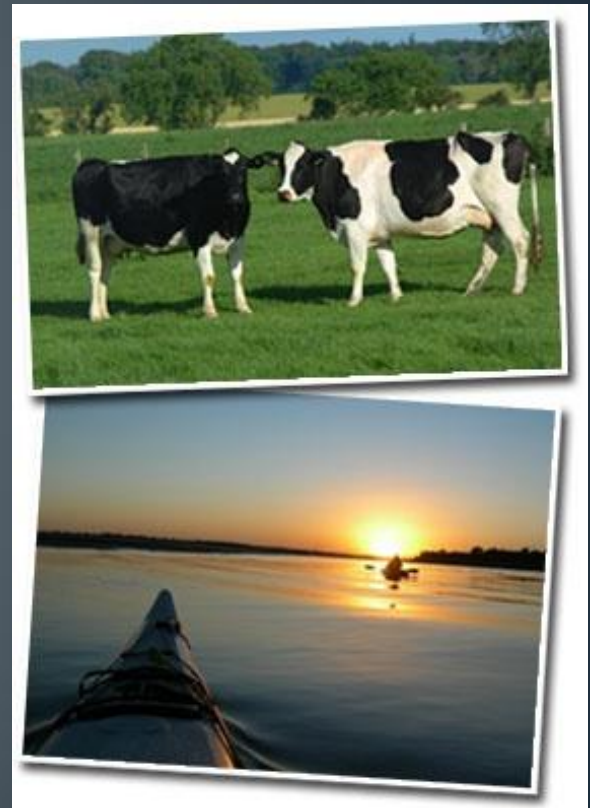




Water Quality Trading Government Affairs Seminar

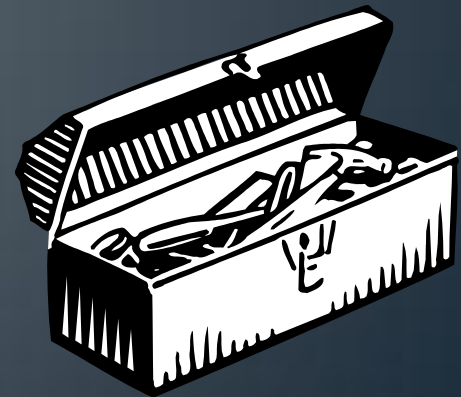
What is Water Quality Trading?

- Water quality trading is an exchange of pollutant reduction credits.
- A buyer with a high pollutant control cost can purchase pollutant reduction or treatment from a willing seller.
- Trading can produce cost savings but must result in an improvement in water quality and a net reduction of the pollutant being traded.



Trading is a Potential Tool

- Several options exist to meet WQBELs and TMDL allocations including:
 - Adaptive Management
 - Modifying wastewater treatment systems
 - Modifying your production process to limit additives or raw materials
 - Trading
- Options can be used in combination



