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Responses to Oral Comments
Received April 18, 2014

Water and Waste Advisory Board Meeting

Wyoming Water Quality Rules and Regulations
Chapter 25
Small Wastewater Systems

June 10, 2014

List of Commenters

Chairwoman Marjorie Bedessem, Water and Waste Advisory Board
Lorie Cahn, Water and Waste Advisory Board
Klaus Hanson, Water and Waste Advisory Board
Roy Kroeger, Cheyenne Laramie County Health Dept.

Comments and Responses

General Comments

Entity: Chairwoman Marjorie Bedessem

Comment: Ms. Bedessem pointed out a Formatting error on line 1147.

Response: WDEQ/WQD has made this editorial change.

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn is concerned that changing to the proposed percolation test method will affect the calculations which determine the sizing of systems. Ms. Cahn requests that WQD send her the spreadsheet that determined that the revised method does not affect the calculations.

Response: As requested, WQD will provide the calculations spreadsheet which demonstrates that the revised percolation test procedure provides consistent results.

Entity: Roy Kroeger

Comment: Mr. Kroeger explained that he is in favor of the greywater changes.

Response: WDEQ/WQD appreciates the support of the greywater section.

Entity: Klaus Hanson, Water and Waste Advisory Board

Comment: Mr. Hanson is in favor of allowing the use of irrigation of greywater. He was previously under the impression that this was impossible.

Response: WDEQ/WQD appreciates the support of the changes to the greywater section.

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn is concerned that Chapter 25 has grown from twenty pages to forty pages. She would like to see some of the pieces that are too detailed move to a worksheet-type package.

Response: WDEQ/WQD reviewed this comment. The initial draft, presented to the Board in June 2013, was forty-four pages. The majority of the growth has come from the addition of Section 16, Greywater. Greywater was not adequately discussed historically. However, since that initial draft, WQD has removed removed the sections from Section 16, Greywater on filters and pumps. WQD also removed the "Estimated Rise in Water" tables and has condensed the figures in Table 5, "Rates of Wastewater

Application for Soil Absorption System Areas." We are hesitant to remove other design requirements due to the need to provide enforceable requirements to manufacturers, in addition to the homeowners and installers.

Section 2

Entity: Chairwoman Marjorie Bedessem, and Lorie Cahn Water and Waste Advisory Board

Comment: Ms. Bedessem and Ms. Cahn both commented on the updated objective statement. They suggested editing the new paragraphs to combine them to clarify what the chapter covers. Ms. Bedessem suggests eliminating the space between the old paragraph and new.

Response: WDEQ/WQD reviewed the objective statement. As requested, WQD removed the paragraph space between the first statement and the second statement to create one paragraph outlining both small wastewater systems and UIC Class V facilities.

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn noted that she found the use of "less than" and "greater than" confusing. She requests that when "greater than" is used that a parenthetical statement of "(5-60)" is included.

Response: WDEQ/WQD made this editorial change throughout the chapter.

Section 3

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requests that WQD add the definition of "septage".

Response: WDEQ/WQD added the definition of "septage" as requested.

3(q)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn is concerned that including the word "bathroom" is too inclusive. Suggests WQD remove "bathroom" from the greywater definition.

Response: WDEQ/WQD made this editorial change.

Section 5
5(b)(iii)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requested the passage change from "which" to "that."

Response: WDEQ/WQD made this editorial change.

Section 6

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Pressure-dosed soil absorption systems and pressure distribution systems used interchangeably. Pick one and use it consistently. Pressure distribution is defined. Requests that we add "these are also referred to as pressure-dosed soil absorption…"

Response: WDEQ/WQD reviewed the chapter and found one instance of "pressure dosed." However the passage containing the term was stricken for other editorial reasons. As the term pressure dosed no longer appears in the chapter, WQD will not add the requested explanation to "pressure distribution" in order to refrain from adding additional unnecessary language.

6(d)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requested the last sentence be written to state "the depth to high groundwater shall be at least three feet below the bottom of the absorption surface if the percolation rate of the soil is five minutes per inch or greater (5-60)."

Response: WDEQ/WQD has made this editorial change.

