

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
AND THE DEPARTMENT OF ENVIRONMENTAL QUALITY
OF THE STATE OF MONTANA

In the matter of the amendment of ARM)	NOTICE OF AMENDMENT
17.36.320, 17.36.321, 17.36.322,)	
17.36.323, 17.36.325, 17.36.912,)	(SUBDIVISIONS/ON-SITE
17.36.918, 17.38.101, and 17.38.106)	SUBSURFACE WASTEWATER
pertaining to sewage systems,)	TREATMENT)
definitions, horizontal setbacks,)	(PUBLIC WATER AND SEWAGE
floodplains, plans for public sewage)	SYSTEM REQUIREMENTS)
system, and fees)	

TO: All Concerned Persons

1. On April 24, 2014, the Board of Environmental Review and the Department of Environmental Quality published MAR Notice No. 17-359 regarding a notice of public hearing on the proposed amendment of the above-stated rules at page 747, 2014 Montana Administrative Register, Issue Number 8.

2. The department has amended ARM 17.36.320 and 17.36.325 exactly as proposed and has amended ARM 17.36.321, 17.36.322, and 17.36.323 as proposed, but with the following changes, stricken matter interlined, new matter underlined. The board has amended ARM 17.38.101 and 17.38.106 exactly as proposed and has amended ARM 17.36.912 and 17.36.918 as proposed, but with the following changes, stricken matter interlined, new matter underlined:

17.36.321 SEWAGE SYSTEMS: ALLOWABLE NEW AND REPLACEMENT SYSTEMS (1) and (2) remain as proposed.

(3) The following sewage systems may not be used for new systems, but may be used as replacement systems subject to the limitations provided in Department Circular DEQ-4:

- (a) through (c) remain as proposed.
- (d) ~~cesspools~~ absorption beds;
- (e) through (g)(ii) remain as proposed.

(4) Cesspools are prohibited as new or replacement systems. ~~The following systems may be used only as replacement systems, subject to the limitations provided in department Circular DEQ-4:~~

- ~~(a) cut systems;~~
- ~~(b) fill systems; and~~
- ~~(c) artificially drained systems.~~
- (5) remains as proposed.

17.36.322 SEWAGE SYSTEMS: SITING (1) through (3) remain as proposed.

(4) No component of any sewage treatment system may be located under structures or driveways, parking areas or other areas subjected to vehicular traffic,

or other areas subject to compaction, except for those components of the system designed to accommodate such conditions. Drainfields must not be located in swales or depressions where runoff may flow or accumulate.

(5) through (7) remain as proposed.

17.36.323 SETBACKS

(1) Minimum setback distances, in feet, shown in Table 2 of this rule must be maintained, except as provided in the table footnotes or as allowed through a deviation granted under ARM Title 17, chapter 38, subchapter 1. The setbacks in this rule are not applicable to gray water irrigation systems that meet the setbacks and other requirements of ARM 17.36.319.

TABLE 2
SETBACK DISTANCES
(in feet)

From	To Drinking Water Wells	To Sealed Components (1) and Other Components (2)	To Drainfields/Soil Absorption Systems (3)
Public or multiple-user drinking water wells/springs	-	100 (3) (4)	100
Individual and shared drinking water wells	-	50 (3) (4)	100
Other wells (4) (5)	-	50 (3) (4)	100 (3) (4)
Suction lines	-	50	100
Cisterns	-	25	50
Roadcuts, escarpment	-	10 (5) (6)	25
Slopes > 35 percent (6) (7)	-	10 (5) (6)	25
Property boundaries	10 (7) (8)	10 (7) (8)	10 (7) (8)
Subsurface drains	-	10	10
Water mains	-	10 (8) (9)	10
Drainfields/Soil absorption systems	100	10	-
Foundation walls	-	10	10

Surface water (9) (10), springs	100 (3) (4) (10) (11) (11) (12)	50 (3) (4) (10) (11)	100 (3) (4) (10) (11) (12) (13)
Floodplains	10 (10) (11)	- Sealed components - no setbacks (1) Other components - 100 (2) (3) (4) (10) (11)	100 (10) (11) (13) (14)
Mixing zones	100 (3) (4)	-	-
Storm water ponds and ditches (15)	25 (14) (16)	10	25

Footnotes (1) and (2) remain as proposed.