Appropriate Circumstances for WQT

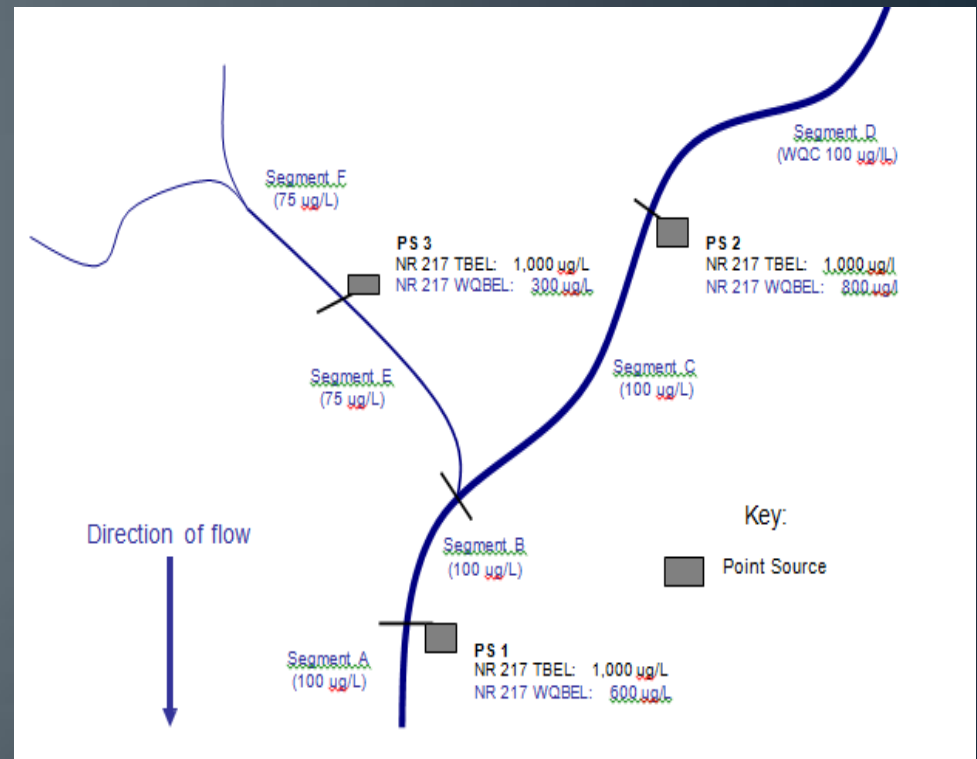
- WQT May be Used To:
 - Demonstrate compliance with WQBELs
 - Offset pollutant load from new or expanding discharger
- WQT Guidance Not Applicable to TBELs (1 mg/L)
- WQT not allowed when localized exceedance of water quality standards will occur

Pollutant Parameters Acceptable for WQT

- Nutrients
 - Phosphorus
 - Nitrogen
- Total Suspended Solids (sediment)
- Temperature
- Dissolved Oxygen-related Parameters (e.g., biochemical oxygen demand)

Location and Geographic Scope

- Non-TMDL WQBELs
 - Credits should be generated upstream of credit user's discharge.
- TMDL WQBELs
 - Credits may be generated within the drainage area for the impaired segment (segmentshed).



Credit Threshold

Credit threshold is the pollutant load below which reductions must be made to generate pollutant reduction credits.

- Credits Generated by Point Source
 - Threshold is lesser of WQBEL or TBEL
- Credits Generated by Nonpoint Source
 - Lesser of TMDL LA or Performance Standard (e.g., ch. NR 151)
 - 5-yr Interim Credit = Reduction from Existing Pollutant Load

Trade Ratio - DRAFT

- *Final Trade Ratio = Delivery + Equivalency + Reserve + Uncertainty – Habitat Adjustment*

