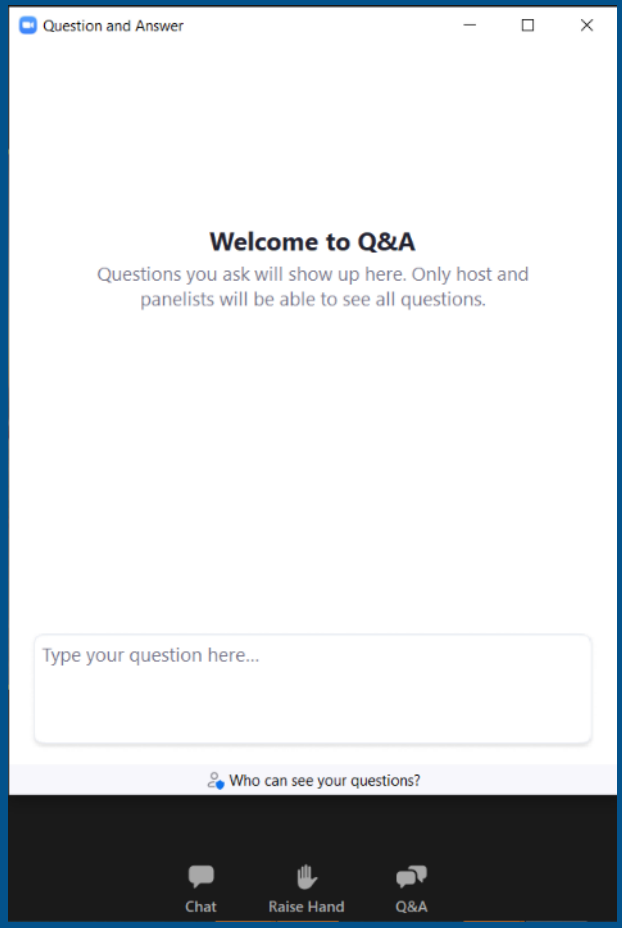
# Nutrient Work Group

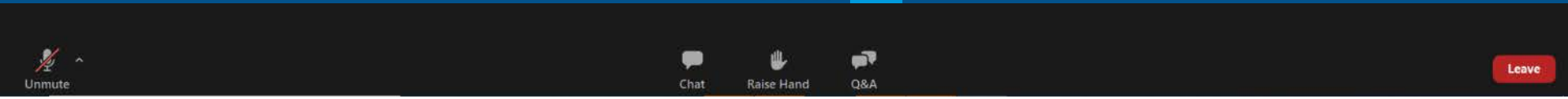
May 17, 2022

DEQ MONTANA

# Welcome!

- This meeting has been converted to a webinar
- NWG members will be panelists
- Members of the public can raise their hand or use the Q&A feature to ask questions during the public comment portion of the meeting
- *9 raises your hand if you're on the phone
- State your name and affiliation before providing your comment




