Listening Session 2

September 23, 2021

DEQ MONTANA

Welcome!

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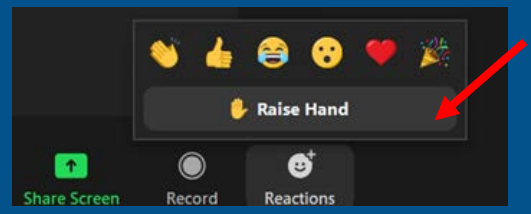
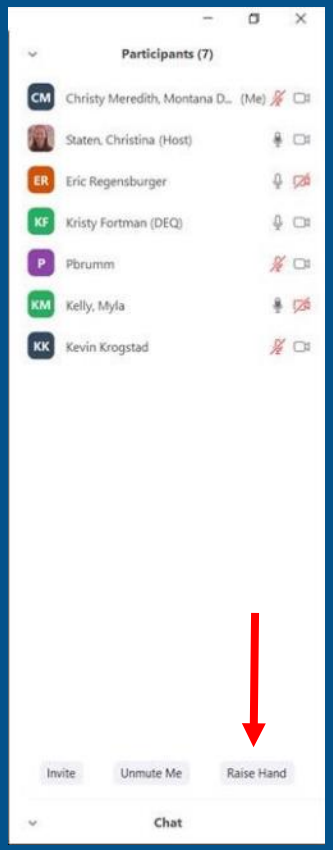
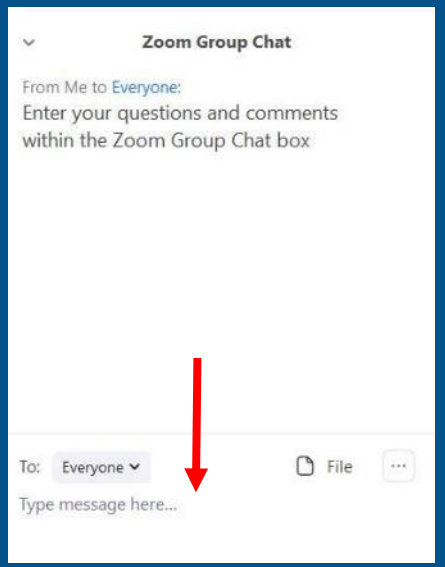
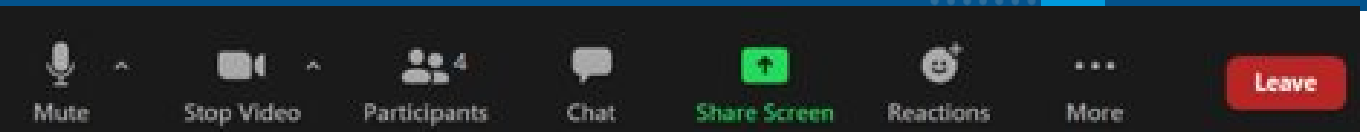
- *6 unmutes your phone
- Please sign-in to the chat box with name and affiliation









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Introductions

DEQ Staff

- 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
- Christina Staten, Water Quality Specialist

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Agenda

Listening Session Purpose: To hear from the public on the transition to narrative standards

- Overview
- Questions
  - Submitted Prior to Today
  - Open Questions
- Informal Comments
  - 3 Minutes Per Person

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SB 358

Section 1. Transition for nutrient standards. (1) **By March 1, 2022, the department of environmental quality shall adopt rules related to narrative nutrient standards in consultation with the nutrient work group.**

(2) The rules shall provide for the development of an adaptive management program which provides for an **incremental watershed approach for protecting and maintaining water quality,** and that:

(a) reasonably balances all factors impacting a water body;

(b) prioritizes the minimization of phosphorus, taking into account site-specific conditions; and

(c) identifies the appropriate response variables affected by nutrients and associated impact thresholds in accordance with the beneficial uses of the waterbody.

(3) In developing the rules in subsection (2), the department shall consider options pertaining to whether the point source is new or existing and whether the receiving water body is considered impaired or unimpaired.

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SB 358

Until final rules are adopted pursuant to [section 1], **the department shall administer the discharge permitting program under 75-5-402 in a manner consistent with ARM 17.30.637 and the intent of [this act]**. (2) Any nutrient standards variances currently authorized and effective are hereby authorized and effective under 75-5-320 until otherwise amended or repealed.

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SB 358

The department of environmental quality shall amend ARM 17.30.602 to **delete all references to department circular DEQ-12A, department circular DEQ-12B, base numeric nutrient standards, and nutrient standards variances.**

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What are the narrative nutrient standards?

ARM 17.30.637 General Prohibitions

(1) State surface waters must be free from substances attributable to municipal, industrial, agricultural practices or other discharges that will:

(d) create concentrations or combinations of materials which are toxic or harmful to human, animal, plant, or aquatic life; and
(e) create conditions which produce undesirable aquatic life.

Also includes standards such as those for pH which contain narrative components:

ARM 17.30.623 (2)(c): "Induced variation of hydrogen ion concentration (pH) within the range of 6.5 to 8.5 must be less than 0.5 pH unit. Natural pH outside this range must be maintained without change. Natural pH above 7.0 must be maintained above 7.0."

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Overview

DEQ is transitioning from numeric nutrient standards to narrative nutrient standards

DEQ will utilize the existing science regarding nutrient impacts to Montana's beneficial uses.

All water quality standards changes will be submitted to EPA for approval under the Clean Water Act.

DEQ is actively engaging with the Nutrient Work Group as an advisory body. Monthly meetings are open to the public.

DEQ's developed and vetted nutrient assessment method will remain in place, with minor changes.

The timeline for creating the new narrative implementation rules is faster than most rulemaking at DEQ and requires the rules to be developed by March 2022.

