



Iowa Nutrient Reduction Exchange



July 2018

Iowa's 2013 Nutrient Reduction Strategy (Strategy) called for the Iowa Department of Natural Resources (IDNR) and the Iowa Department of Agriculture and Land Stewardship (IDALS) to work with partners to "establish and implement voluntary market-based approaches or incentives." The stakeholder committee that advised IDNR and IDALS on the development of the Strategy focused on Water Quality Credit Trading (WQCT) programs that use an incentive-driven, market-based approach to achieve compliance with state and federal water quality-based permit requirements. These Iowa stakeholders expressed interest in the use of ecosystem market strategies to bolster collaboration between various sectors to help improve water quality in the state.

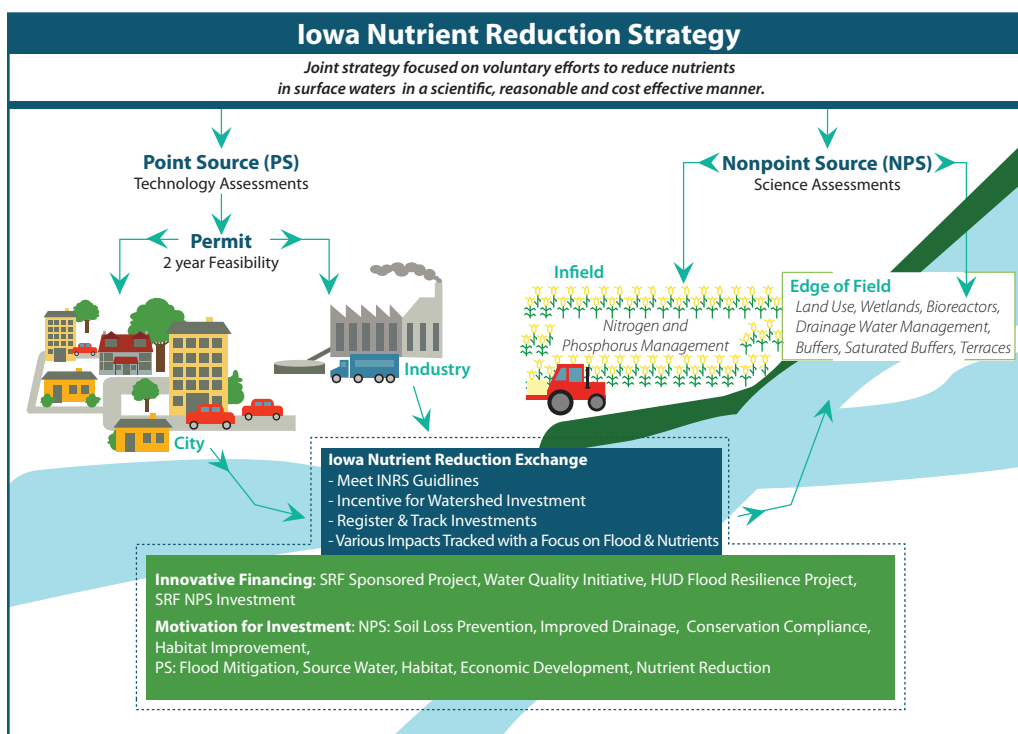
To help develop these strategies, the Iowa League of Cities received a USDA-NRCS Conservation Innovation Grant (CIG) in the fall of 2015. The Project Team has been working over the past three years to develop a market-like framework called the Nutrient Reduction Exchange (NRE) to advance the goals of

the Strategy and anticipate that it will be fully transitioned to IDNR this fall. Development of the NRE framework has been guided by input from a Technical Advisory Committee composed of over thirty key stakeholders in Iowa representing the agricultural, environmental, municipal, academic and industrial sectors.

The project commenced with two pilot communities already making significant investments in their watersheds, Storm Lake and Dubuque, and has expanded to encompass numerous other watershed investments from cities across the state utilizing a variety of funding sources. Analysis of these watershed investments showed that motivations to reduce nutrient loading vary between municipal stakeholders (investing in wastewater as well as stormwater infrastructure improvements) and agricultural stakeholders (investing in land management-based practices). Though nutrient load reduction is a key motivation, other goals to accommodate economic growth, flood mitigation, source water protection, habitat development or increase farm productivity also drive decision-making.

