## NUTRIENT WORK GROUP MEETING SUMMARY JUNE 23, 2021

#### 9:00 a.m. Hybrid Meeting: Zoom and DNRC Montana Room

## ATTENDANCE: NUTRIENT WORK GROUP MEMBERS

Representative & Affiliation	Representing	
Susie Turner	Point Source Discharger: Large Municipal	
City of Kalispell	Systems (>1 MGD)	
Shannon Holmes	Point Source Discharger: Middle-Sized	
City of Livingston	Mechanical Systems (<1 MGD)	
Rika Lashley	Point Source Discharger: Small Municipal	
Morrison-Maeirle	Systems with Lagoons	
Alan Olson	Point Source Discharger: Non-POTW	
Montana Petroleum Association		
Scott Buecker	Wastewater Engineering Firms	
AE2S		
Kelly Lynch	Municipalities	
Montana League of Cities and Towns		
Pete Schade	County Water Quality Districts or Planning	
Lewis and Clark County Water Quality Protection	Departments	
District		
Tammy Johnson	Mining	
Montana Mining Association		
John Youngberg	Farming-Oriented Agriculture	
Montana Farm Bureau		
Jay Bodner	Livestock-Oriented Agriculture	
Montana Stockgrowers Association	-	
Kristin Gardner	Conservation Organization: Local	
Gallatin River Task Force		
Sarah Zuzulock	Conservation Organization: Regional	
Zuzulock Environmental Services		
David Brooks	Conservation Organization: Statewide	
Montana Trout Unlimited		
Guy Alsentzer	Environmental Advocacy Organization	
Upper Missouri Waterkeeper		
Not Present (Guy Alsentzer subbing for Wade Fellin)	Water or Fishing-Based Recreation	
Andy Efta	Federal Land Management Agencies	
U.S. Forest Service, Northern Region		
Tina Laidlaw	Federal Regulatory Agencies	
U.S. Environmental Protection Agency		

Representative & Affiliation	Representing	
Jeff Schmalenberg	State Land Management Agencies	
MT Dept. of Natural Resources and Conservation		
Dan Rostad	Soil and Water Conservation Districts – East	
Yellowstone Conservation District Council	& West of the Continental Divide	
Julia Altemus	Timber Industry	
Montana Wood Products Assocation		

#### **ATTENDANCE: OTHER PARTICIPANTS**

Aaron Losing, City of Kalispell Adam Sigler, Montana State University Extension Amy Deitchler, Great West Engineering Amy Steinmetz, DEQ, Water Quality Division Administrator Andrew Gorder, Clark Fork Coalition Brian Heaston, City of Bozeman Christina Staten, DEQ, Watershed Protection Section Christopher Dorrington, DEQ, Director Coralynn Revis, HDR Cori Hach, Montana Legislative Services Division Darrin Kron, DEQ, Monitoring and Assessment Section Supervisor Dave Galt, Montana Petroleum Association David Clark, HDR Ed Coleman, City of Helena Eric Regensburger, DEQ, Water Quality Standards and Modeling Section Erin Wall, Montana Rural Water Systems Galen Steffens, DEQ, Water Quality Planning Bureau Chief George Mathies, DEQ, Deputy Director Haley Sir, DEQ, Surface Water Discharge Permitting Hannah New, DEQ, Surface Water Discharge Permitting Heather Henry, DEQ, Surface Water Discharge Permitting Jason Mohr, Legislative Environmental Policy Office Jeff May, DEQ, Surface Water Discharge Permitting Joe Lierow, ExxonMobil John Bernard Kate Wilson, MT Dept. of Natural Resources and Conservation Kayla Glossner, DEQ, Surface Water Discharge Permitting Krista Evans, Montana Agricultural Business Association, Association of Gallatin Agricultural Irrigators Kristy Fortman, DEQ, Watershed Protection Section Supervisor Kurt Moser, DEQ, Legal Counsel Lisa Kirschner, Parsons Behle & Latimer Loren Franklin, KC Harvey Environmental Louis Engels, City of Billings Lynn Mass, Friends of Lake Mary Ronan Matt Wolfe, Sibanye Stiillwater Maya Rao, DEQ, Surface Water Discharge Permitting Melissa Nootz Michelle Pond – WGM Group

