

EPA-USDA National Workshop on Water Quality Trading

Tools for Trading 1

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Water Quality Trading Using a Balanced Approach

Successful programs select and implement credit estimation methods by balancing three needs:

1. Accuracy with and without margins of safety
2. Model accuracy/increased transaction cost
3. Ease-of-use for staff and administrators



Program Examples

Model	Program Areas	Model Uses	Pollutant Parameters	Benefits	Limitations
Region 5 / STEPL	Michigan Minnesota Ohio	Grant Tracking Water Quality Trading Stormwater Offsets	Sediment TP TN	Ease-of-use Moderate accuracy Standardized methods	Surface only Sediment attached nutrients only Most programs use default values
Nutrient Tracking Tool	California Chesapeake Bay Oregon	Site planning Water Quality Trading	Sediment TP TN Water volume	Ease-of-use Provides edge-of-field estimates for surface flow, interflow and deep aquifer loading	APEX is for sheet and rill erosion estimates only Pending: Crop Management Zone calibration (most of U.S.)
WQIag	California Minnesota	Compliance Metric Regulatory Certainty	Sediment TP TN Pesticides	Ease- of-use, Calibrate to modeled or measured data Rates producer performance	Does not estimate mass loads “Jack of all trades– Master of none”

Further Considerations

- All three methods are appropriate when applied considering relative limitations
- Results can be readily tied to different attenuation factors for use in watershed management programs, including trading
- In some settings the cost of setting up a better model will be cost prohibitive given the modest increase in accuracy

Questions?

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