**WATER POLLUTION CONTROL ADVISORY COUNCIL**
**10:00 am, July 15, 2022**
**Room 111 DEQ Metcalf &**
**Zoom Meeting**

**FINAL MEETING MINUTES**

**PRESENT**

**Panelists:**
DEQ Communications
Meagan Gilmore (x2)
Nicholas Danielson
Adam Pummill
Amanda Knuteson
Chad Bauer
Dennis Teske
Eric Campbell
Jeff Mark
Lee Bruner
Ron Pifer
Teri Polumsky

**Attendees:**
A Losing
Cf2795
Darryl Barton
Eric Sivers
Greg Olsen
Jon Kenning
Peggy Trenk
R Peterson
Sarah Zuzulock
Christina Staten
Teri Polumsky (x2)
Thomas Kallenbach
Trevor Watson-MT FWP

**In Person:**
Kate Wilson
Meagan Gilmore
Moira Davin
Nicholas Danielson
Eric Trum
Andy Ulven
Galen Steffans

**CALL TO ORDER**
Amanda Knuteson called the meeting to order and roll call.

**APPROVAL OF AGENDA**
Amanda Knuteson moved to approve the agenda and Jeff Mark seconded it.

**APPROVAL OF MINUTES**
Amanda Knuteson moved to approve the March 11, 2022, meeting minutes as written. The motion was seconded by Chad Bauer and approved.

Amanda Knuteson moved to approve the May 13, 2022, meeting minutes as written. The motion was seconded by Adam Pummill and approved.

**BRIEFING ITEMS**
PowerPoint presentations for briefing items can be accessed through the hyperlinks in this document and are located on the WPCAC website.

**Septic Leachate Pollution + Water Quality Workshop Outcomes – Kate Wilson, Commission Administrator Flathead Basin Commission**
The Flathead Basin Commission (FBC) was established in 1983 by the Montana Legislature to ***protect the existing high quality of the Flathead Lake aquatic environment; the waters that flow into, out of, or are tributaries to the Lake and: the natural resources and environment*** of the Flathead Basin.

- "Administratively attached" to DNRC (previously Governor's Office)
  - Director's Office, Water Resources, CARDD
- Staff, office, fleet car, supplies, etc.
  - Kate Wilson, Administrator (both); Cassidy Bender, Coordinator (both); Emilie Henry, NPS Coordinator (FBC)
- Statutory Duties:
  1. To monitor the existing condition of natural resources…
  2. To encourage close cooperation and coordination between state, federal, provincial, tribal, and local resource managers…
  3. To encourage and work for international cooperation and coordination between the state of Montana and the Province of British Columbia…
  4. To encourage economic development and use of the basin's resources…
  5. To undertake investigations of resource utilization and hold public hearings…
  6. To submit a biennial report to the governor…
  7. To meet at least semi-annually within the Flathead basin…

- Overview of issue
  - Nonpoint source pollution – one of the greatest threats to water quality
  - Septic leachate pollution: studies in MT dating back to 1977 – little movement in 50 years
  - MT "passing grade" for new onsite wastewater treatment systems (state level)
  - Cumulative impacts not considered
  - Existing, aging systems largely not addressed
  - Rapid growth occurring mostly outside of cities/towns

- Increasing number of WQ – septic issues in MT
- Homeowner knowledge/uptake of maintenance BMP's unknown (suspected to be low)
- Difficult to correct once widespread issues
- Education not enough to change behavior
- Existing state law: Only a handful of counties have gone above and beyond minimum standards (design/installation only)

- Efforts
  - FBC's Onsite Wastewater Treatment Committees
  - GIS/Mapping Project + Synthetic DNA study (Whitefish and Lake Mary Ronan)
  - Flathead Basin Wastewater Partnership
    - Septic maintenance reimbursement program
  - FBC + Partners Water Quality Campaign ("Montana Waters")
  - UM/FLBS National Science Foundation Grant – largely funded workshop that we'll be discussing today

