

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MOU) is between the City of Joliet (the City) of Will County, Illinois, Prairie Rivers Network (PRN) and the Illinois Chapter of the Sierra Club (SC).

PURPOSE OF THIS AGREEMENT

1. To allow the City of Joliet to meet its wastewater management needs while satisfying Illinois antidegradation and other water pollution control requirements.
2. To provide long-term protection of and improvements to the water quality of the Lower DuPage River.

BACKGROUND

The City of Joliet is seeking a National Pollution Discharge Elimination System (NPDES) permit from the Illinois Environmental Protection Agency (IEPA) to authorize an expansion of the City's Aux Sable Wastewater Treatment Plant (WWTP). The proposed plant expansion would increase pollutant loadings to the Lower DuPage River. Illinois water pollution control regulations require the City to minimize such pollutant loadings.

The City worked with Prairie Rivers Network and Sierra Club, non-profit river protection organizations, to assist it in meeting water quality protection requirements. This MOU sets forth the duties of all parties during the life of NPDES permit No. IL 0076414, as modified, as accepted by their signatures below.

AGREEMENT

The design average flow of the WWTP will increase from a daily average flow of 3.2 million gallons per day (MGD) to 7.7 MGD. In order to treat the expanded waste stream, the City will complete various upgrades to the WWTP including but not limited to additional grit removal, a selector structure upstream of the existing oxidation ditch, two additional clarifiers, modifications to the UV disinfection system, one additional biosolids storage tank, and a new chemical feed building.

Biological Nutrient Removal (BNR). In order to minimize nutrient loadings to the Lower DuPage River, the City will construct a new selector structure consisting of four individual selectors upstream of the existing oxidation ditch. The structure will be constructed for maximum operational flexibility and can operate in either AO mode, AO with RAS denitrification or UCT mode. Chemical phosphorus removal will be installed as a back-up to BNR. The City agrees to the following NPDES permit Special Conditions.

SPECIAL CONDITION W: The Permittee shall operate the expanded facilities for biological nutrient removal (BNR) to the maximum extent feasible.

The Permittee shall notify the IEPA in writing of any operational changes and corrective measures that are operational in nature to be taken if the treatment plant exceeds the average monthly goal concentration values of 10 mg/L of Total Nitrogen and 0.8 mg/L of Total Phosphorus in the effluent, as long as those operational changes do not result in an exceedance of another limit included in the NPDES permit. These goal concentrations may be re-evaluated in the next permit cycle following start-up and operation of the biological nutrient removal system. Correspondence shall be directed to:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section, Mail Code #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency
Bureau of Water
Des Plaines Field Office
9511 West Harrison Street
Des Plaines, Illinois 60016

Nutrient Implementation Planning (NIP) and Participation in Watershed Group. The City will remain active in the Lower DuPage River Watershed Coalition (LDRWC) or a subsequent group formed by the joining of the Lower DuPage Watershed Coalition and the DuPage River Salt Creek Workgroup (DRSCW). The City agrees to the following Special Conditions:

SPECIAL CONDITION X:

DuPage River/Salt Creek and Lower DuPage River Watershed Coalition Special Requirements

1. The Permittee shall participate in the DuPage River Salt Creek Workgroup (DRSCW) and the Lower DuPage River Watershed Coalition (LDRWC). The Permittee shall work with other watershed workgroup members of the DRSCW and LDRWC to determine the most cost effective means to remove dissolved oxygen (DO) and offensive condition impairments in the DuPage River Salt Creek watersheds.
2. The Permittee shall ensure that the following projects and activities set out in the DRSCW and LDRWC Nutrient Implementation Plan (April 16, 2015), are completed (either by the permittee or through the DRSCW/LDRWC) by the schedule dates set forth below; and that the

short term objectives are achieved for each by the time frames identified below:

Project Name	Completion Date	Short Term Objectives	Long Term Objectives
IPS Tool/ Project Identification Study	December 31, 2018	Identify stressor response gradients and priority projects	Guide adaptive management activities
NPS Phosphorus Feasibility Analysis	December 31, 2021	Assess NPS performance from reductions leaf litter and street sweeping	Reduce NPS contributions to lowest practical levels

3. The Permittee shall participate in implementation of a watershed Chloride Reduction Program, either directly or through the DRSCW/LDRWC. The program shall work to decrease DRSCW/LDRWC watershed public agency chloride application rates used for winter road safety, with the objective of decreasing watershed chloride loading. The Permittee shall submit an annual report on the annual implementation of the program identifying the practices deployed, chloride application rates, estimated reductions achieved, analyses of watershed chloride loads, precipitation, air temperature conditions and relative performance compared to a baseline condition. The report shall be provided to the Agency by March 31 of each year reflecting the Chloride Abatement Program performance for the preceding year (example: 2015-16 winter season report shall be submitted no later than March 31, 2017). The Permittee may work cooperatively with the DRSCW/LDRWC to prepare a single annual progress report that is common among DRSCW/LDRWC permittees.

4. The Permittee shall submit an annual progress report on the projects listed in the table of paragraph 2 above to the Agency by March 31 of each year. The report shall include project implementation progress. The Permittee may work cooperatively with the DRSCW/LDRWC to prepare a single annual progress report that is common among DRSCW/LDRWC permittees.

