

RESOLUTION 15-06

APPROVING A PROFESSIONAL SERVICES AGREEMENT WITH DONOHUE & ASSOCIATES, INC. IN CONNECTION WITH NUTRIENT AND MERCURY REMOVAL PLANNING ASSISTANCE

WHEREAS the Village of Manteno, a Municipal Corporation, owns and operates a wastewater treatment facility; and

WHEREAS the Village of Manteno acting by and through its Village President and Board of Trustees find it in the public interest that a certified professional be contracted to provide assistance in developing a nutrient and mercury removal plan; and

WHEREAS it is necessary to contract with a professional company with certified personnel skilled to provide assistance in developing a nutrient and mercury removal plan; and

WHEREAS Donohue & Associates, Champaign, IL, is a company with professional and certified personnel skilled to provide assistance in developing a nutrient and mercury removal plan.

NOW THEREFORE BE IT RESOLVED by the President and Board of Trustees of the Village of Manteno, Kankakee County, Illinois as follows:

SECTION 1: That an agreement for Professional Services with Donohue & Associates, Champaign, IL, in connection with providing assistance in developing a nutrient and mercury removal plan for the Village's wastewater treatment facility and the same is hereby approved.

SECTION 2: That the Village President is hereby authorized, empowered and directed to execute said agreement for Professional Services provided for in Section One of this resolution in the form and content of **Exhibit "A"** which is attached hereto and made a part hereof.

Passed by the Board of Trustees of the Village of Manteno, Kankakee County, Illinois at a regular meeting thereof held on 19th day of October, 2015 and approved by me as Village President on the same day.

RECORD OF THE VOTE	Yes	No	Abstain	Absent
President Timothy Nugent				
Trustee Timothy Boyce	✓			
Trustee Samuel Martin	✓			
Trustee Diane Dole	✓			
Trustee Todd Crockett				✓
Trustee Joel Gesky	✓			
Trustee Wendell Phillips	✓			
TOTAL VOTES <i>or</i>				
BY OMNIBUS VOTE	5			



Timothy O. Nugent, Village President

ATTEST:



Alisa Blanchette, Village Clerk



ENGINEERING SERVICES AGREEMENT

Project: Nutrient and Mercury Removal Planning Assistance (Project)

This Agreement is by and between:

Village of Manteno (Owner)
98 East Third Street
Manteno, IL 60950

and

Donohue & Associates, Inc. (Donohue)
2919 Crossing Court, Suite 12
Champaign, IL 61822

Who agree as follows:

Owner hereby engages Donohue to perform the Services set forth in Part I for the compensation set forth in Part III. Donohue will be authorized to commence the Services upon execution and receipt of this Agreement from Owner. Owner and Donohue agree that this signature page, together with Parts I through IV attached, constitute the entire agreement for this Project.

APPROVED FOR OWNER

By: [Signature of Timothy O. Nugent]

Printed Name: TIMOTHY O. NUGENT

Title: MAYOR

Date: 10-19-2015

APPROVED FOR DONOHUE

By: [Signature of Eric Cockerill]

Printed Name: Eric Cockerill, P.E.

Title: Vice President

Date: 10/12/2015

PART I
PROJECT DESCRIPTION/SCOPE OF SERVICES/TIMING

A. PROJECT DESCRIPTION

The Village of Manteno (Owner) owns and operates a wastewater treatment facility rated for 1.15 MGD average design flow. The Illinois Environmental Protection Agency (IEPA) recently issued a new NPDES effluent permit for this facility that includes a 1 mg/L limit for Total Phosphorus with an implementation schedule and two Special Conditions. In addition, the new permit requires removal of mercury down to 12 ppt (parts per trillion) in the effluent.

Phosphorus Limit Compliance

The first special condition requires a nutrient removal “feasibility study” be completed within 18 months of the date of the permit. The feasibility study is intended to evaluate improvements to the facility to remove total phosphorus to various levels of removal. Those levels are 1 mg/L, 0.5 mg/L and 0.1 mg/L. The study should identify the recommended improvements for each removal level, including capital and operating costs as well as financial impacts to the residential rate payers.

