



November 11, 2021

Mr. Ted VanHolland
Teton County Sanitarian
Teton County Engineering Services
320 S. King Street
Jackson, WY 83001

Re: Comments on Proposed Revisions to the Teton County Small Wastewater Facility (SWF) Regulations

Dear Mr. VanHolland:

Protect Our Water Jackson Hole offers the following comments on the proposed revisions to the Teton County SWF regulations. Formed initially as Friends of Fish Creek in 2014, Protect Our Water Jackson Hole is a 501(c)(3) nonprofit organization dedicated to improving and protecting water quality in Jackson Hole.

Teton County has historically failed to prioritize clean water issues and failed to set aside the resources required to plan for and manage pollutants negatively impacting our waters appropriately. The health and well-being of Teton County residents and our ecosystem are suffering from that neglect. Residents in the Hoback area cannot drink their well water because it contains nitrates in excess of the EPA's maximum allowable limits. Elevated nitrates have been documented in parts of the West Bank, Kelly, Alta, and the Snake River corridor south of Jackson.

Teton County has been operating under SWF regulations approved in 2010. Those regulations have been out of compliance with the minimum standards for SWFs approved by the Wyoming Department of Environmental Quality (WDEQ) in 2016. To meet the Wyoming Statute 35-11-304(a) requirements, Teton County should have updated its SWF regulations within six months of notice by the State. In 2018, Teton County entered into a new delegation agreement with WDEQ in which it agreed to revise the SWF Regulations to bring them into compliance with the 2016 WDEQ update (Wyoming Department of Environmental Quality 2018). Despite the commitment made in 2018, Teton County has failed to meet its obligations and has been out of compliance for nearly six years and drafting new regulations for almost four years. During this period of non-compliance, hundreds of new septic systems have been permitted under criteria that fall short of the guidance of the US Environmental Protection Agency (EPA), the WDEQ, and the standards necessary to restore and protect our extraordinary water resources.



Proper management of septic systems is of critical importance to our valley's water resources. Growth accelerated by the Covid-19 Pandemic and a rapidly changing climate have made protecting source water a community priority. It is widely accepted that poorly managed septic systems can lead to significant water quality problems (Voluntary National Guidelines For Management Of Onsite And Clustered (Decentralized) Wastewater Treatment Systems 2003). The *1996 National Water Quality Inventory Report to Congress* said that "improperly constructed and poorly maintained septic systems are believed to cause substantial and widespread nutrient and microbial contamination to groundwater." Septic systems can contribute to source water contamination for various reasons, including improper siting, poor design, faulty construction, and incorrect operation and maintenance. According to the EPA, proper management of septic systems involves a comprehensive life-cycle series of events and activities. The life-cycle series of events and activities includes;

- Public Education and Participation
- Planning
- Recordkeeping, Inventory, and Reporting
- Site Evaluation
- Financial Assistance and Funding
- Construction
- Design
- Training and Certification
- Residuals Management
- Inspections and Monitoring
- Corrective Actions
- Performance
- Operation and Maintenance

(Voluntary National Guidelines For Management Of Onsite And Clustered (Decentralized) Wastewater Treatment Systems 2003)

Without a comprehensive septic system management program that addresses these events and activities, the public health and water quality issues already well documented in Hoback Junction and the West Bank of the Snake River will continue to increase. The SWF regulations are fundamental to a comprehensive septic system management program because so many life-cycle events and activities are addressed explicitly.

There are many areas in Teton County where septic systems are not appropriate because of environmental sensitivity or public health concerns. In areas where septic systems are appropriate, it is critical that they are managed to prevent environmental and public health impacts. Unfortunately, the current septic system management program does not go far



enough to ensure proper performance. Teton County has historically failed to require homeowner accountability for septic systems performance after installation. Few systems receive proper maintenance because homeowners are unaware that the systems even need maintenance. The lack of a comprehensive management program for septic systems has put the health and well-being of Teton County residents and the health of our aquatic ecosystems at risk.