Given the diverse nature of these motivations and water quality benefits resulting from these decisions, the CIG project was steered in a way to capture these important outcomes by developing the NRE to reliably track and account for nutrient reductions, as well as other benefits.

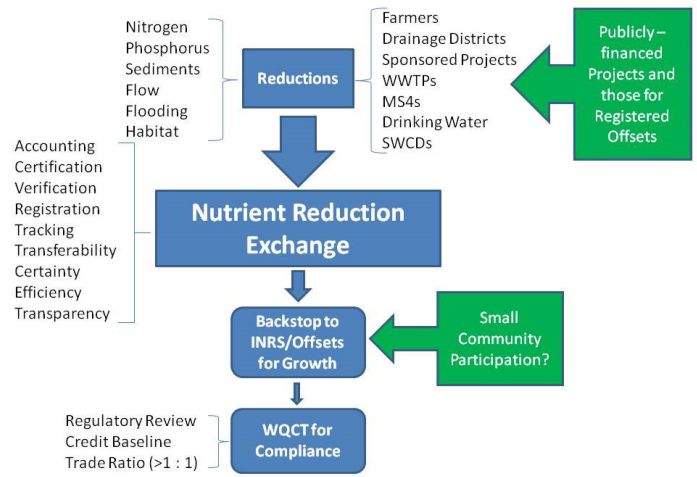
Conceptually, the NRE serves as a tracking system that will allow point sources across the state to register and track nutrient reductions from installed practices identified by the Science Team that target Strategy goals. For point sources, Strategy reduction



goals amount to 66% for total nitrogen (TN) and 75% for total phosphorus (TP) over current discharges and a combined 45% reduction goal for wastewater treatment plants (WWTPs) and agricultural nonpoint sources. The NRE will help track these reductions and serve as a basis for incentivizing near-term investments in the non-point source sector by point sources. Ancillary benefits such as flood reduction and habitat creation that result from select non-point source nutrient reduction projects will also be tracked in the NRE.

The tracking of nutrient reductions and ancillary benefits serves to inform and calibrate point source decisions under the Strategy and promote collaboration between point and nonpoint sources. It provides additional motivation to account for the nutrient reduction value of the practices. The Technical Advisory Committee is working with IDNR to provide additional regulatory and financial incentives for participation which may include reduced reporting for point sources achieving greater reductions beyond Strategy goals and priority scoring for state administered funding.

In 2017, the CIG Project was selected by the USDA Office of Environmental Markets as a pilot to test the integration of nutrient reduction markets into the Army Corps of Engineers system for wetland and stream mitigation. The Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) is an internet-based tracking system which will allow DNR to efficiently manage the NRE and track new watershed projects. DNR will work with IDALS and the Science Team at Iowa State University to provide quality con-



trol of inputs that be uploaded to the system.

Programmatic elements of the NRE, including credit accounting, certification, and verification, are designed to encourage stakeholder use while promoting full public transparency and confidence.

In the future, the Project Team anticipates that WQCT may be needed for point sources to achieve additional nutrient reductions beyond the Strategy (for example, to address localized water quality impairments). The NRE is designed to facilitate the transition from voluntary, early watershed projects to compliance trading, if so desired in the future.

The three-year CIG will be completed with a formal NRE structure and WQCT framework by October 2018.

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¹ Iowa Nutrient Reduction Strategy: A science and technology-based framework to assess and reduce nutrients to Iowa waters and the Gulf of Mexico. Prepared by: Iowa Department of Agriculture and Land Stewardship Iowa Department of Natural Resources Iowa State University College of Agriculture and Life Sciences. Updated September 2014. <http://www.nutrientstrategy.iastate.edu/sites/default/files/documents/NRSfull-141001.pdf>

² Partners on this project include Nyemaster Goode, P.C., Kieser & Associates, LLC, Troutman Sanders, LLP with support from University of Iowa, Iowa State University, and the cities of Dubuque and Storm Lake.

³ A municipal wastewater utility borrowing from Iowa's Clean Water SRF for an infrastructure project may request additional grant funding for a "sponsored project" which must improve water quality in the watershed in which the wastewater utility is located. The overall interest rate of the loan is reduced, allowing the utility to finance a WWTP upgrade as well as implement an additional watershed project (see: http://www.iowasrf.com/about_srf/sponsored-project-manual/).