Entity: Chairwoman Marjorie Bedessem, Water and Waste Advisory Board

Comment: Confusing sentence: "In areas of high groundwater this vertical separation can be satisfied by a pressure-dosed soil absorption system." Asks that we edit the sentence and then edit the other place in the chapter where it appears.

Response: WDEQ/WQD reviewed the chapter and found only one instance of "satisfied." After reviewing the passage, we agree that the sentence "in areas of high groundwater this vertical separation can be satisfied by a pressure-dosed soil absorption system" can be removed from the passage. Upon removal of this sentence, "satisfied" no longer appears in the chapter.

6(f)(iii)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn restated her request that the Division change the regulation so that the option of doing either percolation tests or soil texturing. Does not think that soil texturing as a confirmation of a percolation test is accommodating enough.

Response: As WQD explained previously, we are not yet confident to substitute soil texturing for percolation tests due to the newness of the technology and lack of certified individuals. On May 27, 2014, the WQD staff attended a presentation on soil texturing with James Bauchert, Acting State Soil Scientist for the US Department of Agriculture, Natural Resources Conservation Service. He presented an overview of soil texturing and discussed the certification process for soil texturing. At this time, there is no national certification process. Texturing specialists become qualified through an unspecified number

of classroom hours and an unspecified number of hours of field training. Mr. Bauchert also noted that while his office is capable of classifying soils through texturing, they reserve that service for large projects due to staffing and budget restraints.

Since the number of individuals qualified to carry out soil texturing is limited, the training requirements are not standardized, and the current percolation test requirement is enforceable and effective, the Division will leave the regulation as written. However, as previously discussed, the Division is continuing our work on the soil texturing policy for Chapter 25.

6(g)Table 4

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn noted that "mg/l" should be written as "mg/L"

Response: WDEQ/WQD has made this editorial change.

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: When Ms. Cahn did an online search for the source water assessment cited in footnote 2 of Table 4, she was unable to locate the document.

Response: WDEQ/WQD reviewed the comment and located both documents at http://deq.state.wy.us/wqd/www/SWP%20WHP/ WQD compared the titles in the citations in footnote 2 to the titles of the documents on the website listed above and edited footnote 2 to correct inconsistencies between the titles. Searching the corrected titles provided the correct website within the first two search results.

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn wondered why the statement of ""for disposal of non-domestic wastewater, the setback distance shall be determined by a hydrogeological study…" appears in the chapter. She wondered why non-domestic wastewater was discussed in the table. She also pointed out that setbacks could be addressed by zoning, which is not done by DEQ. Lastly, Ms. Cahn explained that the "4-log removal" is still confusing.

Response: As was discussed during the meeting, WQD has encountered several situations where municipalities were encountering installations of absorption systems near the public water supply wells and the zoning was not in place to prevent such an installation. If the hydrogeologic study shows that the absorption system would not impair the drinking water supply, then it may be installed. As was also discussed at the meeting, the situations discussed in footnote 2 of Table 4 are required to have the stamp of a professional engineer. These situations require specialized attention and additional treatment. While the term "4-log removal of pathogens" may be potentially confusing to a homeowner, that homeowner will be required to obtain the services of a professional engineer who will understand that it is a treatment standard.

Section 7

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requested that WQD edit Table 5 to set up the data in ranges to minimize the size of the table.

Response: WDEQ/WQD reviewed the request and edited the table in the cases where multiple percolation rates corresponded to the same loading rate. By combining these percolation rates into ranges, we removed twelve rows.

7(b)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn feels that including sidewalls is inconsistent with our conservative stance in other areas. She prefers that we ignore the sidewall in the specified calculations. She requests that the separation increase from four to six and not have three feet separation.

Response: As discussed during the meeting, WQD has reviewed the sidewall in terms of trench configuration and has found that trench configuration does provide treatment. Additionally, counting the sidewall in the trench configuration allows the system to be installed in a smaller footprint. When chambers were introduced, we originally gave them fifty percent and have reduced it to thirty to be consistent with the International Plumbing Code.

Wyoming has been using the separation distance of three feet since the requirement was promulgated in Chapter 11 in 1984 and we have a low failure rate, state-wide. Additionally, this standard is consistent with EPA's Onsite Wastewater Treatment Systems Manual.

