

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE IOWA DEPARTMENT OF NATURAL RESOURCES
AND
THE CITY OF STORM LAKE, IOWA**

This Memorandum of Understanding (MOU) between the Iowa Department of Natural Resources (DNR) and the City of Storm Lake, Iowa (City) is effective on the 19th day of October, 2020.

1. **Purpose.** The purpose of this MOU is to establish a framework for the City to implement a watershed-based Nutrient Reduction Program within the North Raccoon watershed (Watershed) and credit quantifiable nutrient reductions for the benefit of the City's nutrient reduction targets through National Pollutant Discharge Elimination System (NPDES) permitting. The City may use this framework to achieve compliance with current and future permit requirements arising from the Iowa Nutrient Reduction Strategy (NRS). In exchange for utilizing this framework, the City shall receive certainty regarding compliance with future nutrient reduction permit requirements.

2. **Background.** Iowa developed a NRS to reduce excess nutrients in Iowa's surface waters and tasked wastewater treatment plants with specific nutrient reduction goals. The NRS supports the development of water quality credit trading between two or more entities, commonly a point source which is mandated to achieve a permit goal and one or more nonpoint sources who voluntarily collaborate with the point source to reduce the amounts of nitrogen and phosphorus entering a water body. Trading can provide a means to improve water quality, especially in cases where the technology does not exist or is not affordable or feasible to allow a point source discharger to comply with permit requirements or where the same or greater pollutant reductions can be achieved more quickly or at lower cost through implementing Best Management Practices (BMPs) or other nutrient reduction efforts.¹

In support of the NRS goals and policy statements, the DNR in partnership with the Iowa League of Cities established the Nutrient Reduction Exchange (NRE), a tool for registration of practices implemented in a watershed that reduce Nitrogen (N) and Phosphorus (P), registration of the modeled nutrient reductions of those practices, and that are thus available for offsets or trading. This MOU is designed to build on the NRS policy and goals, and the establishment of the NRE, to provide point source facilities with a well-defined option of achieving regulatory compliance and certainty through the implementation of watershed-based nutrient reduction practices.

¹ The United States Environmental Protection Agency also supports water quality trading, offsets and similar programs to achieve compliance with regulations, in particular using land management strategies for implementing market-based programs within a watershed, as most recently stated in the EPA February 6, 2019 Memorandum titled "Updating the Environmental Protection Agency's (EPA) Water Quality Trading Policy to Promote Market-Based Mechanisms for Improving Water Quality."

3. Goal. The goal of this MOU is to provide the City with regulatory certainty that allows the City to utilize nutrient load reductions achieved through BMP implementation in the Watershed to offset nutrient reduction targets required in future NPDES permits, or to bank environmental outcomes of nutrient reducing practices to offset future permit requirements.

4. General Areas of Agreement.

A. Use of Nutrient Reducing Practices as Offsets. Provided that the terms of this agreement are followed, the City shall be able to utilize nutrient reducing practices as offsets (Nutrient Reduction Offsets) toward its requirements for nutrient reduction under an NPDES permit issued by DNR for the City of Storm Lake Water Reclamation Facility (WRF) facility, in accordance with the terms of this MOU. Nutrient reducing practices (aka BMPs) built or implemented as part of a watershed-based nutrient reduction plan will be considered as described below.

B. Monitoring and Modeling. The City may develop a monitoring strategy to assess overall N and P concentrations in-stream and to document progress toward nutrient reductions within the watershed. However, progress toward nutrient reduction will be based on modeling using the Nutrient Tracking Tool (NTT) provided by the U.S. Department of Agriculture's Environmental Markets Division, or in another mutually-agreed upon model as further set forth below in this Section 4.B.

For urban practices, the City may present the DNR with a proposal for new infrastructure and an analysis, using one or more models in use by the civil engineering community, of the expected reduction in N, P or Total Suspended Solids ("TSS"). Based upon this presentation, the DNR and City shall work in good faith to agree upon a rate of Nutrient Reducing Offsets that may be applied toward the NPDES permit.

