

Nutrient Offset Trading Workgroup

May 21, 2026

Preliminaries

- Agenda
- Roll Call
- Approve March 17 and April 16, 2026 meeting minutes and share any post-meeting thoughts or ideas



Agenda

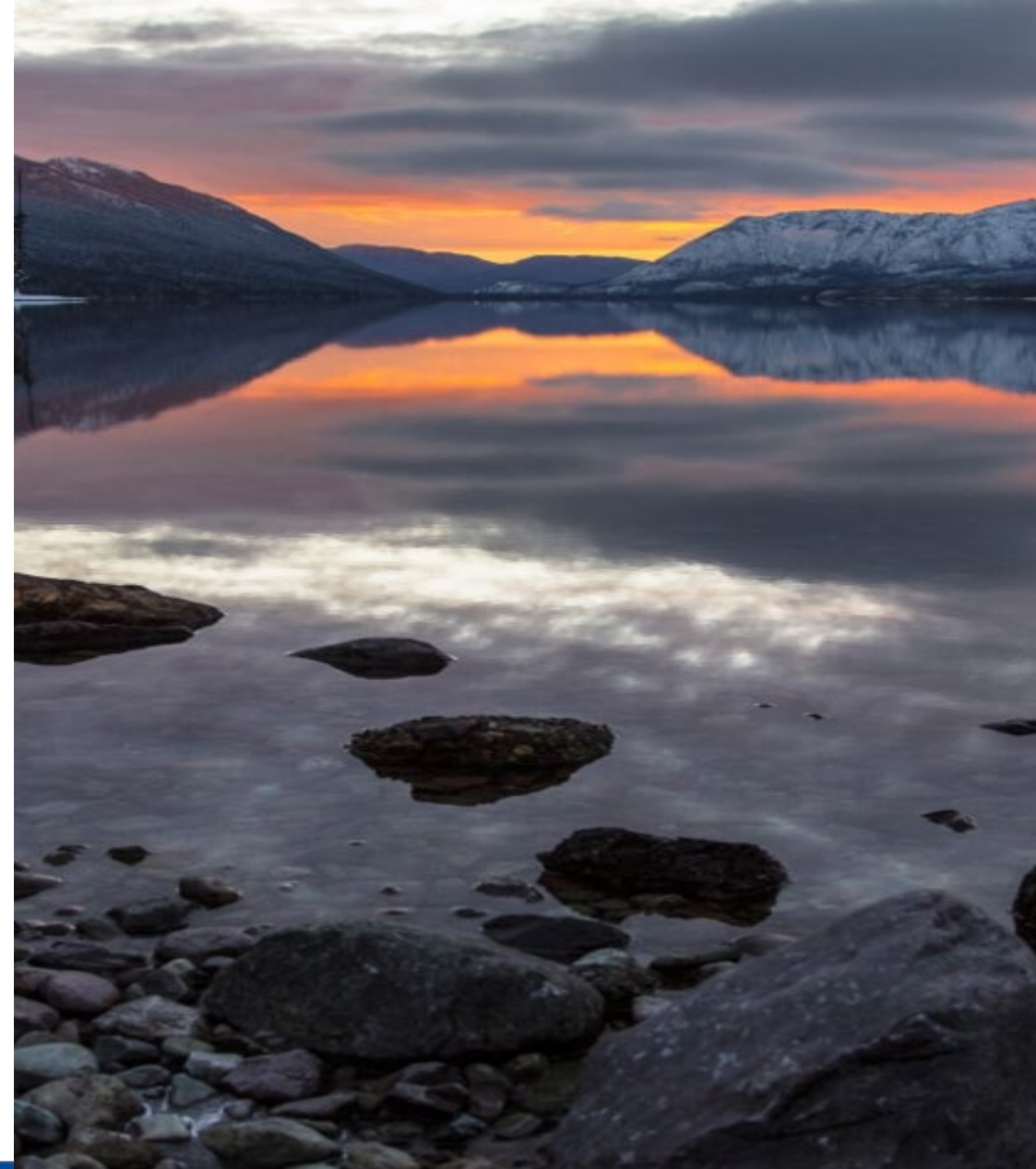
- Discussion Topics
 - DEQ-13 Proposed Updates Review
 - Topics to revisit from April 16th
 - Baseline
 - Offset Ratios
 - Riparian fencing credit scenario
 - Others?
 - Verification Process Diagram
 - Example Credit Scenarios
- Other changes required for success
- General + Public Comment