The second special condition requires a nutrient removal “optimization study” be completed within 18 months of the date of the permit. The optimization study is intended to determine if any operational changes or low cost capital projects could be adopted to increase the amount of nutrients (nitrogen and phosphorus) removed by the facility. Potential source control is included as a potential area for improvement.

The Village has contracted Donohue to complete a study of the existing facility, including the use of computerized process modeling using BioWin, to complete both the optimization study and the feasibility study. The feasibility study report is intended to become a facility plan meeting the requirements of the IEPA required to qualify for low interest loans through the Agency’s State Revolving Loan (SRF) program if the Village chooses to fund the improvements in this fashion.

The first phase of nutrient removal studies include development of a sampling program for each facility and data analysis for the sampling program. Donohue will develop a recommended sampling program. Samples will be collected by Village staff and analyzed by a third party laboratory. The Village will contract with the laboratory directly to perform the analyses identified by Donohue. Donohue will analyze the data provided by the laboratory for use in the process model.

The second phase of the studies will be development, calibration, and validation of a steady state process model.

The third phase of the studies will be use of the process model to evaluate various options needed to meet removal levels. Options evaluated will include a “low capital” option (for the optimization study), chemical phosphorus removal, and biological phosphorus removal. Up to three alternatives will be evaluated for the feasibility study; and three alternatives for the optimization study.

The last phase of the studies will be to develop costs for each alternative, including capital and operating costs, and present the results of the studies in two reports, one to meet the requirements for the optimization study and the second to meet the requirements of the feasibility study.

Mercury Limit Compliance

The new permit limit for mercury is 12 ppt in the effluent from the wastewater treatment facility. The reduction in effluent mercury can be accomplished by source identification and reduction as well as by advanced treatment technologies.

The first phase in the mercury limit compliance effort will be to create a list of potential sources of mercury that contribute wastewater to the wastewater treatment facility. Donohue will develop a sampling plan to collect samples from these sites in order to determine mercury loadings to the wastewater treatment facility from the various sources. The influent and effluent to the wastewater treatment facility will also be tested for mercury as part of the special sampling campaign required for the phosphorus removal feasibility study.

The second phase of the mercury compliance study will be the review of the data collected during the special monitoring program as well as the historical mercury data available. The major sources of mercury will be identified and a strategy to reduce the sources of mercury to the wastewater treatment plant will be developed and discussed with the plant staff and Village officials.

The third phase of the mercury compliance study will be to develop and evaluate various options for processes at the wastewater treatment plant to treat and remove mercury to the required levels. Options evaluated will include chemical precipitation, adsorption and filtration. Up to four total alternatives will be evaluated. These alternatives will be compared to the source control opportunities from the various contributing sources identified.

The last phase of the studies will be to develop costs for each alternative, including capital and operating costs, and present the results of the study in a report to the Village.

B. SCOPE OF SERVICES

Basic Services to be provided by Donohue for this Project under this Agreement are as follows:

1.0 Phosphorus Limit Compliance

Special Monitoring Program

- 1.1 Attend a one day site visit to tour the facility. The purpose of the site visit is to gather background knowledge and identify flow streams that require sampling.
- 1.2 Prepare a draft monitoring program for the facility to accomplish the following sampling and testing activities:
 - a. Donohue will recommend mercury, phosphorus and nitrogen sampling and testing activities to be added to the facilities' regular operations monitoring program.
 - b. Donohue will recommend additional sampling and testing for a two week special monitoring program. This program will provide the necessary data to fully characterize the influent wastewater at the facility for model setup.
- 1.3 Attend a meeting to review the draft monitoring program with the Village's plant staff and laboratory staff.
- 1.4 Incorporate Village staff comments and prepare final version of the monitoring programs. Deliver the final version in electronic format.
- 1.5 Receive electronic data files with available operating and performance data related to influent quality, flow rates, performance monitoring, aeration rates, RAS pumping rates, etc.
- 1.6 Receive electronic data files from the special monitoring program and prepare summary tables displaying average, minimum, and maximum values for each of the sampling parameters. Compare these values with default model values.
- 1.7 Prepare influent characteristic input tables for use with the BioWin process simulator program for the facility. These tables will be used for setting up BioWin models of the facilities.