- Physical Risk Model
  - Committee has heard about previously from Committee member Mike Koopal, but will provide brief synopsis
  - All physical risk layers (soil type, slope, proximity to ground and surface water) added together to create overall physical risk model for the Flathead Basin (both Flathead & Lake Counties)
  - Demonstrates the potential risk for septic treatment failure based on the physical conditions
  - Looked at age of septic systems in Flathead County, not able to do the analysis for Lake County or CSKT as they don't currently have a publicly available online permit database
  - Number of septic systems on landscape in Flathead County is 27,150. Estimated 5,735 unpermitted systems.

- Septic Systems and Water Quality Workshop, June 9-10, 2022, Objectives:
  - Connect science, technology, policy, and education
  - Share lessons learned from policies and programs
  - Foster stakeholder communication
  - Define challenges and knowledge gaps
  - Prioritize research and scalable technology
  - Provide support/key findings to the FBC

- Workshop Overview/Key Discussion Topics
  - ~50 participants
  - Representation from Legislative and local leaders, researchers and scholars, regulatory and water quality agencies, interested parties and organizations.
  - Natural Science
    - Collecting data that connects public health/env degradation to septic systems
    - Enhance current monitoring efforts
    - Compile and present data to the public and stakeholders in a visual manner
  - Social Science
    - Identify barriers to maintenance BMPs, lack of understanding/knowledge, high and

rising costs, fear of change, low regulatory oversight
        - Address barriers, increase knowledge, regulations, advocate for funding, incentives, enhance coordination and digitize permit database

- Recommendations for Future Efforts
    - Host remote sensing workshop(s) to explore emerging monitoring technologies
    - Map groundwater flows to identify target locations for more extensive sampling efforts
    - Build lab capacity in MT for more complex analysis
    - Support the Flathead County's Septage and Biosolids Projects (and others as they are proposed or come online) to better address septage options
    - Utilize existing tools to implement a community/citizen science + guide
      Provide support for counties, water, and sewer districts to make improvements
    - Refine definition of a "failing system" (in state statute)
    - Explore "model regulations" for counties concept (easily adoptable and adaptable for county specific needs, issues, conditions)
    - Explore RME online reporting database (free to counties, small fee for pumpers to report); great way to collect data w/o burdening regulatory bodies/local governing boards
    - Engage all municipal entities in the basin to better address issue
    - Consider legislative/rule-making options:
        - Inspection upon property transfer and/or specified amount of time (e.g., 5 yrs)
        - Disclosure of permit and septic maintenance records upon property transfer
        - Data standards state-wide (+ digitization)
        - Funding/grant and incentive programs

- Workshop Key Takeaways
    - Gathered diverse group of experts, advocates, decision makers, and field staff to discuss complex scientific, social, and economic perspectives.
    - The magnitude of the septic issue needs to be better understood, quantified, and shared to mobilize the public/decision makers
    - A multi-pronged solution that
        - Moves toward centralized systems
        - Better addresses replacements, upgrades, and maintenance of existing systems
        - Incorporates cutting-edge waste management technologies
    - Is required to solve this complex water quality issue

- Montana Waters: Clearly Connected (water quality campaign)
    - Playing on pride of place, clear water quality, and connection of water/land people
        - A platform to educate the public on top threats to Montana's Water:
            - Septic leachate
            - Stormwater pollution
            - Harmful algal blooms
            - Increased development
            - And much more…
    - Montana waters campaign to launch via website, events, and publications – launching SUMMER 2022

**Commented [WK1]:** These can all be included in the recommendations (e.g., not broken out)

    - Campaign logo and customizable materials will be available to all partners via the Montana Waters website
    - First call to action: on septic leachate pollution

