Department of Environmental Protection & Sustainability

# PROPOSED REVISIONS
## CODE OF BALTIMORE COUNTY REGULATIONS 1.03

### Ground Water Management

111 W. Chesapeake Avenue, Room 319
Towson, Maryland 21204

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# Title 1. Department of Environmental Protection and Sustainability

## Subtitle 03 Ground Water Management

### Chapter 01 On-site Sewage Disposal Systems.

Authority: Environment Article §§ 9-216, 9-217, 9-223, 9-252, 9-506, 10-103, 10-301, and 10-304, Annotated Code of Maryland, COMAR 26.04.02 and 26.04.03

### .01 Scope.

Pursuant to the authority conferred by the Maryland Department of the Environment ("MDE") upon the Director of the Baltimore County Department of Environmental Protection and Resource Management (now the Department of Environmental Protection and Sustainability) ("the Department" or "the Approving Authority") by Memorandum of Understanding (1987) and COMAR Title 26.04.02 and 26.04.03, this chapter applies to the proper siting and design of on-site sewage disposal systems for new construction, repairs to existing on-site sewage disposal systems, and existing on-site sewage disposal systems involved in a subdivision of land.

### .02 Definitions.

A. In this chapter the following terms have the meanings indicated.

B. Terms Defined.

(1) "Non-Conventional On-site Sewage Disposal Systems" are experimental ~~alternative~~ systems and innovative technologies not described in COMAR 26.04.02 that are undergoing evaluation by MDE and the Approving Authority but categorized by ~~the Maryland Department of the Environment~~ MDE as either:

(a) "Alternative Technologies," which include:

~~(i) At-grade Mounds (percolation rates of 2-60 minutes/inch);~~

(i) Sand Mounds (percolation rates of 60-120 minutes/inch);

(ii) Enhanced Pretreatment (percolation rates of 30-60 minutes/inch);

(iii) Waterless Toilet/Graywater (percolation rates of 30-60 minutes/inch)

(iv) Shallow Low Pressure Distribution (percolation rates of 30-60 minutes/inch); and

(v) Shallow Alternating Trench (percolation rates of 30-60 minutes/inch); or

(b) "Innovative Technologies," which include all non-conventional systems that are not listed as Alternative Technologies or exceed the acceptable percolation rates listed for each alternative technology.

(2) "Existing Dwelling" means:

(a) A structure that provides complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation;

(b) A structure that has been legally occupied as a residence within the last three years; and

(c) A structure that is situated on a property that is listed by the State Department of Assessments and Taxation as "improved."

(3) "New Construction" means a structure intended for residential, commercial, or institutional use that is proposed on a property that:

(a) Is unimproved;

(b) Will replace an existing use with change in use;

(c) Will replace an existing use but result in a substantial increase in sewage flows that cannot be accommodated by the existing on-site sewage disposal system; or

(d) Will add ~~50% or more of living space~~ square footage to the original structure that may reasonably result in an increase in sewage flows that cannot be accommodated by the existing on-site sewage disposal system~~.~~

(4) "Interim Agreement" means an agreement signed by the owners of a particular property and the Department and recorded in the Land Records of Baltimore County, whereby, it is stated that the subject property is in a planned service area for public water or sewerage and the owners agree to make a connection to the public water and sewerage system subsequent to being notified by the County of it's availability.

(5) "High Strength Waste" means sewage effluent with concentrations of total suspended solids (TSS), biological oxygen demand (BOD), and fats, oils, and greases (FOG) above typical domestic sewage effluent concentrations.

(6) "Holding Tank" means a watertight receptacle or series of receptacles designed to receive and store sewage that will ultimately be disposed of at another location.

(7) "Sewage Pre-treatment Unit" means a device that utilizes the principle of oxidation in the decomposition of sewage by introduction of air into the sewage or by surface absorption of air for a sufficient length of time to effect treatment through aerobic bacterial action. Sewage Pre-treatment Units include products approved by ~~the Maryland Department of the Environment~~MDE as a Best Available Technology for Nitrogen Removal (BAT) for on-site sewage disposal systems.

**.03 General Provisions.**

A. The use of innovative technologies:

(1) Shall meet the approval of the Department and ~~the Maryland Department of the Environment~~ MDE; and

(2) May not be used as the basis for approval for the subdivision of land.

B. The use of alternative technologies:

(1) Shall meet the approval of the Department and MDE; and

(2) May be used for new construction on existing lots of record created prior to March 3, 1972; or

(3) May be used to resolve existing on-site sewage disposal system failures for existing dwellings.

C. Innovative technologies may be used to resolve on-site sewage disposal system failures for existing dwellings, but may not be used for new construction unless the site meets the criteria for a conventional on-site sewage disposal system.