A 2018 cooperative project to map wastewater infrastructure in Teton County identified approximately 1379 septic systems on the east side of the Snake River and 890 west of the Snake River ("Septic And Sewer Map — Teton Conservation District" 2018). Of the 2269 estimated septic systems in Teton County in 2018, 8% (282) were categorized as unknown, meaning that the property contained a home, but no septic system permit was found. These septic systems are most likely more than 30 years old and were installed when septic system rules were nonexistent or poorly enforced. Leaving these septic systems unaddressed is clearly risking the health of our residents, the environment, and our economy.

POWJH's comments are presented in two sections. The first is a summation of our significant concerns followed by a detailed commentary on specific sections of the proposed regulations. The detailed comments include a follow-up from a previous comment letter submitted jointly to the County Sanitarian by POWJH, Jackson Hole Conservation Alliance, and Wyoming Outdoor Council on April 23, 2020.

Part One - Summary of Primary Concerns:

1. 9-2-3 Timing of Compliance With These Regulations

The proposed rules exempt all systems permitted before the date of adoption of the revised regulations. The revised regulations will not impact the ongoing degradation of our water quality by many existing septic systems. The rules as proposed will not apply to systems that are failing, nor to any systems that have been approved but not yet built, nor will they apply to any systems found to violate prior regulations. In addition, the language of the proposed rules is vague as to what constitutes a modification that would trigger the application of the revised regulations. **The regulations should be rewritten to apply to failed systems, systems operating in violation of past rules, and a clear definition of what constitutes a modification requiring the new regulations.**

2. 9-2-16 Variance

POWJH's impression was that any new variance language included in the 2021 draft SWF regulations would be tailored to a specific situation where a strict interpretation of the watercourse protection districts would render a parcel undevelopable. Although a variance for this situation may seem warranted, the property owner's/buyer's responsibility is to perform their due diligence to avoid this situation. Unfortunately, the



2021 draft SWF regulations Section 9-2-16 would allow an owner to apply for a variance to any part of the regulations. We question why this is even necessary and cannot imagine what situation would warrant such a variance from many of the provisions in the SWF regulations.

3. **Inspections**

The proposed amendments fail to address the need for a program for inspections of existing septic systems. We know poorly maintained septic systems are contributing to the degradation of our waters. In some cases, failing septic systems have made our residents' drinking water undrinkable, yet the proposed amendments do not address that problem despite that serious health threat. Teton County needs a sensible program that requires homeowners to inspect and maintain their systems and enables Teton County to administer a program for compliance. Many other jurisdictions across the country have regulations that require inspections, including areas where the water resources are far less fragile. These regulations need to include a framework of shared responsibility for maintenance and inspection of septic systems, and Teton County needs to provide the resources to ensure the program's success. **No other kind of polluting infrastructure is granted a pass on performance in perpetuity.**

4. **Protecting Public Drinking Water**

Chapter 25 of Wyoming Administrative Rules and the proposed Teton County SWF regulations contain an essential provision that requires additional levels of protection and higher levels of performance for SWF systems placed in areas that may impact public water supplies. However, those areas can only be determined by delineation in an adopted Source Water Protection Plan. The State of Wyoming began a program in 2004 to create Source Water Protection Plans, yet Teton County has failed to complete Source Water Protection Plans for most of its 113 Public Water Supplies. The SWF amendments, as proposed, do not sufficiently protect our public drinking water supplies. **Teton County needs to prioritize and have the authority to complete Source Water Assessments and create Source Water Protections plans for Public Water Systems (PWSs).**

POWJH recognizes and appreciates that the Teton County Commission has begun to allocate additional resources to tackle water quality concerns. We fully support the preparation and implementation of a Comprehensive Water Quality Plan as proposed and supported by POWJH. However, if adopted as proposed, the amendments to Teton County's SWF regulations will fail to address the harm and potential future harm to groundwater and surface waters from inappropriately located, designed, or poorly functioning septic systems.

