

**WATER POLLUTION CONTROL ADVISORY COUNCIL**  
**10:00 am, May 13, 2022**  
**Room 111 DEQ Metcalf &**  
**Zoom Meeting**

**FINAL MEETING MINUTES**

**PRESENT**

*Council Members Present:*

Amanda Knuteson (Chair)  
Ron Pifer (Vice Chair)  
Eric Campbell  
Shannon Holmes  
Mike Koopal  
Jeffrey Mark  
Adam Pummil  
Dennis Teske

*Council Members Absent:*

Chad Bauer  
Lee Bruner  
Teri Polumsky

*Montana Department of Environmental Quality Staff Present:*

Darryl Barton  
Nick Danielson  
Maira Davin  
Rainie DeVaney  
Theresa Froehlich  
Meagan Gilmore  
Heather Henry  
Myla Kelly  
Kurt Moser  
Maya Rao  
Christina Staten  
Galen Steffens  
Amy Steinmetz  
Lauren Sweeney  
Blake Towarnicki  
Christine Weaver

*Members of the Public Present:*

Scott Boecker  
Ben Edwards  
Thomas Kaltenbach

Kelly Lynch  
Amanda McInnis  
Derf Johnson  
Tamara Johnson  
Coralynn Revis  
Peggy Trenk  
Sarah Zuzulock

### **CALL TO ORDER**

Chair Knuteson called the meeting to order.

### **APPROVAL OF AGENDA**

Chair Knuteson moved to approve the agenda with the amendment that the action item to hold a June special meeting be added. The motion was seconded and carried in a 6-1 vote.

### **APPROVAL OF MINUTES**

Chair Knuteson moved to approve the January March 11, 2022, meeting minutes during the July 15, 2022, meeting. The motion was seconded 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.

### **Update: SB358 and Narrative Nutrient Standards Transition – Rainie DeVaney, MPDES Section Supervisor & Dr. Mike Suplee, Water Quality Standards Scientist**

Rainie DeVaney and Mike Suplee provided an update on the department's work with the Nutrient Work and progress on a comprehensive rule package implementing the narrative nutrient standards. This includes an Updated Regulatory Framework proposal.

### **Montana Septic Perspective – Mike Koopal, WPCAC Councilmember**

#### **1. State Regulatory Framework – A Passing Grade for New Septic Systems**

- According to current rules and regulations, DEQ establishes design and permitting standards for on-site WWTS, and local boards of health work with individual homeowners to permit systems that are allowable and adequate for a specific location.  
(DEQ Circular 4 Montana Standards for Subsurface WWTS is currently under review.)

#### **2. Whitefish Case Study – Juggernaut**

- Whitefish Community WW Committee  
Tier ranked neighborhood level approach; Potential solutions vary based on locale
- Two Preliminary Engineering Reports  
Lion Mountain, East Lakeshore Drive, Multiple funding partners
- Lion Mountain Discussion  
Jurisdiction, cost, annexation

### 3. The Flathead Basin Commission

- The mission is to protect the existing high quality of the Flathead Lake aquatic environment; the waters that flow into, out of, or are tributary to the Lake and; the natural resources and environment of the Flathead Basin.
- The Flathead Basin Commission (FBC) was created in 1983 by the Montana Legislature as a non-regulatory entity to monitor and protect water quality and the natural resources in on of the State's most important watersheds. The twenty-three-member Commission represents a cross-section of citizens and local, state, tribal, federal, and provincial representatives.
- Three committees: On-site WWT, Technical, E&O

**On-Site WWT Committee:** goal – actionable measures to reduce water quality impacts from septic leachate.

- Septic risk assessment (GIS)
- Synthetic DNA study
- Landowner assistance program – have a septic system in need of pumping (has not been pumped in 1 to 3 years). Be in close proximity to surface water (500 feet or less). Live in the Flathead Basin (priority will be give to specific watersheds: Lake Mary Ronan, Ashley Creek, and Spring Creek). Contact Flathead or Lake County Conservation Districts.
- National Science Foundation (NSF) Project Collaboration – focus on socio-technical solution to meet a community-driven need. Identification of hurdles and development of solution strategies.