D. Where innovative or alternative technologies are approved:

(1) The Department shall require the owner (and subsequent owners) of the property to keep a continuous maintenance agreement with a qualified

contractor who is certified by the manufacturer (or otherwise approved by the Department) ~~qualified~~ to service the ~~equipment~~ installed system; and

(2) An A~~a~~greement to M~~m~~aintain the approved system in accordance with the manufacturer's recommendations shall be signed by the property owner and a Department representative and recorded in the Land Records of Baltimore County.

E. Where a sewage pre-treatment unit and/or alternative or innovative technologies are utilized:

(1) The owner shall maintain a ~~contract~~ continuous maintenance agreement with a qualified contractor who is certified by the manufacturer (or otherwise approved by the Department) to service the installed system ~~equipment installed~~ for as long as the dwelling/structure is occupied;

(2) The owner ~~will~~shall devote such care and effort to the maintenance of the system so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.

~~(1)~~(3) The owner shall make all necessary repairs to the system in a timely manner to ensure that the system operates as designed and in accordance with the manufacturer's recommendations.

~~(2)~~(4) The owner ~~will~~ shall keep all records verifying routine maintenance and repair of the on-site sewage disposal system and ~~will~~ shall submit said records to the Department within 7 days after notification or as stipulated in the recorded ~~maintenance~~ A~~a~~greement to Maintain; and

~~(3)~~(5) The owner grants the Department personnel the right to enter upon the property at any reasonable time to access/inspect the on-site sewage disposal system.

F. Where a holding tank is utilized:

(1) The owner shall ensure that the holding tank is watertight and that all wastewater generated from the subject property is collected by the holding tank system;

(2) The owner ~~will~~ shall contract with a licensed waste hauler to pump the system at a frequency necessary to prevent overflow from the holding tank or back-up of the system and ensure that all sewage collected by the holding tank is properly disposed;

(3) The owner shall ensure that there is a functioning water meter on the water supply and that the water meter is read and recorded at a frequency necessary to correlate with the pumping of the holding tank;

(4) The owner ~~will~~ shall keep all records verifying water usage and routine pumping and maintenance of holding tank and ~~will~~ shall submit the records to the Department within 7 days after notification or as stipulated in any additional agreements with Baltimore County;

(5) The owner grants the Department personnel the right to enter upon the property at any reasonable time to access/inspect the holding tank;

(6) Additions or alterations to the dwelling/facility that may result in an increase in daily sewage flows to the holding tank system may not be permitted by the Department; and

(7) Any change in use of the property that may result in an increase in daily sewage flows to the holding tank may not be permitted by the Department.

G. The Department shall determine whether a particular property qualifies as an existing dwelling, existing lot of record, or new construction on a case-by-case basis and may request the owner to provide:

(1) Access to the property and on-site buildings;

(2) Copies of the most recent utility bills for the property; and

(3) Any other evidence that would indicate or confirm proof of recent habitation, lot recordation, or existing use.

H. ~~In accordance with COMAR 26.04.02.02. D,~~ W~~w~~here public sewerage is planned, the Department may not issue a building permit for new construction or alteration of existing structures to be served by an on-site sewage disposal system unless:

(1) The Department has determined that there is adequate sewage disposal area to support a new on-site sewage disposal system in accordance with the COMAR 26.04.02 and this chapter, the Department of Public Works has signed a Justification for Variance to the Master Water and Sewerage Plan, and the owner signs and records an Interim Agreement in the Land Records of Baltimore County;

(2) The Department has determined that the existing on-site sewage system is functioning adequately to accommodate any anticipated increase in flows resulting from proposed improvements, the Department of Public Works has signed a Justification for Variance to the Master Water and Sewerage Plan

and the owner signs and records an Interim Agreement in the Land Records of Baltimore County;

(3) The Department has conferred with the Department of Public Works and verified that the contract to construct the public sewer to serve the property has been let and the owner signs and r~~R~~ecords an Interim Agreement in the Land Records of Baltimore County and agrees to install any temporary measures deemed necessary by the Department to mitigate potential septic system failure; or

(4) The Department has conferred with the Department of Public Works and verified that public sewerage is planned as a Health Project to serve the property, and the property owner signs and records an Interim Agreement in the Land records of Baltimore County and agrees to install any temporary measures deemed necessary by the Department to mitigate potential septic system failure.

I. ~~In accordance with COMAR 26.04.02.02. D, w~~Where public sewerage is not planned, the Department may not issue a building permit for new construction or alteration of existing structures to be served by an on-site sewage disposal system unless:

(1) The Department has determined that there is adequate sewage disposal area to support a new on-site sewage disposal system in accordance with the COMAR 26.04.02 and this chapter; or

(2) The Department has determined that the existing on-site sewage disposal system is functioning adequately to accommodate any anticipated increase in flows resulting from proposed improvements. The Department may require the on-site sewage disposal system be inspected by a licensed sewage disposal contractor and determined to be in good working order, prior to building permit approval. At a minimum, the inspection shall consist of locating all septic system components, and pumping/inspection of the septic tank.

