



Gina Thompson <gina.thompson@wyo.gov>

Water Quality Rules, Chapter 12, Water and Waste Advisory Board Meeting comment

1 message

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Mon, Feb 14, 2022 at 4:10 PM

To: fpage@m-m.net

Bcc: gina.thompson@wyo.gov

Thank you for your comments on the Water Quality Rules, Chapter 12, Water and Waste Advisory Board Meeting. Your comments have been received.

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[Water Quality Rules, Chapter 12, Water and Waste Advisory Board Meeting](#)

Please see attached letter.

Attachment(s):

FMP Chapter 12 Review Letter 2022_02_14 .pdf

Frank Page

Please see attached letter.

February 14, 2022

Water and Waste Advisory Board
Wyoming Department of Environmental Quality

RE: Chapter 12 Rules – Comments

To whom it may concern:

I have been requested to review and comment on the WYDEQ Chapter 12 revisions, that are open for public comment. I have reviewed the areas that I have knowledge and practice in.

1. *Secretary of State - Rules on Rules.*

It is acknowledged that all formal rules and regulations are required to follow the Secretary of State - Rules on Rules. However, these antiquated rules were set up for manual typewriters and make reading, using and referencing the rules more complex, cumbersome and difficult than necessary. It is suggested that the rules on rules be reviewed and revise to make them easier to use. Just a suggestion.

2. *Ten States Standards (2018 TSS) The revised standard has removed minimal criteria from the Wyoming Chapter 12 text and appears to incorporate by reference the 2018 TSS. Making the 2018 TSS regulatory for Wyoming.*

In the past the Ten States Standards have used and referred to by WYDEQ, university courses and consultants as a reference. The 2018 TSS is mentioned in the Notice as being incorporated by reference. If it is now going to be used as a regulatory document, then the regulated community should be fully advised of this action. The Public Notice does not adequately advise Wyoming system operators and consultants who will be affected by this change.

3. *Definitions*

- Add – Ten States Standards (TSS). 2018 TSS is referenced throughout the text but the acronym “2018 TSS” is not defined until page 12-64.
- (z) Water Service Connection – please add definitions for domestic, commercial, industrial and others. While this may seem inconsequential there have been discussions and disagreements with the public, developers, consultants and local agencies, in the differences between the various water connections and standards that apply each.

We create solutions that build better communities.

4. *Section 7(g) Storage Tank – Two Step Permitting*

Line 259. Section (iii) numbering skips from (A) to (C), no (B). Is this a numbering issue or is there a section (B)

Line 260. “(C) The applicant shall submit for the Administrator’s review and approval final drawings and specifications for the tank that demonstrate the design is consistent with the requirements of this Chapter;”

It is standard that 90% plans are submitted to WYDEQ with the “Permit-to- Construct” Application. Any comments based on the review are incorporated into the Final plans prior to Bidding. The “Final” plans may not be specific for the actual tank and tank appurtances, as most Public Works projects are competitive bid projects with “Approved Equal” provisions.

Is the intent to have the proposed contractor/fabricator supplied “Shop Drawings” be submitted for review, rather than the Bid Set submitted for review? It is suggested the narrative be clarified to include “Specific Manufacturer/Supplier Final Engineering Shop Drawings, Specifications, Calculations” be submitted to WYDEQ and USEPA Region 8 for review and approval, prior to the design engineer’s approval of the shop drawings.

Experience with Two Step permitting shows that coordination within WYDEQ, and between WYDEQ and USEPA – Region 8 could be improved.

WYDEQ reviews and approves the project “Permit-to-Construct” permit. USEPA Region 8 is not included and does not review the “Permit-to-Construct” application. Once WYDEQ issues the “Permit-to-Construct” permit, the project is constructed.

Then USEPA Region 8 through the Sanitary Survey process provides a field review of the constructed project, months or possibly years later. The EPA review is based off USEPA Region 8 Water Unit Tech Tips. The public water utility is then provided a copy of the USEPA Sanitary Survey Report which may contain “significant deficiencies” that must be addressed.

In some cases, sanitary survey information is based on field discussions, with personnel who are not aware of what protective measures or devices are actually installed, how the device operates, and thus the deficiency reported may not be accurate.