#### Physical Risk Model

- All physical risk layers added together to create overall physical risk model.
- Septic risk
- Existing septic risk model

#### Synthetic DNA Study (2022)

- Whitefish Lake, Lake Mary Ronan
- Emerging technology partnership with Cornell University
- FBC EPA grant funding bulk of study
- Proof of Concept
- Validate FBC GIS risk assessment
- ArcNLET particle tracking module helped determine/refine the sampling plan
- Unique short strands of synthetically created DNA encased in a polymer (nanoparticle) and used as a tracer in groundwater.
- Introduced into the septic systems of homeowners to assess the connection to groundwater
- Source tracking technique

### 4. National Science Foundation Smart and Connected Communities Grant

- Collaboration between researchers, basin stakeholders, government agencies and communities.
  - 3-day workshop at The University of Montana Flathead Lake Biological Station
  - Proof of concept on the use of data to motivate homeowners to adopt septic BMPs
  - Pilot microbial analysis to identify affected littoral areas
  - Assess policy and governance framework

- Provide support to the FBC On-Site WWT Committee

## 5. Other Efforts Underway

- Flathead County Biosolids Facility (septage)  
Planning phase (\$2M), issues: high strength waste (sludge) municipalities can't accept (sources, septic tanks, vault toilets, holding tanks). Septage application areas sometimes in sensitive areas. PPCPs that may persist in environment. Conversion of ag land to development. Non-biological waste. Septage haulers in a pinch.
- University of Montana graduate student, Marie Watson, focus is to understand social and cultural dynamics related to septic risk.

More than one in five households in the USA depend on individual onsite or small community cluster systems (septic systems) to treat their wastewater (EPA, 2022). One-half of the 428,000 households in Montana use septic systems (DEQ, 2018).

Montana examples: South Butte – fractured granitic geology with increased development. West Billings – Increased nitrate probably more related to agriculture currently, but increased development. Gallatin Valley – groundwater rich and increased nitrate concerns over septic.

Traditional Mitigation Methods: Individual system replacement (need replacement drainfield area), Level II, Community Systems, Hook up to municipal sewer system (may require annexation or ww agreement).

## 6. Montana Legislative History

- 2021, HB62
- 2021, SB54
- 2021, HB123
- 2019, SJ-3
- 2015, LC957
- 2013, HB483
- 2011, SB191
- 2011, HB602

## 7. Solution Matrix – Food for Thought

- Method – site specific mitigation and/or policy.
  - Septic inspection program
  - Time of Sale or Transfer (TOST)
  - Lenders
- Scalable / Equitable – financial, social and cultural considerations
- Jurisdictions
- Ancillary issues (septage)
- Synergy – Wellhead Protection Program
- Science and Monitoring
  - MEANSS model (nutrient trading, TMDLs)
  - How much is enough? What questions do we need to answer? Remote sensing?

## Comments:

- great concept, however, one size fits all is difficult due to the cost involved.
- This issue effects both surface water and groundwater. There are indicators of this impacting communal drinking water wells. Even though this is an “invisible” issue, it is still a personal infrastructure issue. We don’t see if our septics are failing until it is too late. This is going to need a combination of more monitoring and research with some creative solutions.
- Would like to see at the time of sale in real estate, that somehow the buyer knows what they’re getting into, in terms of septic systems and open negotiations regarding upgrade of a septic system.

## Nutrient Trading and Septic Systems– Eric Regensburger, DEQ Hydrologist

### Method for Estimating Attenuation of Nutrients from Septic Systems (MEANSS)

- Description
- Data Needs
- Scoring Tables
- Validation
- DEQ-13 Trading Circular
- DEQ-13 Trade Example

**MEANSS Description:** estimate nitrogen and phosphorus (nutrients) reductions as septic system wastewater migrate to surface water. Used to estimate septic loading for TMDLs and Nutrient Trading (DEQ-13). Large dataset over watershed scale. Needed a simple method that uses site-specific information known to control nitrogen and phosphorus attenuation. Lack of other simple available tools for estimating septic contributions to surface water.