J. Soil Percolation Test Approval:

(1) Soil percolation tests shall be valid for a period of 5 years from the date of the tests, approval letter to install an on-site sewage disposal system, or record plat, whichever is most recent.

(2) Requests to revalidate soil tests shall be made in writing to the Department.

(3) If soil tests have expired, the Department may require additional testing or deny approval for installation of an on-site sewage disposal system.

K. For properties involved in a proposed subdivision of land:

(1) Existing on-site sewage disposal system(s) serving dwellings/structures to remain or proposed to serve new construction shall be inspected by a licensed sewage disposal contractor and determined to be in good working order, prior to record plat or minor subdivision plan approval. At a minimum, the inspection shall consist of locating all septic system components, and pumping/inspection of the septic tank; and

(2) A 10,000 sq. ft. septic repair area shall be established for existing dwellings/structures utilizing an on-site sewage disposal system in accordance with the Site Evaluation Criteria (as specified in Regulation .04 of this Chapter);

L. Master Water and Sewerage Plan Designation.

(1) In accordance with the Baltimore County Master Water and Sewerage Plan, as amended, properties designated as S-7 for "No Planned Service" may be served by onsite sewage disposal systems.

~~(1)~~(2) As per COMAR 26.03.01.05, properties designated as ~~S-7,~~ S-5, and S-6 may be served by on-site sewage disposal systems.

~~(2)~~(3) Prior to approval of soil percolation test applications for commercial properties, subdivisions of 3 lots or less, or for existing lots of record in areas designated S-1, S-3, S-4, the applicant shall obtain a Justification for Variance to the Master Water and Sewerage Plan signed by the Department of Public Works. In addition, an Interim Agreement shall be signed by the owners and a Department representative and recorded in the Land Records of Baltimore County.

~~(3)~~(4) Subdivisions of 4 lots or greater may not be approved for soil percolation testing in areas not designated S-7. The Master Water and Sewerage Plan shall be changed before conducting soil percolation testing.

**.04 Site Evaluation Criteria**

A. Soil Tests.

(1) Unless otherwise determined by the Department, soil evaluation tests in the following areas designated in the Baltimore County Web Soil Survey (Revised 2010) as having severe to moderate limitations due to seasonally perched or high water table shall be performed during wet weather season (generally February 1 through April 30):

(a) Beltsville (BeA, BeB, BeC, BfB, BfD);

(b) Christiana (CcB, CcC, CdB, CdD);

(c) Crosiadore (CpA);

(d) Delanco (DcB DdB, DbC);

(e) Glenville, Piedmont (GhA, GhB, GhC, GkB);

(f) Hambrook (HaA, HaB);

(g) Jackland (JaB, JuB);

(h) Keyport (KeA, KeB, KeC, KuB, KuD);

(i) Mattapex (MhA, MhB, MhC, MkB, MkD);

(j) Mount Lucas (MpA, MpB, MrB, MrC, MsB);

(k) Russett (RsB, RsC, RsD, RuB, RuD);

(l) Travilah, Piedmont (TrB, TrC);

(m) Udorthents (UdB);

(n) Udorthents Reclaimed Gravel Pits (UeB, UeD);

(o) Watchung (WaA, WaB, WcB, WdB);

(p) Wiltshire, Piedmont (WhA, WhB, WkB); and

(q) Woodstown (WoA, WoB, WuB);

(2) Unless otherwise determined by the Department, soil evaluation testing will not be conducted in areas designated in the Baltimore County Web Soil Survey as the following:

(a) Baile (BaA, BaB, BbB);

(b) Codorus, Piedmont (CfA);

(c) Comus, Piedmont (CgA);

(d) Corsica (CmA);

(e) Elkton (EaA, EfA);

(f) Fallsington (FaA, FbA);

(g) Hatboro, Piedmont (HbA);

(h) Issue (IsA, IuA);

(i) Lindside, Piedmont (LsA, LuA);

(j) Nanticoke and Mannington (NM);

(k) Melvin, Piedmont (MmA, MnA);

(l) Mispillion (MT);

(m) Othello (OtA, OuB);

(n) Quarries (QM, QS);

(o) Sand and Gravel Pits (PT);

(p) Udorthents- Reclaimed Gravel Pits (UbF);

(q) Udorthents- Refuse (UfE); and

(r) Udorthents- former highway 0-65% slopes (UcF)

B. Soil Treatment Zones.

(1) Conventional deep trench on-site sewage disposal systems may not be approved where there is less than 8 -feet of unsaturated, unconsolidated (less than 50% fractured rock) material with permeability rates between 2 and 30 minutes/inch except as provided in paragraph (2) of this section.