There is a disjoint between the permit process and the final constructed project. Many of the issues of concern that are noted in the Sanitary Sewer reports could be addressed, efficiently and more economically at the permit stage, before fabrication and construction. Retrofitting a storage facility after project completion is expensive and should be avoided if possible.

Suggestions to improve the process could involve:

1. a joint review of permit applications and inspections by both agencies at the same time, and joint inspections, prior to approval of the “Permit-to-Construct”; or

2. USEPA convey primacy and provide funding and support to WYDEQ to handle public water system regulatory role

5. *Line 287 Section 8(c)(j) "... Pertinent elevations shall be indicated on all appurtenances."*

Providing elevations on ALL appurtenances, is a high standard, that would increase costs and clutter drawing. Elevations should be included for low, high and some intermediate points but are not necessary on all appurtenances. The design engineer and the WYDEQ reviewing engineer should have discretion on this requirement.

6. *Line 600. Water Main Removal and Replacements.*

It is suggested to include criteria on what constitutes a repair versus a remove and replacement, include in definitions.

7. *Line 618. New Water Main.*

It is suggested to include criteria on what constitutes a new water main, include in definitions.

8. *Section 15. Water Storage*

The revised standard has removed minimal criteria from the WYDEQ Chapter 12 text and incorporates by reference the 2018 TSS criteria. This will require having to review both sets of regulations. This will likely cause confusion and may prove to be cumbersome.

It is suggested that WY coordinate with USEPA Region 8, the 2018 TSS and provide minimum acceptable criteria to be used on Wyoming projects for water. Chapter 12 should also allow discretion the design engineer and the WYDEQ reviewing engineer for the use of professional judgement when needed.

9. *#24 Mesh Screen Overflow and Vents.*

The current version of Chapter 12 requires 24 mesh screens for vents and overflows. EPA Region 8 believes and has been promoting the use of 24 mesh screen to protect for tank vents from intrusion by insects. WYDEQ has indicated that it would accept the use of 16 mesh screen for elevated tanks, but knowing that Chapter 12 requires #24 mesh screen, design engineers are specifying #24 mesh in project documents to be in compliance with EPA advice and Chapter 12 rules, to avoid the water system being issued a significant deficiency notice, at a later date.

Many existing tank vents and overflows were constructed and have been functioning well using #16 mesh non-corrodible screens. It is recommended that further evaluation and documentation be considered before requiring the use of #24 mesh screen. A comprehensive risk analysis review should be completed that considered the benefit and risks of #24 mesh screen. Is the probability a mosquito from entering the tank and contaminating the water stored, a greater concern and risk than tank damage or failure a

greater risk? Both are important considerations but what are the risks and costs? They need to be balanced.

It's not difficult to inspect or change the vent screens on ground level /buried tanks as it is for elevated tanks. Elevated tanks pose obstacles and safety concerns for inspectors, who need training and safety equipment for any inspection or maintenance activities on the top of the tank. This should not preclude EPA or State inspectors from making the effort to perform their required inspections, including climbing the tank and to verify information provided by others.

It is recommended that the entity's involved in reviewing this rule, obtain actual samples of #24 mesh non-corrodible screen so they can see firsthand the fineness and sturdiness of the screen. The #24 mesh screen will prevent intrusion and contamination of the stored water, but it also presents a significant restriction to air flow into and out of the tank under ideal conditions.

The air flow restrictions under ideal conditions requires the vent and overflow sizing to be significantly increased (by a factor of 2, 3 or more) these costs are significant on new tanks.

Retrofitting existing tanks is even more expensive, especially if the original piping is inadequate and the tank structure requires modification.

Another major concern is the susceptibility of the vent and overflow screen to possibly fail due to frosting up during winter conditions, this could potentially occur if the #24 mesh screens frosted up and the tank experienced a large water demand (i.e., water line break, fire suppression event, etc.). An internet search for available information on this topic did not reveal readily available information on this topic. This concern should be further evaluated.

Thank you for the opportunity to submit these comments.

Sincerely,



Frank Page, PE
Senior Civil Engineer