7(c)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn wondered if the passage concerning percolation rates less than one minute was stated incorrectly. She wondered if it should be "1-5"?

Response: As discussed during the meeting, WQD is forbidding the use of septic systems in soils with percolation rates less than 1 mpi. Whether or not a PE is preparing the application, soils with percolation rates of less than one are unsuitable. The soils with these fast rates must be amended, as directed in Section 7(c).

Section 8

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requests rewording of the introductory statement. The current wording implies that the International Plumbing Code isn't approved.

Response: WDEQ/WQD reviewed the passage and edited the statement to "in the absence of a locally approved plumbing code…" Adding locally, as discussed at the meeting, removed the implication that the IPC is not approved.

8(a)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms Cahn noted that the passage should state "PVC or ABS" Instead of "PVC and ABS."

Response: WDEQ/WQD made this editorial change.

8(b)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requested that WQD reverse the order of the sentence to be "building sewer pipes shall be sized to handle the peak hourly flow from the building and shall not be smaller than four (4) inches in diameter."

Response: WDEQ/WQD made this editorial change.

Section 9
9(a)(ii)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: "As needed" indicates that overexcavating can be used to make the area bigger. Is this correct?

Response: As was discussed during the meeting, overexcavating is allowed for convenience of installation. Removal of obstructions is not required, so overexcavation is allowed in cases where removal of the obstruction would not be feasible.

9(a)(iv)(E)(I)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn expressed confusion at the current phrasing of 9(a)(iv)(E)(I)

Response: WDEQ/WQD reviewed the subdivision and made some edits. WQD split the original passage of "The tees or baffles shall extend both above and below the liquid level. The upper part shall be a minimum of six (6) inches above the liquid level. The part below the liquid level shall be 30 to 40 percent of the total liquid depth." WQD removed "The tees or baffles shall extend both above and below the liquid level." (I) was rewritten to "The tees or baffles shall extend above the liquid level a minimum of six (6) inches. A new subdivision (II) was created and states "The tees or baffles shall extend below the liquid level a distance equal to thirty to forty percent (30-40%) of the liquid depth." WQD believes that

splitting the requirements for the extensions above the liquid level from the requirements for extensions below the liquid level will give readers a chance to pause and understand both requirements.

9(a)(iv)(E)(II)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn noted that members of the public are concerned that three inches (as stated) is unreasonable. They prefer 1-2 inches.

Response: WDEQ/WQD reviewed the request to change the requirement for clear space from the current three inches to one or two inches. Both Chapter 25 subdivision 9(a)(iv)(E)(IV) and EPA require 9 inches of clear space "above the liquid depth (outlet invert) to allow for scum storage and ventilation" (*Onsite Wastewater Treatment Systems Manual, 2002, §4.6.2)* Since the tees or baffles are required to extend above the liquid level "a minimum distance of six (6) inches," one or two inches additional clear space would not meet the minimum requirement for total distance between the liquid surface and the bottom of the septic tank. The requirement will remain as written.

9(a)(v)(B)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: As the passage is worded, Ms. Cahn feels the passage disallows one-compartment tanks.

Response: As discussed during the meeting, the passage does allow one-compartment tanks. If there are two tanks in series, the first tank has to be at least 50 percent of the total tank volume of all that is required. If there is one tank, the first compartment needs to be at least 50 percent.

9(a)(vi)(A) and 9(b)(i)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn again requested that the minimum opening requirement change from 20 inches to 24 inches.

Response: As was discussed at the meeting in April and in our responses to comments from the September 19, 2013 meeting, WQD's requirement, as written, is consistent with EPA's range in the *Onsite Wastewater Treatment Systems Manual.* Changing the standard from 20 to 24 would require changing a significant number of approved designs by manufacturers. Lastly, individuals wishing to install tanks with 24 inch access risers would be in compliance with the rule, as it is written. The rule is not forbidding the use of 24 inch risers—it is just not mandating the statewide use of 24-inch access risers.

Table 6

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn feels Table 6 belongs in a guidance document and not in the rule. Additionally, she found the first column heading is confusing and wondered if it should it be "design

flow"? She wonders if the "recommended pump capacity" should be included when the table specifies dosing tank volumes.