(2) For existing lots recorded before March 3, 1972, the Department may approve installation of a conventional deep trench disposal system if there is at least 6 feet of unsaturated, unconsolidated (less than 50% fractured rock) material with permeability rates of between 2 and 30 minutes/inch.

~~(2)~~(3) Conventional at-grade mound on-site sewage disposal systems may be approved where there is at least 4 feet of unsaturated, unconsolidated material (less than 50% fractured rock material) with permeability rates between 2 and 60 minutes/inch within the most restrictive layer of the upper 30 inches of soil.

~~(3)~~(4) Conventional sand mound on-site sewage disposal systems may be approved where there is at least 2 feet of unsaturated, unconsolidated material (less than 50% fractured rock material) with permeability rates between 2 and 60 minutes/inch within the most restrictive layer of the upper 24 inches of soil.

~~(4)~~(5) Alternative sand mound on-site sewage disposal systems may be approved where there is at least 2 feet of unsaturated, unconsolidated material (less than 50% fractured rock material) with permeability rates between 60 and 120 minutes/inch within the most restrictive layer of the upper 30 inches of soil.

**.05 Design and Construction of On-Site Sewage Disposal Systems**

A. An on-site sewage disposal system or repair area shall be:

(1) At least 10 feet from property lines;

(2) At least 20 feet from any permanent building;

(3) A minimum width of 40 feet along the topographic contour;

(4) At least 50 feet from any abandoned well, unless the well is backfilled with bentonite or will be used as a geothermal well, in which case the minimum setback shall be 25 feet; and

(5) At least 50 feet from any structural stormwater management device as measured from the design water surface elevation level.

B. Variances to setbacks for on-site sewage disposal repair areas may be granted for existing buildings or existing lots of record if it is determined by the Department that adjacent properties, streams, or reservoirs will not be adversely impacted.

C. An on-site sewage disposal system or repair area may not be located immediately upgradient from an existing or proposed well (or other water supply) on another lot unless:

(1) Alternative layouts have been explored and determined by the Department to be unacceptable due to technical, regulatory or practical reasons; and

(2) The existing or proposed well is at least 150 feet away and the proposed layout is deemed acceptable by the Department based on an evaluation of on-site conditions which may include soil percolation rate, soil profile characteristics, topography, depth to ground water, well construction, and on-site sewage disposal construction. (Note: a nutrient reduction device may be required in some cases.)

D. Cover Material Over On-site Sewage Disposal System Components

(1) The maximum amount of soil cover for septic tanks, grease interceptors, and deep trenches shall be 2 feet unless otherwise determined by the Department.

(2) Fill, driveways, or parking areas are not permitted over sand mounds, shallow drainfields or other alternative or innovative field infiltration systems.

E. Subsurface grease interceptors

(1) Tank capacity shall be the greater of: 750 gallons or a volume sufficient to retain at least 24 hours of anticipated flows.

(2) Greater storage capacity may be required depending on strength, temperature, and peak volume of effluent.

F. On-site sewage disposal systems utilizing sewage ejector pumps shall be equipped with a high water alarm and be designed using:

(1) Twin alternating pumps with no required minimum pump pit capacity; or

(2) A single pump with a pump pit designed to accommodate a volume of at least one dose in addition to a 24-hour retention of waste loading.

G. On-site sewage disposal systems designed to treat flows in excess of 1,000 gallons per day shall include:

(1) A septic reserve area with sufficient size to accommodate at least 300% of the designed flow; and

(2) A water flow meter to monitor water usage directed to the septic system.

H. On-site sewage disposal systems to serve individual residences shall be designed according to the following criteria:

| Percolation Rate (min/in) | Soil Loading Rate (Gal/ft2/day) |
|---|---|
| 2-5 | 1.2 |
| 6-~~10~~15 | ~~0.9~~0.8 |
| ~~11-15~~ | ~~0.79~~ |
| 16-30 | 0.6 |

I. On-site sewage disposal systems to serve non-residential facilities shall be designed based on:

(1) The projected maximum daily volume of waste water generated;

(2) The anticipated strength of the waste (i.e., the concentration of biological oxygen demand (BOD), total suspended solids (TSS), fats, oils, and greases (FOG)); and

(3) A loading rate of no greater than 1.2 gal/ft$^2$/day.

J. Large Capacity On-site Sewage Disposal Systems

(1) On-site sewage disposal systems in excess of 5,000 gpd (average flow) shall incorporate pressure dosing into system design and shall also meet the approval of ~~Maryland Department of the Environment~~ MDE and may be required to obtain a Groundwater Discharge Permit.