DEQ-13 Proposed Updates Review



Topics to Revisit from April 16th



Antibacksliding: Water Quality Trading Policy

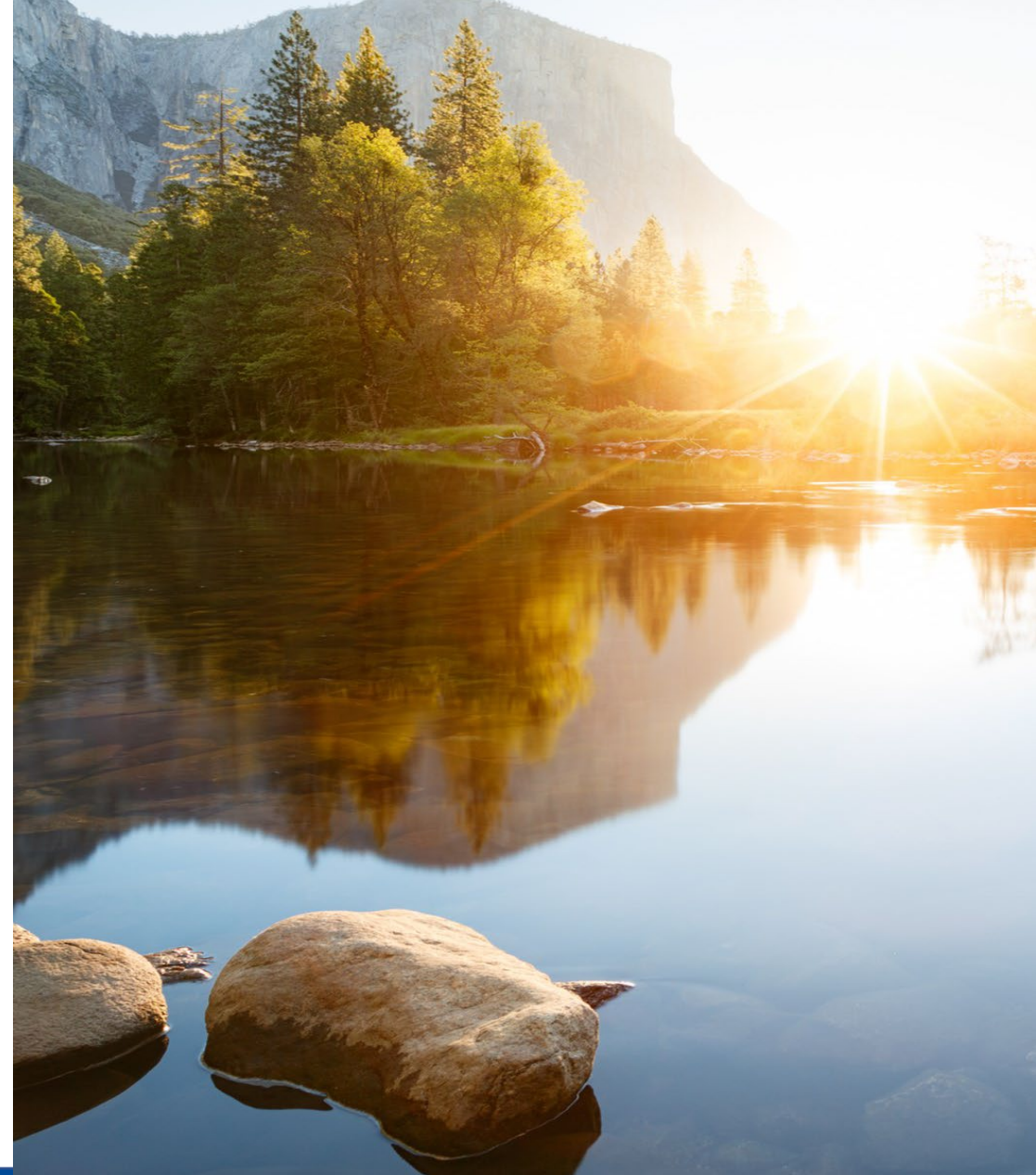
III(F)(6) Antibacksliding. EPA believes that the antibacksliding provisions of Section 303(d)(4) of the CWA will generally be satisfied where a point source increases its discharge through the use of credits in accordance with alternate or variable water quality based effluent limitations contained in an NPDES permit, in a manner consistent with provisions for trading under a TMDL, or consistent with the provisions for pre-TMDL trading included in a watershed plan.

These antibacksliding provisions will also generally be satisfied where a point source generates pollution reduction credits by reducing its discharge below a water quality based effluent limitation (WQBEL) that implements a TMDL or is otherwise established to meet water quality standards and it later decides to discontinue generating credits, provided that the total pollutant load to the receiving water is not increased, or is otherwise consistent with state or tribal antidegradation policy.



Antidegradation: Water Quality Trading Policy

III(F)(7) EPA does not believe that trades and trading programs will result in “lower water quality” . . . or that antidegradation review would be required under EPA’s regulations when the trades or trading programs achieve a no net increase of the pollutant traded and do not result in any impairment of designated uses.





