

Water Quality Credit Trading Workshop

Objectives:

- To initiate communication and collaboration among agricultural producers, agricultural advisors and point source dischargers as a first step toward water quality credit trading
- To educate these groups about the benefits of WQCT and how to begin a trading program in their communities

Challenges:

- To engage all three groups, individually and jointly, in *first steps* and *action items* related to WQCT
- To retain interest of representatives from each group during the one- or two-day period of the WQCT workshop



DAY 1

Water Quality Trading Rules in Ohio

Gary Stuhfauth, Ohio Environmental Protection Agency

- Development of Ohio's Water Quality Trading Rules
- Overview of the promulgated rules
- Important elements in determining credit generation (baselines and ratios)
- What buyers and sellers need to know

DAY 1

Benefits and Obstacles in Water Quality Trading

Douglas “Dusty” Hall, Miami Conservancy District

Drawing on examples from the Great Miami River WQT program, present on the following topics:

- Benefits/services that agriculture can offer in reducing nutrient and sediment loads to watersheds (via conservation practices)
- TMDLs and WQT
- Economic benefits that WQT can offer to both nonpoint sources and point source dischargers (via MCD examples)
- Obstacles that were encountered when starting the WQT market-based program

DAY 1: Breakout Sessions

Agriculture

Douglas “Dusty” Hall, Miami Conservancy District

Dennis O’Grady, South Nation River Conservation Authority

- What, how much, and when can a producer trade in a WQT market? (Elements 2-4 from CTIC WQT Manual*)
- Finding a trading partner and making trades (Element 5*)
- How credits are verified and tracked (Elements 7-8*)

*Source: *Getting Paid for Stewardship: An Agricultural Community Water Quality Trading Guide*, 2006

DAY 1: Breakout Sessions

Wastewater

Cy Jones, World Resources Institute

James Klang, Kieser & Associates, LLC

- Perspectives on WQT for the wastewater community (issues of importance to the WW community – liability, certainty, etc.)
- How WQT can address the issue of future growth in a watershed
- Determining WQT readiness (using WERF benchmarking tool*)—
Six questions wastewater facilities should answer before starting a WQT program

DAY 1: Breakout Sessions

Credit Aggregators

Brian Brandt, American Farmland Trust

Peter Hughes, Red Barn Trading Company

Drawing on examples from your involvement in WQT programs, present on the following topics:

- Types of aggregators and systems for aggregating WQT credits
- Identifying and assembling credit buyers and sellers
- Developing trade agreements and addressing liability (Element 6 from CTIC WQT Manual*)

*Source: *Getting Paid for Stewardship: An Agricultural Community Water Quality Trading Guide*, 2006

DAY 2 (morning)

Introduction to Ohio River Water Quality Issues

Mark Kieser, Environmental Trading Network

Timothy Lohner, American Electric Power

- A WQT case study example
- The business case for power companies
- Ohio River basin WQT exercise – Small Group Breakouts

DAY 2 (afternoon)

Small group reports

Mark Kieser, ETN

“Who’s Ready for Trading?”

Group Discussion

Applying the Case Study to your Watershed

Mark Kieser, ETN

Sarah Hippensteel, MCD

Group Exercise / Q&A

Mark Kieser, ETN

Trading Overview


**A market-based tool
for water quality improvements...**

**One pollutant source with high
treatment costs pays another
to make a voluntary and surplus
pollutant reduction for a lower cost.**

***The Market...Buyers and Sellers
of Pollutant Reductions***

‘Terms of the Trade’

- **Effluent Trading**
- **Pollutant Trading**
- **Pollution-credit Trading**
- **Nutrient Trading**
- **Offsets**
- **Watershed-Based Trading**
- **Water Quality Credit Trading**
- **Water Quality Trading**
(Explicit retirement of a portion of reductions with every trade for water quality benefits)

An aerial photograph of a rural landscape, showing a large white building, possibly a farm or processing plant, surrounded by fields and some trees. The image is faded and serves as a background for the left side of the slide.

Getting Paid for Stewardship: An Agricultural Community Water Quality Trading Guide

Conservation Technology Information Center

Published July 2006



Getting Paid for Stewardship

INTRODUCTION

The guide outlines the concept and basic elements of water quality trading for individuals and organizations that serve as agricultural advisors to producers, including:

- Soil and water conservation districts
- Certified Crop Advisers (CCAs)
- Extension agents
- Farm bureaus
- US Department of Agriculture (USDA)
- Natural Resources Conservation Service (NRCS)
- Farm Service Agency (FSA)
- Universities
- Producer associations



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ELEMENTS FOR CONDUCTING WQT

- Element 1: Assessing the potential for water quality trading
- Element 2: Determining what a producer can trade
- Element 3: Determining how much a producer can trade
- Element 4: Determining when a producer can trade
- Element 5: Finding a trading partner
- Element 6: Developing trade agreements and addressing liability
- Element 7: Verifying and certifying conservation practice implementation
- Element 8: Tracking and reporting pollutant reductions and trades



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Element 1: Assessing the potential for water quality trading

- A catalyst or driver is necessary within a watershed to develop a WQT market, examples include:
 - Total maximum daily loads (TMDLs)
 - Specific pollutants of concern
 - Regulated dischargers (NPDES permit-holders)
- Research possible pollutants for reduction to generate potential credits
- Determine the overall goals and necessary reductions for the watershed