Part Two – Detailed Commentary

CHAPTER 2 – PERMIT ADMINISTRATION

9-2-3 TIMING OF COMPLIANCE WITH THESE REGULATIONS

- a. This section is of great concern to POWJH and was documented in our joint comment letter submitted on April 23, 2020. We have two primary problems with this section as written. 1) If adopted, the rule would effectively limit the County's authority to regulate existing septic systems, and 2) managing thousands of septic systems under two sets of regulations will complicate the program's administration.

Recommendation: Replace the existing draft language with the language adopted by Fremont County, Wyoming, in 2020; *These regulations shall apply retroactively to prior violations that were not discovered until after adopting these revised regulations and shall further apply to the maintenance of systems installed before the adoption of these regulations.*

9-2-5 PROHIBITIONS

- a. This section should clearly state that a major repair that requires excavation is considered a modification and requires a permit.

Recommendation: Add the word repair to i-iv or add a definition to 9-3-1 for "modify" that clearly states that repairs that include excavation are considered a modification. Many municipalities have a separate application for repairs or modifications of a small wastewater facility, and we would recommend that Teton County develop its own.

- b. The 2010 SWF regulations contained an additional provision that has been removed.

Discharge wastes to surface waters or ground surface. Effluent from any onsite wastewater system shall not be discharged to surface waters or upon the surface of the ground. Effluent processed by an enhanced treatment system and disinfection may be dispersed by drip irrigation. Sewage shall not be discharged into any abandoned or unused well, or into any crevice, sinkhole, or similar opening, either natural or artificial.

Would you please explain why this provision has been removed?

Recommendation: Reinstate this provision as 9-2-5, v.

9-2-9 CONSTRUCTION AND OPERATION IN COMPLIANCE WITH ISSUED PERMIT

- a. In the corresponding section of the 2010 regulation, Section 10, D., a provision was found informing the applicant of procedures for the final inspection before backfilling.

Notify the County Sanitarian at least 24 hours prior to backfilling of system. The County Sanitarian will perform a final inspection of the installation to ensure compliance with these regulations. The compliance section of the permit will then be signed. If the applicant does not notify the County Sanitarian the following actions may be taken or required by the County Sanitarian:

1. *digging up the system to show compliance with these regulations;*
2. *revocation of the permit;*
3. *legal action; or*
4. *all of the above.*

Would you please explain why this provision has been removed? We cannot find any other location within the 2021 draft SWF regulations or the permit application where this information is provided.

Recommendation: Reinstate this provision as 9-2-9, d.

9-2-12 DENIAL OF A PERMIT

- a. 9-2-12, a., iii., references Section 16, which is now the variance language. Section 16, Compliance with State and Local Water Quality Management Plans, from the 2010 SWF regulations has been removed and not replaced in the 2021 draft regulations.

Recommendation: Reinstate Section 16 (from the 2010 SWF regulations), *Compliance with State and Local Water Quality Management Plans*, in the draft 2021 SWF regulations and reference the new section number.

9-2-15 MONITORING PROGRAM; PERMIT APPLICATION REQUIREMENTS

- a. We support this proposed addition to the SWF regulations.
- b. 9-2-15, a., references Section 16 (from the 2010 SWF regulations), Compliance with State and Local Water Quality Management Plans. This section is missing from the draft 2021 SWF regulations. See the recommendation from 9-2-12.

9-2-16 VARIANCE

- a. See Part 1, primary concerns. Would you please explain if the County Sanitarian has had previous experiences where a variance would be required outside of the situation described in Part 1?

Recommendation: Rewrite Section 9-2-16 to apply only to the specific situation where a property would be made uninhabitable by a strict application of the watercourse protection district provision.

CHAPTER 3 – TECHNICAL STANDARDS

9-3-2 SYSTEMS NOT SPECIFICALLY COVERED BY THESE STANDARDS

- a. We support the addition of this section, particularly 9-3-2, f. the inclusion of ongoing operation, maintenance, or monitoring requirements.
- b. We are concerned about the lack of specific performance standards for alternative systems.