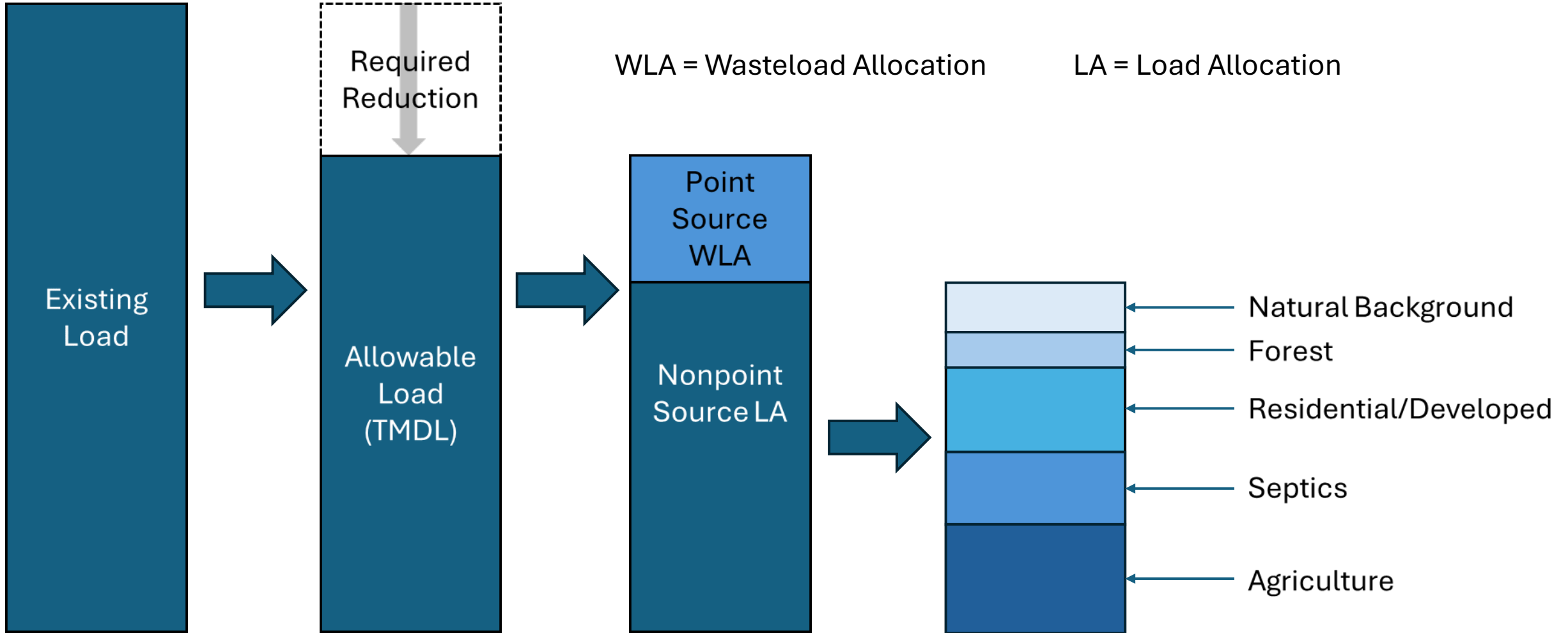
Baseline in Current Circular

- Point Sources Baseline
 - With TMDL: WLA
 - Without TMDL: WQBEL
- Nonpoint Sources Baseline
 - ~~With TMDL: Level of pollutant load associated with existing land uses and management practices that comply with applicable state, local, or tribal regulations~~ LA
 - Without TMDL: Level of pollutant load associated with existing land uses and management practices that comply with applicable state, local, or tribal regulations

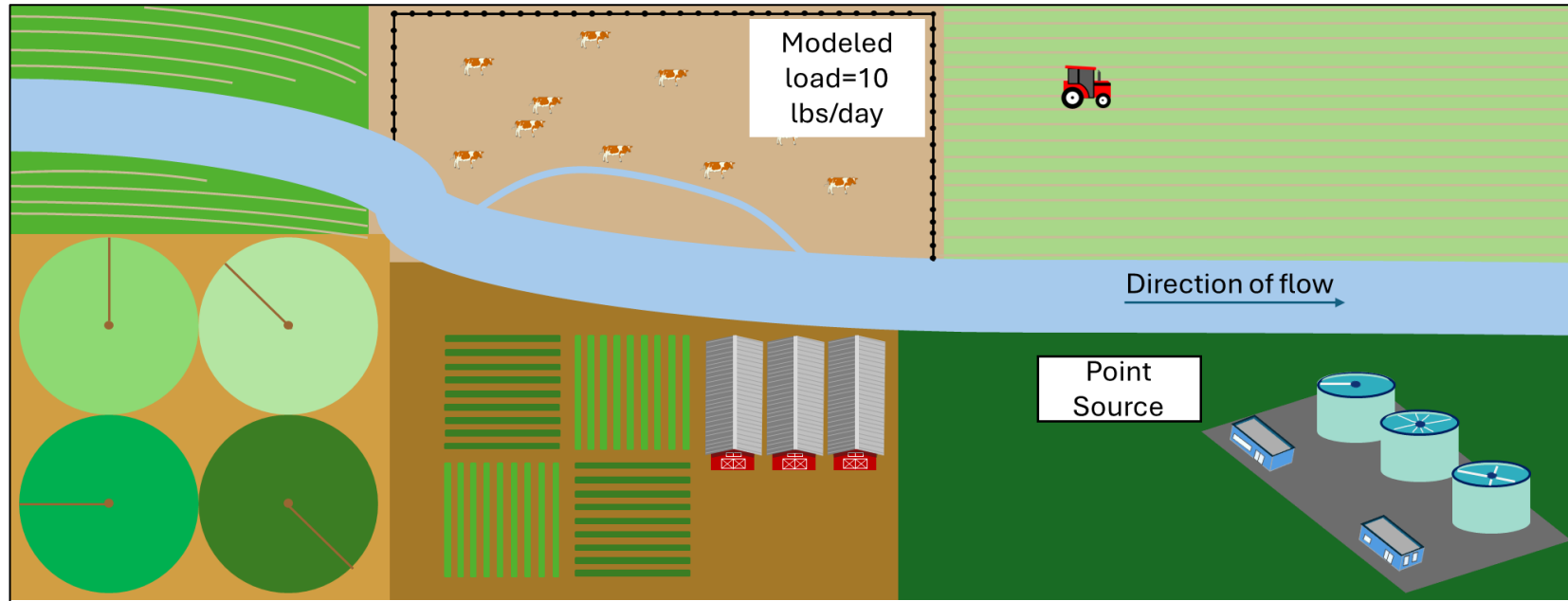
EPA Water Quality Trading Toolkit (pg. 29) “For a nonpoint source seller in a watershed under a TMDL, the source’s baseline would be derived from the nonpoint source’s load allocation.”

Potential alternative to proposed circular revision: use flow diagrams to encourage compliance with EPA guide.