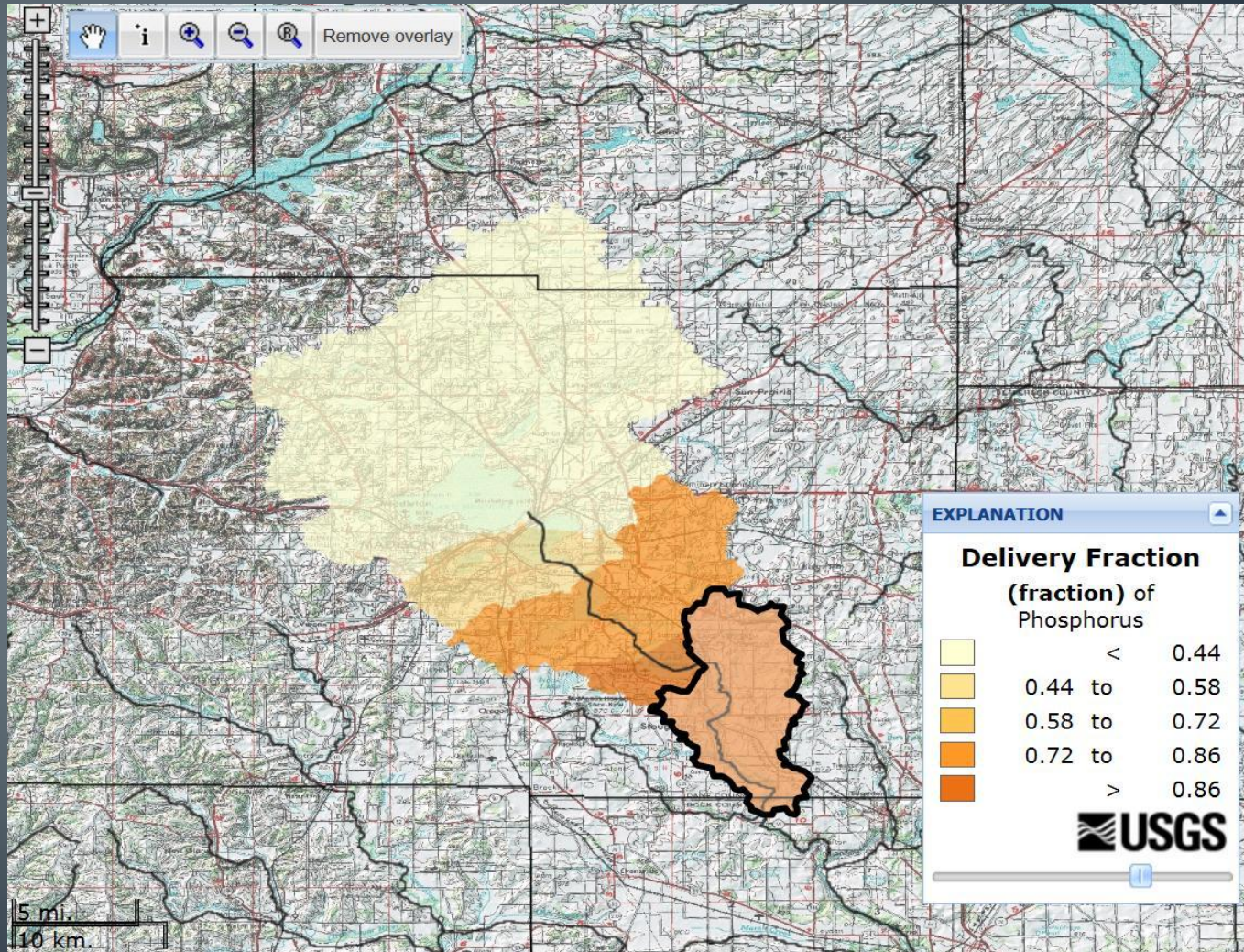
For trades involving nonpoint sources the trade ratio cannot be lower than 1.2:1 (1.2 pounds of nonpoint for every pound of point source pollutant). For trades located upstream in the same HUC-12 the equation simplifies to:

- *Final Trade Ratio = (0.2 + Uncertainty)*

Trade Ratio - DRAFT

- Delivery (distance between generator and user)
 - TMDL – Same factors used in TMDL
 - Non-TMDL – USGS SPARROW model for P, N and sediment
 - Not needed if trading within same HUC-12
- Equivalency (form of pollutant)
 - Not necessary with phosphorus
 - Not yet specified for N and TSS (sediment)

Delivery - SPARROW Output Example



Trade Ratio – DRAFT DRAFT

Downstream Trade Ratio Factor: Allow downstream trading but minimize risk of exceedances to water quality.

Percent Difference between Buyer's Load and Total Load at Point of Discharge	Downstream Trade Ratio Factor
< 25%	0.2
25 - 50%	0.4
50 - 75%	0.6
75% >	0.8

Trade Ratio - DRAFT

- **Reserve Factor**

Reserve sets aside a portion of the pollutant credits to help offset liability and uncertainty between the buyer and seller associated with potential failure of management practices.

Pollutant / Constituent	Reserve Factor
Total Phosphorus	0.2
Total Suspended Solids (TSS or SSC)	0.2
Total Nitrogen	Currently Not Available
Thermal	Not Applicable