C. Baselines. Calculated point and nonpoint source loads of N,P, and sediment prior to implementation of BMPs by the City, as estimated using the NTT, will be utilized as the baseline for measuring environmental outcomes resulting from watershed management activities. For nutrient reducing practices, baseline conditions may be further defined in terms of geographic scale, existing conservation practices, and schedule of implementation to facilitate improved environmental performance to achieve nutrient load reductions. Agricultural nonpoint source (NPS) baselines will be established using pre-existing field management data. Baseline data will be verified using the NRE guidelines and will be stored within the NRE system as a part of the NTT model runs. Baseline conditions shall be established at the field scale prior to the City-connected implementation of any BMP on a given field.

D. Future Mandated Practices. In order to recognize investments made by municipalities towards NRS reduction goals, and to reward leadership, if a BMP or urban practice funded under a watershed project subsequently becomes mandated by local, state or federal law, the N, P, and TSS reductions associated with that BMP or urban practice will continue to be credited to the municipality if allowed under the new law, provided that the BMP or urban practice continues to be viable with ongoing maintenance or rehabilitation, verified, and within the useful life of the practice.

E. TSS. BMPs and urban practice put in place to address P will also generally be effective in reducing TSS. Where necessary and when correlated within a watershed, P-reductions will be used as a surrogate for TSS. TSS reductions, in addition to N and P reductions, can be considered, if allowed by and consistent with state and federal law.

F. At all times the City shall maintain its existing (or newly implemented) plant infrastructure at the optimal level of performance. This optimization of the structural WRP plant technology shall be an ongoing requirement for the City that shall be addressed in each five-year permit renewal.

5. Watershed-Based Nutrient Reduction Plan.

A. Outlining the City's Goals. In each NPDES permit application the City must submit a watershed-based nutrient reduction plan document that explains the City's approach for implementing BMPs within the Watershed to achieve nutrient reductions within the permit timeframe. This plan will outline a targeted strategy for implementing the City's Nutrient Reduction Program to ensure maximum efficiency in the use of City funds invested in BMPs. Existing HUC-8 and HUC-12 level Watershed Management Plans (WMP), such as the North Raccoon River Watershed Management Coalition Plan, may serve as the WMP provided the plan meets the Plan Requirements specified below.

B. Plan Requirements. The watershed-based nutrient reduction plan shall include the following: (1) identification of appropriate watershed management strategies within the Watershed, (2) the process to be used by the City or its partners to engage and recruit landowners to participate in the City's Nutrient Reduction Program, (3) an estimation of load reductions expected from implementation of new BMPs, (4) how the practices will be maintained over the design life of the practice (5) an expected project schedule during the permit term, and (6) a description of how the City will monitor and track the effectiveness of its BMP implementation schedule.

C. Location. The City may select a watershed planning area or multiple areas in the Watershed. These areas may be in any of the subbasins in the North Raccoon Watershed or in the portions of the watershed that lie within the City's municipal boundary.

D. Practice Criteria. BMPs identified in a watershed plan shall be installed and maintained according to Natural Resources Conservation Service (NRCS) or Iowa Department of Agriculture and Land Stewardship (IDALS) technical standards. Work shall be done in accordance with generally accepted engineering practices and shall document the NTT-modeled estimates of pounds/tons reduced as compared to nutrient and sediment loading conditions prior to the installation of the BMP. Novel practices not included in NRCS or IDALS standards may be used, as long as the nutrient reductions they produce can be modeled using the NTT, are consistent with the NRS, and approved by DNR and Iowa State University (ISU) technical reviewers.

For urban practices, the Iowa Storm Water Management Manual (ISWMM) will be used for technical guidance.

6. Partnerships, Contractual Relationships, Watershed Management Authorities, Third-Party Designees, and Other Arrangements. At any point during the timeframe of this MOU, the City may work through a partnership, contractual relationship, Watershed Management Authority, Third-Party Designee (such as the Soil and Water Outcomes Fund), or other arrangement to implement the activities defined by the Watershed-Based Nutrient Reduction Plan. In these instances, the City shall maintain the right to register practices implemented through these arrangements in which City funds were utilized as cost-share for BMP design or installation. Moreover, if the City is working with a farmer group or third party aggregator, such as a farmer-led watershed group or the Soil and Water Outcomes Fund, the third party may assign registered nutrient reduction Offsets for use in the City's NPDES permit compliance efforts, or transfer registration of the practices in the NRE to the City.