Baseline with a TMDL



Baseline with a TMDL (Cont'd)



- The TMDL allocates a 10% reduction to all agriculture sources
- A point source conducts a series of fencing exclusion projects on a grazing field
 - Models show a total reduction of **6 lbs/day**
- Nonpoint source needs to meet the load allocation = $10\% * 10 \text{ lbs/day} = 1 \text{ lb/day}$

Available load for trading after meeting LA = $6 \text{ lbs/day} - 1 \text{ lb/day} = 5 \text{ lbs/day}$

Total Credit Generated = $5 \text{ lbs/day} * 0.8 = 4 \text{ lbs/day}$

Trading Ratio

Discount factors applied to pollutant reductions to account for delivery or uncertainty. The following are examples of trading ratios:

- (a) Delivery Ratios** - Delivery ratios apply discount factors to compensate for a pollutant's travel over land or in water (or both) and may be applied to point, as well as, nonpoint sources. Delivery ratios generally account for attenuation (i.e., the rate at which nutrients are reduced through natural processes, such as hydrolysis, oxidation, and biodegradation, on their way to the mainstem of the waterbody). The ratio may vary depending on the location of the source. Generally, the greater the distance the pollutant has to travel, the greater the pollutant loss will be. This ratio would work to equalize a trade between a source in the headwaters and one near the mainstem. This ratio is often referred to as the "location ratio." Delivery ratios will be based upon information from applicable and accepted data sources as reviewed and approved by DEQ. Delivery ratios may incorporate time-variable credits to account for delays between implementation of a load reduction (e.g. connecting a Wastewater Soil Disposal System (WSDS) to a permitted wastewater treatment plant) and the time that load reduction is actually realized in the receiving water.
- (b) Uncertainty Ratios** - Uncertainty ratios are intended to account for variation in the expected reliability and efficiency of the source or type of reduction being applied toward credit for another. They are calibrated to create a margin of safety or otherwise attempt to ensure that the credited practice provides a minimum level of reductions to ensure water quality is improved as a result of the trade, even if actual reduction efficiencies and units removed are on the low end of an expected range. In some instances, uncertainty ratios will not be employed because they are already accounted for in quantification methods used in delivery ratios.

Trading Ratio Cont'd

For nutrient reductions that satisfy Section IV. 3 - 4., the offset or trading credit must be 100% of a reduction from point source discharges; 80% of a reduction from an up-gradient, nonpoint source discharge; or 50% of a reduction from a down-gradient, nonpoint source discharge.

3. Examples of Obtaining Nutrient Credits

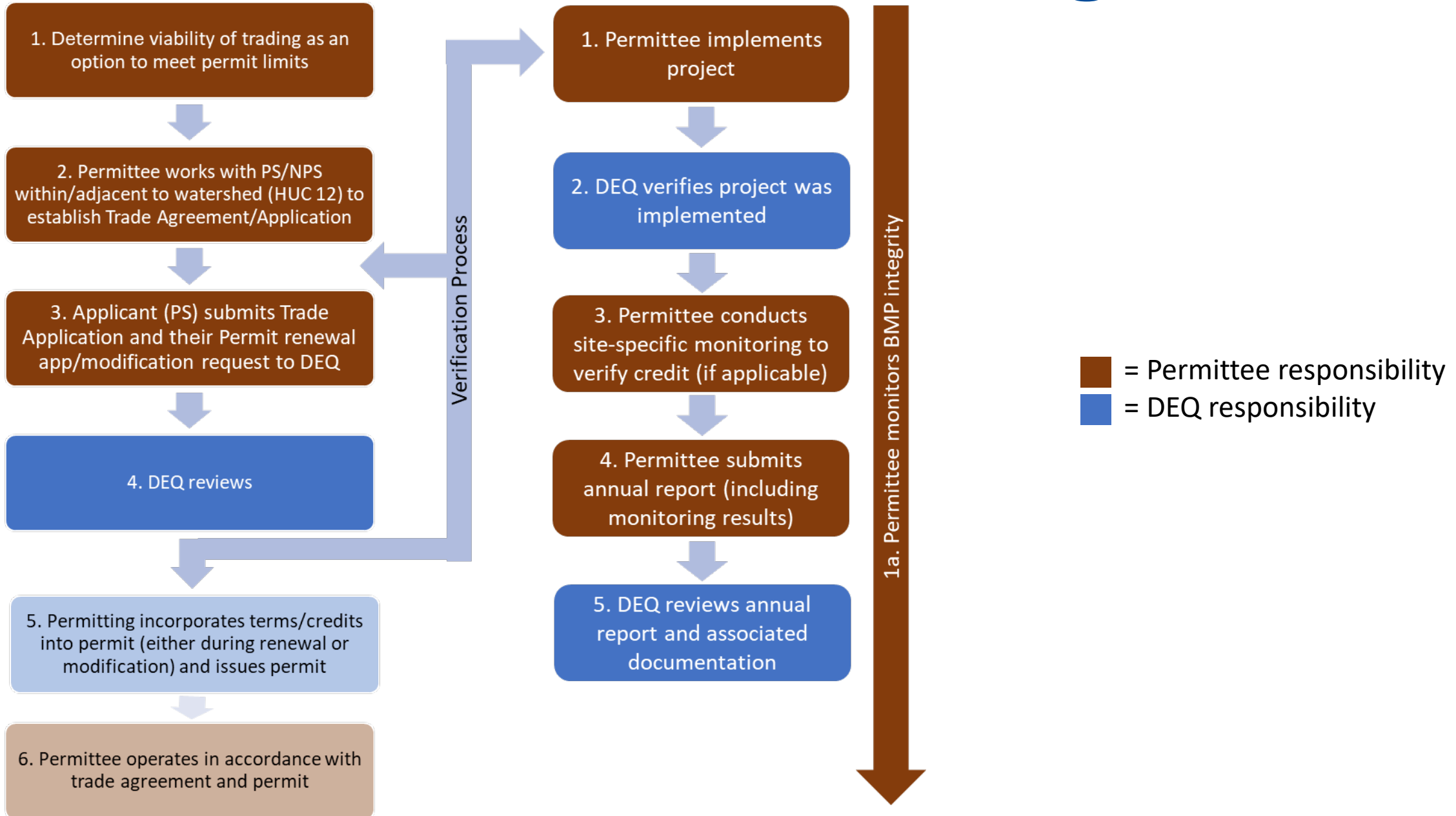
4. Where Trading May Occur (Boundaries)

Geographical boundaries for trading will be based on a net decrease in nutrient loading within the United States geological survey-designated 12-digit hydrologic unit code (HUC) subbasin, or immediately adjacent 12-digit HUC when the project is in close proximity to the adjacent 12-digit HUC watershed boundaries. Other boundary conditions may exist in certain instances, such as when the stream passes through a reservoir, lake, or large wetland complex. Generally credits should be generated upstream in the watershed.