DEQ MONTANA

# Agenda

## Meeting Goal: Discussion of updated draft Circular DEQ-15 and additional related topics

**Preliminaries**

- Nutrient Work Group Roll Call

**Updated Regulatory Framework and AMP Process and Related Topics**

- AMP-TMDL Relationship
- Updated Circular DEQ-15 Discussion
- EPA Action Letter

**Public Comment & Close of Meeting**

- Public Comment
- Next Meetings

DEQ MONTANA

# Introductions

## Nutrient Work Group Members

| Interest Group | Representative | Substitute |
|---|---|---|
| Point Source Discharger: Large Municipal Systems (>1 MGD) | Louis Engels | |
| Point Source Discharger: Middle-Sized Mechanical Systems (<1 MGD) | Shannon Holmes | |
| Point Source Discharger: Small Municipal Systems with Lagoons | Rika Lashley | |
| Point Source Discharger: Non-POTW | Alan Olson | |
| Municipalities | Kelly Lynch | |
| Mining | Tammy Johnson | |
| Farming-Oriented Agriculture | John Youngberg | |
| Livestock-Oriented Agriculture | Jay Bodner | |
| Conservation Organization - Local | Kristin Gardner | |
| Conservation Organization – Regional | Sarah Zuzulock | |
| Conservation Organization – Statewide | David Brooks | |
| Environmental Advocacy Organization | Guy Alsentzer | |
| Water or Fishing-Based Recreation | Wade Fellin | |
| Federal Land Management Agencies | Andy Efta | |
| Federal Regulatory Agencies | Tina Laidlaw | |
| State Land Management Agencies | Jeff Schmalenberg | |
| Water Quality Districts / County Planning Departments | Nick Banish | |
| Soil & Water Conservation Districts – West of the Continental Divide | Samantha Tappenbeck | |
| Soil & Water Conservation Districts – East of the Continental Divide | Dan Rostad | None |
| Wastewater Engineering Firms | Scott Buecker | |
| Timber Industry | Julia Altemus | |

# AMP – TMDL Relationship

DEQ MONTANA

# TMDL Documents Containing Nutrient Wasteload Allocations Based on 12A

| Document (Abbreviated) | Permits with Nutrient WLAs | Waterbody |
|---|---|---|
| Central Clark Fork Tribs | • Missoula MS4* | Grant Creek |
| Upper Clark Fork Phase 2 | • Butte-Silverbow WWTP<br>• Rocker WWTP<br>• Butte-Silverbow MS4*<br>• REC Advanced Silicon Materials, Inc.<br>• MT Resources, Inc. | Silver Bow Creek |
| Flathead-Stillwater | • Kalispell WWTP<br>• Kalispell MS4* | Ashley Creek<br>Spring Creek |

* Nutrient wasteload allocations for MS4s in these TMDL documents do not affect permit limits