**MEANSS Parameters:** Denitrification (natural nitrogen reduction) and phosphorus absorption occurs more in soils with high organic content (clay soils). Hydrologic Soil Group (HSG) used to estimate those soils. Low CaCO<sub>3</sub> content correlated to higher P absorption (except at less common high soil pH, where P absorption increases again at higher CaCO<sub>3</sub> concentrations). Wastewater travel time is correlated to nutrient reduction. Distance to surface water used as a proxy to travel time which is more difficult to measure.

**Data Sources:** Drainfield location from GIS: Montana Structures Framework or actual location when available. HSG and soil CaCO<sub>3</sub> from NRCS Soil Survey Geographic Database (SSURGO). Distance to receiving / perennial SW is from GIS and USGS surface water dataset (NHD).

**Validation:** Comparison to 5 groundwater studies showed comparable results (68% to 120% of study load). Currently working on using MT Ground Water Permit data to improve MEANSS validation.

**DEQ-13 Nutrient Trading Summary:** Designed primarily for Point Source (MPDES permitted source) to Non-Point Source (septics, agricultural, livestock) but can also be used in Point Source – Point Source. Trade details are included and enforced through the MPDES permit. To date, only septic trades implemented in Montana.

**DEQ-13 Trade Ratio:** Trades are based on trading ratio. For every pound of nutrient reduction by the

non-point source, the Permittee receives “X” pounds of credit. Trade ratio begins at 1 and then can be increased for: Delivery Ratio and Uncertainty ratio. Agriculture / Livestock BMPs often have pre-set pound credits. Can also use models to estimate the BMP nutrient reduction. Septic trade ratios can also account for municipal wastewater discharge concentration.

**Comments/Questions:**

- What are the nuances if you have a lake upstream of a treatment facility? That that would be part of the delivery ratio. We haven't encountered that yet fortunately because lakes, are a lot more complicated than rivers. There is nutrient cycling, there's settling. Phosphorus can be settled and then redistributed at a later time, if you get low value, so it would require more complex model than MEANSS to figure out that portion of the delivery ratio. You could use MEANSS to figure out the delivery ratio to the lake but then, once in the lake you'd have to you'd have to do some other type of analysis.

**Update: Lake Koocanusa Selenium Stringency Written Findings – Lauren Sweeney Water Quality Standards Scientist**

Lauren Sweeney provided an update to the Council on the status of the draft stringency written findings for the site-specific water column standard for Lake Koocanusa. The public comment period ended May 4, 2022, and the department is currently reviewing the nearly 150 comments provided by the public and will be responding to substantive comments on the written findings. The findings document is expected to be complete by June 2022.

**MPDES Domestic Sewage Treatment Lagoon GP Renewal – Christine Weaver, MPDES Permit Writer**

Christine Weaver provided a briefing to the Council to make aware that the general permit for domestic sewage treatment lagoons for batch dischargers is out for public comment through June 2, 2022. MPDES permits are renewable every five years and this one expires at the end of 2022. There are currently 21 permittees authorized to discharge under this general permit

**ACTION ITEMS**

A motion was made by Chair Knuteson to add an action item to the agenda to vote on the DEQ request for a special meeting at the beginning of June to request initiation of rulemaking. The motion was second and passed in a 6-1 vote.

The Council voted on holding a special June meeting to hear DEQ's update on the NWG and possible request for initiation on rulemaking. Chair Knuteson made a motion to hold the meeting on Friday June 3. The motion was seconded and carried in a 4-3 vote.

Chair Knuteson made a motion to extend the meeting beyond the 12 pm end time. The motion was seconded and passed unanimously.

