NUTRIENT REDUCTION EXCHANGE

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Iowa Soybean Association
Iowa Nutrient Reduction Strategy goals are to reduce nitrogen and phosphorus levels by 45%.
Point vs Nonpoint Source

**POINT SOURCE POLLUTION** is relatively constant discharges from stationary locations or fixed facilities, such as municipal wastewater treatment plants and major industries.

**NONPOINT SOURCE POLLUTION** generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification. NPS pollution comes from many diffuse sources.
Can Iowa achieve collaboration between point and non-point sources to improve water quality?
Why collaborate?

Source: Maryland Department of Environment Study, 2013
What’s in it for farmers?
What’s in it for point sources?

Photo: Fox Engineering
How are non-point and point sources currently collaborating?
Project in Iowa is exploring development of program linking point and nonpoint sources

- Conservation Innovation Grant from USDA to Iowa League of Cities to develop framework in Iowa for water quality offset program

- Program will not be the whole solution to water quality in Iowa but will be another tool to fund water quality improvement

- Goal is for more cost-effective solutions in watersheds
Nutrient Reduction Exchange is an outcome of the CIG grant and creates a registry for point sources to track investments.

<table>
<thead>
<tr>
<th>Serial ID #</th>
<th>Credit Generating Entity</th>
<th>Watershed Location</th>
<th>Credit Buyer Information</th>
<th>Watershed Location</th>
<th>Regulated Discharger</th>
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<tbody>
<tr>
<td>2</td>
<td>Catfish Creek Watershed Management Authority</td>
<td>Catfish Creek (HUC 10 #0706000501)</td>
<td>City of Dubuque WR&amp;RC</td>
<td>Catfish Creek (HUC 10 #0706000501)</td>
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<td>City of Dubuque WR&amp;RC</td>
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<td>6</td>
<td>City of Des Moines/Don Rothfus</td>
<td>Yeader Creek-Des Moines River (HUC 12 #071000081503)</td>
<td>City of Des Moines</td>
<td>Yeader Creek-Des Moines River (HUC 12 #071000081503)</td>
<td>Yes</td>
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</table>
Nutrient Reduction Exchange reinforces the voluntary nature of the Nutrient Reduction Strategy and promotes collaboration.
ISA participation has reinforced the watershed approach as a means to identify practice placement opportunities.
Many benefits of creating a registry to track point source investments

- Data collection process
- Data validation process
- Record management
- Process management
- Transparency
Nutrient Reduction Exchange tracks many data points

- Point source name and contact information
- Watershed
- Permit number
- Project name
- Funding source
- Practice type
- Install data

- Term of practice (years)
- Type of credits generated (N, P, sediment, etc.)
- Credit calculation method
- Verifying entity
- Monitoring
- Pollutant reductions
- Ancillary benefits
How does the Nutrient Reduction Exchange work?

Way for municipalities to track investments and benefits of working with farmers/landowners to implement water quality practices.

Diagram:

- Point Source
  - Register Practice in NRE
  - Financial Support
  - WQ Benefits
- Farmer
  - Farmer Implements a Water Quality Practice
City of Des Moines Example

- **Financial Support**
- **Nitrogen reduction**: 52-104 lbs/yr N
- **Landowner**
- **Built a Bioreactor**
- **WQ Benefits**
City of Dubuque Example

Water quality benefits:
- 1,858 lbs/year P
- 2,186 tons/year Sediment
- 3,716 lbs/year N
There may be benefits for point sources who participate early

- **Flexibility** if/when point source subjected to permit requirements
- Reductions by be used to **offset against growth**
- **Recognition** program
- Ability to **use reductions** when **technology based reductions are not feasible**
- Watershed-based permitting encouraging **watershed planning**
- **Waivers on future permit requirements** if new baselines are set by state
- **Priority scoring** for funding applications
- Acknowledgement of **1:1 trading ratio** if a nutrient offset program is established
What’s next?

• Final year of Conservation Innovation Grant
• Continue to build the Nutrient Reduction Exchange framework
• Cities will expand partnerships with farmers and landowners
• Practices will be tested within the Nutrient Reduction Exchange framework
• Longer term, this project may help guide and track cost effective gains in nutrient reduction