- FBC Septic Leachate Work – Next Steps
    - External peer review process (GIS risk map)
    - NSF workshop recommendations to Onsite WWT Committee + FBC
    - Results of synthetic DNA study (winter 2022)
    - Webinar + "Road Show" (GIS risk map focus) in Flathead Basin
    - Publicly available GIS risk map (FBC website)
    - Lake County/CSKT gaps – potential for better data standards for all counties?
    - Analysis of options (report) – FBC's Onsite Wastewater Treatment Committee
        - Legislation, ordinances, outreach/education, financial incentives, etc.
    - Better funding mechanisms for maintenance + replacement
    - Development and growth awareness + use of tool (counties, municipalities)

Questions/Comments/Discussion:

1. Amanda Knuteson: Commented – there seems to be a good array of stakeholders, however what seems to be missing is those who do actual work in the field, people who operate and maintain systems, people who produce technologies, private sector representatives. Question – what is commissions position on DEQ's position on moving away from the current maintenance regime for newer systems? Kate Wilson responded that they are always trying to get diverse people involved on the On-Site WWT Committee, particularly pumpers would be a great addition, as they bring a unique perspective, so any suggestions or recommendations for contacts would be welcomed. In terms of DEQ going with new rulemaking, she has not been briefed on what those specific changes are, so she can't comment on that position. Amanda Knuteson went on to say it is coming from a legislative movement and people think it is burdensome and expensive to have this perpetual maintenance requirement, and she would like to ask if on-site or decentralized systems would be appropriate to have a less-frequent maintenance schedule? Kate Wilson responded, that is one of the major concerns that there isn't a requirement (to maintain once installed). Only one county in the state currently has an inspection and pumping requirement. For all other counties, once a system is in the ground, there is not a way to ensure that maintenance is ongoing.

2. Dennis Teske commented that he is a farmer in eastern Montana, and a former commissioner, and the issue of septic water is raised. At transfer, would be a good idea, and you're dealing with more of a cost for a transfer of property, and government puts that on the backs of taxpayers – where is the end of this? He agrees with the transfer inspection. In his county they have been able to educate the citizens. The town is sparsely populated (12,000) and they have settling ponds and a transfer system. Farms and ranches are sparse. Sometimes in government, that we need to be aware of and be careful of, is the one-size, fits-all. He sees the magnitude of the problem in the Flathead Valley, and there is lots of develop, etc., but that is totally different than his area. They want to be prudent and safe, too, and perform maintenance, and that is part of education. The more people involved, especially the installers, should be involved. His biggest fear is the government often has a one-size-fits-all and it is a horrible approach, and it doesn't accomplish the much-needed goal in this. He came from Seattle in retail, tried to work on the features, advantages, and benefits with the public. Dennis Teske went on to say it seems the general public themselves are more amenable to that change that

comes into their lives, not everyone at first, but eventually people educate themselves and realize this is a good thing. Kate Wilson responded, she agrees about one-size fit all, and they've been cognizant of the fact that this isn't an issue for every single county, but it is growing in terms of impact. They might consider a phased approach, starting at data digitization. Then every resident and interested buyer would have the ability to lookup the property themselves. It wouldn't require the county or taxpayers paying for that themselves. Kate Wilson went on to say, maybe more of a disclosure upon transfer, so there would be a septic permit and a maintenance record available to the buyer. She says the inspection would be the most protective and potentially more burdensome requirement. Kate Wilson went on to say there are many ways to go with this. She says that studies in environmental behaviors show that, even going door-to-door to educate people about what they can do, hasn't moved the needle too much in terms of changing behavior. She agrees that education is important to the solution but doesn't seem to be enough, in terms of this issue.