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Nutrient Work Group

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	MT Dept. of Nat. Resources & Conservation
Water Quality Districts / County Planning Departments	Pete Schade	Lewis & Clark County Water Quality Protection District
Soil & Water Conservation Districts – West of the Continental Divide	Samantha Tappenbeck	Flathead Conservation District
Soil & Water Conservation Districts – East of the Continental Divide	Dan Rostad	Yellowstone River Conserv. District Council
Wastewater Engineering Firms	Scott Buecker	AE2S
Timber Industry	Julia Altemus	Montana Wood Products Association

Deliverables

- Rules to implement narrative nutrient standards
  - Rules
  - Circular
  - Guidance

  All materials presented today are draft only

- Repeal of DEQ 12A

- Implement the Adaptive Management Program and Adaptive Management Plans
  - Requirements
  - Content
  - Review Process
  - Implementation

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Rulemaking Framework

Overview

Framework Overview

- Focus on development of an Adaptive Management Program for watersheds with point sources

- Adaptive Management Plans (AMPs) under the program to be developed at different scales according to waterbody size

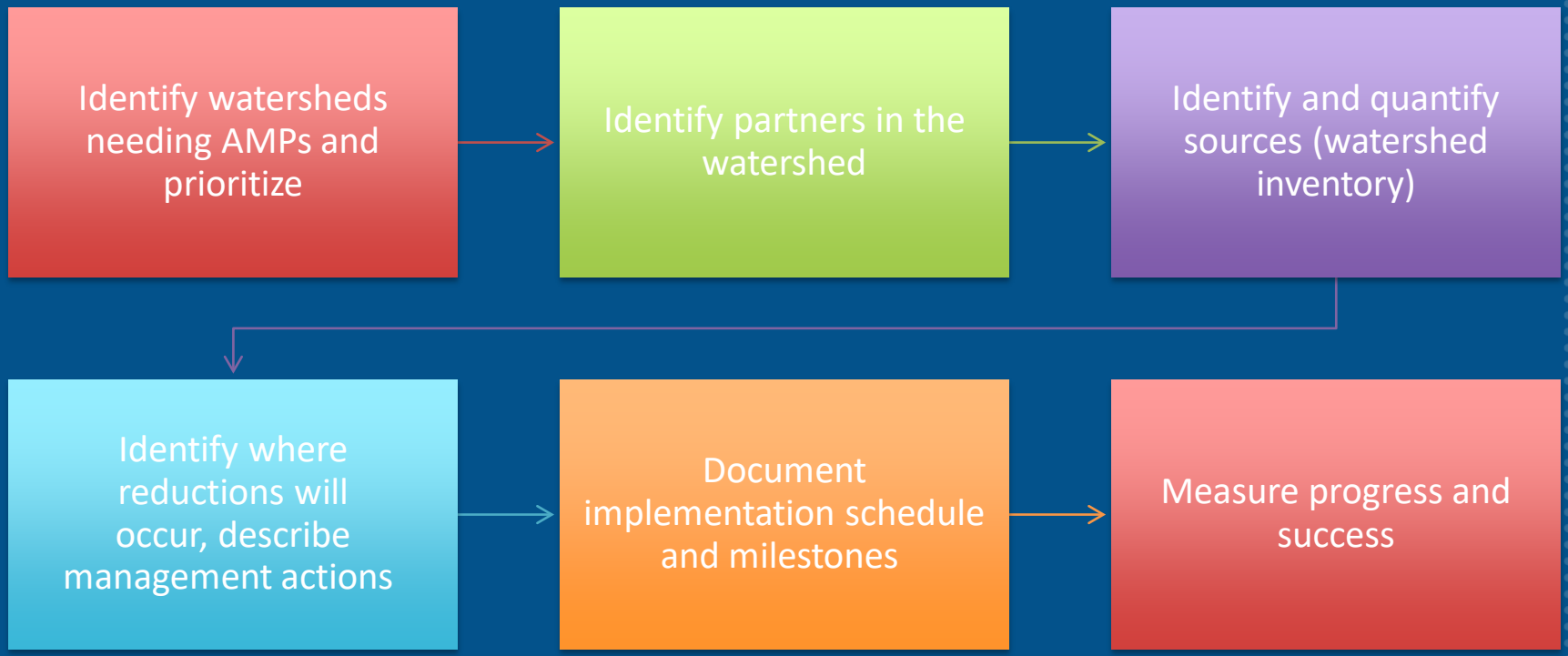
- AMPs to consider all sources impacting a waterbody, prioritize phosphorus minimization unless unfitting for the situation

- Identify water quality indicators (response variables) related to nutrient pollution and how (at what threshold) they impact beneficial uses

- AMPs should use information in existing water quality studies/plans (TMDLs) when available, inform future TMDLs when starting from scratch

- AMPs implemented in Permitting on an incremental schedule, considering operational costs, requiring ongoing monitoring to track progress, etc.; may result in future pollutant reductions if limits not succeeding