Trade Ratio – Uncertainty DRAFT

Management Practice	Uncertainty Factor ¹	Applicable Technical Standard	Method for Calculating Credits	Notes
Agricultural Practices				
Whole Field Management (Requires an approved management plan, filter strips/buffer strips, grassed water ways, conservation or no till, and cover crops. For fields with applicable slopes contour buffer strips or additional practices as deemed by NRCS or County Conservationist.)	1	NRCS 590, 393, 332, 412, 345 329, 340, 330	<p>SNAP-PLUS</p> <p>Compare to baseline.</p> <p>Calculate using predominate soil and slope instead of critical and most erodible.</p>	<p>Requires an approved 590 nutrient management plan that meets both the soil test-P and PI requirements.</p> <p>Requires a draw down strategy for nutrient levels beyond UWEX soil fertility recommendations.</p> <p>No applications of manure on snow covered or frozen ground or on fields with high groundwater or tile drainage.</p> <p>A crop or livestock producer engaged in a trade agreement must have all fields under an approved nutrient management plan; not just fields engaged in the trade.</p>
Companion Crops (perennial vegetation)	1	NRCS 340	SNAP-Plus compare to baseline.	Companion crops must be established to provide continuous protection to soil surface.
Conservation Easement	1	NRCS 327	SNAP-Plus compare to baseline.	Land must be out of production and in perennial vegetation.
Nutrient Management and support practices. Initial and (Third Permit Term)	3 (2)	NRCS 590	SNAP-Plus compare to baseline.	<p>An approved nutrient management plan and supporting practices.</p> <p>Once it has been established through soil testing that nutrient levels are stable or dropping indicating that the nutrient management plan is being adhered to the trade ratio can be lowered in subsequent permit terms.</p>
Tillage Mulch Till No Till	3 (2) 3 (2)	NRCS 345 NRCS 329		<p>To allow a lower of the trade ratio, soil testing must be performed annually for a minimum of 10 years to generate a trend in soil test values.</p> <p>All supporting practices receive the same ratio and can be adjusted downward (ratio of 2) based on supporting soil test trends.</p>
Riparian Filter Strip (edge of field)	3 (2)	NRCS 393		
Grassed Waterway	3 (2)	NRCS 412		
Cover Crop	3 (2)	NRCS 340		

Trade Ratio - DRAFT

- **Aquatic Habitat Adjustment Factor**

NRCS Technical Standard	Description
395	Stream Habitat and Improvement and Management
658	Wetland Creation
657	Wetland Restoration

Trade Ratio - DRAFT

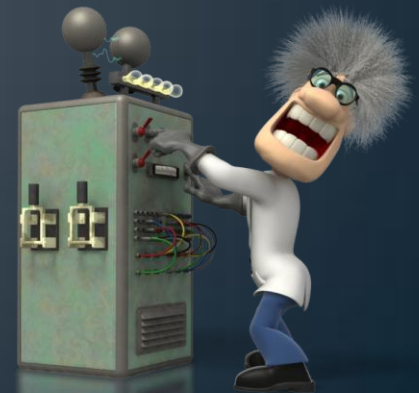
- *Final Trade Ratio = Delivery + Equivalency + Reserve + Uncertainty – Habitat Adjustment*

For trades involving nonpoint sources the trade ratio cannot be lower than 1.2:1 (1.2 pounds of nonpoint for every pound of point source pollutant). For trades located upstream in the same HUC-12 the equation simplifies to:

- *Final Trade Ratio = (0.2 + Uncertainty)*

Quantifying Credits

- Credits Generated by a Nonpoint Source
 - SNAP-Plus and RUSLE2 for agricultural field practices
 - New Barnyard Tool – working with UW APLE
 - SLAMM and P-8 for urban practices
 - Establishment of baseline condition.
- Credits Generated by a Point Source
 - Effluent monitoring