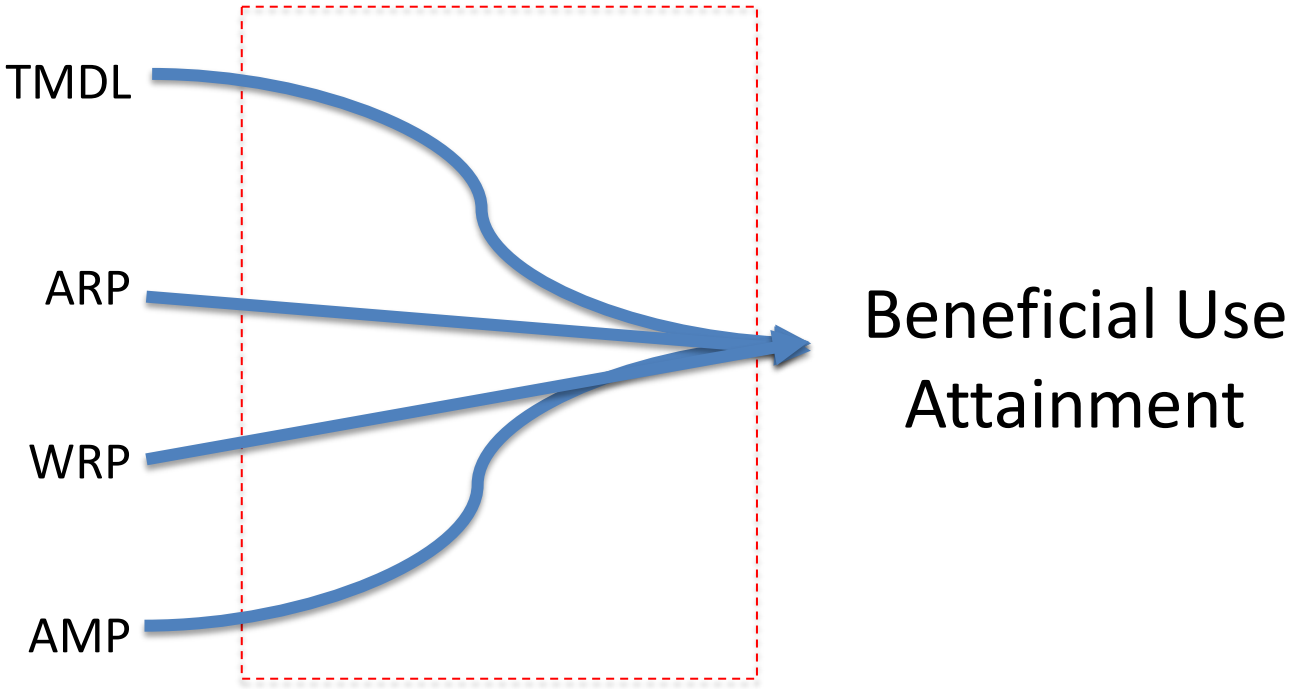
DEQ MONTANA

# Document Types

- Total Maximum Daily Load (TMDL): Establishes allowable pollutant loading (WLA, LA, MOS) to meet beneficial uses
- Watershed Restoration Plan (WRP): Locally developed roadmap prioritizing NPS WQ improvement practices
- Alternative Restoration Plan (ARP): Locally driven restoration approach where sources are understood and project implementation is likely; may delay TMDL development
- Adaptive Management Plan (AMP): Watershed-specific tool developed under the adaptive management program to achieve narrative nutrient standards

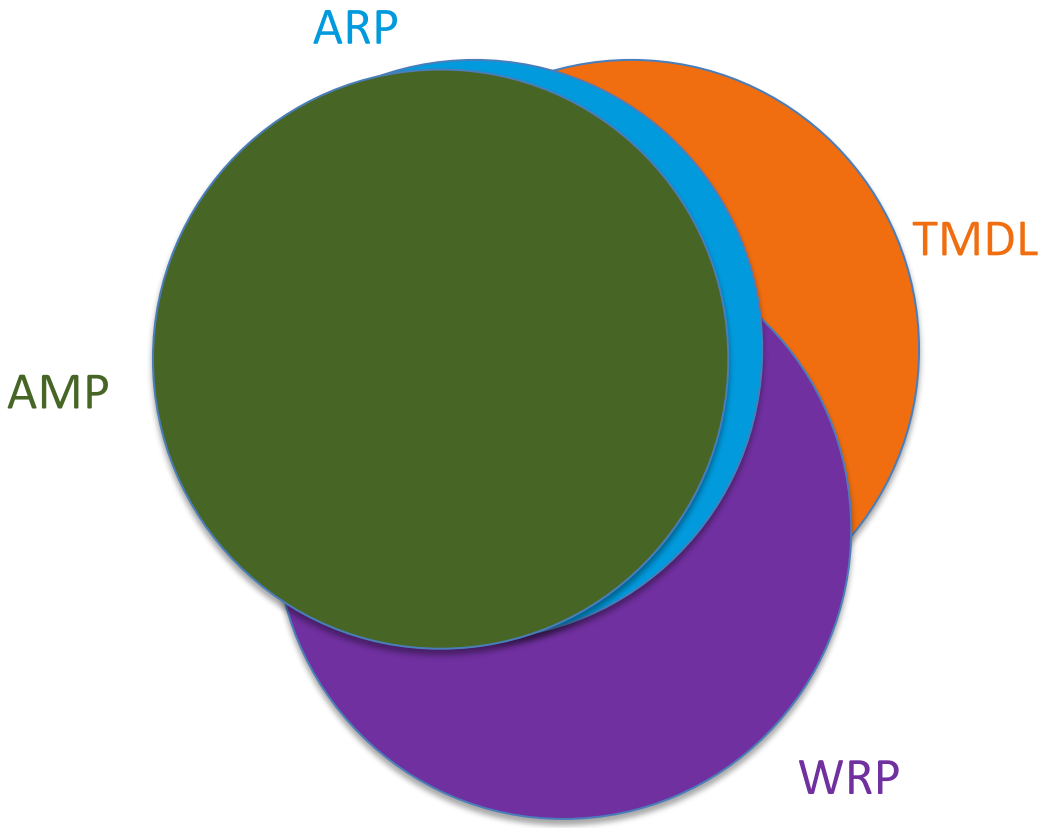
DEQ MONTANA

# Common Goal




Concept adapted from EPA 303(d) Planning Presentation (Amy Feingold & Chris Hunter)