Recommendation: Adopt the NSF/ANSI 245 standard that requires a 50% reduction for total nitrogen to meet the growing demand for nutrient reduction in sensitive environments (NSF's Advanced Onsite Wastewater Treatment Certification Program 2021).

9-3-3 SITE SUITABILITY

- a. 9-3-3, g., we support the decision to maintain the four feet of separation below the bottom of the soil absorption system for pressure distribution systems.
- b. 9-3-3, i., iv., allows for records of subsurface conditions at nearby locations to support the proposed design instead of soil exploration pits and percolation tests. The proposed revision creates an exception that is not authorized in WDEQ Chapter 25.

Recommendation: Remove 9-3-3, i., iv., as it is not authorized by WDEQ Chapter 25.

c. Section 7(e)(ii) of WDEQ Chapter 25 contains the following provision; *Serial distribution, with the use of drop boxes or approved fittings, is the preferred installation method for sloping terrain. The bottom of individual trenches shall be level and the trenches shall be constructed to follow the contours of the land.*

Recommendation: Insert this provision under 9-3-3, h.

d. 9-3-3, h., iv., includes the following provision not found in WDEQ Chapter 25; *Deviations from these slope standards shall be evaluated according to 9-3-5, and may require additional site investigation, characterization, analysis, and design, or specific permit conditions.* The provision also references Section 9-3-5, which is not found in the draft 2021 regulations. Is a deviation from the slope standards allowed by WDEQ?

Recommendation: If the change is found to be not as stringent as WDEQ Chapter 25, remove 9-3-3, h., iv., from the 2021 draft SWF regulations.

9-3-6 BUILDING SEWER PIPES

- a. Section 9 of WDEQ Chapter 25 contains this provision at the beginning of the section; *All building sewers shall be installed in accordance with the 2012 International Plumbing Code (IPC)*. Was this paragraph not included because the County Building Department has adopted the 2012 IPC code? Is there harm in including this statement at the beginning of 9-3-6?

Note: After reviewing the staff report, it appears that this reference was removed to make building sewer pipes at 2% minimum grade standard. We support this decision.

- b. 9-3-6, a., viii., contains a deviation from what is found in Section 9(e) of WDEQ Chapter 25. The provision in the 2021 draft regulations requires cleanouts when the change in alignment is greater than 22.5 degrees, yet WDEQ Chapter 25 Section 9(e) requires cleanouts at every change in alignment. Is the difference as least as stringent as the WDEQ regulation?

Recommendation: If the change is found to be not as stringent as WDEQ Chapter 25, adopt WDEQ Section 9(e) as written.

9-3-7 SEPTIC TANKS AND OTHER TREATMENT TANKS

- a. 9-3-7, a., should also specify repairs

Recommendation: Add the word repair or add a definition to 9-3-1 for "modify" that clearly states that repairs that include excavation are considered a modification.

- b. We support the addition of 9-3-7, e., guidance on lift stations.

- c. 9-3-7, f., B., contains a provision not found in WDEQ Chapter 25 Section 10(d) Grease Interceptors. The provision in the 2021 draft regulations reads as follows; *For applications for facilities that are typically anticipated to exceed the FOG criteria but are not proposing the installation of a Grease Interceptor, the permittee may be required to conduct monitoring to verify compliance*. Is this deviation from Chapter 25 allowed?

Recommendation: If this provision is found not to be as stringent as the WDEQ Chapter 25 rules, 9-3-7, f., B. should be deleted from the 2021 draft SWF regulations.

9-3-9 STANDARD SOIL ABSORPTION SYSTEMS

- a. 9-3-9, a., i., the wording found in this provision has been changed from that found in WDEQ Chapter 25 Section 12. The word filtered has been replaced with dispersed.

