

**AMENDMENT NO. 2 to
ENGINEERING SERVICES AGREEMENT
Effluent Phosphorus Compliance Plan (Project)
Original Agreement Executed July 21, 2015**

This Amendment is by and between:

City of La Crosse (Owner)
La Crosse Utilities Office
400 La Crosse Street
La Crosse, WI 54601

and

Donohue and Associates, Inc. (Donohue)
3311 Weeden Creek Road
Sheboygan, WI 53081

Who agree to amend the original Agreement, as follows:

PART I – B. SCOPE OF SERVICES

The Services have been modified to include the Services described generally below:

Donohue will work with City of La Crosse to develop a 2018 Facilities Plan Amendment that builds off of the 2008 Facility Plan, the 2017 Rerating Project, and the Phosphorus Study. The Facilities Plan will outline a phosphorus compliance strategy as well as a comprehensive capital improvement program (for the Wastewater Treatment Facility) aimed at enhancing efficiency, maintaining reliability, and maintaining Permit compliance throughout the 20-year planning horizon. The Facilities Plan will also outline a financing program to pay for the phosphorus compliance a comprehensive capital improvement program.

The original Scope of Services has been modified to include the specific Tasks below. *The line items denoted as ✓ are formal deliverables that will be incorporated in the Facilities Plan Report.*

Task 1 – Project Definition/Kickoff Workshop

- ❖ Submit Information Request (which may include such things as):
 - Typical Information Request might include the following (but we have most of this, so for this project it'll just be mostly bringing what we have to current):
 - Influent flow and loading records (5 years)
 - Biosolids records (5 years)
 - Recent engineering reports
 - Current analytical results
 - Operating Records
 - Maintenance Records

- O & M Manuals
- Plans and Specifications
- Engineering Reports
- NPDES Permit
- WDNR Correspondence
- Industrial Discharge Records
- Hauled-In Waste Records
- Chemical purchases (Alum and polymer)
- Natural Gas and Electric Rates
- User Charge System
- ❖ Compile Information
- ❖ Conduct Kickoff Workshop
 - Confirm Project Goals, Approach, Schedule
 - Summarize “What We Collectively Know”, based on
 - Key Elements from 2008 Facility Plan
 - Upgrades/Changes Since 2008
 - Capacity Rerate Evaluation
 - Phosphorus Study
 - Information Request Items
 - Discuss Key Issues, Understandings, Challenges, Concerns
 - Define economic and non-economic alternative evaluation criteria and scoring methodology.
- ✓ **TM 1: Project Definition**

Task 2 – Document Existing Conditions

- ❖ Update facility operations and performance assessment to (from Capacity Rerate Evaluation and Phosphorus Study) to current, including documentation of more recent performance and operating changes resulting from optimization activities
- ❖ Facility Condition/Physical Assessment Site Visit
 - Multi-Discipline Site Visit to Inspect Condition and Other Issues Related to Current Facility
- ✓ **TM 2: Existing Conditions**

Task 3 – Define Future Conditions

- ❖ Future Flows and Loadings
 - Work closely with the Utility to assess flow and loading projections within the City and contributing communities. Assessments will include consideration of:
 - Sewer service land use plans;
 - Survey of major industrial and commercial dischargers.
 - Before performing Task 6, meet with the most significant and relevant industrial dischargers and request projected high and low loading scenarios. Bracketing the loading spectrum will allow Donohue, the Owner, and the significant dischargers to evaluate sizing and cost sensitivities to these loadings. Donohue expects the significant industrial dischargers to include City Brewery and Kwik Trip.
 - After performing Task 6 and developing an understanding of potential rate increases attributed to various implementation strategies, meet with the most significant and relevant dischargers to review the cost implications of the project low and high loading scenarios.