# Relative Plan Overlap



# Document Comparison

| | TMDL | ARP | WRP | AMP (as proposed) |
|---|---|---|---|---|
| Document guidance/ review criteria | 12 decision rationale, 40 CFR 130.7 | 8 Elements, 2013 Vision | 9 Essential Elements, 2008 EPA handbook | SB 358, Proposed rule (9 imp. reqs.) |
| Key considerations | Source assessment, load & wasteload allocations, margin of safety, reasonable assurances | Sources & contribution estimates largely understood, funding sources ID'd, milestones | Similar to ARP, required for 319 fund eligibility, nonpoint source focus, often follows a TMDL | Similar to ARP, point source & nonpoint source |
| 303(d) list impact | EPA-approved TMDLs change category | Could gain EPA measures credit, same category | Depends if a TMDL has been completed | Could gain EPA measures credit as ARP, same category |
| MPDES permit impact | Permit limits must be consistent with the assumptions and requirements of WLA | No MT examples; EPA assumes ARPs could be used to inform permit limits | No direct impact | MPDES permit updated to reflect AMP effluent limits |

# Document Comparison

| TMDL Decision Rationale | Also present in: |
|---|---|
| 1. Identification of Waterbody, Pollutant of Concern, Pollutant Sources, and Priority Ranking | *AMP, ARP, WRP |
| 2. Description of Applicable WQS and Numeric WQ Target | AMP, ARP, WRP |
| 3. Loading Capacity – Linking WQ and Pollutant Sources | AMP, ARP, WRP |
| 4. Load Allocations* | AMP, ARP, WRP |
| 5. Wasteload Allocations | |
| 6. Margin of Safety | |
| 7. Seasonal Variation | *AMP, ARP, WRP |
| 8. Reasonable Assurances | |
| 9. Monitoring Plan | AMP, ARP, WRP |
| 10. Implementation | AMP, ARP, WRP |
| 11. Public Participation | AMP, ARP, WRP |
| 12. Submittal Letter | *AMP, ARP |

# Alternative Restoration Plans (ARPs)

- Waterbodies remain on 303(d) list after an ARP is completed
- TMDL or other regulatory action (i.e., variance) is still required as long as the impairment remains.
  - EPA reviews ARPs and recognizes them with measures credit if 8 elements are satisfied
    - EPA does not "approve"
  - Think of an ARP as activities done in advance of a TMDL, not activities done instead of a TMDL
    - Unless WQS/beneficial uses are demonstrated to be achieved after ARP is implemented and the waterbody is delisted

- In general, ARPs are appropriate in watersheds where:
  - Unique local circumstances are present
  - Impairment sources are known and can be linked to clear restoration mechanisms
  - Stakeholder and public support for the ARP approach is present to achieve timely implementation and capitalize on opportunities

Adapted from EPA Region 8 States TMDL Coordination Call (10-12-2021)

# 8 ARP Elements – AMP Comparison

| # | ARP | Draft AMP Implementation Rule |
|---|---|---|
| 1 | Identify the specific impaired waters, causes, and sources | 2(c)(ii)(A) - wadeable streams/medium rivers<br>3(d)(i) - large rivers |
| 2 | Clearly identify the target(s), consistent with water quality standards (WQS), which will be used to demonstrate restoration. Provide an analysis that shows how planned implementation actions can meet that target(s). | 2(c)(ii)(C)<br>3(d)(iii) |
| 3 | Provide an implementation plan to address all sources and a schedule with milestones and target dates | 2(c)(ii)(A-I)<br>3(d)(i-ix) |
| 4 | Identify sources of available funding to implement the plan | 2(c)(ii)(D)<br>3(d)(iv) |