Model Setup and Evaluations

- 1.8 Evaluate historic influent flows and loadings to the plant from 2010 to present along with the spring and winter monitoring program data. This data will be used to set up the framework of the influent characterization for the model.
- 1.9 Evaluate historic operations data from 2010 to present along with the special monitoring program data and receive input from the operations staff to setup the framework of the existing plant simulation and calibration.
- 1.10 Develop a steady state model of the existing facility with a focus on the activated sludge treatment train using the BioWin Process Simulator.
- 1.11 Calibrate and validate the model using special monitoring and historic operations data along with input from the staff on operating strategies.
- 1.12 Evaluate operational and "very low capital" cost alternatives (<\$50,000) for "optimization" of existing nutrient removal. Options may include temporary baffles, adjusted pumping rates, alternate influent or RAS application points, cycling of aeration, etc. Source control options will be provided by the Owner.

- 1.13 Using the calibrated and validated model, evaluate the following three levels of nutrient removal:
 - a. Effluent total phosphorus limit of 1 mg/L and effluent total nitrogen limit of 10 mg/L.
 - b. Effluent total phosphorus limit of 0.5 mg/L and effluent total nitrogen limit of 8 mg/L.
 - c. Effluent total phosphorus limit of 0.1 mg/L and effluent total nitrogen limit of 6 mg/L.
- 1.14 Identify conceptual upgrades required for each of the three levels of nutrient removal along with estimated annual chemical requirements. Phosphorus removal will be evaluated based on both biological and chemical removal strategies.

Report Preparation and Workshop

- 1.15 Prepare a brief Optimization Study Report outlining options and capability for “optimization” of existing nutrient removal. Memorandum will identify potential positive and negative impacts of the proposed changes, if any. Incorporate source control options identified by the Owner. The report is intended to meet the requirements for an “optimization study” as required by permit special conditions.
- 1.16 Prepare a draft Nutrient Removal Planning Report presenting the background, analysis, and results of the nutrient removal evaluations for the facility. The report is intended to meet the IEPA requirements for a “feasibility study” as required by permit special conditions.
- 1.17 Prepare conceptual layout sketches of identified upgrades on a facility site plan for the facility and include as figures in the report.
- 1.18 Prepare conceptual construction and annual operating cost estimates of identified upgrades for the facility and include as tables in the report.
- 1.19 Deliver the draft report in electronic PDF format and attend a workshop to review and discuss the draft report with the Village’s engineering staff and plant staff.
- 1.20 Revise the Nutrient Removal Planning Report based on the comments from the review meeting and deliver the final report in electronic PDF format.

2.0 Mercury Limit Compliance

Potential Source Identification and Sampling

- 2.1 During the site visit with the Village, develop a list of potential sources of mercury discharge to the wastewater treatment facility.
- 2.2 Prepare a draft mercury sampling program for the Village to accomplish the following sampling and testing activities:
 - a. Donohue will recommend the location and number of samples for mercury sampling from the various potential sources of mercury.
- 2.3 Attend a meeting to review the draft monitoring program with the Village's plant staff and laboratory staff.
- 2.4 Incorporate Village staff comments and prepare final version of the monitoring programs. Deliver the final version in electronic format.
- 2.5 Receive electronic data files from the mercury source special monitoring program and prepare summary tables displaying average, minimum, and maximum values for each of the sampling parameters.
- 2.6 Prepare data tables for comparison of source loads to the wastewater treatment facility.

Alternative Evaluation

- 2.7 Develop alternatives for chemical removal of mercury, adsorption and filtration technologies.
- 2.8 Prepare capital and lifecycle costs for the proposed mercury treatment and removal alternatives.