Mike Suplee, DEQ, Water Quality Standards and Modeling Section Mikindra Morin - Northern Plains Resource Council Moira Davin, DEQ, Public Information Officer Myla Kelly, DEQ, Water Quality Standards and Modeling Section Supervisor Nick Banish, Gallatin Local Water Quality District Peggy Trenk, Treasure State Resources Association Quincey Johnson, Upper Missouri Waterkeeper Rachel Cone, Montana Farm Bureau Rainie DeVaney, DEQ, Surface Water Discharge Permitting Section Supervisor **Rickey Schultz, HDR** Robin Franzen, Montana Rural Water Systems Ryan Leland, City of Helena Ryan Sudbury, City of Missoula Ted Barber, Meeting facilitator Trevor Selch, MT Fish, Wildlife & Parks Vicki Watson

#### **MEETING INITIATION**

George Mathieus, DEQ's Deputy Director, welcomed everyone to the meeting at 9:05 a.m. and thanked everyone for their time, participation, and commitment. He then introduced the meeting facilitator, Ted Barber. Galen Steffens, Bureau Chief of DEQ's Water Quality Planning Bureau introduced key DEQ staff and took a role call of Nutrient Work Group members present either via Zoom or in the Montana Room of DNRC's Headquarters building in Helena. Ted then went over the meeting ground rules, roles and responsibilities of the Nutrient Work Group members, and the meeting agenda (found on slides 5-7 of **Attachment A**).

## TECHNICAL SUBCOMMITTEE REPORT: ADAPTIVE MANAGEMENT PROGRAM DEFINITION & FLOWCHART

Rainie DeVaney, supervisor of the surface water discharge permitting program, reviewed a definition DEQ drafted for the adaptive management program and then reviewed an associated flowchart (slides 9 and 10 of **Attachment A**). Both items were drafted and modified based on input from the technical subcommittee (TSC) members and DEQ has not identified either of these as final products. Rainie then reviewed some key differences between TSC member recommendations and DEQ proposals (slide 11).

#### Discussion

Discussion followed surrounding box 3 of the flowchart and the definition of a stakeholder. A definition for "stakeholder" was requested; Rainie responded that DEQ considers this a broad term that includes a variety of people such as farmers, ranchers, local conservation districts, etc. Tammy Johnson, Mining representative, responded that this is a broader category than dischargers typically deal with and asked how to reach out to nonpoint source interests (Action).

David Brooks, Statewide Conservation Organizations representative, commented that stakeholder engagement should not be limited to just the individuals or groups identified by the permittee. "Interested, legitimate stakeholders ought to have the opportunity to engage even if they are not preemptively identified by the Permittee." Guy Alsentzer, Environmental Advocacy Group

representative, noted that he agreed with David Brooks regarding the need to ensure broad public participation in the development of any adaptive management plan (AMP). He also noted that this inclusive context is required by the Clean Water Act's public participation mandates.

Kristy Fortman, supervisor of DEQ's total maximum daily load (TMDL) program, noted that stakeholder groups are defined in state law for TMDL development and suggested that it may be useful to mirror this for forming stakeholder groups for AMPs:

https://leg.mt.gov/bills/mca/title\_0750/chapter\_0050/part\_0070/section\_0040/0750-0050-0070-0040.html

Kelly Lynch, the Municipalities representative, noted that the flow chart seems to start late in the process and asked at which step the AMP is developed. She also noted that they want to ensure that nonpoint sources will be part of the discussion but cannot assume this will happen.

Guy asked for clarification on how DEQ envisions this going forward in a practical timetable that works with NPDES timeframes - how do we ensure that pollution does not continue indefinitely? Rainie acknowledged that timeframes are missing from DEQ's conceptual flowchart (Action).