Adapted from EPA Region 8 States TMDL Coordination Call (10-12-2021)

# 8 ARP Elements (cont.)

| # | Description (2016 IRG) | Draft AMP Implementation Rule |
|---|---|---|
| 5 | Identify all parties committed to or assisting in implementation | 2(c)(ii)(B)<br>3(d)(ii) |
| 6 | Provide an estimate or projection of time when WQS will be met | 2(c)(ii)(C)<br>3(d)(iii) |
| 7 | Describe the plans for effectiveness monitoring to show restoration progress and identify corrective measures | 2(c)(ii)(E)<br>3(d)(v) |
| 8 | Describe the plans to periodically evaluate the alternative plan to determine if it's on track to more immediately meet WQS, or if adjustments need to be made, or if impaired water should be assigned a higher priority for TMDL development. | 2(c)(ii)(F-G)<br>3(d)(vi-vii) |

Adapted from EPA Region 8 States TMDL Coordination Call (10-12-2021)

# ARP Experience in R8

- R8 has accepted all 8 submitted ARPs following some back and forth (as of 5/5/22)
- Element #6 (project date of WQS attainment) is most challenging

| State | North Dakota | Wyoming |
|---|---|---|
| # of EPA-Accepted ARPs | 5 | 3 |
| # Waterbodies Addressed | 6 | 4 |
| # of Impairment Causes Addressed | 6 | 4 |
| Document Links | Antelope Creek Watershed Alternative Plan (NDDEQ, 2018)<br>Hailstone Creek & Sims Creek Alternative Plan (NDDEQ, 2018)<br>Maple River-Buffalo Creek Watershed Alternative Plan (NDDEQ, 2017)<br>Timber Coulee Watershed Alternative Plan (NDDEQ, 2017) | Little Powder River Watershed Restoration Plan (Campbell Cty CD, 2019)<br>Attachment A – TMDL Alternative Rationale (WDEQ, 2021)<br>Flat Creek Watershed Management Plan (Teton Cty CD, 2021)<br>Attachment A – TMDL Alternative Rationale (WDEQ, 2021)<br>Middle Fork Popo Agie Watershed Based Plan (Popo Agie CD, 2020)<br>Attachment A – TMDL Alternative Rationale (WDEQ, 2021) |
| Pollutants | *E. coli* | *E. coli*, fecal coliform, physical substrate habitat alteration |
| Pollutant Source Category | Nonpoint source | Nonpoint source |
| Underlying Plan | 319 Project Implementation Plan | 319 9-Element Plan |
| Underlying Plan Author | Conservation Districts | Conservation Districts |
| ARP Document Template | Appendix - Crosswalk to 2016 IRG Elements | Attachment A – TMDL Alternative Rationale |
| Level of Effort to Produce ARP | Less than a TMDL | Similar to or less than TMDL |
| Public Involvement | Next Integrated Report associated with 5 to 5-alt Category change; final ARP posted to state website | Next Integrated Report associated with 5 to 5-alt Category change |

Adapted from EPA Region 8 States TMDL Coordination Call (10-12-2021)

# AMP – ARP - TMDL Takeaways

- Proposed AMP could fit as an ARP in watersheds where a TMDL has not been completed
  - DEQ would approve AMP and submit to EPA as an ARP
- Recognized ARP would still need a TMDL in the future unless WQS/beneficial uses are achieved
  - Timeline for achievement is fluid, but progress should be re-evaluated regularly to determine if the TMDL priority should change
- A waterbody/pollutant combination with a recognized ARP would likely be ranked lower on DEQ's TMDL priority list due to on-the-ground efforts
  - To recognize on-the-ground activities
  - With consultation of Statewide TMDL Advisory Group (STAG)
  - This could change with new data, changing priorities, etc.
- Development of AMP/ARP would expand the reach of WQ improvement activities in MT

DEQ MONTANA

# Questions / Discussion

# Updated Circular DEQ-15 Discussion

DEQ MONTANA

# Circular Sections - Overview

Circular sequentially follows process in NEW RULE 1 of 4/29/2022

1. Introduction
   - *Includes explanation of P-control first concept as initial stage of the adaptive management program*
2. Identify Waterbody Size
   - *Sends user to appropriate part of document (wadeable streams & medium rivers vs. large rivers)*
3. Determining if P Prioritization is Appropriate
   - *Work in progress; use of nutrient diffusing substrates discussed*

Note: yellow text is for explanatory purposes.