- Information gathered will be used to develop 5-, 10- and 20-year flow and loading projections developed in a manner consistent with WDNR guidelines.
- ❖ Regulatory Landscape
 - Document current and expected regulatory conditions that may affect the Wastewater Utility during the 20-year planning period
 - Request future effluent limits from WDNR
 - Includes a structured/focused conference call with Paul Kent to receive MEG input/perspectives
- ✓ **TM 3: Future Conditions**

Task 4 – System Needs

- ❖ Based on results of Tasks 2 and 3 as well as understandings from previous studies document and prioritize system needs at the WWTP in a concise draft TM
- ❖ Hold conference call with Utility Staff to review draft System Needs TM
- ✓ **TM 4: System Needs**

Task 5 – Develop Retained Alternatives

Task includes two important Workshops: the Brainstorming Workshop and the Retained Alternatives Workshop.

- ❖ The Brainstorming Workshop is a fun, relaxed, non-judgmental, brainstorming session where no ideas are bad ideas and all ideas are welcome. The purpose is to identify alternatives that might address current, near-term, and long-term deficiencies. The hope is, and our experience has been, that uninhibited collective brainstorming by experienced operators and engineers results in a wonderful evolution of ideas; where one participant puts forth an idea that, with the help of the Workshop participants, evolves into something somewhat different but, something better. For instance, quite often a Donohue engineer offers up a potential solution or alternative, and the operations staff hones it into something a bit different but better for their facility. Together, we develop solutions that are superior to those we can develop on our own.
- ❖ The age and capacity of solids-train processes, as well as the logistics associated with the current biosolids land application program, are of particular concern. The Owner and Donohue know in advance that the solids-related issues and concerns summarized below will be considered during this Task. There will certainly be liquid-train issues and concerns discussed and considered during this Task as well. The solids- and liquid-train alternatives the Owner feels warrant further, more detailed consideration will be advanced to the next Task.
 - The Future of Land Applying Biosolids
 - Regulatory Landscape: Wisconsin and Minnesota Rules Outlook and Timing
 - Agricultural Landscape: Present-Day and Future Landowner Preferences
 - Anaerobic Digestion and Biogas Utilization Alternatives and Considerations
 - Digestion Capacity
 - Digester Mixing
 - Digester Heating
 - Building/Campus Heating
 - Pre-Digestion Thickening
 - High-Strength Waste Receiving and Digestion
 - Biogas Production
 - Biogas-to-Electricity
 - Biogas-to-Natural Gas
 - Heat Recovery from Biogas-to-Electricity
 - Class A and Class B Biosolids End-Use Considerations
 - Class A Alternatives: Liquid, Cake, and Pellets

- Economic Factors: Capital, Annual, Present Worth, User Rates
 - Non-Economic Factors
 - Class B Alternatives: Liquid and Cake
 - Economic Factors: Capital, Annual, Present Worth, User Rates
 - Non-Economic Factors
 - Incineration Alternatives
 - Economic Factors: Capital, Annual, Present Worth, User Rates
 - Non-Economic Factors
 - Landowner Agreements to Enhance Land Application Logistics
 - Economic Factors: Capital, Annual, Present Worth, User Rates
 - Non-Economic Factors
- ❖ At the conclusion of the Brainstorming Workshop, those in attendance will generate a list of alternatives worthy of further consideration. Working from this list, Donohue will generate preliminary and specific information relevant to those alternatives. At the subsequent Retained Alternatives Workshop, attendees will consider this information and determine which of these alternatives will be carried forward for further development and analysis in the next Task.
- ❖ Alternatives Brainstorming Workshop
- Review System Needs
 - Brainstorm/Identify Potential Alternatives
 - Initial Screening of Alternatives
- ❖ Advanced Alternatives Screening/Retained Alternatives Workshop
- Preliminary Assessment of Screened Alternatives
 - Advanced Screening/Develop List of Alternatives for Detailed Evaluation
- ✓ **TM 5: Alternatives Screening/Retained Alternatives**

Task 6 – Evaluate Alternatives

The efforts leading up to this Task will produce a list of alternatives deemed worthy of thorough and detailed economic and non-economic evaluation. For each alternative, we will develop performance assessments, capital cost opinions, operating cost opinions, present worth or net present value cost opinions (life-cycle costs), non-economic advantages, and non-economic disadvantages. This information will allow the City to compare competing alternatives and ultimately select the alternatives to implement.