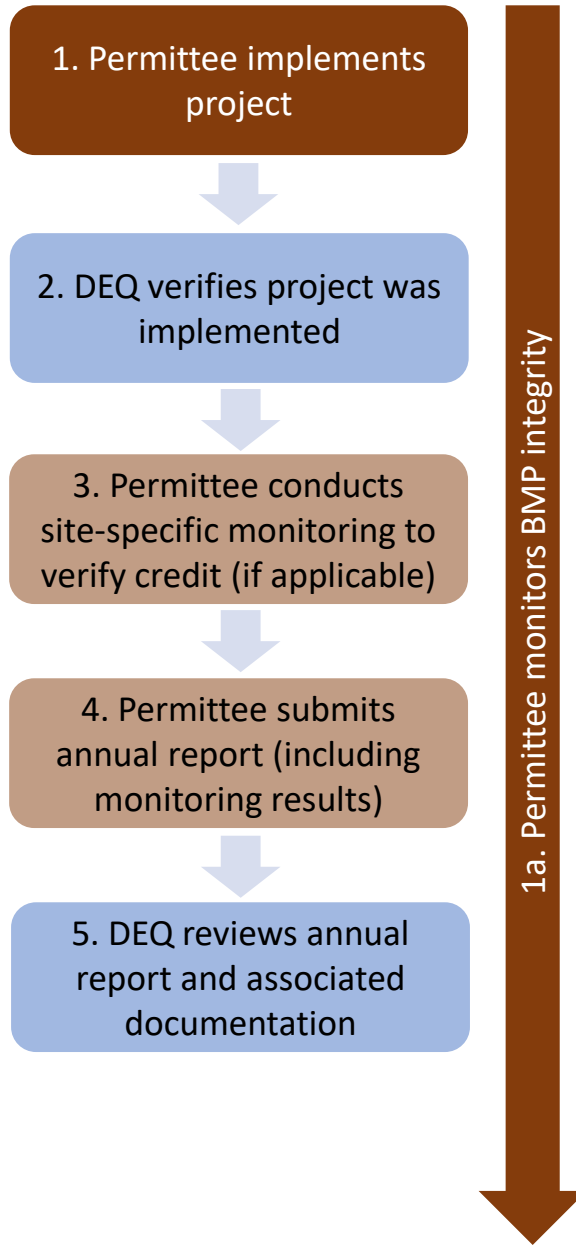
Verification Process Flow



Verification Process Flow Diagram



Verification Process Flow Diagram Cont'd



1. Project Implementation

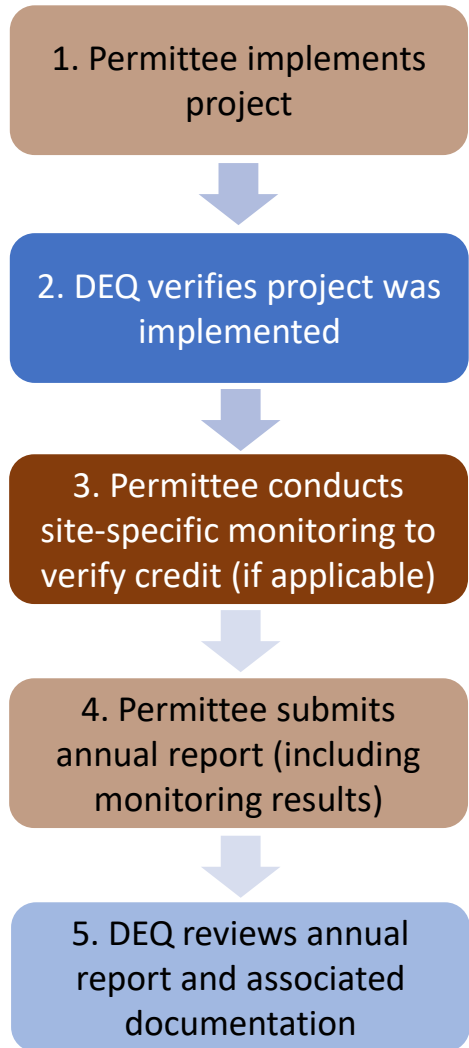
- As-builts
- DEQ NPS/NRCS standards

1a. BMP Integrity Monitoring

- Routine checks
- Maintenance (as needed)
- Occurs for the life of the BMP

■ = Permittee responsibility
■ = DEQ responsibility

Verification Process Flow Diagram Cont'd





1a. Permittee monitors BMP integrity

2. Project Implementation Verification

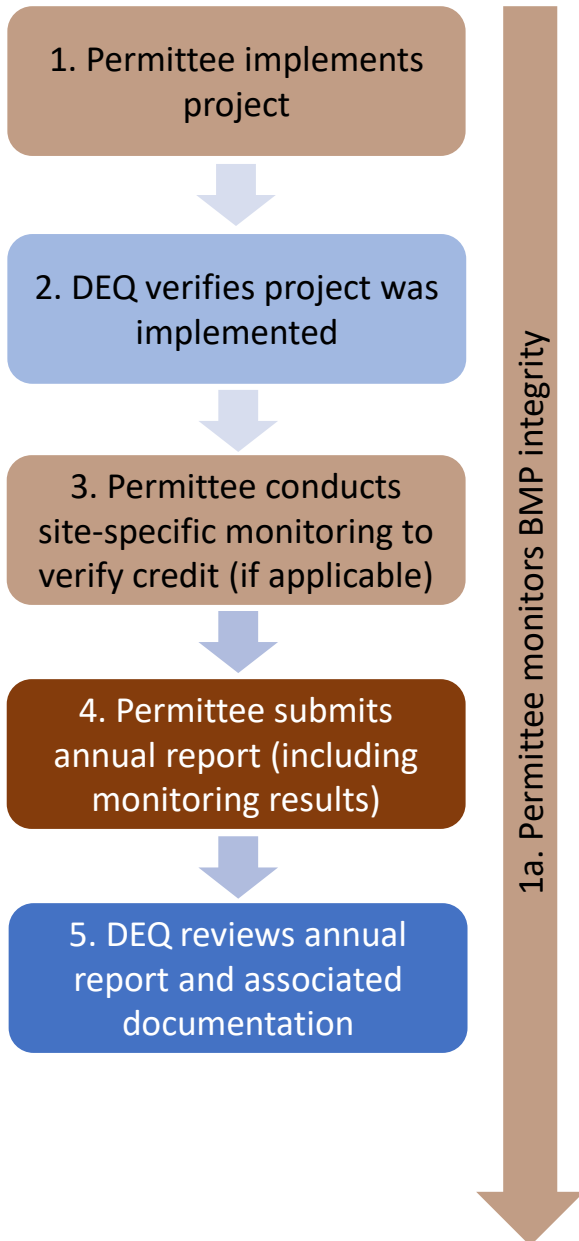
- Review project documentation (trading application)
 - As-builts
 - Photos
 - Modeling results (if applicable)
 - Landowner agreements
 - Pre-project monitoring (if applicable)
- DEQ site visits (as resources permit)

3. Site-Specific Monitoring (if applicable)

- Monitoring to verify reduction (Credit)

 = Permittee responsibility
 = DEQ responsibility

Verification Process Flow Diagram Cont'd





4. Annual Reporting

- Annual reports should include:
 - Monitoring data to verify credit (if applicable)
 - Records of BMP inspection/maintenance (including photos)
 - Address any issues

5. DEQ Reviews Annual Report

- DEQ notifies permittee of any corrections needed/any missing information
- DEQ determines if the BMP (and credit) are still effective
 - Possible compliance, enforcement action

 = Permittee responsibility
 = DEQ responsibility

Example Credit Scenarios



Example Nutrient Load Reductions from Riparian Vegetation Programs

