Development of a Nutrient Reduction Exchange and WQT Framework for Iowa

Kieser & Associates, LLC (K&A) and the Iowa League of Cities applied for and received a 2015 USDA Conservation Innovation Grant to advance WQT opportunities identified in the Iowa Nutrient Reduction Strategy. Iowa stakeholders expressed interest in the use of trading strategies to bolster cooperation between various sectors to help improve water quality in the State. This project importantly recognized that these 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, or increased farm productivity ultimately drive decision-making. Given the diverse nature of potential projects and water quality benefits resulting from these decisions, this project captured these important outcomes by developing program structures that can reliably track and account for nutrient reductions and as well as other environmental improvement outcomes. To this end, K&A developed the concept of a “Nutrient Reduction Exchange” (i.e., the NRE or “Exchange”) to capture these values.

Conceptually, the NRE serves as a tracking system that allows nutrient sources across the state to register and track nutrient reductions resulting from installed best management practices (BMPs) that target NRS goals. For point sources, NRS reduction goals amount to 66% for total nitrogen (TN) and 75% for total phosphorus (TP) over current discharges. A 45% NRS goal applies to agriculture for TN and TP. WQT will not necessarily be needed to meet either set of these NRS reductions. However, creatively financed near-term investments through the State Revolving Fund in the non-point source sector by point sources prompted the desire to register benefits as nutrient reduction “credits” that could later be used by WWTPs for WQT.

K&A was responsible in this project for: conducting a WQT supply/demand analysis for traditional and alternative compliance drivers in Iowa; crafting the framework for the Nutrient Reduction Exchange/state-approved WQT framework with a toolkit of documents and resources for buyers and sellers in Iowa; bringing USDA-NRCS’ Nutrient Tracking Tool (NTT) to Iowa as the primary credit quantification tool, and; forging the integration of the NRE into USACE’s RIBITS nationwide credit tracking program (Iowa and Virginia being the only two states to now have this as their state-wide trading platform).

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Project Duration: 2015-2019

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