Rika Lashley, Small Municipal Systems with Lagoons representative, noted it would be helpful to hear from the farming and nonpoint source community on how they feel about this process and what they think is possible or realistic (**Action**). Jay Bodner, representative for Livestock-Oriented Agriculture, noted a technical document on DEQ's website showing impact of range livestock to water quality is low (see *Whole-stream Nitrogen and Phosphorus Addition Study to Identify Eutrophication Effects in a Wadeable Prairie*, 2016; discussion begins on page 5-9. Document found at: https://deq.mt.gov/files/Water/WQPB/Standards/NutrientWorkGroup/PDFs/BoxElderTechRprt\_FNL.pdf

#### **MEETING FOCUS DISCUSSION: WATERSHED SCALE FRAMEWORK**

Michael Suplee, Water Quality Science Specialist in DEQ's Water Quality Standards program, discussed why adaptive management plans should consider watershed scale. Mike posed the topic of what physical construct we need to be working under to meet our narrative water quality standard and to gather information in a way that is objective and appropriate. He noted that we're addressing flowing waters and that wadeable streams are fundamentally different from large rivers (see slide 13 of **Attachment A**). He also discussed how wadeable streams process nutrients differently than large rivers (slide 14). Lakes are closed systems like a bathtub: nutrients tend to cycle from inorganic forms to organic forms (e.g., phytoplankton, aquatic macrophytes), then when organisms die, the nutrients cycle back around. In a river or stream, however, nutrients move in a longitudinal direction downstream due to flow (spiraling). Nutrients introduced end-of-pipe are picked up by biota and converted to algae and eventually fish.

There are also dramatic differences in how far downstream things will affect a large river versus a small stream, which affects where to collect data downstream of POTWs. A typical 3<sup>rd</sup> order small stream tends to pick up nutrients, process them, and manifest effects in less than a half mile. Whereas, in a large river, effects are more commonly around 20 miles. We must take this into account when we determine when, where, and how to collect data. Slide 15 of **Attachment A** discusses the simplicities and difficulties in monitoring nutrient response variables in wadeable streams versus large rivers.

There is also a question of medium-sized rivers (e.g., Smith, Dearborn rivers) and whether we want a separate category for them or lump them with wadeable streams/rivers.

Mike also posed the questions: what is a watershed? How far upstream and downstream are permittees responsible? Where do the boundaries lie?

#### Discussion

Discussion was had around the consideration of groundwater in the AMP framework. Sarah Zuzulock, Regional Conservation Organizations representative, stated that discharges are often to groundwater that then affect surface water. David Brooks concurred with the need to include groundwater in AMP monitoring where there are point source discharges to groundwater. Tammy Johnson also stated that groundwater is a big subject and decisions have to be made as to whether we're looking at authorized discharges to groundwater (**Action**).

Kelly Lynch asked if DEQ goes forth and identifies the adoption of an AMP for each watershed in which there is a point source. She also stated that the bill sponsors' idea was that the onus would be on the point source discharger to develop an AMP, although she recognizes the issues related to funding for this. Mike Suplee responded that this is a common theme from the technical subcommittee meetings: who is responsible for what and when? He further stated that there are some pretty different viewpoints on this, but DEQ's impression is there's a lot of room to figure this out. There are areas where DEQ has expertise, but areas where dischargers may want to take control.

Sarah responded to Kelly's comments regarding how Montana League of Cities and Towns has envisioned the adaptive management program. As representative for conservation groups, she stated she would take the opposite view and advocates that DEQ drive the process in order to maintain a level of objectivity. DEQ has a watershed-wide knowledge of nutrient loading, and a permittee would only develop a small portion of the AMP.

Kelly noted that this is how the process works for subdivisions: the developer provides all the groundwork and then provides it to the agency making the decision. She doesn't see an issue with having locals do the work if funding is established.