AMP Essential Components



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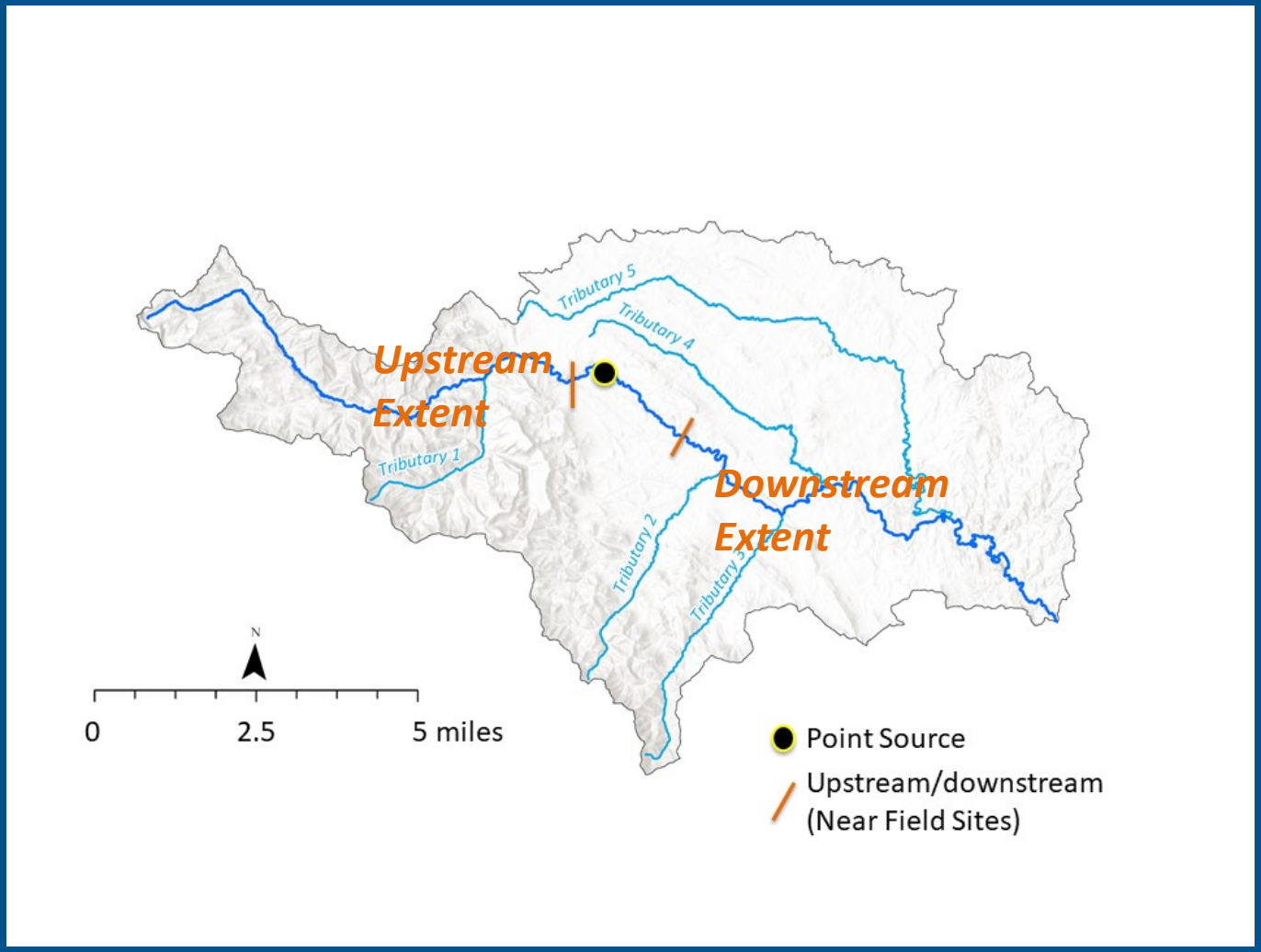
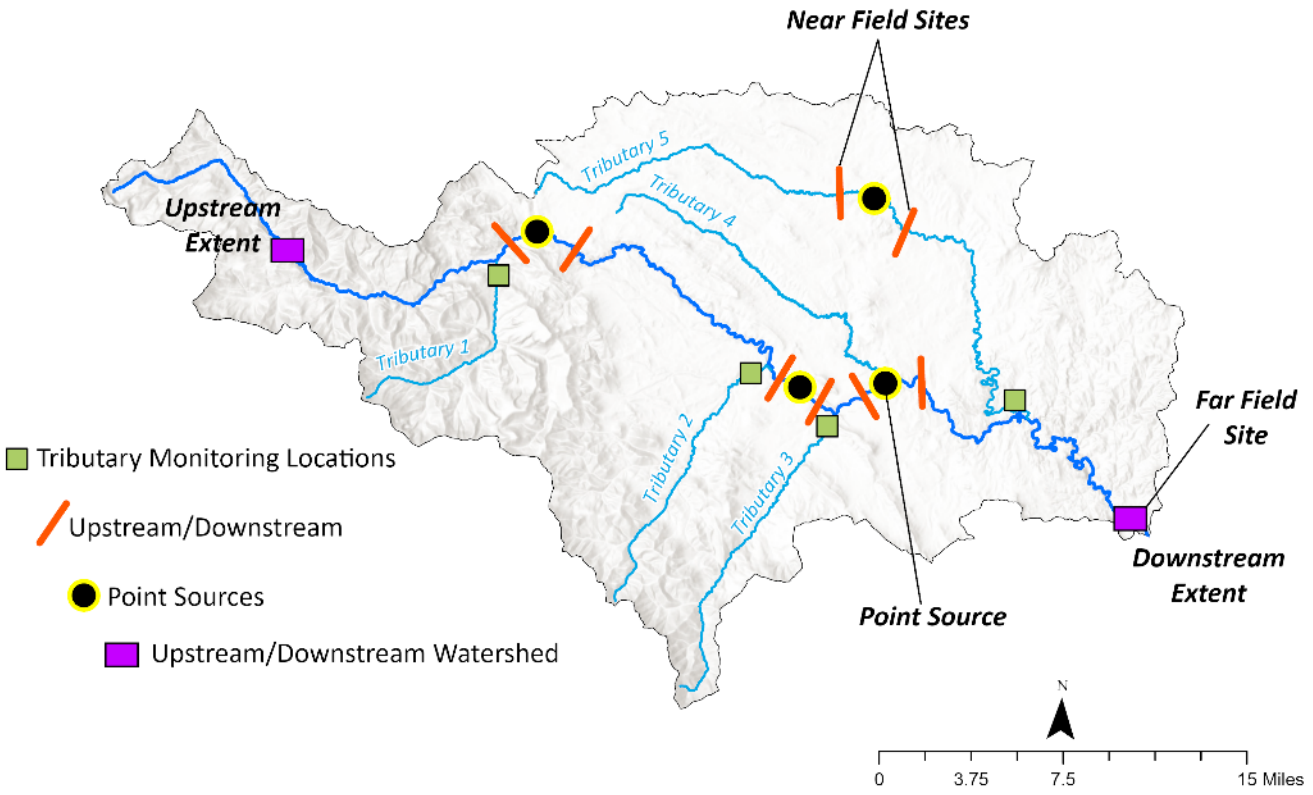
Example of a Simple AMP Watershed



Example AMP Watershed with Multiple MPDES Permittees



Note: This map demonstrates monitoring locations upstream and downstream of point sources. The locations shown are for illustrative purposes only. In addition to upstream and downstream, monitoring downstream of the confluence would be required to demonstrate cumulative effects.