Develop capital cost opinions for equipment and infrastructure improvements that address existing or future concerns that do not have a *competing* alternative (e.g., replace aging or deteriorating treatment facility and pumping station equipment, replace deteriorating collection system piping).

- ❖ Define Evaluation Criteria (Economic/Non-economic)
 - ❖ Detailed Alternatives Development
 - ❖ Alternatives Evaluation Workshop
 - Review Alternatives
 - Select Alternatives
 - Assess Implementation Plan
 - Discuss Funding Alternatives
- ✓ **TM 6: Alternatives Analysis**
- ❖ **At or near the completion of this Task, Donohue will use the work products related to this Project to develop and submit the Preliminary Compliance Alternatives Plan required by the Owner's WPDES Permit by January 1, 2019.**

Task 7 – Develop Recommended Plan

During this Task the City will develop its “roadmap for the future.” Like the Tasks before it, it will be a collaborative effort. Donohue will give the City clear, reliable, and actionable decision-making information; the City will select and identify the actions it deems “right” for the City and its rate payers.

TM 7.A – Technical Plan will document the City-selected actions and implementation plan for the WWTP improvements resulting from Task 6. The TM will document the rationale for these actions, the timing of these actions (when), and the estimated capital and annual cost implications.

TM 7.B – Financial Plan will document the estimated rate implications of the City-selected actions. We will work with you using the timeline of costs (capital and annual) in TM 7.A, the historical and projected flows and loadings, and anticipated/probable funding mechanisms to estimate the user rate impacts required to implement the actions defined in TM 7.A – Technical Plan. Because TM 7.A and TM 7.B are directly linked, they will be produced in an iterative and parallel manner.

- ❖ Recommended Plan Workshop
- ✓ **TM 7.A – Technical Plan**
- ✓ **TM 7.B – Financial Plan**

Task 8 – Develop Facilities Plan Amendment

Prepare the Facility Plan, which will include the TMs and a draft summary report (in an Executive Summary manner) that summarizes the results of Tasks 1-7 and references the TMs. Prepare a Facility Plan Presentation and meet with the City of La Crosse to review the Draft Facility Plan for the purpose of soliciting feedback and obtaining consensus. Finalize the draft report and assist the City with submitting to WDNR for review/approval. Respond to WDNR comments, revise the Facility Plan (if required) to address comments provided by the WDNR, and develop the Final Facility Plan.

- ✓ **Draft Facilities Plan Amendment Report**
- ❖ Facilities Plan Presentation/Review Meeting/Public Meeting
- ✓ **Final Draft Facilities Plan Report/WDNR Submittal**
- ❖ Assist City Responding to WDNR Comments/Attaining WDNR Approval
- ✓ **2018 Facilities Plan Amendment Report**
- ❖ **The Final Facilities Plan Amendment will satisfy the requirement of the Final Compliance Alternatives Plan required by the Owner’s WPDES Permit by January 1, 2020.**

C. PROJECT TIMING

Donohue shall be authorized to commence the Services set forth herein upon execution of this Amendment. Donohue will submit a DRAFT Facility Plan Amendment Report by December 31, 2018. Donohue will submit the WPDES Permit required submittals outlined herein to the Wisconsin Department of Natural Resources by their respective Permit-required deadlines.

PART III – A. COMPENSATION

Compensation for the services set forth in Part I shall be increased \$100,000, resulting in a total contract amount of \$176,122.

The total contract value = \$72,422 (original) + \$3,700 (Amendment #1 per February 21, 2018 email) + \$100,000 (this Amendment #2).