Jay Bodner asked how users will determine whether a waterbody is considered a wadeable stream or a large river. Mike Suplee responded that DEQ will summarize this process and discuss in the technical subcommittee (**Action**).

Andy Efta, Federal Land Management Agencies representative, asked regarding the definition of a watershed and what constitutes a wadeable system versus a large river system: has DEQ considered application of USGS' National Hydrography and Watershed Boundary Datasets? These datasets provide a standardized framework for articulating hierarchical drainage scale. There are specific terms tied to the various catchment scales that could assist in minimizing confusion. Mike Suplee responded that DEQ has and has an internal document that parses out large rivers that takes flow, wadeability, and time of year into account, and will make that available to for the next TSC meeting.

Susie Turner, Large Municipal Systems representative, stated regarding the watershed scale subject: I'd like to make sure we are considering a broader group of watershed factors, for response variables, as not all watersheds are the same and react to different factors, as I've learned during the site specifc

study we're doing on Ashely Creek. Reverting to just nitrogen and phosphorus concentrations for point source I feel will defeat the purpose of AMPs. These items should be discussed at the TSC, and we'll be ready to support solutions.

#### LISTENING SESSION SUMMARY

Galen Steffens provided a summary of the themes that emerged from the June 9 listening session (see slide 17 of **Attachment A**). She reminded everyone that the goal of that meeting was to provide opportunity for anyone that wanted to attend to be heard and to submit questions. She also noted that DEQ anticipates holding a future listening session later this summer when more portions of the rules are drafted.

#### **PUBLIC COMMENT**

Public comment was taken at the end of the meeting.

Adam Sigler with Montana State University commented that he agreed with the importance of acknowledging groundwater – surface water connections during source assessment. He further stated that groundwater sources of nitrate are pivotal nutrient sources in many algae-impaired streams, and there are opportunities to enhance nitrogen use efficiency in agricultural operations, benefiting both producer's bottom line (i.e., nitrogen is expensive) and water quality. The Gallatin River Task Force also agreed that it is critical to include point source discharges to groundwater.

A comment was made that the delineation of responsibility needs to be clear. Many stakeholders have serious concerns about point source dischargers having the sole responsibility of developing AMPs and therefore developing the limits of their own permit. DEQ needs to maintain its regulatory authority.

### **CLOSE OF MEETING**

George Mathieus closed the meeting with a statement that all the existing programs are designed to work together. This is an opportunity to use a more watershed-based approach to permitting, which can and should afford us the opportunity to draw on a larger toolbox. This is going to help us, as a state, look at nutrient trading options and different treatment options, and at a larger scale, broadening our toolbox.

The meeting ended at 10:40 a.m.

#### **SUMMARY OF ACTION ITEMS**

	Action	Who*
1	Provide documents in advance of NWG meetings	DEQ
2	Get Microsoft Teams up and running for NWG and TSC members	DEQ
3	Address the question of nonpoint source participation in the AMP process	DEQ, NWG
4	Consensus opinion of farming and nonpoint source community on this	Nonpoint source
	process and what they think is possible or realistic	representatives
5	Add timeframes to the Adaptive Management Program flowchart	DEQ and TSC
6	Create responsibility chart for adaptive management program	DEQ and TSC
7	Summarize the process for determining a wadeable stream vs large river	DEQ

8	Add groundwater to the adaptive management program framework	DEQ and TSC
9	Summarize SOPs for sampling nutrients	DEQ

\* NWG = Nutrient Work Group, TSC = Technical Subcommittee

## ATTACHMENT A: JUNE 23, 2021 NUTRIENT WORK GROUP MEETING PRESENTATION SLIDES

# Nutrient Work Group Session Two

June 23, 2021



## Welcome!

- Please keep your microphone muted until called on
- Only NWG Members may participate during discussions
- \*6 unmutes your phone

Mute

Stop Video

- State your name and affiliation before providing your comment
- Enter questions in the chat box at any time
- Turning off your video feed provides better bandwidth
- Please sign-in to the chat box with name and affiliation