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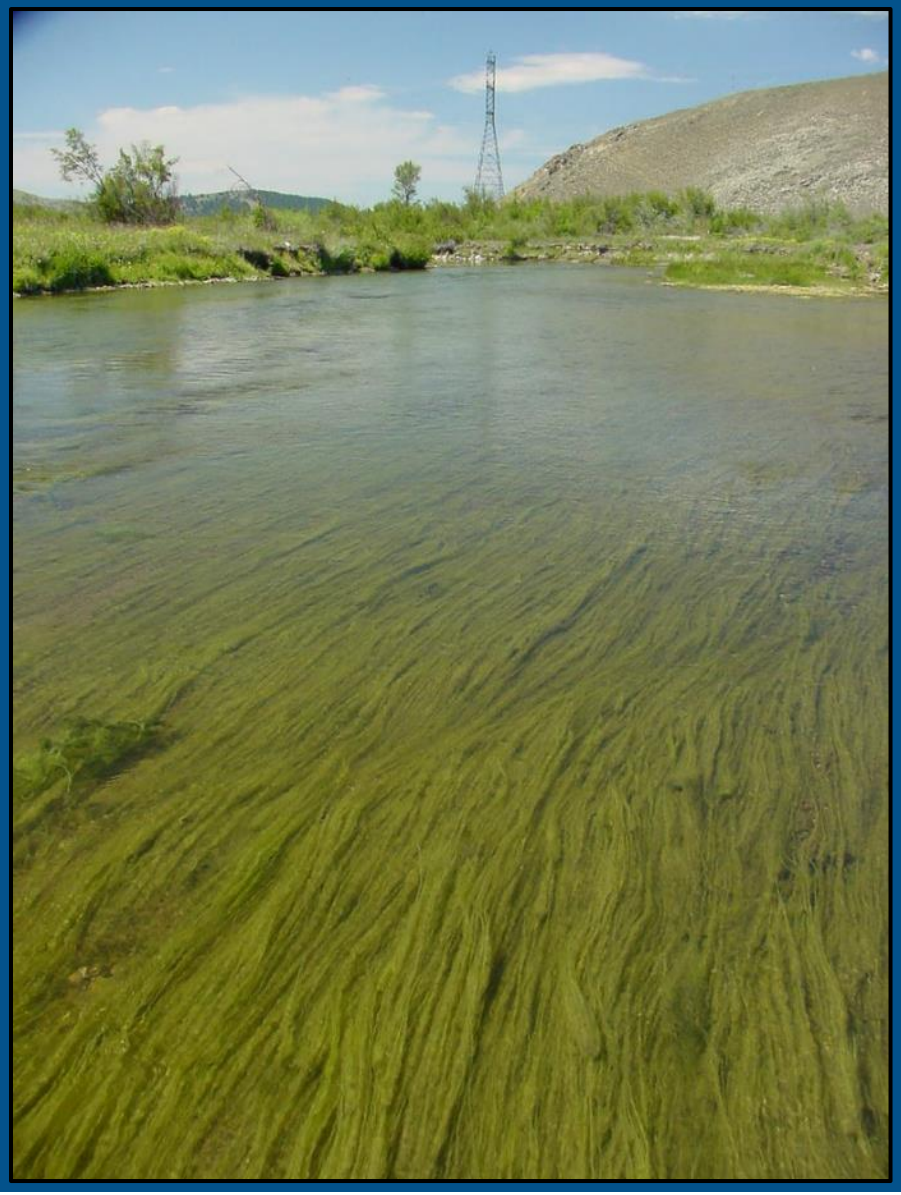

Nuisance algal growth, western Montana rivers and streams

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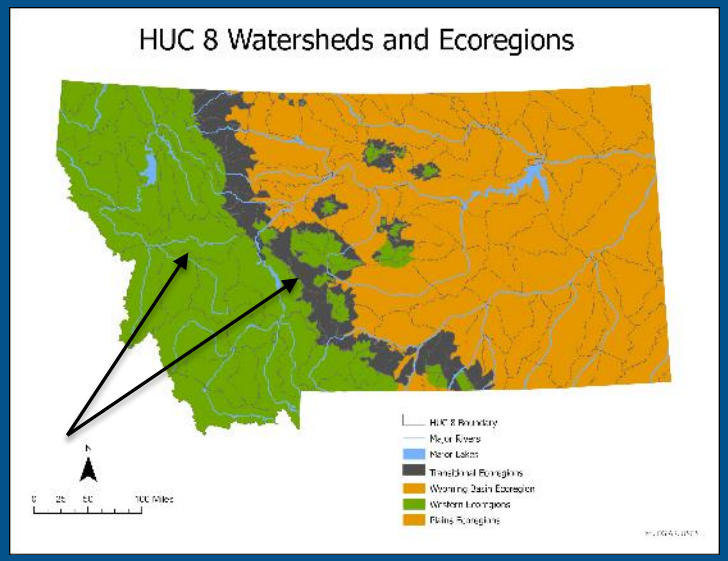
Western MT Medium Rivers and Wadeable Streams: DEQ's Recommended Response Variables & Thresholds



Data Collection Index Period:
July 1 to September 30, annually

- Average stream bottom (benthic) chlorophyll *a* over a sampling reach
  - Threshold: 125 mg Chl*a*/m^2
- Average stream bottom (benthic) ash free dry weight (AFDW) over a sampling reach
  - Threshold: 35 g/m^2
- Average % stream bottom cover by filamentous algae over a sampling reach
  - Threshold: 30%
- Macroinvertebrates, Hilsenhoff Biotic Index (HBI)
  - Threshold: relative us/ds comparison