3. Ron Pifer commented regarding people in the field like himself, that are part of the solution to the septic problem. He says one person to contact in Bitterroot Valley is Conrad Eckart. Conrad Eckart's company is called Patriot Pumpers, was head of the Montana Commission for Septic Pumpers located in the Bitterroot Valley. Ron Pifer goes on to say he thinks the commission should start dialog with individuals like himself and Conrad that are involved in solutions. Ron Pifer goes on to say he is involved in an invention that treats waste from restaurants. This invention was given at the National Plumbers Association and labeled the creative invention of the year. Ron Pifer went on to say the invention uses biofilms. While working with the Biofilm Engineering Organization at Montana State, Ron provides probiotic bacteria found in a product called Septic Solutions to septic systems. He says the last time the Bitterroot Valley needed to be pumped out was in 1992. Ron Pifer states the reason the Bitterroot Valley does not need to be pumped out is because they create and maintain a biofilm. He feels it would be good for the commission to start, in addition to identifying problems, but also look at solutions. Ron Pifer goes on to say, for what it's worth, there are solutions out there and we need to start factoring them into the mix. Kate Wilson responded she agrees that reaching out to individuals, like Ron Pifer, and others would be good for the Commission and the GIS map project to better address the issue and gain new perspectives.

4. Adam Pummill commented adding he believes Ravalli County, in the last year, implemented new regulations that go towards the "Upon Sale" theory mentioned. There could be valuable feedback, or lessons gained, from Ravalli County Health and their regulation amendments. He also offers help from his firm WGM group in the Kalispel office and anything they can do to facilitate the discussion with Ravalli County Health. Kate Wilson responds thank you for the Ravalli County information and she will look into that information. Amanda Knuteson responds, she will vouch for Adam Pummill and WGM group. She has a lot of experience with them and knows they're very familiar with on-sites across the state.

Public Comment:

1. Thomas Kallenbach commented he is the president of the Limonite in Bozeman and a licensed engineer in the state of Montana. Issue of legislatures in Flathead attempt to pass a bill on ground water quality is raised. He thinks it's important this group investigates the bill and provide education and public participation as to what was in the Carl Glimm's bill last session – danger to water quality issues like this. Question - What does pumping a septic tank have to do with ground water quality? His position on the topic is that pumping a septic tank is detrimental to ground water quality. Thomas Kallenbach goes on to discuss the age of a wastewater system and its risk to ground water. He feels the type of system being used and its risk to ground water quality should be taken into consideration. Some systems that are brand

new could be more of a risk than older systems. He goes on to say age should not be used in presentations until that can be defined. Question - what is the risk model? Question-has the risk model been peer reviewed? Question - Is it a computer model? Question - Where does the risk model come from? Question - who has reviewed this risk model? He has heard the risk model is being used as a regulatory instrument. He thinks there are assumptions in it that make it indefensible. Kate Wilson responds starting with the risk model. They absolutely believe that it needs to be defensible and have undergone the last 6-8 months with internal technical committee reviews and external reviews. That report is on their website: flatheadbasincommission.org. The risk model is currently not being used in any regulatory manner. They have used publicly available layers to build the model as well as existing best available science, aside from the soil types layer, which was built with NRCS. Kate Wilson goes on to say regarding groundwater quality and the age of systems, there is a lot of research nationally, EPA, and studies from universities that demonstrate these systems do pose a risk to drinking water wells (individuals), as well as where there are hydrological connections to surface water (public health, wildlife, economy). The life of a system is not infinite, but estimated to be ~30 years. She agrees that there is a lot of site-specific factors. Whether the age is the biggest factor, is dependent on-site conditions and proximity to bed rock, ground water, surface, slope, etc.

2. Dennis Teske commented on questions regarding pumping a system out. Question - Does it work or not? He has three systems at different age ranges 60-years, 25-years, and a new house, 2-years old. He has pump systems to keep sludge down to not plug up a system. Each system make must be different. Private property rights must be taken into consideration. His private property cannot affect his neighbor's private property nor the river near his own property.

