Iowa League of Cities

City Perspective of Iowa's Nutrient Reduction Strategy

ACES Conference

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Overview

- **What we will discuss today:**
  - Iowa Nutrient Reduction Strategy
  - Development of a Water Quality Trading System in Iowa

Iowa Nutrient Reduction Strategy Overview

- Integrated Strategy that coordinated non-point sources (agriculture) and point sources (municipalities and industries)
  - Science Assessment for NPS with voluntary implementation of conservation practices
  - PS Technology Assessment for wastewater treatment facilities
- 45% Total Reduction Goal for Non-Point Source (NPS) and Point Source (PS)

Iowa Nutrient Reduction Strategy Implications for Point Sources

- **Covered**
  - 102 Major Municipal Facilities that serve 55-60% of all wastewater handled by Iowa Cities.
  - 28 Permitted Industrial Facilities
- **Implementation of technically and economically feasible process changes**
  - 75% Reduction for Total Phosphorus (P)
  - 66% Reduction for Nitrogen (N)
- **Anticipated Reduction**
  - 11,000 tons N and 2,170 tons P reduction per year
- **Cost**
  - Capital and operation costs over 20 years of approximately $1.5 billion

Iowa Nutrient Reduction Strategy Implications for Point Sources

- **Year One:** Testing for N and P
  - Determination of total pounds of N and P
- **Year Two:** Feasibility Study to Achieve Reductions
  - Certain % Technological Changes at the Plant
  - Propose to use Remaining % for Pilot Trades with NPS
    - Take remaining lbs load and translate to BMPs within watershed.
- **Year Three:** Submit Permit with Suggested Timeframes for Implementation of Reductions

Role of Cities in Water Quality

- **Unique Position as:**
  - Regulated through Waste and Storm-Water Permits
  - Regulators through Pretreatment Permits
  - Users as Drinking Water Sources
- **Success Has a Price Tag**
- **One solution was water quality trading between PS to PS or PS to NPS**

Nutrient Trading with the Iowa Nutrient Reduction Strategy

Different Goals of PS and NPS

- **Point Sources want Certainty**
  - Regulatory
    - Needs to impact current or future regulatory requirements
  - Cost
    - Save cities millions in costly construction with diminishing return on the investment
- **Non-Point Source**
  - Increased Resources for Water Quality / Conservation
  - Simplicity and Familiarity of Usage
- **Additional Benefits Besides Nutrient Reduction**
  - Saving Dollars in Technology Costs
  - Flood Mitigation
  - Habitat Development

Potential Trading Options

- PS owned land or PS owned BMPs
- Framework for all PS to NPS
  - Direct Investment Through Aggregator
  - Credit Banking Approach
- Utilization of Sponsored Projects to Support Long-Term Investments
- PS to PS

Water Quality Trading Findings

- 40 different trading programs were reviewed for the study
- The focus of the research centered on how other trading systems function and key takeaways for an Iowa trading program.
- Quick Findings:
  - **10 actively trading, 3 active trading PS to NPS**
  - **Scale of Trading** – 2 Multi State, 6 Statewide, 18 Watersheds
  - **Credit Costs –** $1.48 to $10 for active trading for pound per a year reduction
  - **NPS Baselines -** 11 Baselines, 2 Minimum Baselines

Water Quality Trading in the US

- Water Quality trading is used in numerous states and watersheds across the country.
- **Not one state has the same trading system.**
  - Trading systems are designed for a specific need in that state.
  - Some trading systems are state controlled while others are managed by a non-profit or watershed authority.
- **Technology-Based Standards have not been widely utilized for trading.**
- Wide range of items traded:
  - Phosphorus (P)
  - Nitrogen (N)
  - Sediment
  - Heat
  - Bacteria

Water Quality Trading Findings

- After reviewing 40 different trading programs, studies, and pilot projects the following are perceived barriers for active PS to NPS trading:
  - **Complexity of the trading program.**
  - **Stringent baselines for NPS to enter into active trading.**
  - **Lack of communication between stakeholder groups.**

Concerns to Address

Policy

- Utilization of Knowledge from Previous Systems
- Lack of Numeric Nutrient Criteria
- Same Impact within the Same Watershed
- Current or Future Regulatory Impact
- Temporal Restrictions
- Accountability and Transparency
- Supply and Demand (Monetizing BMPs)
- Enforcement

Concerns to Address

Science

- Defensible Metrics for Credit Calculation and Verification
- Trading Ratios and Baselines
- Eligible BMPs

PS Specific Issues

- Long-Term Technology Changes for PS
- Baselines (Elbow Curve)

NPS Issues

- Focus on Sensitive Land
- Interest from Agricultural Producers

Questions?

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