Response: WDEQ/WQD made the requested editorial change to the column heading. As discussed at the meeting, Table 6 is necessary for reference by manufacturers so it will remain in the chapter. The pumping capacity is included to show what the pumping rate should be for a certain sized pump for a certain sized tank. It is not an absolute, but gives designers an idea of how to size the pump for the tank.

9(d)(vi)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn again requested that the minimum opening requirement change from 20 inches to 24 inches.

Response: As was discussed at the meeting in April and in our responses to comments from the September 19, 2013 meeting, WQD's requirement, as written, is consistent with EPA's range in the *Onsite Wastewater Treatment Systems Manual.* Changing the standard from 20 to 24 would require changing a significant number of approved designs by manufacturers. Lastly, individuals wishing to install tanks with 24 inch access risers would be in compliance with the rule, as it is written. The rule is not forbidding the use of 24 inch risers—it is just not mandating the statewide use of 24-inch access risers.

Section 11

11(a)(vi)(F)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requests that WQD correct the passage "less than 60 minutes" with the parenthetical "(5-60)". Ms. Cahn is also concerned about allowing beds at percolation rates less than 5 even if a PE assembles the application.

Response: WQD made the requested editorial change. As discussed at the meeting, the regulation allows for percolation rates less than five minutes per inch as long as a professional engineer assembles the application and designs the system to accommodate the fast soils.

11(a)(vii)(F)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn wonders if this passage outside the scope of needing a PE.

Response: As discussed at the meeting, the passage pertains to the spacing requirement. If the percolation rate is greater than 60 minutes per inch, the 9-foot spacing is not going to be counted as reserve area.

Section 12

12(a)(v)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn noted that the sentence states three feet of filter sand, and "and unsaturated native soil." She wondered if instead of "and" if it should be "and/or?"

Response: WDEQ/WQD made this editorial change.

Section 13

13(c)(i)(C)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn pointed out that the passage states the sand mound shall have a four feet combination of sand and soil above the high groundwater level. She asked if it is pressure dosed, if the separation distance can be reduced to three feet.

Response: WDEQ/WQD reviewed this comment and agreed that if pressure distribution is used for a sand mound system, then the distance can be reduced to a minimum of three feet. We have added a subdivision to 13(c)(i)(C) which specifies that the reduction is allowed for sand mounds using pressure distribution.

Section 14

14(b)(vii)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn pointed out that the equation is missing a line number.

Response: WDEQ/WQD made this editorial change.

Entity: Klaus Hanson, Water and Waste Advisory Board

Comment: Mr. Hanson noticed that the passage is written "5 foot" but it should be "5 feet."

Response: WDEQ/WQD made this editorial change.

14(b)(xii)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn noted that she feels the concrete apron is unnecessary.

Response: WDEQ/WQD reviewed this comment. We agree that the concrete apron is not necessary for lagoons regulated in this chapter. We have removed the requirement from this subsection.

Section 16

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn is concerned that greywater systems, as written, are not encouraging more reuse. She suggests all of page 25-29 be removed.

Response: WDEQ/WQD reviewed this request. 16(c), Estimating Greywater Discharge contains requirements which will help homeowners and installers determine the appropriate size of the greywater system. Prescribing discharge rates is consistent with prescribing the residential and non-residential flow rates as is done in Section 4. Section16(d), Greywater Components and Configurations, requires flow diversion devices, outlines basic structural specifications, outlines basic overflow requirements, and requires disinfection for surface irrigation use. Eliminating these requirements and placing the passages in guidance would remove the enforceability. We have agreed that removing specific filter and pump requirements would not affect the enforceability of the rule. But we disagree with removing subsections (c) and (d) as the removal of these would potentially lead to failed installations. Our intent was to encourage the successful installation of greywater systems which could be enforced, both by WDEQ/WQD and our delegated counties/municipalities.

16(f)(iii)(A)

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Ms. Cahn requested that the passage change from "levels is" to "level is."

Response: WDEQ/WQD made this editorial change.

Section 18

Entity: Lorie Cahn, Water and Waste Advisory Board

Comment: Change mg/l to mg/L.

Response: WDEQ/WQD made this editorial change.