(3) Absorption systems include the systems addressed in Department Circular DEQ-4, Chapters 6 and 8, subject to the limitations in ARM 17.36.321.

Footnotes (3) through (12) remain as proposed, but are renumbered (4) through (13).

(43) (14) After consultation with the local health department Aa waiver may be granted by the department, pursuant to ARM 17.36.601, if the applicant demonstrates that the surface water or spring seasonally high water level is at least a 100-foot horizontal distance from the drainfield and the bottom of the drainfield will be at least two feet above the maximum 100-year flood elevation.

(15) Storm water ponds and ditches are those structures that temporarily hold or convey water as part of storm water management.

Footnote (14) remains as proposed, but is renumbered (16).

17.36.912 DEFINITIONS For purposes of this subchapter, the following definitions apply:

(1) and (2) remain as proposed.

(3) "Bedrock" means material that cannot be readily excavated by hand tools, or material that does not allow water to pass through or that has insufficient quantities of fines to provide for the adequate treatment and disposal of wastewater. The term does not include gravel and other rock fragments as defined in Department Circular DEQ-4, Appendix B.

(4) through (34) remain as proposed.

(35) "Wastewater" means water-carried wastes. For purposes of these rules, wastewater does not include storm water. The term including includes, but is not limited to, the following:

(a) through (36) remain as proposed.

17.36.918 HORIZONTAL SETBACKS, FLOODPLAINS (1) Minimum horizontal setback distances (in feet) are as follows:

Table 1 remains as proposed.

Footnotes (1) and (2) remain as proposed.

(3) Absorption systems include the systems addressed in Department Circular DEQ-4, Chapters 6 and 8 subject to the limitations in ARM 17.36.916. Footnotes (4) through (8) remain as proposed.

(2) through (5) remain as proposed.

3. The following comments were received and appear with the board's and department's responses:

COMMENT NO. 1: Several comments were received in response to ARM 17.36.320, 17.36.322, and 17.36.918 stating that drip irrigation systems should not have the same slope limitations, natural soil depth, and setback requirements as other systems. The comments stated that drip systems are installed at a very shallow depth and micro-dosed. The comments also stated that the best use of a drip system includes steep slopes, confined drainfield areas, and preserving plantings such as mature trees.

RESPONSE: Steep slopes are sensitive areas that are naturally affected by erosion and landslide potential. Application of effluent by subsurface drip systems increases the possibility of failure. Six feet of natural soil below the bottom of the trench ensures that hydraulic loading will occur only in areas where there will not be a limiting layer. The suggested change has not been made.

COMMENT NO. 2: ARM 17.36.320(4) requires that the replacement area for a system approved for a size reduction must have sufficient area without considering the size reduction for the primary system. This rule does not appear to be based in good engineering logic. With a malfunctioning or failed Level II pre-treatment system, the failure does not typically occur in the drainfield. The risk of soil-based failure in a drainfield is mitigated when Level II treatment, or another advanced treatment, is installed upstream. This rule change will result in the unnecessary loss of developable land.

RESPONSE: Although effluent from advanced treatment typically has very low BOD5 and TSS effluent characteristics, if the drainfield fails it will most likely be from factors other than the use of advanced treatment. Since the department cannot predict what those factors may be, the department requires a full-sized replacement area. If site constraints do not allow this configuration, the designer may request a waiver from the requirement. Moreover, a full-sized replacement area must be required for all systems, including elevated sand mounds and those with advanced treatment in order to maintain consistency with the standards of Department Circular DEQ-4. The suggested change has not been made.