Recommendation: Adopt the provision as it is found in Chapter 25 Section 12; *All soil absorption systems shall be designed in such a manner that the effluent is effectively filtered and retained below the ground surface. The absorption surface accepts, treats, and disperses wastewater as it percolates through the soil.*

- b. 9-3-9, vi., G., does not contain language found in WDEQ Chapter 25 Section 12(a)(vi)(F) addressing clay loam soils. The omission reads as; *For clay loam soils that have percolation rates greater than 60 min/in., the nine (9) foot spacing shall also be required but it is not considered as reserve area.* Would you please explain the omission of this provision?

Recommendation: Insert the missing language related to clay loam soils.

- c. Typo: 9-3-9, a., vii., references the previous section vi., A-G, but is shown as A-D.

d. 9-3-9, a., B., omits language found in the corresponding WDEQ Chapter 25 Section 12(a)(vii)(A); *therefore, the site shall be relatively flat, sloping no more than one (1) foot from the highest to the lowest point in the installation area.* Would you please explain the omission? Does omitting this language satisfy the requirement to be at least as stringent as the WDEQ rule?

Recommendation: Include the missing language from WDEQ Chapter 25 Section 12 in the 2021 draft SWF regulations.

- e. 9-3-9, a., viii., E., we support the additional language regarding the firm soil foundation.

f. 9-3-9, a., viii., G. See 9-3-9, vi., G. above. This provision is again missing language found in WDEQ Chapter 25 that addresses clay loam soils.

Recommendation: Insert the missing language related to clay loam soils.

- g. 9-3-9, a., ix., contains two errors.

Recommendation: The provision should reference (viii)(A through G), not (A through E), and aggregate is specified in (vi)(C), not (B).

9-3-11 SAND MOUND SYSTEMS

- a. 9-3-11, a., the definition of a sand mound found in 2021 draft SWF regulations differs from the definition found in WDEQ Chapter 25 Section 14. Chapter 25 reads; *The sand mound consists of a sand fill, an aggregate bed and a soil cap.* The 2021 draft SWF regulations read; *The sand mound consists of a sand fill, an aggregate bed or chambers containing pressure-dosed laterals, and a soil cap.* Could you please explain the difference? Does the additional language still result in the 2021 SWF regulations being as stringent as the WDEQ Chapter 25 definition?

Recommendation: If this provision is found not to be as stringent as the WDEQ Chapter 25 rules, the additional language should be deleted from the 2021 draft SWF regulations.

- b. 9-3-11, i., c., i., we support the additional language concerning the rising groundwater level due to the effluent.

- c. 9-3-11, i., c., iii., we support the additional provision.

- d. 9-3-11, i., c., C, appears to correspond to WDEQ Chapter 25 Section 14 (c)(C)(I). WDEQ Chapter 25 reads as; *For sand mounds using pressure distribution systems, the depth to high groundwater shall be three (3) feet below the bottom of the absorption surface if the percolation rate of the soil is five (5) minutes per inch or greater (5-60 mpi).* The draft 2021 SWF regulations read as; *The total depth of fill sand, other suitable fill material, and native soils must provide at least 3 vertical feet of separation to seasonally high groundwater.* Including the line "other suitable fill material" makes this provision less stringent than the WDEQ Chapter 25 rules and should be removed. Can you please explain the removal of the phrase "For sand mounds using pressure distribution systems"?

Recommendation: Adopt the provision as it is found in WDEQ Chapter 25 Section 14(c)(C)(I), retain the 4-foot minimum separation depth to high groundwater as documented in the October 5, 2021, Staff Report.

- e. 9-3-11, i., d., D., differs in its wording from WDEQ Chapter 25 Section 14 (c)(C). WDEQ Chapter 25 reads as; *The sand mound shall have a combination of at least four (4) vertical feet of filter sand and unsaturated native soil above the high groundwater level.* The 2021 draft SWF regulations read as; *The total depth of fill sand, other suitable fill material, and native soils must provide no less than 4 vertical feet of separation to the top of restrictive soil layers or bedrock.* Including the line "other suitable fill material" makes this provision less stringent than the WDEQ Chapter 25 rules and should be removed. The 2021 draft SWF regulations also use the word "fill" instead of filter.