(2) As determined on a case-by-case basis, on-site sewage disposal systems with 2,000-5,000 gpd (average flow) may be required to incorporate pressure dosing into system design.

K. Septic tanks shall be fitted with manhole risers with lids extending to the ground surface, and fitted so that they are water-tight. Lids shall be heavy enough (concrete) or secured in place to prevent tampering, and the tank plug shall remain in place or a safety pan installed to prevent objects, animals or persons from accidentally falling into the tank.

L. Terra Cotta tees are not permitted for use as baffles for a septic tank.

## Chapter 02 Wells and Drinking Water

Authority: Environment Article §9-1305, Annotated Code of Maryland, COMAR 26.04.04, and Baltimore County Code §§34-2-101 – 34-2-106

### .01 Scope

This chapter applies to the location and approval of private drinking water supplies and geothermal wells for new lots of record, subdivision of land, and existing development.

### .02 Definitions

A. In this chapter the following terms have the meanings indicated.

B. Terms Defined.

(1) "Dry Hole" means a drilling attempt that does not yield sufficient water to be utilized as a water supply.

~~(1)~~(2) "Dug well" means a shallow well that is generally 2-4 feet in diameter and constructed of dry-stacked stone, brick, masonry block, or concrete rings.

~~(2) "Dry Hole" means a drilling attempt that does not yield sufficient water to be utilized as a water supply.~~

(3) "Force Chlorination" means a procedure used to disinfect a well that is in accordance with COMAR ~~26.04.04.07N(6).~~ 26.04.04.24E

(4) "Geothermal Well" means a well used to transfer heat to or from the ground or ground water.

(5) "Hydrofracturing" means a method of developing or reworking an existing well whereby water is pumped down the borehole under pressure in an attempt to increase the well's yield.

(6) "Interim Agreement" means an agreement signed by the owners of a particular property, and recorded in the Land Records of Baltimore County, and the Department, whereby, it is stated that the subject property is in a planned service area for public water or sewerage and the owners agree to make a connection to the public water and sewerage system subsequent to being notified by the County of its availability.

(7) "New Construction" means a structure intended for residential, commercial, or institutional use that is proposed on a property that:

(a) Is unimproved; or

(b) Will replace an existing use with change in use.

(8) "Replacement Well" means a well that will replace or supplement an existing well or spring as a domestic water supply.

**.03 Well Siting and Approval**

A. In accordance with COMAR ~~26.04.04.05 B (2)(h)~~ 26.04.04.04.-C, the following setbacks shall be maintained for potable supply and open loop geothermal wells in Hydrogeologic Areas 3 and 5 to minimize influence between wells and potential impacts from identifiable sources of contamination, topography, surface drainage, easements and ground water conditions:

(1) Wells proposed for new construction shall be at least 100 feet from existing wells or proposed well areas on adjacent lots;

(2) Replacement wells for improved properties shall be at least 100 feet from existing wells or proposed well areas on adjacent lots unless determined otherwise by the Department;

(3) Wells for new construction shall be set back from structural stormwater management devices, as measured from the design water surface elevation level as follows:

(a) At least 100 feet from infiltrative devices; and

(b) At least 50 feet from non-infiltrative devices.

(4) In accordance with COBAR 01.03.04, wells for new construction and replacement wells shall be at least 300 feet downgradient from a conservation burial ground.

~~(4)~~(5) Wells proposed for closed-loop geothermal use shall satisfy the following minimum distance requirements:

(a) 10 feet from property line;

(b) 15 feet from road or dedicated road right of way;

(c) 30 feet from permanent structures on adjacent properties;

~~(c)~~(d) ~~25~~ 50 feet from potential sources of contamination including but not limited to ~~an~~ on-site sewage disposal system or sewage reserve areas; and

~~(d)~~(e) 100 feet from water supply wells on adjacent properties; and

~~(5)~~(6) Requests for variances of minimum distance requirements for geothermal wells may be considered by the Department on a case-by-case basis.

B. Wells to be used for new construction as a domestic water supply may not be located immediately downgradient from an existing or proposed on-site sewage disposal system or repair area on another lot unless:

(1) Alternative layouts have been explored and determined by the Department to be unacceptable due to technical, regulatory or practical reasons; and

(2) The proposed well is at least 150 feet away and the proposed layout is deemed acceptable by the Department based on an evaluation of on-site conditions which may include soil percolation rate, soil profile characteristics, topography, depth to ground water, well construction information, and on-site sewage disposal construction.

C. Construction of a new well may not proceed unless:

(1) A well construction permit has been issued by the Department and the location of the proposed well has been field inspected and approved by the Department;

(2) A well construction permit has been issued and a valid Well Siting Agreement for the property is on file with the Department; or

(3) It has been determined by the Department that an emergency condition exists as defined in COMAR ~~26.04.04.06 D~~ 26.04.04.02.-B-(20) and COMAR 26.04.04.06.-A(1) and (2) and verbal authorization has been granted.