3. Ron Pifer commented regarding the issue of the age of the system brought to question by Thomas Kallenbach. He had a discussion with Tom Bansak, assistant director of the Flathead Lake Biological Station. A septic system could still be working a hundred-years from now using biofilm development and maintenance. The beneficial bacteria clean the water in the middle and eat the sludge down. He questions the age of the septic issue. He goes on to say if you have good biofilm development, an aged septic could still be working effectively. He agrees that septics without good biofilm development will fail and will need to be pumped out. Bottomline septic systems do fail if they do not have good biofilm development. Amanda Knuteson responds asking Kate Wilson if she would be able to share her contact information to respond to more questions. Kate Wilson agrees and goes on to say, wrapping up the age question, it is one factor, and we agree system types and site specific conditions do differ. Maintenance is the main issue they are the most concerned about as well as confidence in the homeowner understanding the maintenance requirements.

**DEQ Septic and Onsite Wastewater Internal Coordination Group Update- Andy Ulven**

We established an internal workgroup to discuss septic tanks, on-site wastewater treatment, and all things associated. We are meeting regularly and having focused attention and discussion on this challenging issue that touches so many different parts of DEQ. Dealing with septic tanks is not new to DEQ, and many programs have worked with the subject since DEQ was established. This internal coordination group is striving to bring pertinent staff and all those programs together so we can think about onsite wastewaster treatment more holistically from subdivision development all the way to septage management and disposal, and every step in between, including nonpoint source pollution. Some of the inspiration for this is collaboration and work across different programs. He attended the 2020 Water Summit, where Mike Koopal presented on the topic of septics, and Andy had a discussion table, and he discussed it from the aspect of septage disposal and management. He went on to say that they are trying to engage all parts of the DEQ and others as well in this

matter, and organize ourselves more and continue to have internal discussions on full-cycle self-management. Our goal, at some point in 2023, is to extend beyond the internal group and invite other groups, for example, counties and nonprofit organizations, and those within the field - pumpers, installers, developers, real estate agents, etc. and have state-wide leadership, and provide scalable adaptable solutions based on the region, as we recognize that it is not a one-size-fits-all approach.

Amanda Knuteson commented that she would like Andy Ulven on the next meetings agenda for another update. Andy replied that he could be there, though there may be few significant updates before the end of the year.

Thomas Kallenback- asked who all is on the group. Andy Ulven replied that the group, just formed in May, is currently an internal organization and it is in the rudimentary stages – discussions of how this group is going to function, the organization of the group, and potential for future external engagement. Hoping to expand it out in 2023, but there is not a hard and fast deadline. Currently it has DEQ staff from nonpoint source and the wetlands team, the TMDL section, the solid waste septic tank pumper program, subdivisions, groundwater, and enforcement. They are trying to get anyone that deals with septic tanks, in some fashion, at the same table, to meet on a regular basis, perhaps monthly. He is happy to provide updates at future meetings.

**DEQ Update on Water Quality Standards Variance – standing in for Mike Suplee and Myla Kelly, is Galen Steffens**

Rulemaking Timeline for Variance Rule:

- May 13, 2022 – Special meeting requested
- June 3, 2022 – Special meeting to initiate rulemaking
- June 16, 2022 – Draft variance Rules Informational Webinar (available on are website)
- June 22, 2022 – Nutrient Work Group meeting with variance rule overview and NWG and WPCAC joint discussion
- June 24, 2022 – Review of the highest attainable condition and economic affordability process and recap feedback from previous meetings.

Water Quality Standards

- Beneficial uses such as recreation, aquatic life, drinking water, agriculture
- Water quality criteria (numeric and narrative)
- Nondegradation = protection of high-quality waters

What is a Temporary WQ Standards Variance?

- CWA tool – regulations found in 40 CFR 131.14
- A time limited, customized WQ standard that identifies the highest attainable condition applicable throughout the term of the variance
    - A tool to be used if a WQS can't be met due to specific factors
    - Preferable to permanent removal and downgrade of a waterbody's beneficial uses
    - Allows time for treatment technology to advance and become less cost prohibitive
- Variances are designed to encourage compliance with the MT WQ Act and federal Clean Water Act within a reasonable timeframe.