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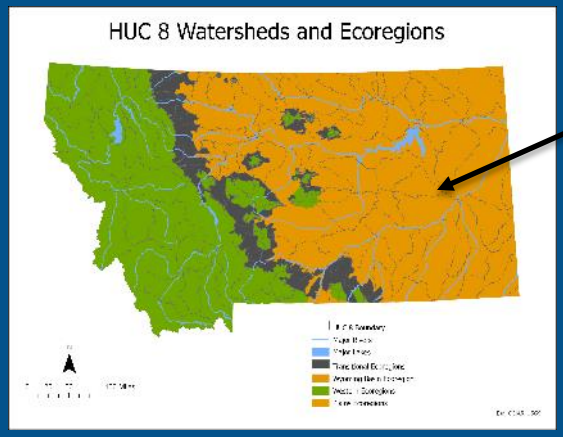
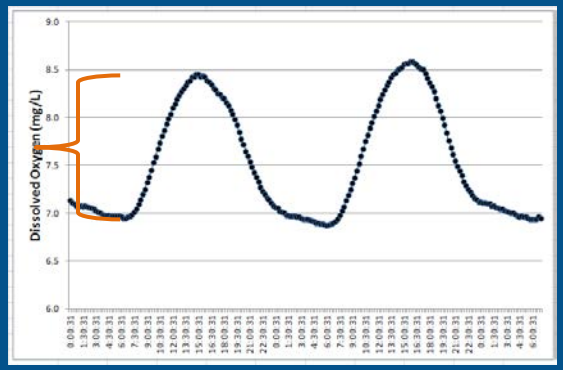
Eastern MT Medium Rivers and Wadeable Streams: DEQ's Recommended Response Variables & Thresholds





Data Collection Index Period:
July 1 to September 30, annually

- Dissolved Oxygen Delta (DO Δ) as a weekly average
  - Threshold: 5.3 mg DO/L

- Biochemical Oxygen Demand (BOD_5)
  - Threshold: Relative us/ds comparison

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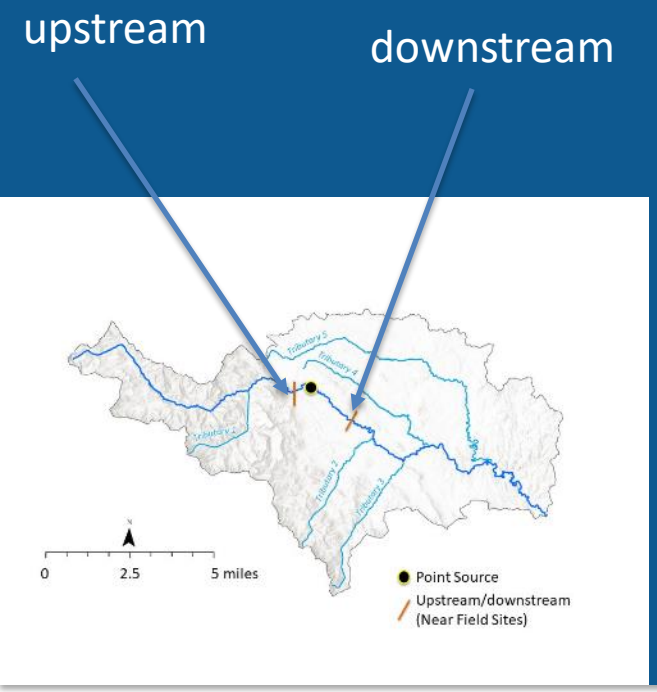
Upstream/downstream results inform next steps



Example Results for Near Field Sites Bracketing a Point Source.

Upstream Site(s)	Downstream Site(s)	Implication
Compliant	Compliant	Permittee is compliant with permit limits, continue to monitor
Compliant	Non-compliant	Work should focus on point source improvements
Non-compliant	Compliant	Suggests work should focus on improvement to upstream watershed
Non-compliant	Non-compliant	Suggests work could begin upstream of point source, at point source, or both

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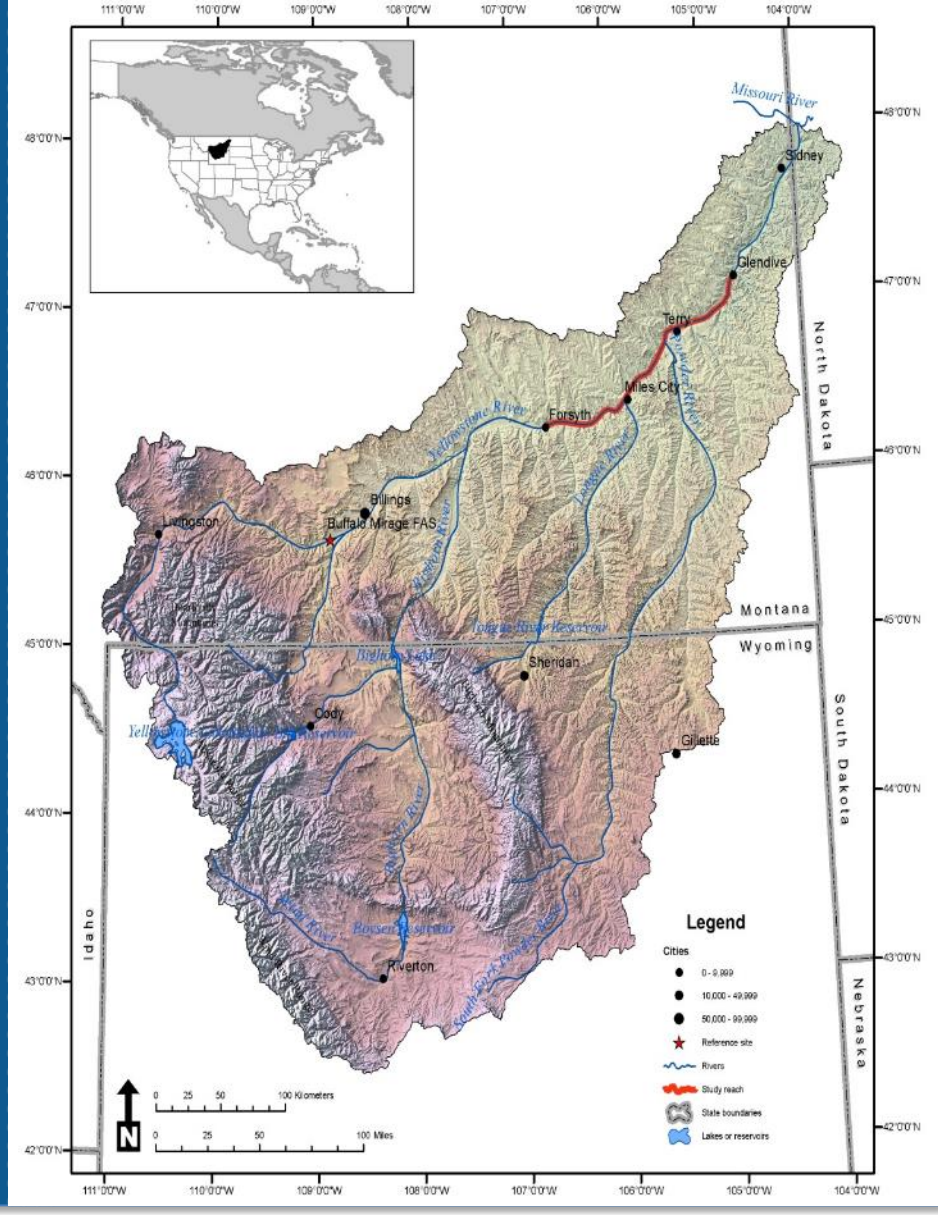
AMP Would Use Data Collection and Modeling in Large Rivers