D. Master Water and Sewer Plan Designation.

(1) In accordance with the Baltimore County Master Water and Sewerage Plan, as amended, p~~P~~roperties designated as W-7 for "No Planned Service" may be ~~are intended to be~~ served by private water supplies.

(2) Properties not designated W-7, the applicant must obtain a Justification for Variance to the Master Water & Sewerage Plan that is approved by the Department of Public Works prior to approval of a well construction permit. In addition, an Interim Agreement shall be signed by the owners and a Department representative and recorded in the Land Records of Baltimore County.

E. Properties involved in the subdivision of land shall comply with the following:

(1) Existing dug wells and wells determined by the Department to be a potential source of contamination shall be abandoned and sealed by a Maryland licensed master well driller prior to approval of a minor subdivision plan or record plat.

(2) Where public water is not available and existing dwellings are to remain, dug wells, spring supplies or other water supplies determined by the Department to be unsuitable as a drinking water source shall be abandoned and replaced with a new drilled well meeting current construction standards unless:

(a) The Department has determined that drilling a new well is not practicable, or otherwise attainable, based on technical, regulatory or logistical considerations, and the owner submits in writing to the Department an agreement to install and maintain a water disinfection system that meets Department approval; or

(b) The well can be upgraded/repaired to achieve a sanitary and potable condition by a licensed well driller or master plumber and meet the requirements for a certificate of potability.

(3) Existing dwellings to remain for which public water is available shall be connected to public water and existing wells shall be abandoned and sealed by a Maryland licensed master well driller. A request for a variance to keep an existing well shall be made in writing to the Department and shall be considered on a case-by-case basis.

(4) Where Interim Agreements are required, existing dwellings and proposed new construction served by a private water supply shall have legal and physical access to future public water lines.

F. Water lines for water wells must be at least 50 feet from septic system drainfields, seepage pits and on-site sewage disposal reserve areas or meet the following:

(1) Be enclosed in a protective pipe and sealed water tight; and

(2) Be at least 10 feet from septic tanks, drainfields, seepage pits, and on-site sewage disposal reserve areas.

G. Water Appropriation Permits

(1) As per COMAR 26.17.06, a permit to appropriate or use waters of the state is required if the desired water use is associated with subdividing land into residential lots on individual wells. A location map and plan of the proposed subdivision must be submitted to MDE for review. MDE will determine whether a permit is required or if it is qualified for an exemption. ~~for major subdivisions of 11 lots or greater and non-residential development. Subdivisions of between 11 and 20 lots (i.e., combined water use under 5,000 gpd) may file for an exemption~~.

(2) The permit application may not be forwarded to MDE ~~the Maryland Department of the Environment~~ until after it has been confirmed that the proposed development is consistent with the Baltimore County Master Water and Sewerage Plan and has been approved by all applicable County agencies.

H. Water Balance Assessments

(1) A Water Balance Assessment is required as part of the Hydrogeologic Study for all non-residential developments utilizing ground water supplies for domestic use.

(2) On-site artificial infiltration may be required when water balance assessments indicate that the maximum average month of water consumption is greater than 50% of the total calculated recharge to the property under normal precipitation conditions.

**.04 Well Yields**

A. Contractors performing yield tests shall notify the Department of the location and estimated starting time at least one business day in advance of commencing a test.

B. Well yield tests are considered valid for the purposes of property conveyance and issuance of building permits only if performed in accordance with COMAR ~~26.04.04.07Q~~ 26.04.04.26 or Section .04.C of this Chapter by one of the following persons:

(1) A master well driller, or pump installer licensed by the Maryland State Board of Well Drillers; or

(2) A master plumber licensed by the Baltimore County Plumbing and Gasfitting Board.

C. Yield tests for existing wells in which a submersible pump has been installed and connected to a water distribution system shall be performed in accordance with the following procedure:

(1) The contractor performing the test shall provide a testing manifold, consisting of an inlet for connection to the pressure line from the well and a tee with a pressure gauge graduated with intervals of at least 2 pounds per square inch (psi) and capable of measuring up to 200 psi.

(2) The testing manifold shall be connected so that the pumping switch mechanism is bypassed.

(3) The pump shall be turned on and the manifold valve opened completely. Time, flow rate, and pressure readings shall be recorded every 15 minutes.

(4) If the water level is drawn down to the pump intake; turn the pump off and record the time. Wait a set period of time (15 minutes minimum); turn the pump back on and measure the discharge of the water until the water level is drawn down to the pump intake again. Record the time and repeat this process at least 3 times. The recovery rate is determined by dividing the average discharge (in gallons) by the average interval (in minutes) between each time the pump was shut off.