Report Preparation and Workshop

- 2.9 Prepare a draft Mercury Removal Planning Report presenting the background, analysis, and results of the mercury removal evaluations for the facility.
- 2.10 Prepare conceptual layout sketches of identified upgrades on a facility site plan for the facility and include as figures in the report.
- 2.11 Prepare conceptual construction and annual operating cost estimates of identified upgrades for the facility and include as tables in the report.
- 2.12 Deliver the draft report in electronic PDF format and attend a workshop to review and discuss the draft report with the Village's administration staff and plant staff.
- 2.13 Revise the Mercury Removal Planning Report based on the comments from the review meeting and deliver the final report in electronic PDF format.

C. PROJECT TIMING

Donohue shall be authorized to commence the Services set forth herein upon execution of this Agreement. The draft nutrient removal planning report and the mercury removal planning report will be completed within 6 months after special monitoring program data has been received.

PART II
OWNER RESPONSIBILITIES

- A. In addition to other responsibilities of Owner set forth in this Agreement, Owner shall:
1. Identify a person authorized to act as the Owner's representative to respond to questions and make decisions on behalf of Owner, accept completed documents, approve payments to Donohue, and serve as liaison with Donohue as necessary for Donohue to complete its Services.
 2. Furnish to Donohue copies of existing documents and data pertinent to Donohue's Scope of Services, including but not limited to and where applicable: design and record drawings for existing facilities; property descriptions, land use restrictions, surveys, geotechnical and environmental studies, or assessments.
 - a. Provide electronic data files of special monitoring program results for all three wastewater treatment facilities.
 - b. Provide electronic data files of historical influent, effluent, and operating data for all three wastewater treatment facilities from 2010 to present.
 - c. Provide potential source control options for nutrient removal optimization based on existing pretreatment programs, if available.
 3. Provide Donohue safe access to premises necessary for Donohue to provide the Services.

**PART III
COMPENSATION, BILLING AND PAYMENT**

- A. Compensation for the work as defined in the Scope of Services (Part I) of this Agreement shall be in accordance with Donohue's standard chargeout rates in effect at the time the Services are performed. Routine expenses will be billed at cost. The total cost for these basic Services will not exceed \$59,795 without prior written approval from Owner.
- B. Donohue will bill Owner monthly, with net payment due in 30 days.
- C. Donohue will notify Owner if Project scope changes require modifications to the above-stated contract value. Services relative to scope changes will not be initiated without authorization from Owner.
- D. The sampling campaign sampling and analysis costs are not included in the scope or fee. Owner shall pay these costs separate and direct to the selected outside laboratory performing these analyses.

PART IV STANDARD TERMS AND CONDITIONS

1. **STANDARD OF CARE.** Donohue's Services shall be performed in accordance with the standard of professional practice ordinarily exercised by the applicable profession under similar circumstances at the same time and in the locality where the Services are performed. Professional services are not subject to, and Donohue does not provide, any warranty or guarantee, express or implied. Any warranties or guarantees contained in any purchase orders, requisitions, or notices to proceed issued by Owner are void and not binding upon Donohue.

2. **CHANGE OF SCOPE.** The Scope of Services set forth in this Agreement is based on facts known at the time of execution of this Agreement, including, if applicable, information supplied by Owner. For some projects involving conceptual or process development services, scope may not be fully definable during initial phases. As the project progresses, facts discovered may indicate that the scope must be redefined. Donohue will promptly provide Owner with a written amendment to this Agreement to recognize such change, which shall be deemed accepted if not objected to within 15 days of receipt by Owner.

3. **HAZARDOUS ENVIRONMENTAL CONDITIONS.** Unless expressly stated otherwise in the Scope of Services (Part I) of this Agreement, Donohue's scope of services does not include any services relating to a Hazardous Environmental Condition, including but not limited to the presence at the Project site of asbestos, PCBs, petroleum, hazardous substances or any other pollutant or contaminant, as those terms are defined in pertinent federal, state, and local laws. In the event Donohue or any other party encounters a Hazardous Environmental Condition, Donohue may at its option suspend performance of services until Owner: a) retains appropriate consultants or contractors to identify and remediate or remove the Hazardous Environmental Condition; and b) warrants that the Project site is in full compliance with all applicable environmental laws.