**Public Comment/Questions**

Kelly Lynch: Good afternoon I am the executive director of the League of Cities and Towns we represent all 127 incorporated municipalities in Montana. I'll be brief, we agree with the concerns expressed by

councilmember Shannon Holmes. The POTWs strongly believe these rules are not ready for prime time yet. October 1 is not a drop-dead deadline, while we were all hoping to meet it, we need to get the rules done right not as fast as possible. We stated to you at the last meeting that we have spent thousands of dollars and staff time drafting proposed regs for what we thought the AMP process should look like. And DEQ provided their proposal at the beginning of March, and we provided some high-level comments to DEQ on that proposal. The bottom line though is that we are still far apart. We think that the proposal is too micro focused on individual permittees and not looking at the watershed plan and permitting as a whole. We think that the reasonable potential analysis is too narrow and restrictive. We put together a proposal that DEQ has about how we would like to see the reasonable potential analysis be done. It doesn't address economic factors or achievability at all in the approach. There are no details on what the actual AMP program would look like. That's what we've been focused on so that's what we'd like to see some of our language translated into that. And a lot of that comes from the fact that we've just seen the rules and not any of the accompanying circular or guidelines. So, we just need more time to go through this and come to agreement. We are getting closer but we are not there yet so we would ask that you wait. I'll end by saying we are concerned that a vote was going to be taken on this when that wasn't placed on the agenda. I know for a fact that there were a couple of members who were not here today because they thought it was just an update.

Peggy Trenk: I'm with the Treasure State Resources Association our association represents industry folks, labor folks, we've got agricultural members and trade associations. I'm not personally a member of the Nutrient Work Group but quite a few of my members are and I'd just like to reiterate what Kelly Lynch offers that we are not there yet with the rules. And our folks, both point source and non-point source. I represent non-point source folks as well, want some more time. That should not be heard as a criticism of the incredible amount of work of DEQ staff have done to date and the work of the working group members, there has been a lot invested here and that is just one more reason we should keep plugging away to get it right. Thank you for your time today.

Tammy Johnson: I serve as the executive director of the Montana Mining Association. I am also a member of the Nutrient Work Group. I just want to say ditto to what Kelly and Peggy said. One thing I really want to impress on the councilmembers is that while certainly understanding the DEQ has invested a huge amount of time and talent to this, we have also. As point source dischargers, non-point source dischargers, we are spending massive amounts of time on this because it is so critically important to us. We are spending cumulatively hundreds of thousands of dollars to obtain legal advice, to obtain technical advice, etc. and I just wanted to assure you that we are working as hard as anybody to get this right. I also agree that this isn't quite ready and there is just some differences of opinion and approaches we have yet to talk through. So thank you for the opportunity.

Darf Johnson: It's just a question I have for Mr. Moser if he's available. I am a little confused about the process here. I don't see any requirement that there be a special meeting in June. All I see in the statute is that the rulemaking needs to be provided within 30-days of formal rulemaking. So, what's my confusion? I don't understand why there needs to be a special meeting, or a vote, I don't see anything in the statute requiring that. I just see that the WPCAC members need to be provided with a copy of the rule package 30-days before formal introduction to rulemaking.

Kurt Moser a DEQ attorney responded that the department does generally seek the advice of the Council before we make changes to water quality standards or other water quality related rules. The department is

seeking the special June meeting based upon the timelines in front of us right now. Mr. Moser clarified that the presiding officer can call that meeting by themselves or on the written request of two or more members and there is no requirement that that be made in the context of a meeting.

Dr. Mike Suplee added a bit of context noting that in his 20 years of working with WPCAC, it has never been unusual to hold special WPCAC meetings when the timing did not align well with WPCAC's normally scheduled meetings and that it is common to request a special meeting.

There were no other comments from the public or council members.

### **ADJOURN**

Chair Knuteson added as a final note, that as long as this decision about a special June meeting does not need to be made at this time during this meeting, she moved that the topic be deferred, and the meeting be adjourned. The motion was seconded by Ron Pifer and passed unanimously.