EPA's Pollutant Load Estimation Tool (PLET) – similar to, but more user friendly than, the Spreadsheet Tool for Estimating Pollutant Load (STEPL) tool in Load Reduction Guide

1. EPA.gov/nps/plet
2. Select HUC12 watershed (100301011406 Lower Tenmile Creek used for this example)
3. Review model inputs and update if necessary
4. Add BMP/s (i.e. 20 acres of revegetated cropland)
5. Adjust annualized load reduction if necessary

| Example Scenario | Example Acreage | Nitrogen Reduction (lbs/growing season) | Phosphorous Reduction (lbs/growing season) |
|-------------------------|------------------------|--|---|
| 1 | 20 | 1.7 | 0.43 |

Example Nutrient Load Reductions from Riparian Fencing

Pre-project



Post-project



Nutrient load = (# animals) x (days on pasture) x (daily N/P production) x (contributing fraction of pasture) x (uptake/volatilization/decomposition factor 0.15/0.85)

| Example Scenario | Example Feet of Stream | Example # of Cows (Heifers) | Nitrogen Reduction (lbs/growing season) | Phosphorous Reduction (lbs/growing season) |
|------------------|------------------------|-----------------------------|---|--|
| 1 | 10 | 1 | 4 | 3.1 |
| 2 | 100 | 10 | 35 | 31 |
| 3 | 1000 | 100 | 351 | 306 |
| 4 | 1000 | 100 | 332 | 289 |

Scenarios 1-3 assume livestock are completely excluded from the riparian pasture.

Scenario 4 assumes high density, short duration (e.g., 5 days) grazing in the riparian pasture

Example Nutrient Load Reductions from Riparian Fencing Cont'd



Nutrient load = (# animals) x (days on pasture) x (daily N/P production) x (fraction of contributing pasture*) x (uptake/volatilization/decomposition factor 0.15/0.85)