5. Total phosphorus in the effluent shall be limited as follows:
 - a. The Permittees effluent limitation shall be 1.0 mg/L monthly average for the 10 year duration of the special condition.
 - b. The Agency may modify this permit if the DRSCW/LDRWC has developed and implemented a trading program for POTWs in the

DRSCW/LDRWC watersheds, providing for reallocation of allowed phosphorus loadings between two or more POTWs in the DRSCW/LDRWC watersheds, that delivers the same River watershed results of overall watershed phosphorus point-source reduction and loading anticipated from the uniform application of the applicable 1.0 mg/L monthly average effluent limitation among the POTW permits in the DRSCW/LDRWC watersheds and removes DO and offensive condition impairments and meet the applicable dissolved oxygen criteria in 35 IL Adm. Code 302.206 and the narrative offensive aquatic algae criteria in 35 IL Adm. Code 302.203.

c. The Agency may modify this permit if the DRSCW/LDRWC has demonstrated and implemented an alternate means of reducing watershed phosphorus loading to a comparable result within the timeframe of the schedule of this condition and removes DO and offensive condition impairments and meet the applicable dissolved oxygen criteria in 35 IL Adm. Code 302.206 and the narrative offensive aquatic algae criteria in 35 IL Adm. Code 302.203.

6. The Permittee shall monitor the wastewater effluent, consistent with the monitoring requirements on Page 2 of this permit, for total phosphorus, dissolved phosphorus, nitrate/nitrite, total Kjeldahl nitrogen (TKN), ammonia, total nitrogen (calculated), alkalinity and temperature at least once a month. The Permittee shall monitor the wastewater influent for total phosphorus and total nitrogen (calculated) at least once a month. The results shall be submitted on NetDMRs to the Agency unless otherwise specified by the Agency.
7. The Permittee shall submit a Nutrient Implementation Plan (NIP) for the DRSCW/LDRWC watersheds that identifies phosphorus input reductions by point source discharges, non-point source discharges and other measures necessary to remove DO and offensive condition impairments and meet the applicable dissolved oxygen criteria in 35 IL Adm. Code 302.206 and the narrative offensive aquatic algae criteria in 35 IL Adm. Code 302.203. The NIP shall also include a schedule for implementation of the phosphorus input reductions and other measures. The Permittee may work cooperatively with the DRSCW/LDRWC to prepare a single NIP that is common among DRSCW/LDRWC permittees. The NIP shall be submitted to the Agency by December 31, 2023.

SPECIAL CONDITION Y: The Permittee shall implement the phosphorus input reductions and other measures necessary to remove DO and offensive conditions impairments and meet the applicable DO and narrative criteria set forth in the DRSCW/LDRWC NIP that are applicable to said Permittee as soon as possible. Permittee shall demonstrate that the schedule for input reductions applicable to Permittee

achieves such reductions as soon as possible and shall document the steps needed to modify or install treatment facilities, operations or other measures to meet the required input reductions and the time each of those steps will take.

SPECIAL CONDITION Z: Except in the case that the NIP determines that a greater P input reduction is necessary and achievable by an earlier date, an effluent limit of 0.5 mg/L P annual average will be applicable to Permittee beginning January 1, 2030, unless Permittee demonstrates pursuant to the EPA's Financial Capability Assessment Framework that achieving this limit by 2030 is not feasible or it is determined that achieving this limit by 2030 would require ferric chloride or alum addition.

Permit Limits. The City accepts the following NPDES permit concentration limits in its next permit:

<u>Parameter</u>	<u>Current Permit (Monthly Average)</u>	<u>Proposed Permit (Monthly Average)</u>
CBOD ₅	20 mg/L	10 mg/L
Suspended Solids	25 mg/L	12 mg/L
Ammonia		
March-May/Sept.-Oct	1.5 mg/L	1.5 mg/L
June-August	1.2 mg/L	1.2 mg/L*
November-February	3.7 mg/L	3.7 mg/L
Phosphorus		1.0 mg/L
Nitrogen		Monitor Only

*It is anticipated that a lower summer ammonia limit will be imposed within the next permit cycle due to pending federal regulatory changes. The anticipated ammonia limit is 0.5 mg/L.

In exchange for the covenants made herein by the City of Joliet, PRN and SC will compose and deliver a letter to the IEPA recommending issuance of the state NPDES permit following receipt and review of a draft permit that contains the special conditions set forth herein. The parties agree that it is their intent that all future NPDES permits for this facility shall include the special conditions set forth herein until the NIP or Special Condition Z is fully implemented, whichever is later.

If the Permittee determines that meeting a 0.5 mg/L P limit by 2030 is not feasible, it shall meet and confer with representatives of Sierra Club and Prairie Rivers Network regarding the basis for the non-feasibility finding and on the steps the Permittee is taking to meet Special Condition Y.

By our signatures below, we agree to abide by the terms of this Memorandum of Understanding.



James D. Hock
City Manager, City of Joliet

10/5/16
Date



James E. Eggen
Director of Public Utilities, City of Joliet

10/4/2016
Date



Kim Knowles
Staff Attorney
Prairie Rivers Network

September 28, 2016
Date



Cindy Skrukrud
Clean Water Program Director
Sierra Club, Illinois Chapter

October 4, 2016
Date