COMMENT NO. 3: ARM 17.36.321(2) and 17.36.912(1) should be amended to clarify that an evapotranspiration absorption (ETA) system is not considered an absorption bed.

RESPONSE: ETA systems are not considered absorption beds. The distinctions between the two types of systems are clear in Department Circular DEQ-4 Section 6.8, Evapotranspiration Absorption and Evapotranspiration Systems, and Section 6.11, Absorption Beds.

COMMENT NO. 4: ARM 17.36.321(3)(g) should allow the use of holding tanks by waiver for systems with special uses, such as automotive repair shop floor drains and beer/wine mash waste.

RESPONSE: Holding tanks may be approved through waiver for facilities owned and operated by a local, state, or federal unit of government or in facilities licensed by the Department of Public Health and Human Services and inspected by the local health department. The department restricts the use of holding tanks more than other wastewater treatment systems because holding tanks require a higher level of maintenance and scheduled inspections. The suggested change has not been made.

COMMENT NO. 5: A county health department supports the addition of a waiver in ARM 17.36.321(3)(g) to allow holding tanks to replace a failed system when no other alternative is available. The rule will allow the county more flexibility in dealing with problem situations.

RESPONSE: The department acknowledges this comment.

COMMENT NO. 6: ARM 17.36.321(3) and (4), which describe systems allowed for new or replacement systems, seem to say the same thing from a different perspective. The department should simplify this rule. Also, this section should include absorption beds in order to remain consistent with subchapter 9.

RESPONSE: The department agrees that ARM 17.36.321(3) and (4) could be drafted more concisely. In response to this comment, the department has consolidated the lists in (3) and (4) and clarified that cesspools are prohibited.

COMMENT NO. 7: ARM 17.36.322(4) should be reworded to ensure that drainfields will not be located in any area that is subject to compaction.

RESPONSE: The department agrees and ARM 17.36.322(4) has been modified to include language that prohibits drainfields in all areas that would be subject to compaction, not just those listed in the proposed rule.

COMMENT NO. 8: ARM 17.36.322(2) should not allow drainfields on slopes greater than 25 percent. There is no language that limits the amount of design flow as with installations on slopes that are 15 to 25 percent. Also, does an objection from the local health department mean that the waiver will not be granted?

RESPONSE: ARM 17.36.322(2) amendments allow, through a department waiver, use of pressure-dosed systems on slopes greater than 25 percent and up to 35 percent, if a qualified person performs a soil evaluation. The department has found that in some situations pressure-dosed systems can be installed on these slopes without adverse consequences. The use of the waiver process will allow for consideration of the special circumstances in each case and will ensure the appropriate design flow.

While ARM 17.36.322(2) does require consultation with the local health department, this does not give the local health department the authority to determine if a waiver will be granted. The department retains the authority to grant or deny a waiver so long as it has consulted with the local health department.

COMMENT NO. 9: A county health department agrees with the changes to Table 2 in ARM 17.36.323, especially the addition of language that allows easements to be used to satisfy setbacks to property lines. The county also agrees with the addition of mixing zones and storm water ponds to the table.

RESPONSE: The department acknowledges this comment.

COMMENT NO. 10: Several comments were received in response to setback distances in Table 2 of ARM 17.36.323 and Table 1 of ARM 17.36.918. The comments asked for clarification as to why a setback was not required between water lines and sewer lines.

RESPONSE: The department does not require setbacks between water lines and sewer lines because the department does not believe that a setback between water and sewer lines is necessary to protect public health or the environment. Water and sewer lines run close together when entering and exiting a structure and, in many cases, water and sewer lines overlap once inside. This type of design is permissible because water lines are pressurized making the likelihood of contamination from a sewer line highly unlikely, even in an instance where both lines are broken. Additionally, requiring a setback between water and sewer lines creates inconsistency with the department's public water supply rules.