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Element 2: Determining what a producer can trade

- Types of commodities or services a producer can trade:
 - Commodity = Units of pollutants reduced (in pounds, credits, or acres)
 - Service = Payments for implementation of conservation practice
- List commodities or conservation practices that are eligible for trading
- Crop advisors should work closely with producers to choose conservation practices that are best suited for a producer to enter into a WQT agreement



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Element 3: Determining how much a producer can trade

- A catalyst or driver is necessary within a watershed to develop a WQT market, examples include:
 - Total maximum daily loads (TMDLs)
 - Specific pollutants of concern
 - Regulated dischargers (NPDES permit-holders)
- Research possible pollutants for reduction to generate potential credits
- Determine the overall goals and necessary reductions for the watershed

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Element 3: Continued

- Calculating how much is available for trading:
 - To calculate the amount of pollutant entering a waterbody from the operation, the Ohio Trading Rules (2007) state:

“A water quality credit shall be calculated using the load reduction spreadsheet used to estimate load reductions that are achieved by implementing BMPs (or, for BMPs not included in the load reduction spreadsheet, use a generally accepted engineering method deemed acceptable by the director).”

- Use trading ratios to convert pounds of pollutant reduction to credits:

For permittee-permittee, ratio = **1:1**

For nonpoint source-permittee (no TMDL), ratio = **2:1**

For nonpoint source-permittee (w/ TMDL), ratio = **3:1**



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Element 4: Determining when a producer can trade

- Many factors affect the time frame in which a producer can implement conservation practices, generate eligible pollutant reductions, and sell the pollutant reduction, including:
 - Seasonal variability
 - Time it takes to select, develop, and implement a particular conservation practice or plan
 - Lag time between when a practice is implemented and when the pollutant reduction is achieved
- Consider the life span and maintenance requirement for a particular conservation practice



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Element 5: Finding a trading partner

- There are several mechanisms to facilitate credit trading:
 - Direct contracts
 - Brokers are third parties that bring trading partners together
 - Aggregators are third parties that collect trading credits and sell in bulk to buyers
 - Central exchanges involve a third party that purchases credits from producers and distributes them among buyers

1.



2.



3.



4.





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Element 6: Developing trade agreements and addressing liability

- Several issues to be addressed when entering into WQT agreements:

- **Technical issues** that the agreement should define:

- Type and location of conservation practices generating credits
 - Procedures for operation & maintenance and responsible party
 - Reconciliation period
 - Applicable baselines for both sellers and buyers
 - Applicable trade ratios
 - Expected pollutant load reductions from conservation practices
 - Current water quality contribution for sellers and buyers
 - Schedule for inspecting, verifying, and certifying practice
 - Ability to estimate pollutant contributions from the operation
 - Lag time between conservation practice implementation and water quality improvement



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Element 7: Verifying and certifying conservation practice implementation

- The CTIC manual answers several questions on credit verification and certification:
 - Is it necessary?

YES, verification allows producers to validate that actual pollutant reductions are occurring and is required by the Ohio Environmental Protection Agency's Water Quality Trading Rules.
 - Who conducts the verification and certification process and how frequently does credit generation need to be verified?

"Best management practices may generate water quality credits as long as they are fully maintained and continue to function as designed and shall be inspected at least annually by a qualified soil & water conservation professional (General Requirements (I), Ohio Trading Rules, 2007)."



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Element 8: Tracking and reporting pollutant reductions and trades

- Ohio Environmental Protection Agency Trading Rules require documentation of trades, water quality monitoring data, and records of BMP effectiveness
- Important questions to ask when entering into an agreement:
 - Does the trade agreement specify how trades are tracked over time?
 - Does the trade agreement indicate who is responsible for tracking trades and what information is necessary to report?
 - Does the trade agreement specify the reporting frequency?
 - When are trade tracking reports due and to whom is the information sent?

Are We Ready for Trading?

Session A in
Water Quality Credit Trading:
PowerPoint Workbook for a
Detailed Assessment of
Opportunities and Options

Introduction & User Guide (Word)

A. Are We Ready for Trading

B. Decision Process

C. Stakeholder Identification

D. Stakeholder Readiness

E. Information Management

1. Opportunities & Constraints

2. What to Trade, Where

3. Who Trades, Why

4. Trading Ratios

5. Credit Generation & Use

6. Market Elements, Part One

7. Market Elements, Part Two

8. Market Models and Framework

9. Tracking

10. Oversight

11. Evaluation

Problem & Opportunity Definition: Will Credit Trading or Offsets Help?

- Key Themes
 - An initial assessment along key factors for success shows where we are now
 - Screen out extreme situations not appropriate, not ready to explore trading
 - Identify strengths, weaknesses, opportunities, and barriers as basis for approaching process choices
- Key Tool
 - Six Question Benchmark Assessment

Problem & Opportunity Definition

Six Questions to Benchmark the Current Situation

- What water quality problem(s)/pollutant(s) are we talking about?
- Is there an imperative to make pollutant reductions and water quality improvements now, or can we see one on the horizon?
- What sources are contributing to the problem, and what are their relative requirements, incentives, general control options?
- What kind of data do we have—water quality, watershed, cost, effectiveness?
- What is our past experience with stakeholder cooperation and collaboration?
- Where should we start with respect to watershed scale and project scope, e.g., small scale project or a larger watershed-scale credit market?