Models: QUAL2K, others
Sampling sites/types identified per model needs support the model AND provide for evaluation of beneficial use support

Water Quality Endpoints (for example):

- Dissolved oxygen concentrations
- Benthic algal biomass (chlorophyll *a*, AFDW) in near-shore areas
- pH
- Total dissolved gas (as linked via DO supersaturation)



Key Differences Compared to Current Permitting Process

- Requirement to prioritize phosphorus reduction instead of phosphorus and nitrogen
  - Site specific exceptions allowed, if appropriate
- Response variables & thresholds requirement means DEQ would evaluate the direct effects manifested *in the river* rather than pollutant concentrations at the end-of-pipe
- If narrative nutrient standards are not met in watershed, AMP would allow for holistic approach to address nutrient sources in water
  - Allows time for improvements to occur

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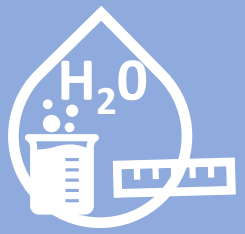
DEQ's Water Quality Planning Process

1 Develop Water Quality Standards

Adopt criteria to describe desired conditions and protect beneficial uses.

2 Monitor Water Quality



Collect data about water quality

3 Assess Water Quality

Describe water quality and determine whether waters are "impaired" (do not meet water quality standards and do not fully support beneficial uses)

4 Identify Sources of Pollution

Estimate amount of pollution from identified sources

5 Develop Total Maximum Daily Loads (TMDLs)

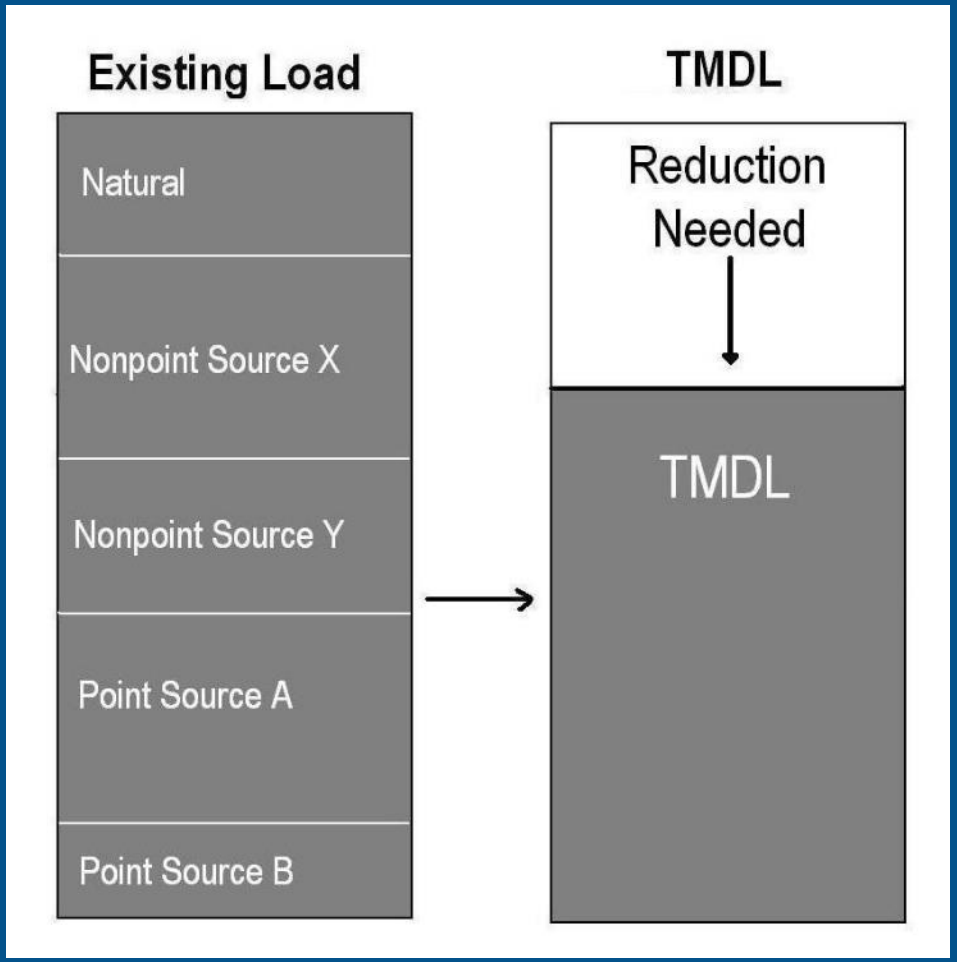
Determine reductions needed for impaired waters to meet water quality standards, and recommend pollution reduction strategies

6 Support Water Quality Improvements

Support efforts to reduce point and nonpoint source pollution and protect and restore water quality.

What is a TMDL ?

What is a TMDL ?