Recommendation: Adopt the provision as it is found in WDEQ Chapter 25 Section 14 (c)(C).

f. 9-3-11, i., d., ii., B., is missing language found in the corresponding WDEQ Chapter 25 Section 14 (c)(ii)(B). WDEQ Chapter 25 reads as; *The aggregate shall be covered with an approved geotextile material after installation and testing of the pressure distribution system.* The 2021 draft SWF regulations are missing the last part of the sentence, "after installation and testing of the pressure distribution system." By removing the last part of the sentence, are the 2021 draft regulations at least as stringent as WDEQ Chapter 25?

Recommendation: Adopt WDEQ Chapter 25 Section 14 (c)(ii)(B) as written.

g. 9-3-11, i., d., ii., C., has no corresponding provision in WDEQ Chapter 25 Section 14 (c)(ii). The provision in the 2021 draft SWF regulations reads as; *Chambers may be used in place of an aggregate bed.* Is this allowed by WDEQ Chapter 25 as it is not explicitly addressed in the section?

Recommendation: Remove 9-3-11, i., d., ii., C as it is not found in WDEQ Chapter 25.

h. We support the removal of small wastewater lagoon rules from the 2021 draft SWF regulations.

9-3-12 PRIVIES OR outhouses

a. 9-3-12, e., differs in the size requirements found in WDEQ Chapter 25 Section (c), with the 2021 draft SWF regulations being significantly larger. Could you explain the reason for the larger size requirements?

9-3-13 GREYWATER SYSTEMS

a. 9-3-13, a., ii., B., says that greywater systems in special flood hazard areas, while WDEQ Chapter 25 Section 17 (a)(i)(B) states that greywater systems shall not be installed in a delineated floodplain. Is the deviation from the WDEQ Chapter 25 language at least as stringent as the state rules?

Recommendation: If this provision is found not to be as stringent as the WDEQ Chapter 25 rules, adopt the WDEQ Chapter 25 (a)(i)(B) provision as written.

9-3-14 OPERATION AND MAINTENANCE

a. 9-3-14, a., we support adding the O & M manual to the draft 2021 SWF regulations.

Recommendation: Based on our comments from 9-2-3 TIMING OF COMPLIANCE WITH THESE REGULATIONS, we firmly believe that the O & M manual should be distributed to all existing SWF permit holders.



b. 9-3-14, f., while we appreciate the inclusion of a recommendation for inspections at property ownership change or after 20 years from the installation time or previous inspection, we cannot support only recommending inspections. According to the EPA, a septic service professional should inspect the average household septic system at least every three years. Septic systems require routine monitoring and subsequent maintenance to ensure that they work correctly and do not pose human health or environmental risk. Teton County needs a sensible program that requires homeowners to inspect and maintain their systems and enables Teton County to administer a program for compliance. Many other jurisdictions across the country have regulations that require inspections, including areas where the water resources are far less fragile. These regulations need to include a framework of shared responsibility for maintenance and inspection of septic systems, and Teton County needs to provide the resources to ensure the program's success.

POWJH thanks the Teton County Sanitarian and Board of County Commissioners for the opportunity to comment on the proposed SWF regulations amendments and urges serious consideration of the concerns and issues raised in this submission. Teton County is home to some of the most unique and important water resources in our nation. However, the County has been operating under a system of planning and oversight that has failed to protect these waters. Now is the opportunity to correct that. We urge the Board of County Commissioners to take this opportunity now to "get this right" and require amendments to its existing regulations that will protect our valuable water resources and stop further degradation of our water resources.

POWJH stands ready to work with the County to revise its regulations in a manner that will achieve the stated purpose of protecting our critical and delicate water resources and ensure a well-informed and well-served public.

Sincerely,

Brad Nielson

Brad Nielson
Board Chair
Protect Our Water Jackson Hole

Dan Leemon

Dan Leemon
Executive Director
Protect Our Water Jackson Hole



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