COMMENT NO. 11: Table 2 in ARM 17.36.323 and Table 1 in ARM 17.36.918 should not allow a waiver on "other" wells to drainfields. Any type of well is a conduit to an aquifer. The purpose for its use is not relevant. For example, irrigation wells have a greater potential to be pumped excessively over a long period of time than drinking water wells. Accordingly, the potential for the irrigation well to pull contaminants into the aquifer is greater and there should be equal protection.

RESPONSE: The amendments to ARM 17.36.323 provide for a waiver to the setback between "other wells" and components of wastewater treatment systems. The amendments to ARM 17.36.918 do not provide for a waiver of the setback, but local boards of health have authority to grant a variance from the setback. The department and the board acknowledge that some wells may have more potential to pull contaminants into an aquifer than others. The waiver and variance processes will allow the department and the counties to consider the use of the well and determine the appropriate restrictions. The suggested change has not been made.

COMMENT NO. 12: A county health department appreciates the clarification in proposed footnote (12) to Table 2 in ARM 17.36.323 that the setback between drainfields or soil absorption systems to irrigation ditches does not apply if the ditch is lined with a full culvert.

RESPONSE: The department acknowledges this comment.

COMMENT NO. 13: Proposed footnote (13) to Table 2 in ARM 17.36.323 provides for a waiver to the setback between drainfields and the floodplain. Proposed footnote (13) authorizes a waiver if the applicant demonstrates that the seasonally high water level of the surface water or spring is at least 100 feet horizontally from the drainfield and the bottom of the drainfield is at least two feet

above the maximum 100-year flood elevation. The waiver is less stringent than the minimum standards in subchapter 9. Before this waiver could be granted by the department, the local board of health would have to approve a variance from local wastewater regulations. We recommend that the waiver include a requirement for local concurrence.

RESPONSE: Proposed footnote (13) (renumbered (14)) is not new, but is an existing provision that was moved from the rule to a footnote. Footnote (14) is not less stringent than the minimum standards in ARM Title 17, chapter 36, subchapter 9. Local boards of health have broad authority to allow variances under subchapter 9 and the variance process does not set forth specific criteria that must be met for this setback. The department's authority pursuant to ARM 17.36.323 is more limited because footnote (14) sets out specific conditions that must be met in order for a waiver to be granted. The department agrees that local input is important and has amended footnote (14) to require consultation with the local health department.

COMMENT NO. 14: In Table 2 of ARM 17.36.323, we recommend that "storm water ponds and ditches" be further clarified so that the phrase includes only those structures that usually do not have water in them. The department could do this with a footnote that reads, "storm water ponds and ditches are those structures that temporarily hold or convey water as part of storm water management."

RESPONSE: The department agrees and has made the suggested change.

COMMENT NO. 15: Why does footnote (14) to Table 2 in ARM 17.36.323 require that a drainfield be 100 feet from the floodplain?

RESPONSE: Footnote (14) requires a 100-foot setback to the floodplain because during a flood the floodplain is covered by surface water. The table requires the same setback for the floodplain as it does for surface water.

COMMENT NO. 16: Footnote (14) to Table 2 in ARM 17.36.323 allows for drainfields to be 100 feet from surface water if the drainfield is at least 100 feet horizontally from seasonally high water and at least two feet above the maximum 100-year flood elevation. The same language should be added to ARM 17.36.918.

RESPONSE: Before making the suggested change, comments should be obtained from other government entities and individuals who would be affected by the change. The board may consider including the suggested provision in a future rulemaking. The existing provisions of subchapter 9 would allow a local board of health to grant a variance that imposed the same conditions that are set out in footnote (14) of Table 2 in ARM 17.36.323.

COMMENT NO. 17: The definition of "bedrock" in ARM 17.36.912(3) is not consistent with some of the provisions in Department Circular DEQ-4. The definition states that bedrock includes material that "has insufficient quantities of fines to provide for the adequate treatment and disposal of wastewater." Gravel could meet this condition if it had few fines. However, gravel is not treated as bedrock in Department Circular DEQ-4, Section 2.1.7.