Leave

More

2: 4 🗭 🚮 😅 Participants Chat Share Screen Reactions



## Introductions DEQ Staff

- Christopher Dorrington, Director
- George Mathieus, Deputy Director
- Kurt Moser, Legal Counsel
- Moira Davin, Public Relations
- Amy Steinmetz, Water Quality Division Administrator
- Jon Kenning, Water Protection Bureau Chief
- Rainie DeVaney, Discharge Permitting Section Supervisor
- Galen Steffens, Water Quality Planning Bureau Chief
- Myla Kelly, WQ Standards & Modeling Section Supervisor
- Kristy Fortman, Watershed Protection Section Supervisor
- Darrin Kron, WQ Monitoring & Assessment Section Supervisor
- Michael Suplee, Water Quality Science Specialist



## Introductions Nutrient Work Group Members

Interest Group	Representative	Affiliation	
Point Source Discharger: Large Municipal Systems (>1 MGD)	Susie Turner	City of Kalispell	
Point Source Discharger: Middle-Sized Mechanical Systems (<1 MGD)	Shannon Holmes	City of Livingston	
Point Source Discharger: Small Municipal Systems with Lagoons	Rika Lashley	Morrison-Maeirle	
Point Source Discharger: Non-POTW	Alan Olson	Montana Petroleum Association	
Municipalities	Kelly Lynch	Montana League of Cities and Towns	
Mining	Tammy Johnson	Montana Mining Association	
Farming-Oriented Agriculture	John Youngberg	Montana Farm Bureau	
Livestock-Oriented Agriculture	Jay Bodner	Montana Stockgrowers Association	
Conservation Organization - Local	Kristin Gardner	Gallatin River Task Force	
Conservation Organization – Regional	Sarah Zuzulock	Zuzulock Environmental Services	
Conservation Organization – Statewide	David Brooks	Montana Trout Unlimited	
Environmental Advocacy Organization	Guy Alsentzer	Upper Missouri Waterkeeper	
Water or Fishing-Based Recreation	Wade Fellin	Big Hole Lodge	
Federal Land Management Agencies	Andy Efta	U.S. Forest Service	
Federal Regulatory Agencies	Tina Laidlaw	U.S. Environmental Protection Agency	
State Land Management Agencies	Jeff Schmalenberg	Dept. Natural Resources & Conservation	
Water Quality Districts / County Planning Departments	Pete Schade	Lewis & Clark County Water Quality Protection District	
Soil & Water Conservation Districts – West of the Cont. Divide	Vacant		
Soil & Water Conservation Districts – East of the Cont. Divide	Dan Rostad	Yellowstone River Cons. District Council	
Wastewater Engineering Firms	Scott Buecker	AE2S	
Timber Industry	Julia Altemus	Montana Wood Products Assocation	

## **Ground Rules**

- Speak one at a time refrain from interrupting others.
- Wait to be recognized by facilitator before speaking.
- Facilitator will call on people who have not yet spoken before calling on someone a second time for a given subject.
- Share the oxygen ensure that all members who wish to have an opportunity to speak are afforded a chance to do so.
- Be respectful towards all participants.
- Listen to other points of view and try to understand other interests.
- Share information openly, promptly, and respectfully.
- If requested to do so, hold questions to the end of each presentation.
- Remain flexible and open-minded, and actively participate in meetings.





## Roles and Responsibilities The Nutrient Work Group is an advisory group to DEQ. Members agree to:

- Provide specific local expertise, including identifying emerging local issues;
- Review project reports and comment promptly;
- Attend as many meetings as possible and prepare appropriately;
- Complete all necessary assignments prior to each meeting;
- Relay information to and from their broader interest group counterparts after each meeting and gather information/feedback from their counterparts as practicable before each meeting;
- Articulate and reflect the interests that NWG members bring to the table;
- Maintain a focus on solutions that benefit the entire state;
- Present recommendations for the rulemaking throughout the planning process.



