 feet above the ground surface or adequately marked. The Department shall record the coordinates of Groundwater Observation Wells using a global position system device. Unless the Department directs otherwise, Groundwater Observation Wells shall be installed to a depth of at least 8 feet.

Groundwater Observation Wells must be located at a point that is representative of the area of the proposed Wastewater System

3.7.2 The Department, or a designated representative shall monitor the Groundwater Observation Wells for a period sufficient to measure Seasonally High Groundwater after the applicant has completed the groundwater monitoring application fonn and paid the fees in accordance with the Fee Schedule available in the Department office. A determination based on Groundwater Observation Wells will be made only after the Department determines that sufficient data has been collected to detect Seasonally High Groundwater, and a peak and a sustained decline in the groundwater level.

3.7.3 The Department may reject groundwater monitoring data and may require additional monitoring (including another season) if it has evidence that the data may be defective, incomplete, or compromised including but not limited to the following reasons:

(1) Monitoring occurred during a drought year in accordance with Appendix C of Circular MDEQ-4;

(2) Historic information indicates high groundwater occurrences;

(3) if the Department has evidence to suggest that monitoring was conducted in a manner or at a time during which the monitoring would fail to detect the Seasonally High Groundwater level; or

(4) The Department has evidence to suggest that site conditions during monitoring were not typical. An example of atypical site conditions would be a property where normal irrigation practices have been altered or suspended during groundwater monitoring.

3.7.4 Groundwater Observation Wells must remain in the ground until construction of the Wastewater System begins.

3.7.5 Any Groundwater Observation Well which has failed (i.e., not meeting depth to groundwater requirements as described in MDEQ-4) cannot be monitored again unless the applicant documents that a permanent change has been made that might allow the Well to pass. (For example, a nearby irrigation ditch is filled in, removed, or piped).

3.7.6 Unless approved by the Department in writing, any Groundwater Monitoring Well installed in subsequent years must be located at least 100 feet from the failed Groundwater Monitoring Well.

3.7.7 If the Department has evidence that a Groundwater Monitoring Well has been tampered with by or on behalf of the applicant, the applicant will be notified and may ask for a hearing with the Department Director. The Director may consider a rebuttable presumption that the applicant is responsible for any tampering that would make the Groundwater Monitoring Well more likely to pass. The Director may consider a rebuttable presumption that the applicant is not responsible for tampering that would make the Groundwater Monitoring Well more likely to fail. The Department shall consider any evidence and make a determination whether applicant is responsible for suspected tampering. This determination may be appealed through the Board of Health.

3.7.8 If an applicant has been found to be responsible for tampering with a Groundwater Observation Well that well will be considered failed and the Department shall reject the application. The Department shall reject another application on that tract of record, or any other tract ofrecord owned by the applicant or owned by an entity in which applicant has at least 25% interest, for 2 years. Notice of the Department's finding and the application restriction shall be filed with the Clerk and Recorder's Office.

3.7.9 Any Wastewater System Permit approval is dependent on data and calculations showing a specific level for Seasonally High Groundwater under the site. It is the responsibility of the tract owner to ensure that irrigation and water use practices that may affect the applicant tract of record are maintained and continued in the same fashion as the practices that existed during the monitoring period and do not cause groundwater level to rise above the level determined during the time of the approved monitoring season.

APPENDIX C - GROUND WATER OBSERVATION WELL INSTALLATION AND MEASURING PROCEDURES

Observation Schedule

Observation must be done during the time when ground water levels are highest. This is typically during spring runoff or during the irrigation period, but may also be at some other time during the year. Observation must be done weekly or more frequently during the appropriate periods of suspected high ground water. Observation must include at least two weeks of observation prior to and after the ground water peak, otherwise the reviewing authority may reject the results. The applicant is encouraged to consult with the state and/or county before installing wells. The monitoring of the observation well must be completed by a qualified site evaluator as defined in Section 1.2.68 approved by the reviewing authority.

Surface water levels may be indicative of the ground water levels that may peak several weeks after spring runoff and irrigation seasons.

Local conditions may indicate that there is more than one geologic horizon that can become seasonally saturated. This may require observation wells to be installed at different horizons. The well should be placed in, but not extended through, the horizon that is to be monitored.

The reviewing authority may refuse to accept seasonal high ground water data when the total precipitation for the previous year, defined as May 1 of the previous year to April 30 of the current year, of April I snowpack equivalent, measured at the nearest officially recognized observation station, is more than 25 percent below the 30-year historical average. This is based upon the definition of drought conditions created by the National Drought Mitigation Center. The reviewing authority may consider soil morphology and data from nearby ground water observation sites with similar soil, geology, and proximity to streams or irrigation ditches, if available, to determine maximum ground water elevation during periods of drought.

Where to Install

The observation well(s) must be installed within 25 feet of the proposed absorption trench and on the same elevation. The reviewing authority may require the placement of the well(s) in an exact location. Additional observation wells may be required if the recommended observation sites show ground water higher than 6 feet below the ground surface.

Installation Process

The observation well must be installed vertically into a dug or drilled hole.

A slotted water well pipe should be used that is 2 to 4 inches in diameter and 10 feet long.

A. Slotted pipe (PVC is the most common material) with slot sizes between 40 and 100 (i.e. slot widths between 0.04 and 0.10 inches wide) is suggested. Slots should be horizontal and spaced at intervals less than or equal to 0.5 inches.
B. Check with the reviewing authority to determine if an alternate well material is acceptable.

The pipe should be perforated from 1 foot below the ground surface to 8 feet below the ground surface unless multiple horizons exist.

The casing must be unperforated **1** foot below the ground surface to the top of the observation well. The well must extend at least 2 feet above the ground surface.

The top of the observation well must be sealed with a watertight cap.

The area around the well must be backfilled with native material to 1 foot below the ground surface.

The observation well must be sealed in such a manner that prevents surface runoff from running along the outside of the well casing. The well should be sealed from 1 foot below the ground surface to slightly above grade to allow for subsidence and to maintain a positive ground slope away from well casing. The material used to seal the well can be either fine-grained material or bentonite.

Each observation well should be flagged to facilitate locating the well and labeled with the lot number, location, and subdivision name.

Measuring Procedures

Lower a measuring tape or stick to the water level and measure the distance from the water level to the top of the pipe (see example on next page). Water levels should be measured to the nearest inch. A plunking device or electronic water sensor can also be used. Data should be submitted in a similar form to that of the example.

Measure the distance from the top of the pipe to the natural ground surface (B distance) (see example). Then measure the distance from the top of the pipe to the water level (A distance) (see example). Subtract B from A. This value equals the actual separation between the water table and the natural ground surface.

Decommissioning

The applicant should consult with the reviewing authority before decommissioning observation wells.