(5) For recovery rates less than 4 gallons/minute, the yield test shall continue by valving down the discharge to the approximate recovery rate determined in step (4) and recording the flow rate and pressure every 15 minutes until 6 hours have passed from the commencement of the test.

(6) For recovery rates of 4 gallons/minute or greater, testing may be terminated after 3 hours if:

(a) The water level is determined to have dropped no greater than 200 feet through the duration of the test; or

(b) The discharge pressure does not vary by more than 5 psi.

D. For approval of tandem well systems for new construction, both wells shall be yield tested simultaneously in accordance with COMAR ~~26.04.04.07Q(2)~~ 26.04.04.26 (H) and each well must yield at least 0.5 gallons/minute throughout the entire test.

E. For property conveyance purposes, the aggregate yield of a tandem well system must total at least 1.0 gallons/minute.

**.05 Water Quality**

A. For the purposes of issuing an Interim Certificate of Potability, any water supply which tests "positive" for total coliform may not be considered safe for human consumption until satisfactory test results are confirmed from at least two (2) consecutive water samples, collected at least 24 hours apart, without the introduction of a disinfectant in between satisfactory samples.

B. The Department may approve the installation of an ultraviolet disinfection device for purposes of meeting the potability standards described in COMAR ~~26.04.04.09~~ 26.04.04.30 if the following conditions are met:

(1) The water supply and distribution system is inspected and determined to be in good physical condition, and all reasonable attempts have been made to prevent bacteriological contamination from entering the water supply as certified by one of the following:

(a) A licensed master well driller, or pump installer licensed by the Maryland State Board of Well Drillers; or

(b) A master plumber licensed by the Baltimore County Plumbing and Gasfitting Board.

(2) At least two (2) attempts are made to disinfect the well in accordance with COMAR ~~26.04.04.07N~~ 26.04.04.04.24, including at least one force chlorination;

(3) A letter is submitted to the Department by the owner of the property requesting approval for an ultraviolet disinfection device along with documentation detailing the chronology of the water quality problem, including water quality test results, dates and type of chlorination efforts, dates and detail of any repair work performed, and the names of contractors who performed the work; and

(4) The owner records in the Land Records of Baltimore County an agreement to maintain an approved system in accordance with the manufacturer's recommendations.

## .06 Hydrofracturing of Wells

~~A.~~ Hydrofracturing of wells must be performed in accordance with COMAR 26.04.04.28.~~The Department shall be notified at least 2 business days in advance of commencing hydrofracturing work on any well in Baltimore County.~~

~~B. Hydrofracturing may not be conducted on wells that are not in compliance with the Maryland State Well Construction Regulations without written approval from the Department.~~

~~C. Hydrofracturing may only be performed by qualified professionals who possess a Maryland Well Driller's license or who are working as a subcontractor and under the direct supervision of a licensed Maryland Well Driller.~~

~~D. Hydrofracturing a water well within 100 feet of another domestic supply requires written approval from the Department. The well driller is responsible for conducting a survey of domestic wells and "dry holes" in the immediate vicinity of the well to be hydrofractured before pressurizing the well.~~

~~E. "Dry holes" within 100 feet of a domestic well to be hydrofractured shall be properly sealed with grout at least 72 hours prior to conducting hydrofracturing.~~

~~F. Hydrofracturing a water well within 500 feet of a landfill or area of known ground water contamination requires written approval from the Department.~~

~~G. Packers shall be set at least 60 feet below the ground surface and at least 20 feet below the well casing to reduce the likelihood of intercepting shallow fractures that are more susceptible to seasonal variation of flow, contamination, and turbidity.~~

~~H. Water used for hydrofracturing shall be from a treated public water supply or other source approved by the Department.~~

~~I. Maximum downhole pressures may not exceed 3,000 pounds per square inch unless otherwise determined by the Department.~~

~~J. New well construction may require deepening to meet the borehole storage requirements specified in COMAR 26.04.04 if there is a drop in static water level as a result of hydrofracturing.~~

~~K. A Water Well Fracturing Report shall be submitted to the Department along with the Well Completion Report and a yield test for newly completed wells. For existing wells that are hydrofractured, a Water Well Fracturing Report shall be submitted to the Department along with the yield test.~~

~~L. Water Well Hydrofracturing Reports shall be submitted to the Department within 45 days after the date of hydrofracturing.~~

**.07 Enforcement of Well Construction Regulations**

In instances where the Department determines that well construction activities were performed in violation of COMAR 26.04.04, the Department shall pursue the following sequence of enforcement with the responsible party:

(1) Depending on the severity of the violation, the responsible party shall initially be notified of the violation by phone or a phone call followed by a certified letter. The responsible party shall be issued a warning and/or be required to correct the violation within a given timeframe. Copies of letters will be kept on file in this office and sent to Maryland Department of the Environment and the Maryland Board of Well Drillers.