**City of La Crosse Sanitary Sewer Utility
Wastewater Facilities Plan Proposal
Cost Estimate Summary
Donohue & Associates, Inc.**

Task Sub-Task	Gerbitz PM \$ 240	Lynne Process \$ 140	Marten Sr Process \$ 210	Junior Engineer \$ 115	Cramer Sr Ops \$ 175	Berktoed Sr Elec \$ 190	Wills Sr Mech \$ 190	Schuenamann Sr Struct \$ 155	Goecks Sr Controls \$ 155	Total Hours	Total Labor	Travel	Total Cost
1 Project Definition/Kickoff Workshop										-	\$ -		\$ -
Info Request/Compile Information		4	1	8						13	\$ 1,690		\$ 1,690
Kickoff Workshop		8	8							16	\$ 2,800	\$ 600	\$ 3,400
TM 1- Project Definition	1	4	1	4						10	\$ 1,470		\$ 1,470
2 Document Existing Conditions										-	\$ -		\$ -
Update Existing Data/Plant Performance/BioWin Model		12	12	8						32	\$ 5,120		\$ 5,120
Facility Assessment Site Visit		8				8	8	8		32	\$ 5,400	\$ 1,200	\$ 6,600
Compile Site Visit Notes/Findings		2				2	2	2	2	10	\$ 1,660		\$ 1,660
TM 2 - Existing Conditions	1	8	1							10	\$ 1,570		\$ 1,570
3 Define Future Conditions										-	\$ -		\$ -
Assess Future Community Growth/Flows/Loadings	2	16	2							20	\$ 3,140		\$ 3,140
SIU Survey/Contacts/Meeting on Future Conditions	12	12								24	\$ 4,560		\$ 4,560
Request Future Effluent Limits		2								2	\$ 280		\$ 280
Regulatory Assessment Conference Call	2	2	2							6	\$ 1,180		\$ 1,180
TM 3 - Future Conditions	1	16	1	4						22	\$ 3,150		\$ 3,150
4 System Needs										-	\$ -		\$ -
Draft System Needs TM		4	1							5	\$ 770		\$ 770
System Needs Conference Call with City		2	2							4	\$ 700		\$ 700
TM 4 - System Needs		1	1							2	\$ 350		\$ 350
5 Select Evaluation Alternatives										-	\$ -		\$ -
Brainstorming Workshop Preparation		4	1	2						7	\$ 1,000		\$ 1,000
Brainstorming Workshop	8	12	8		8					36	\$ 6,680	\$ 1,200	\$ 7,880
Retained Alternatives Workshop Preparation	1	8	1	2	1					13	\$ 1,975		\$ 1,975
Retained Alternatives Workshop	2	8	8		2					20	\$ 3,630	\$ 1,200	\$ 4,830
TM 5 - Alternatives Screening/Retained Alternatives	1	8	2		1					12	\$ 1,955		\$ 1,955
6 Evaluate Alternatives										-	\$ -		\$ -
Define Evaluation Criteria	1	2								3	\$ 520		\$ 520
Detailed Alternatives Development	4	16	2	32		4	4	2	2	66	\$ 9,440		\$ 9,440
Alternatives Evaluation Workshop	8	12	8							28	\$ 5,280	\$ 1,200	\$ 6,480
TM 6 - Alternatives Analysis	1	8	1	4						14	\$ 2,030		\$ 2,030
7 Develop Recommended Plan										-	\$ -		\$ -
Draft Technical Plan	2	16	4	4						26	\$ 4,020		\$ 4,020
Draft Financial Plan	4	8	2							14	\$ 2,500		\$ 2,500
Recommended Plan Workshop	8	10	8							26	\$ 5,000		\$ 5,000
TM 7.A Technical Plan	1	8	2	4						15	\$ 2,240		\$ 2,240
TM 7.B Financial Plan	2	8	1							11	\$ 1,810		\$ 1,810
8 Develop Facilities Plan Amendment/Obtain WDNR Approval										-	\$ -		\$ -
Draft Facilities Plan Amendment (FPA) Report	4	16	4	4						28	\$ 4,500		\$ 4,500
FPA Presentation/Review Meeting/Public Meeting	8	16								24	\$ 4,160	\$ 830	\$ 4,990
WDNR Submittal/Response to Comments	2	4	2							8	\$ 1,460		\$ 1,460
Finalize 2018 Facilities Plan Amendment Report	4	4	1							9	\$ 1,730		\$ 1,730
Total Hours	80	269	87	76	12	14	14	12	4	568	\$93,770	\$ 6,230	\$ 100,000