RESPONSE: The commenter correctly points out that Department Circular DEQ-4 does not treat gravel as bedrock. Four feet of vertical separation with natural

soil is required between absorption trenches and bedrock. However, footnote (c) to Table 2.1-1 in Department Circular DEQ-4 Section 2.1.7 allows absorption trenches to be installed within four feet of gravel if the system is pressure-dosed and the trenches are sand-lined. To be consistent with Department Circular DEQ-4, the definition of "bedrock" has been modified to clarify that the term does not include gravel and other rock fragments that are defined in Department Circular DEQ-4, Appendix B.

COMMENT NO. 18: A county health department supports the increase to 240 minutes per inch in the definition of "impervious layer" in ARM 17.36.912(14).

RESPONSE: The board acknowledges this comment.

COMMENT NO. 19: The definition of "floodplain" in ARM 17.36.912(10) should be amended to remove reference to a 100-year flood. Instead, the rule should refer to this flood as one that has a one percent chance of occurring during any year.

RESPONSE: In pertinent part, the language in ARM 17.36.912(10), as it appears in the rule notice, defines a floodplain as "the area adjoining the watercourse or drainway that would be covered by a flood that is expected to recur on the average of once every 100 years or by a flood that has a one percent chance of occurring in any given year." The reference to the 100-year flood remains in the rule because this description is commonly used to refer to a flood of this intensity. The board believes that this definition is consistent with the commenter's suggestion.

COMMENT NO. 20: In the definition of "impervious layer" in ARM 17.36.912(14), the limitation of 240 minutes per inch is unnecessary. This county has successfully installed ETA systems in soils that are tighter than 240 minutes per inch. Our concern is that the 240 minutes per inch limit will unnecessarily result in declaring properties undevelopable.

RESPONSE: This definition is the same as the definition in the recently revised Department Circular DEQ-4. Soils with percolation rates slower than 240 minutes per inch have very little capacity for wastewater infiltration, requiring that other treatment options be assessed.

COMMENT NO. 21: The board should consider expanding the definition of "replacement system" in ARM 17.36.912(24) to eliminate the restriction to systems that replace a "failed, failing, or contaminating" system. This is necessary to accommodate the need for new systems on parcels that serve expanded homes or systems that need relocation. It should be clarified whether such systems are or are not replacement systems, since replacement systems are allowed certain benefits and flexibilities under the rules.

RESPONSE: New systems that serve an expanded home, or installed to relocate an existing system, are not replacement systems unless the system is replacing a "failed, failing, or contaminating system." The commenter is correct that replacement systems do not always have to meet the same requirements as new systems. Systems should be considered new systems unless they are replacing a "failed, failing, or contaminating system."

COMMENT NO. 22: The proposed amendment to the definition of "wastewater" in ARM 17.36.912(35) deletes the provision that refers to discharge from a building, in order to include waste segregation systems like incinerating toilets. However, the amendment broadens the definition so that it now could include storm water running off roofs or down the street carrying waste and detritus with it. The definition should also be amended to clarify that it applies to human excreta, whether water-carried or not.

RESPONSE: Storm water is not treated as wastewater in these rules and applicable department circulars. The definition of "wastewater" has been modified to clarify that it does not include wastes carried in storm water. A corresponding change to the definition of "wastewater" in Department Circular DEQ-4 will be proposed at a later date. The wastes listed in (a) through (d) are water-carried wastes by definition, regardless of whether they are, in fact, carried in water.

COMMENT NO. 23: In proposed ARM 17.36.912(36), the board should consider redefining "wastewater treatment system" as "a system that receives wastewater for purposes of treatment, storage, and/or disposal." This will allow the reviewing authority to have legal authority over any system installed for this purpose, not just those prescribed in Department Circular DEQ-4.

RESPONSE: In pertinent part, the definition of "wastewater treatment system," as it appears in the rule notice, already defines "wastewater treatment system" as "a system that receives wastewater for purposes of treatment, storage, or disposal." The term includes, but is not limited to, all disposal methods described in Department Circular DEQ-4. The amended definition addresses the commenter's concern.