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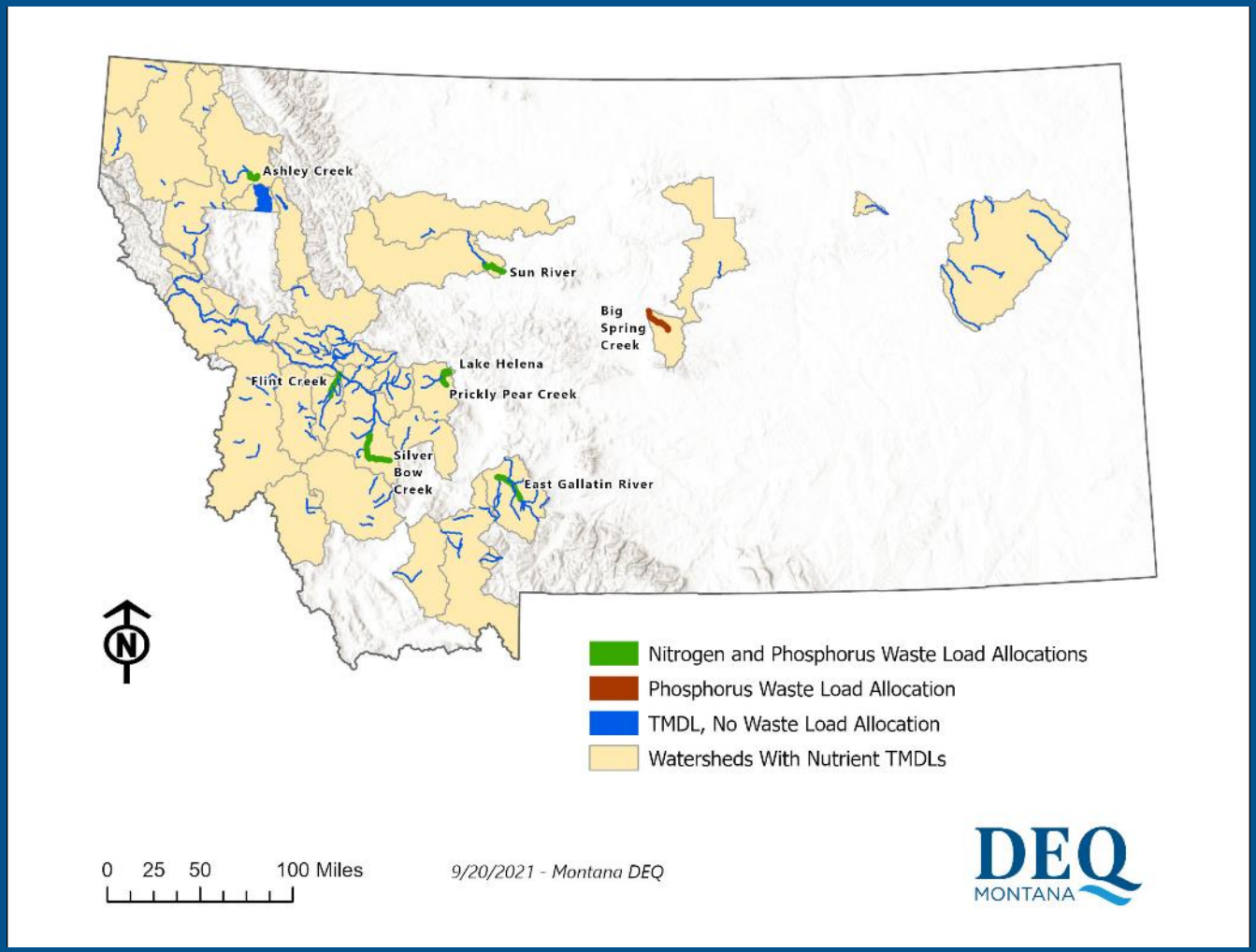
Completed Nutrient TMDLs



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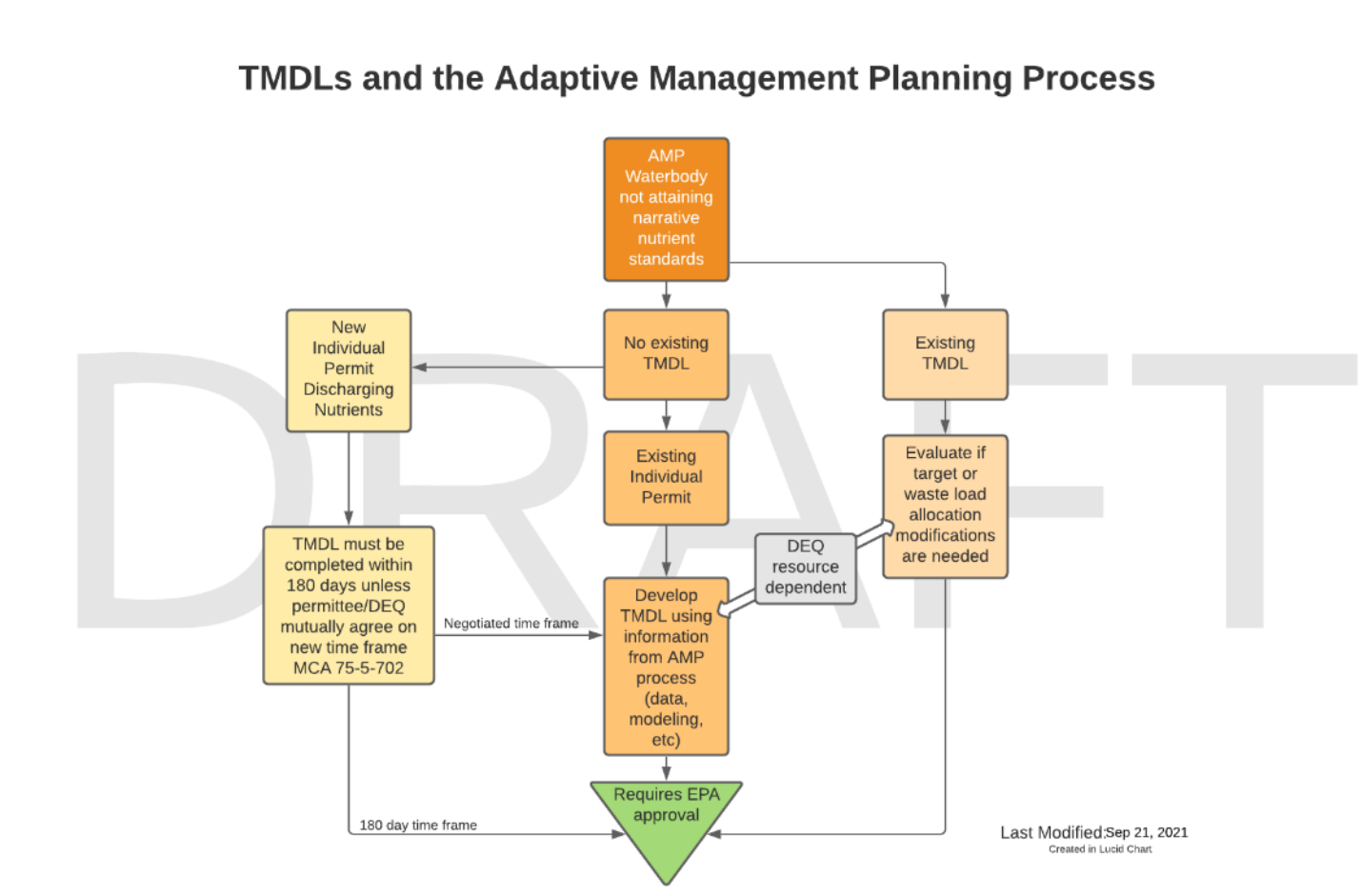
TMDLs and the Adaptive Management Program



