



DPS

Montgomery County
Department of Permitting Services

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<https://www.montgomerycountymd.gov/dps/>



Guidelines for Geothermal Well Systems

1. A County well permit is required for all vertical geothermal well construction. A scaled house location survey plan or a copy of an approved stormwater or sediment control plan must be submitted with the application to show the proposed well site(s). Hand drawn sketches and faxed drawings are not acceptable. The plan must be clear and accurate. If there is an approved sediment control/storm water plan for the property, a copy of this plan must be used.
2. All geothermal wells must be “**closed-loop**”, unless the State of Maryland has issued a Groundwater Appropriation Permit. The State requires all “open-loop” geothermal wells to return the water to the same aquifer from which it is withdrawn. A standing column is an open loop well (see #9).
3. A single application can be made for up to 20 closed loop geothermal wells.
5. Minimum **closed loop geothermal well** setback requirements:
 - a. 50 feet from any septic tank, septic disposal system or septic reserve area.
 - b. 50 feet from storm water management devices (i.e. sources of contamination)
 - c. 50 feet from existing gravity flow public sewer mains and laterals, except 10 feet where piping is constructed of
 - i. cast iron pipe with water-tight lead caulked joints or joints fitted with neoprene gaskets OR;
 - ii. solvent welded schedule 40 (or SDR equivalent) or better PVC pipe OR;
 - iii. Thermally welded high-density polyethylene (HDPE) pipe.
 - d. 10 feet from any existing or future building foundation. A geothermal well may be approved within a building, if unobstructed access to the well is provided.
 - e. 10 feet from any existing underground utilities.
 - f. 30 feet from domestic water wells and irrigation wells
 - g. 10 feet from a property line and easements
 - h. 15 from any road and public right of way
6. All applications for lots that are less than 25,000 square feet must show sediment control measures on the site plan for containing the drilling water and cuttings on the property.
7. The property owner and well driller are responsible for compliance with all applicable sediment control, noise, and dust ordinance(s).
8. Horizontal geothermal loops do not require a county well permit; but the applicant must provide a location sketch at the time of application for the required mechanical permit. Scaled plans are recommended. This sketch must show the loops 25 feet from any part of the septic system and septic reserve area and the connector pipes at least 10 feet from the septic system and reserve area.

9. **Standing column** geo-thermal well systems will be allowed only after the applicant submits evidence that the Maryland Department of the Environment has approved both a Groundwater Appropriations Permit (GAP) and a discharge permit for the return water. Any proposed “**bleed-off**” water must be approved by the State as part of the GAP; and must have an approved discharge site. Use of the standing column well as a drinking water source will not be allowed until the applicant can demonstrate that the HVAC components have the approval of the National Sanitation Foundation (NSF) or the equivalent for contact with drinking water. Note: Standing column wells must be a minimum of 100 feet from all infiltrative storm water devices including but limited to drywells; 30 feet from a building foundation; 100 feet from a septic system; and generally meet the same setbacks as all other cased “open” wells (such as drinking water wells).

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