7. Determining Final Plan Compliance, Interim Progress, and Usable Nutrient Load Reductions.

A. Compliance Measurement. Interim progress, final compliance and usable nutrient load reductions will be determined using the best available modeling tools. Currently, BMPs will be modeled at the field scale using the NTT. Other models or methods may be substituted as deemed appropriate, subject to agreement by the parties to this MOU.

B. Offset and Practice Eligibility. Implemented BMPs shall be recorded on the NRE using the mutually-agreed upon Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS). In general, the City shall provide experienced personnel to be trained in the NTT, and to model the BMPs through the NTT (or other approved model), obtain verification and approval from ISU or the DNR designee; and to confirm and document practice construction completion and record NTT results into the RIBITS system. The DNR shall accept the NTT-modeled load reductions of the BMPs within RIBITS and issue a letter establishing the validity of the practices and these may be used by the City as an offset in a one-to-one ratio (i.e., one pound of NPS pollutant reduced in the watershed by a City-

implemented BMP shall be equivalent to one pound of point source pollutant reduced at the City's WRP facility outfall) to contribute to its NRS goal, or may be used in other regulatory formats so long as the practice has been maintained and is functioning as designed. Upon receipt of the verification and approval of the model run by ISU (or the DNR designee), the DNR shall have sixty (60) days to review, comment, and issue a letter establishing the validity of the nutrient load reductions claimed or request modifications.

C. Interim Progress for NRS Goals. During the term of this MOU, the City shall provide annual progress reports to the DNR detailing its progress in the Watershed, the BMPs implemented, verification of ongoing practices, and the nutrient load reductions obtained. To the extent nutrient load reductions were committed as offsets towards use in the City's NPDES permit requirements, the progress report shall identify overall progress towards the 5-year goals for N and P reductions, as well as what percentage of reductions come from technological improvements versus work in the watershed. DNR also expects the report to sum the load reductions (i.e., pounds) in each year for each of the pollutants at issue (e.g., N and P). This should not require additional calculations, instead merely summing already quantified pounds of nutrient load reductions used as reported in the state's NRE registry/tracking system.

D. Achieving Total NRS Goals. The City is committing to reaching the nutrient reduction goals outlined within the NRS using a combination of technological approaches and watershed offsets, if this is achievable under a feasibility and reasonableness analysis under IAC 567-62.8(5), by 2035 or the date otherwise feasible under a technology analysis, whichever is earlier. If the City is relying primarily on watershed-based nutrient reducing practices to achieve these goals, progress must be shown consistent with commitments and timeframes detailed in the watershed plan for each permit cycle toward achieving the total NRS nutrient reduction goals.

E. Future Requirements. If the City implements a watershed-based nutrient reduction plan in accordance with this MOU, DNR shall not impose any additional nutrient reduction requirements during the plan implementation term unless required to do so by law.


F. Look Back Period. The City initiated its voluntary efforts in watershed work in 2002. For purposes of nutrient reducing practices, the City may record modeled nutrient reductions from BMPs implemented since May of 2013 in the NRE, as outlined above. However, the City must be able to fully document the field conditions prior to the City-initiated BMPs. These nutrient load reductions may be applied to the nutrient reduction goals committed to by the City, and ongoing practices may continue to be used for offsets.

8. Modification and Termination of Agreement. This agreement shall be in effect unless modified or terminated by mutual agreement of the parties, or the DNR elects to terminate this MOU to coincide with the expiration of the City's next NPDES permit by

submitting written notice to the City one-hundred eighty (180) days in advance of the current permit's expiration.

CITY OF STORM LAKE, IOWA

IOWA DEPARTMENT OF NATURAL
RESOURCES


By: 
Michael Porsch

By: _____

Its: Mayor

Its: _____

ATTEST:


Mayra A. Martinez, City Clerk