COMMENT NO. 24: ARM 17.36.914(3) states that "under no circumstances" may the vertical separation distance between a drainfield and a limiting layer be less than four feet of natural soil. The language "under no circumstances" should be removed, since it implies there is no ability to request a variance from this separation distance.

RESPONSE: This comment is outside the scope of the current rulemaking, since no amendments were proposed to ARM 17.36.914.

COMMENT NO. 25: The ground water monitoring procedures set out in ARM 17.36.914(5)(c) could simply refer to the ground water monitoring procedure described in Department Circular DEQ-4.

RESPONSE: This comment is outside the scope of the current rulemaking, since no amendments were proposed to ARM 17.36.914.

COMMENT NO. 26: ARM 17.36.914(6) should be amended so that a replacement system that is not failed is also subject to the 200-foot connection requirement. Or, the definition of a "replacement system" needs to be reconsidered per previous comments on that definition.

RESPONSE: This comment is outside the scope of the current rulemaking, since no amendments were proposed to ARM 17.36.914. In response to the

comment on ARM 17.36.912(24), the board stated that a system is considered a new system unless it is replacing a "failed, failing, or contaminating system."

COMMENT NO. 27: The board should consider amending ARM 17.36.916(1) and (5) to allow the use of holding tanks for special purposes such as auto repair shop floor drains and brewery/winery mash.

RESPONSE: This comment is outside the scope of the current rulemaking, since no amendments were proposed to ARM 17.36.916.

COMMENT NO. 28: In ARM 17.36.916, the board should consider changing the seasonal use requirement for holding tanks. If a holding tank is the right system, it is the right system regardless of the seasonality of use. There should be some flexibility, beyond a local variance, to allow for holding tank use.

RESPONSE: This comment is outside the scope of the current rulemaking, since no amendments were proposed to ARM 17.36.916.

COMMENT NO. 29: The board should consider amending ARM 17.36.916(5) to require deed restrictions for pumping and maintenance of holding tanks. Holding tanks should not be permitted for more than five years. Holding tanks should be required to have a tightness test and inspection to certify soundness before another permit is issued.

RESPONSE: This comment is outside the scope of the current rulemaking, since no amendments were proposed to ARM 17.36.916.

COMMENT NO. 30: A county health department states that the changes made to ARM 17.36.918 Table 1 help clarify the regulations and are still protective of public health and the environment

RESPONSE: The board acknowledges this comment.

COMMENT NO. 31: In the amendments to the setbacks in ARM 17.36.918, water mains have a setback distance, but water lines do not. Water lines should have an established minimum distance to sealed components and absorption systems.

RESPONSE: A horizontal setback between water service lines and drainfield components is not necessary to protect public health or the environment, because water lines are pressurized making the likelihood of contamination from a sewer line highly unlikely, even in an instance where the lines are simultaneously broken.

COMMENT NO. 32: Footnote (3) to Table 1 in ARM 17.36.918 defines "absorption systems" as only those systems in Department Circular DEQ-4 Subchapter 6. That leaves out seepage pits, pit privies, cesspools, and experimental systems, all of which need to be located at least 100 feet from a well or surface water.

RESPONSE: The commenter is correct. In order to include a reference to seepage pits, pit privies, cesspools, and experimental systems, ARM 17.36.918 has been modified to include a reference to Department Circular DEQ-4 Subchapters 6 and 8. In response to this comment, the department will make a similar modification

to the setback table in the Sanitation Act rules. See modifications to Table 2 in ARM 17.36.323, above.

4. No other comments or testimony were received.

Reviewed by: BOARD OF ENVIRONMENTAL REVIEW

/s/ John F. North
JOHN F. NORTH
Rule Reviewer

By: /s/ Robin Shropshire
ROBIN SHROPSHIRE
Chairman

Certified to the Secretary of State, July 28, 2014.