Timing of Credit Generation and Use

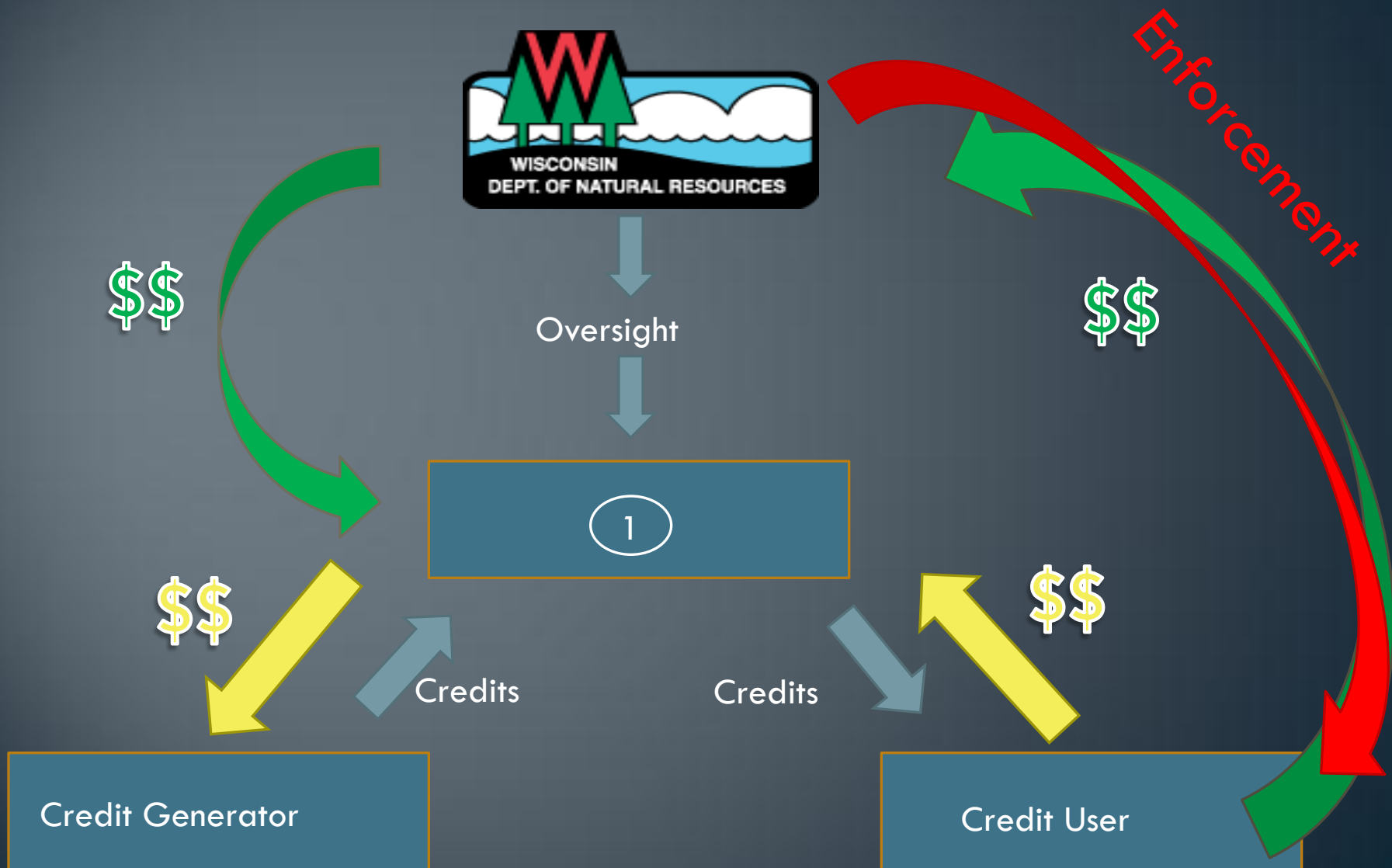
- Credits must be generated before they are used
 - Point source pollutant reduction must be measurable
 - Nonpoint management practices in-place and effective
- Credit use timing depends on credit source
 - Point source – Averaging period of limit (daily max., weekly average, monthly average).
 - Nonpoint – Anytime during calendar year but must be expressed in the same period as the permit limits.

What's included in the permit?

- Phosphorus WQBEL (TMDL or NR 217)
- Permit language allowing credits to be used when demonstrating compliance with the limit
- Reporting requirements for source and amount of credits acquired. Separate Document referred to by permit.
- Certification by permittee that BMPs are in place and are effective



Conceptual Market Structure



Status Of Water Quality Trading Documents

- Developed Framework with Stakeholder Committee (July 2011)
- Implementation Guidance Development
 - Internal DNR Review During March
 - Stakeholder Review April (21 Day Comment Period)

Questions