(2) As per COMAR ~~26.04.04.12 F~~26.04.04.38.~~-~~D, violations of the Well Construction Regulations or failure to comply with a correction letter is punishable as a misdemeanor. ~~and may result in referral to the Attorney General's Office for appropriate action.~~

**Chapter 03 Underground Storage Tanks**

Authority: Environment Article, §§4-401, 4-402, 4-405, 4-407—4-411, and 4-415—4-418, Annotated Code of Maryland, Baltimore County Code §§33-7-101 – 33-7-107

**.01 Scope**

The regulations in this chapter apply to underground storage systems used for the storage of hazardous substances that are not regulated by the Maryland Department of Environment COMAR 26.10.

**.02 General Provisions**

A. Removal of underground storage systems that are less than 1,100 gallons and serving residential properties shall be inspected by the Department.

B. Permits shall be obtained through the Department of Permits, Approvals and Inspections. Inspections shall be scheduled directly with the Department at least 3 business days prior to performing work.

C. Properties involved in the subdivision of land shall have existing underground storage systems removed prior to subdivision approval unless:

(1) Approval has been granted by the Department for abandonment in place in accordance with Baltimore County Code Section §33-7-103, or

(2) The property owner submits documentation to the Department verifying that the underground storage system(s) has passed a tank integrity test and will remain in service to serve an existing structure, and the underground storage system is greater than 100 feet from any existing or proposed domestic water supply.

## Chapter 04 Conservation Burial Grounds

Authority: Baltimore County Zoning Regulations, §§101.1, 1A09.3.B.9 and 401.1.1.6 through .8.

### .01 Scope

The regulations in this chapter apply to conservation burial grounds.

### .02 General Provisions

A. At the time of submission for an application of zoning special exception, a hydrogeological study completed by a hydrogeologist or similarly qualified consultant must be submitted to the Department that includes the following:

(1) A scaled site plan showing the proposed location of the areas to be used for burial, property boundaries, topography, water bodies, USDA soil type, existing and proposed wells and septic systems on and within 200 feet of the property line, and existing and proposed structures on and within 200 feet of the property line;

(2) A forest buffer delineated in accordance with BCC Article 33, Title3, Protection of Water Quality, Streams, Wetlands and Floodplains. A forest stand delineation as described in BCC Article 33, Title6, Forest Conservation;

(3) A determination of the soil type, slope, depth to groundwater, depth to bedrock, and groundwater flow direction beneath the areas proposed as a burial ground. This determination may be based upon scientific literature and available county records but must be verified by conducting onsite soil borings, excavation pits or other investigatory methods as approved by the Department in the area proposed as a burial ground. The onsite testing must be sufficiently deep to conclude that the area meets or exceeds the minimum standards set forth in 01.04.02B of this Chapter;

(4) An assessment of the proposed burial practices, density of burial pits and potential impacts of the buried remains on groundwater quality, surface water quality and domestic water supplies as it relates to human health and the environment. This assessment should include consideration of the site specific findings for soil type, slope, depth to ground water, bedrock, and groundwater flow direction; and

(5) Recommendations as to whether there should be any additional restrictions over and above the minimum regulatory standards or burial density allowed by law.

B. The bottom of a burial pit used in an approved conservation burial ground must be at least six (6) feet above the seasonal high water table or bedrock.

C. Graves in an approved conservation burial ground must have at least three (3) feet of cover. Following interment, the cemetery management is responsible for adding soil over the graves as needed to offset any subsidence that occurs and ensure that the natural grade is maintained.

D. The delineated area to be used for burial shall not include the delineated forest buffer or any forest stand described as Priority Area 1: High, in the Baltimore County Forest Conservation Technical Manual.

E. The delineated area to be used for burial must meet the following minimum setbacks:

| Feature | Setback from a Conservation Burial Ground (ft) |
|---|---|
| Building Foundations | 20 |
| Steep Slopes (> 25%) | 25 |
| Drainage Ways and Gullies | 25 |
| Rock Outcrops | 25 |
| Property Lines | 50 |
| Water Wells in Confined Aquifers (Coastal Plain) | 50 |
| Water Wells in Unconfined Aquifers (Piedmont) that are hydrogeologically upgradient | 100 |
| Stormwater Facilities | 100 |
| Water Wells in Unconfined Aquifers (Piedmont) that are hydrogeologically downgradient | 300 |

F. The Director of the Department of Environmental Protection and Sustainability shall determine if the area to be used for burial meets the minimum requirements of these regulations.

G. The Director, or his designee, shall convey his findings to the Administrative Law Judge at the Special Exception Hearing.

*Administrative History: Title 01, Subtitle 03, first adopted: _April 22, 2005*
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