DEQ MONTANA

# Circular Sections - Overview

4. Ranges of Nutrient Concentrations Protective of Beneficial Uses…. (Wadeable Streams & Medium Rivers)
   - *If P prioritization is appropriate, permit includes a TP limit from ecoregional range after translating the narrative nutrient standards*
     - *Also used for TN limits, when necessary*
   - *Year-round limits under certain conditions (e.g., discharge effects a downstream lake)*
5. AMP Monitoring Plan: (Wadeable Streams & Medium Rivers)
   - *Methods and requirements to monitor near field sites (where, when, what)*
6. Pollutant Minimization Activities for Point Sources…
   - *Requires as part of AMP; more to come on this section…*

Note: yellow text is for explanatory purposes.

DEQ MONTANA

# Circular Sections - Overview

7. Evaluation of Near Field Response Variable Data to Determine if Beneficial Uses are Protected…(Wadeable Streams & Medium Rivers)
   - *Basic question: Did P control work?*
   - *Option for one of three different evaluation methods*
     - *Includes consideration of "other credible data"*
   - *Table showing what different data results are telling us*
8. AMP Implementation Plan Elements
   - *Methods/requirements to establish a more comprehensive array of sites (far field, tributary, main stem, etc.)*
   - *Purpose is to determine loads and effects of watershed-scale nutrient control activities (including nonpoint N controls)*

Note: yellow text is for explanatory purposes.

DEQ MONTANA

# Circular Sections - Overview

9. Water Quality Models…
   - *For large rivers, where feasible*
     - *Permittees may develop models on smaller waterbodies if they choose*
   - *How mechanistic models and associated data are used to derive permit limits and determine if waterbody is achieving beneficial uses/WQ standards*
   - *Allowance for conceptual water quality models*

10. Integration of AMP with TMDL
    - *Basics of the relationship are provided, more to come….*

Note: yellow text is for explanatory purposes.

DEQ MONTANA

# EPA Action Letter

EPA found that several pieces of SB358 represented changes in water quality standards that must be reviewed and approved by EPA.

Specifically:

- SB358 changed the nonsignificance criteria for nutrients.
- SB358 told DEQ to immediately revert to narrative nutrient standards for permitting purposes.
- SB358 directed DEQ to change our standards approach.

Under our primacy agreement, any water quality standards change must be submitted to and reviewed by EPA and must meet the requirements of the Clean Water Act.

DEQ MONTANA

# EPA Action Letter

SB358 changed the nonsignificance criteria for nutrients.

EPA disapproved this change.

*DEQ will use the existing narrative provision that EPA has approved for reviewing nonsignificance for nondegradation, upon transitioning to narrative standards.*

# EPA Action Letter

SB358 told DEQ to immediately revert to narrative nutrient standards for permitting purposes.

<u>EPA disapproved this change.</u>

- EPA finds that SB358 lacks specificity for implementation of narrative nutrient standards in permits
- EPA states that beneficial uses are not protected by this change

*DEQ will continue to develop an implementation process that is protective of beneficial uses and continue to consider narrative reasonable potential analysis.*

# EPA Action Letter

SB358 directed DEQ to change our standards approach.

<u>EPA acknowledged Montana's authority to develop a modified approach to addressing nutrients.</u>

- Montana can only repeal DEQ-12A if the state provides a suitable replacement that protects beneficial uses.