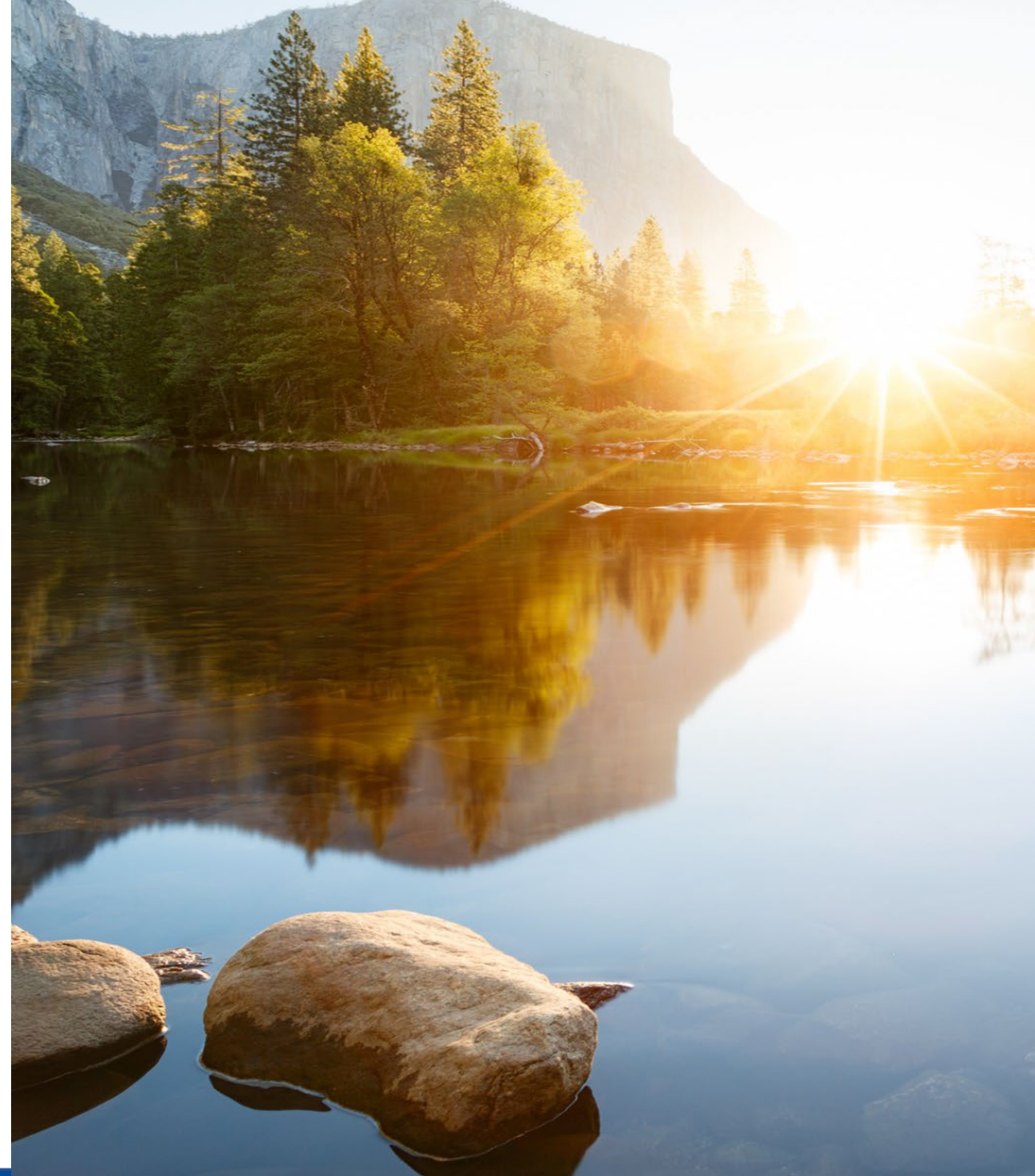
*Fraction of contributing pasture =

$$\frac{(\text{footage of contributing stream} \times \text{average width of contributing pasture})}{(\text{footage of stream} \times \text{average width of pasture})}$$

=

$$\frac{(\text{area of contributing pasture})}{(\text{total area of pasture})}$$

Other Changes Required for Successful Implementation



Other Changes

“DEQ will not allow the use of credits or trades that would cause an impairment of existing or designated uses, adversely affect water quality at an intake for drinking water supply, or that would exceed nutrient load allocations ~~a cap~~⁴ established under a TMDL.

~~4The cap that cannot be exceeded refers to a particular watershed’s total load of nutrients established by a TMDL. Consequently, the prohibition against allowing trades that exceed a cap~~
nutrient load allocations established by a TMDL does not prohibit trades that may result in an exceedance of an individual wasteload allocation, as long as the ~~cap for~~ the total load is not exceeded.”

Other Changes Cont'd

III.2. Trading in an impaired waterbody for which a TMDL has been approved or established must be consistent with the assumptions in the TMDL's WLA or any interim WLA. *Nutrient trades must not exceed the total load imposed by the TMDL*, except when a variance has been granted. ~~There are two phased TMDLs currently existing (Lake Helena and Flathead Lake.), which~~ provide interim goals that establish interim wasteload allocations. For ~~these~~ phased TMDLs, trading must comply with the interim wasteload allocations or a variance from the interim wasteload allocation approved by DEQ.

Other Changes Cont'd

5. Duration of Credits

A point source discharger submitting a trading proposal must demonstrate that it has secured credits for at least the permit cycle (i.e., 5 years).

Other safeguards should be considered by the permittee and by the non-point source that is generating credits to ensure that the appropriate amount of credits are generated during the entire 5-year permit cycle. They may include such things as backup plans and alternative options to address failures by nonpoint sources to provide the contracted credits.

Other Changes Cont'd

Mix of “wastewater soil disposal system” and “septic system”

Other Changes Cont'd

4. Where Trading May Occur (Boundaries)

Geographical boundaries for trading will be based on a net decrease in nutrient loading within the United States geological survey-designated 12-digit hydrologic unit code (HUC) subbasin, or immediately adjacent 12-digit HUC when the project is in close proximity to the adjacent 12-digit HUC watershed boundaries. Other boundary conditions may exist in certain instances, such as when the stream passes through a reservoir, lake, or large wetland complex. Generally credits should be generated upstream in the watershed.

Certain ~~site-specific~~ site-specific conditions may allow for downstream credit generation for downstream trading. Downstream trades will be structured to minimize increased loading to any portion of an impaired water body or to prevent exceedences of water quality standards on a non-impaired waterbody. DEQ may include increased trading ratios when approving a downstream trade to meet those objectives.