## Agenda

Meeting Goal: Finalize AMP Definition, Review AMP Details and Watershed Scale Framework

- Technical Subcommittee Report
  - AMP definition
  - AMP flowchart-DEQ
  - AMP flowchart-feedback from TSC
- Discussion of AMP Step #2 Watershed Scale approach
- Opportunities for public input future listening sessions, comment feature on NWG webpage





## Nutrient Work Group

## Technical Subcommittee Report

## **AMP** Definition

**Draft Definition**: Adaptive Management Program means a watershed-scale system that protects water quality from point and nonpoint sources of nutrients by: (a) prioritizing phosphorus reduction while accounting for site specific conditions, (b) allowing for nutrient sources to be addressed incrementally over time by incorporating flexible decision-making which can be adjusted as management actions and other factors become better understood, (c) reasonably evaluating all factors impacting a waterbody while considering the relative cost of treatment options, their feasibility, and their expected water quality improvement, (d) documenting specific nutrient reduction requirements, and (e) setting as its goal the protection and achievement of beneficial uses of the waterbody.





## **Adaptive Management Program**



DEQ reviews and approves or requests improvements

## TSC Member Input on AMP Flowchart

- <u>Key Differences:</u> DEQ proposal puts all nutrient-discharging permittees in program who carry out assessment upfront; TSC proposal uses 303(d) list and existing watershed knowledge to target those likely to enter AM program.
- <u>Overall</u>: More upfront work by DEQ (watershed inventory). Assumes DEQ will identify a nutrient MPDES permit limit prior permittee assessing instream impacts. TSC proposal could reduce potentially unneeded instream monitoring by permittees.
- TSC members recognize their recommendations are preliminary and additional work to identify a final flow chart is needed



Simplified version of TSC recommendation



## Today's Discussion

Watershed Scale Framework Why Adaptive Management Plans should Consider Watershed Scale Wadeable streams/rivers vs. large rivers

- Wadeable Streams/rivers:
  - Influenced by local climate, geology, soils, plant life
  - Shorter runoff period
  - Process added nutrients over shorter distances due to shallower depth, lower velocities
- Large Rivers:
  - Drain multiple large watersheds, water quality often different from local streams
  - Longer runoff period
  - Process nutrients over much longer distances due to deeper depths, higher velocities



# Yellowstone River



## Nutrient Spiraling in Flowing Waters







Why Adaptive Management Plans should Consider Watershed Scale Wadeable streams/rivers vs. large rivers

## • Wadeable Streams/rivers:

- Often have a single point source (in MT)
- Easier to sample & monitor for direct assessment of nutrient response variables (bottom-attached algae, daily DO changes, etc.)
- Large Rivers:
  - Often have multiple dischargers
  - Difficult to sample, require deployed instruments and often boats to emplace equipment
  - Response variables better addressed through modeling (DO, pH, shore-area algae, etc.)









# Next Steps & Technical Subcommittee



# Public Input

- Listening Session Summary Themes:
  - Federal approval
  - Assessment Method/Impairment
    Listings
  - Sources
  - Nutrient Limits & Specifics
  - TMDLs
  - Existing Science
  - AMPs
  - Treatment Ramifications & Economics
- Future listening sessions
- NWG Website question submittal button
- General Questions





# Next Meeting

- Wednesday, July 28<sup>th</sup> from 9:00 11:00 am
- Next meeting topics:
  - Any wrap-up from today's meeting?
  - Outstanding questions
  - Implementation of Watershed Scale Framework
- Technical Subcommittee meeting
  - Tuesday, July 6th from 1:00 3:00 pm
  - Topic forthcoming





# Thanks for Joining Us

Contact: Galen Steffens <u>Galen.Steffens2@mt.gov</u>

To submit comments or questions



Submit Comments or Questions

http://deq.mt.gov/water/resources



# Nutrient Work Group Session 2

June 23, 2021