*DEQ must use DEQ-12A in permits in the interim and will work to develop and adopt a variance procedure.*

*DEQ will continue to develop an adaptive management program, repeal of DEQ-12A, and details for implementing the narrative standards as directed in SB358.*

DEQ MONTANA

# Timing

- *DEQ will move forward with initiation of rulemaking to provide variance options under MCA 75-5-320 in June.*
- *In response to broad stakeholder feedback, DEQ is committed to continuing to work on the adaptive management process with the Nutrient Workgroup.*
  - *This will include the repeal of DEQ-12A and details for implementing narrative nutrient standards in a way that protects beneficial uses.*
  - *We will not attempt to meet the October 1 deadline.*
  - *The schedule is yet to be determined and we invite Nutrient Workgroup members to discuss the timeline.*

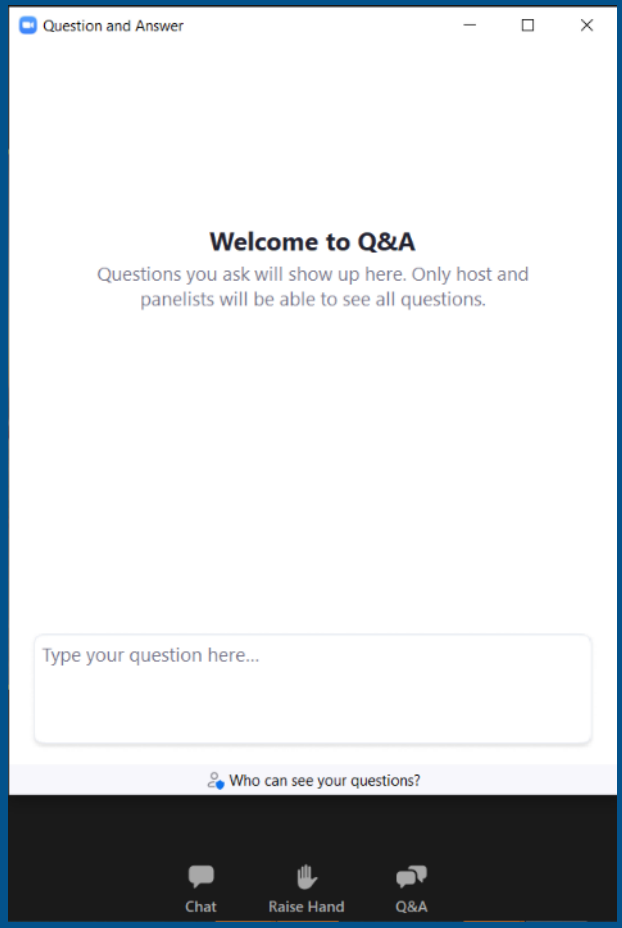
DEQ MONTANA

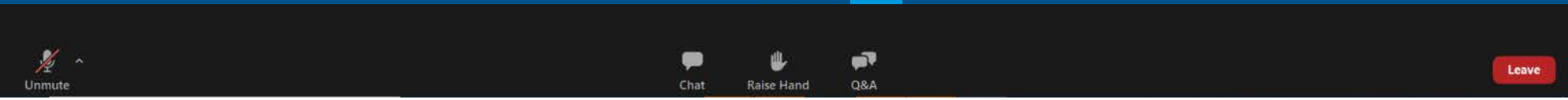
# PUBLIC COMMENT

DEQ MONTANA

# Questions/ Comments

- Raise hand (*9 if on the phone) or type questions into the Q&A
- DEQ will unmute you if you wish to provide your comment orally
- If calling by phone, press*6 to unmute
- State your name and affiliation before providing your comment




DEQ MONTANA

# Next Meetings

- ~~May 24, 2022: 9-11 a.m. -~~ CANCELLED
- May 25, 2022: 9-11 a.m.

* Drop-In Meetings Still Available for NWG Members

# Thanks for Joining Us

Contact:
Christina Staten
CStaten@mt.gov

To submit comments or questions

Submit Comments or Questions

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

DEQ MONTANA