Other Changes Cont'd

- (4) (a) The department shall establish acceptable methodologies, based on readily available watershed characteristics, to determine the reduction in nutrient loading for nonpoint sources, including for:
- (i) riparian fencing programs based on the number of feet of streambank;
 - (ii) riparian vegetation programs based on the number of acres vegetated;
 - (iii) development of wetlands in areas of irrigation water return flows based on the number of acres associated with the return flows; or
 - (iv) removal of septic systems based on the number and size of septic systems removed.
- (b) Other projects and methods may be proposed by an applicant or permittee that are supported by science and data modeling and are not contrary to existing data.
- (c) The department shall use the methodologies established pursuant to this subsection (4) unless there is clear and convincing evidence that the nutrient loading of the proposed action would be substantially different from that determined by the established methodologies.

- 2. Land application of wastewater with any applicable treatment and nutrient management controls;
- 3. Optimizing treatment operations;
- 4. Animal waste management (i.e., ponds, lagoons, holding tanks);
- 5. Conservation tillage (e.g., no-till, low-till);
- 6. Cover crops;
- 7. Retirement of highly erodible land;
- 8. Installation of new runoff or erosion control;
- 9. Installation of new stream protection;
- 10. Installation of new forest conservation or harvesting practices;
- 11. Enhanced storm water management;
- 12. Forested or grass buffers;
- 13. Riparian fencing programs
- 14. Riparian revegetation programs
- 15. Development of wetlands in areas of irrigation water return flows
- 12-16. Restoration of wetlands

Other Changes Cont'd

(c) The department shall use the methodologies established pursuant to this subsection (4) unless

there is clear and convincing evidence that the nutrient loading of the proposed action would be substantially

different from that determined by the established methodologies.

↑ HB 736 versus

↓ Current DEQ-13

A person proposing to implement a BMP may calculate load credits using an applicable method described in Appendix A as guidance. Alternatively, a person may calculate load credits using any other method applicable to the site where a BMP will be implemented. DEQ will review each proposed load calculation during the application process prior to approving its use in a MPDES permit.

Other Changes Cont'd

(c) The department shall use the methodologies established pursuant to this subsection (4) unless

there is clear and convincing evidence that the nutrient loading of the proposed action would be substantially

different from that determined by the established methodologies.

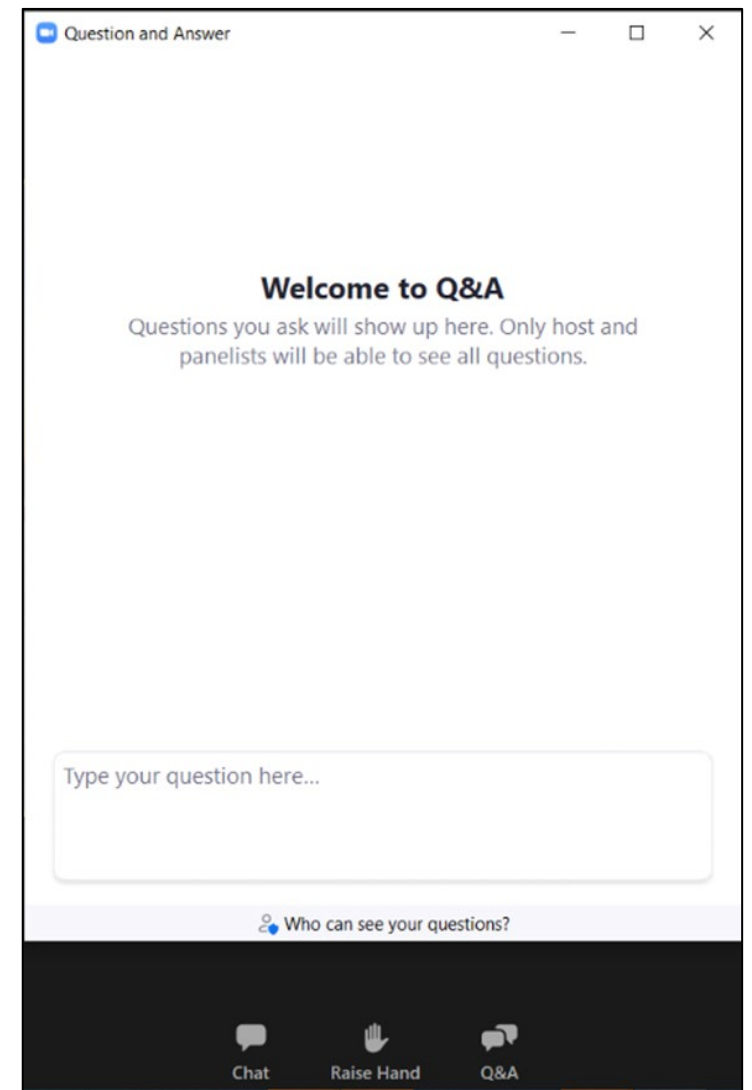
Consider.....

(X) Use of standard methodologies and limited exception under 75-5-412(4)(c), MCA. The department shall use the standard methodologies established in this circular, consistent with 75-5-412(4), MCA, to quantify nutrient loading and load reductions for offsets and trading credits. The department may depart from or materially adjust a standard methodology for a specific project only if it determines, based on clear and convincing evidence, that use of the standard methodology would result in nutrient loading or load reductions that are substantially different from the expected nutrient loading or load reductions provided by the standard methodology. Any departure or adjustment under this subsection must be documented. The documentation must identify the applicable standard methodology, describe the evidence relied upon, and explain why that evidence satisfies the clear-and-convincing standard and supports the alternative method or adjustment.

[Definition Section]: “Clear and convincing evidence” means evidence that leaves no serious or substantial doubt as to the correctness of the conclusion and produces a firm belief that the conclusion is true. It is more persuasive than a preponderance of the evidence but does not require proof beyond a reasonable doubt.

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



Unmute



Chat



Raise Hand



Q&A

Leave