NEW RULE 1: Temporary WQ Standards Variances

- Implementing rules for 2019 legislation (75-5-320, MCA)
    - Department may adopt rules providing criteria and procedures for the department to issue a temporary variance to WQ standards if: (certain conditions are met)
- Applicable to ALL pollutants and available variance factors under CFR 131.14
- Modeled closely after variance rules in 17.30.661 which are specific to upstream anthropogenic sources (adopted and approved by EPA in 2018)
- These rules require conformance with 40 CFR 131.14 (federal regulations for WQ standard variances under the Clean Water Act)
- Not nutrient specific, applicable to ALL pollutants and available variance factors under 40 CFR 131.14.

Temporary water quality standard variances under NEW RULE 1 provide a means to preclude economic and social impacts, because a variance can be based on affordability. The affordability evaluation ensures the dollars expended for purposes of meeting a water quality standard are kept to the feasible level for a community. DEQ continues to see a critical need to use variances to regulate discharges of nutrients whether such variances are from narrative or numeric nutrient standards.

NEW RULE 1: Temporary WQ Standards Variances

- Section 1 and 11: Department will issue variance rules in conformance with 40 CFR 131.14
- Section 2: Describes what the permittee must provide in an application to the department
- Section 3 and 4: Describe instances where an alternative to a variance may be applicable and eliminate need for a variance
- Section 5: Describes the department's review and approval process and the requirement for an optimization study
- Section 6: Submittal requirements to EPA
- Section 7: Ties the variance standard to MPDES permit limits for that pollutant
- Section 8 and 9: Re-evaluation requirements
- Section 10: Identifies option for individual or multiple dischargers

Rulemaking Timeline:

- The 45-day public comment period began July 8th, following publication of notice in the Montana administrative register, also known as the MAR.
- Public Hearing is August 18th at 10:00 AM in room 111 of the Metcalf Building. Meeting is also available via ZOOM
- Public Comment ends August 22nd by 5:00 PM
- Departments response-to-comments
- Department Head Signs RULE no later than September 27, 2022 – filed same day
- Published October 7, 2022

There were no questions/comments.

**Agenda Items (Wishlist) for Next Meeting – Friday, September 23, 2022, at 10:00 AM**

- Update from Kate Wilson (Mike Koppell is chair of committee, so possible joint presentation)
- Update from Andy Ulven with On-Site Wastewater group
- Discussion on Supreme Court hearing which ruled against the EPA, on behalf of West Virginia and North Dakota – if it will impact DEQ going forward, and their transition to narrative from numeric standards (possibly Kurt Moser give his thoughts?)

Comment from Thomas Kallenbach: he looked at website regarding the study/reference and apparently that study, the risk assessment is based on work in Hawaii in 2009. He noticed that in the Hawaiian study, the very first bullet point, which relates to the type of wastewater system being looked at. They're going to develop a risk model, and then the first item that they cite, in that Hawaiian study, is the type of wastewater system. Then according to the type of wastewater system, they have assigned certain nitrogen and phosphorus inputs from those systems. A cesspool would pose a greater risk to groundwater than a pressure dose drain field and chambers. What he noticed about the model on the website, there is no mention of the type of wastewater system in that model, so they've taken it and based it on a study. The number one point, or what researchers thought was important enough to list first in their study, is completely omitted from the risk assessment, the means model. He would like to understand and know where this has come from, and how it is being presented. A professor at Colorado School of Mines once told him, all models are wrong, some are useful. If we are going to battle back the attacks to groundwater, we need to have defensible models. Not these things, with all the assumptions that just can't be proven, or can't be determined.

**ADJOURN:**

Amanda Knuteson adjourned the meeting at 11:22 AM. Jeff Mark seconded it, and it was approved.