Timeline

- **September 10, 2021:** Brief WPCAC on upcoming AMP rules and DEQ-12A rule repeal package
- **November 19, 2021:** Draft rules presented to the WPCAC
- **Mid December:** Department files Notice of Proposed Rulemaking with Secretary of State
- **Late Dec:** Beginning of 45 day public comment period
- **March:** completed rule-making and published in MAR as state law

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In Summary

- Takes a more holistic approach to impacts in a watershed with tailored solutions
- The narrative nutrient standards will be easier to implement and protect water quality through the adaptive management process
- The beneficial uses of each stream will be measured, which provides increased data. This is an increase in data from the previous approach
- Permit limits will be based on response variables
- DEQ must meet the framework outlined in Senate Bill 358, state rules and regulations and the Federal Clean Water Act

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Questions

Submitted and Open Questions

Questions

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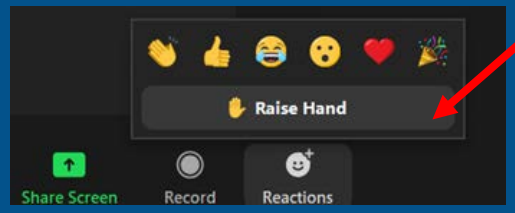
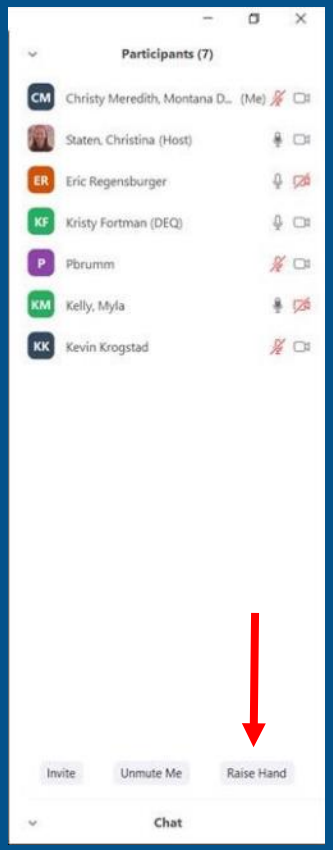
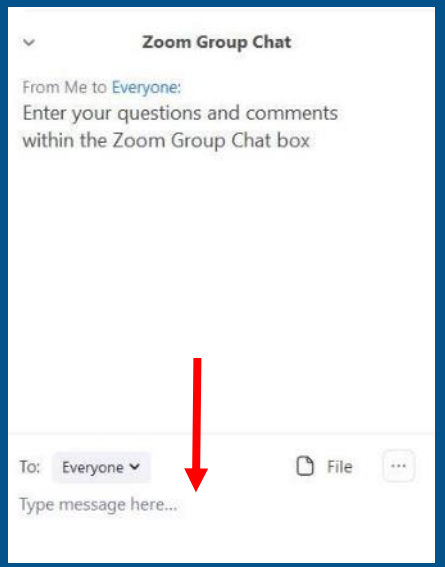
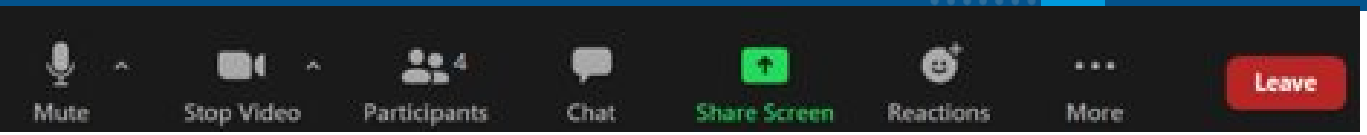
- If calling by phone, press*6 to unmute
- State your name and affiliation before providing your comment
- Raise hand or type questions into the chat









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Question 1

Will DEQ develop quantifiable guidance as to when a groundwater discharge will be deemed "functionally equivalent" to a surface water discharge (i.e., time/distance/dilution)? The Maui Co. Supreme Court decision left this to future lower courts, but groundwater dischargers can't plan around a future lower court decision.

Question 2

Climate change is already causing decreased precipitation and snowpack, resulting in reduced flows in streams and rivers receiving nutrients from permitted discharges and a diminished capacity to dilute nutrient concentrations. In addition, population increases are adding to nutrient loading. Therefore, aren't increasingly stringent requirements for nutrient discharges necessary just to maintain current conditions going forward, let alone to reduce nutrient pollution and reverse conditions that are already leading to harmful algal blooms? How will reverting to a narrative nutrient standard, contrary to what EPA has been working towards for the past 20 years, help Montana comply with the federal Clean Water Act mandate to protect and maintain water quality?

Question 3

What is the possible rationale for change in nutrient pollution limits from a numeric to a narrative approach? How is this a better scientific approach?

Informal Comments

3 Minutes Each

Informal Comments

- Please keep your microphone muted until called on
- State your name and affiliation before providing your comment
- Three minutes per commenter
- Comments are informal and comment themes will be provided to the Nutrient Work Group for consideration
- Please be kind and respectful to others

Questions?

Contact:
Galen Steffens
Galen.Steffens2@mt.gov

To submit comments or questions

Submit Comments or Questions

https://deq.mt.gov/water/Councils

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