4. **SAFETY.** Unless specifically included as a service to be provided under this Agreement, Donohue specifically disclaims any authority or responsibility for general job site safety, or the safety of persons (other than Donohue employees) or property.

5. **DELAYS.** If performance of Donohue's Services is delayed through no fault of Donohue, Donohue shall be entitled to an extension of time equal to the delay and an equitable adjustment in compensation.

6. **TERMINATION/SUSPENSION.** Either party may terminate this Agreement upon 30 days written notice to the other party. Owner shall pay Donohue for all Services, including profit relating thereto, rendered prior to termination, plus any expenses of termination.

If either party defaults in its obligations under this Agreement (including Owner's obligation to make required payments), the non-defaulting party may, after giving seven days written notice, suspend performance under this Agreement. The non-defaulting party may not suspend performance if the defaulting party commences to cure such default within the seven-day notice period and completes such cure within a reasonable period of time.

Donohue may terminate this Agreement upon seven days written notice if: a) Donohue believes that Donohue is being requested by Owner to perform services contrary to law or Donohue's responsibilities as a licensed professional; or b) Donohue's Services for the Project are delayed, suspended, or interrupted for a period of at least 90 days for reasons not attributable to Donohue's performance of Services; or c) Owner has failed to pay any amount due and owing to Donohue for a period of at least 60 days. Donohue shall have no liability to Owner on account of such termination.

7. **OPINIONS OF CONSTRUCTION COST.** Any opinion of construction costs prepared by Donohue is supplied for the general guidance of the Owner only. Since Donohue has no control over competitive bidding or market conditions, Donohue cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to Owner.

8. **RELATIONSHIP TO CONTRACTORS.** Donohue shall serve as Owner's professional representative for the Services, and may make recommendations to Owner concerning actions relating to Owner's contractors. Donohue specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected or used by Owner's contractors. Donohue neither guarantees the performance of any construction contractor nor assumes responsibility for any contractor's failure to perform in accordance with the construction contract documents.

9. **CONSTRUCTION REVIEW.** For projects involving construction, Owner acknowledges that under generally accepted professional practice, interpretations of construction documents in the field are normally required, and that performance of construction-related services by the design professional for the project permits errors or omissions to be identified and corrected at comparatively low cost. Owner agrees to hold Donohue harmless from any claims resulting from performance of construction-related professional services by persons other than Donohue.

10. **INSURANCE.** Donohue will maintain Professional Liability, Commercial General Liability, Automobile, Worker's Compensation, and Employer's Liability insurance coverage in amounts in accordance with legal and Donohue's business requirements. Donohue shall provide to Owner certificates demonstrating such coverage upon request. For projects involving construction, Owner agrees to protect Donohue's interests through appropriate property and liability insurance, and to require its construction contractor, if any, to include Donohue as an additional insured on Contractor's policies relating to the Project. Donohue's coverages referenced above shall, in such case, be excess over contractor's primary coverage.

11. **INDEMNIFICATION.** Donohue shall indemnify and save harmless Owner from and against loss, liability, claims, and damages sustained by Owner due to bodily injury or death to persons or damage to tangible property to the extent caused by the willful misconduct or negligence of Donohue, its agents, or employees.

To the fullest extent permitted by law, Owner shall defend, indemnify and save harmless Donohue, its agents, employees, and representatives from and against loss, liability, claims, and damages (including reasonable attorneys' and consultants' fees) arising from or relating to the Project in any way, except to the extent that such loss, liability, claims or damages are caused by the willful misconduct or negligence of Donohue, its agents or employees. Owner also agrees to require its construction contractor, if any, to include Donohue as an: a) indemnitee under any indemnification obligation to Owner; and b) additional insured under its Commercial General Liability policy.

To the fullest extent permitted by law, Owner shall indemnify, defend, and hold harmless Donohue, its employees, agents, and representatives, and Donohue's subconsultants, from and against any loss, liability, claims and damages caused by, arising out of, or resulting from the presence at the Project site of asbestos, PCBs, petroleum, hazardous substances, or any other pollutant or contaminant, as those terms are defined in pertinent federal, state, and local laws, except to the extent that the loss, liability, or damages are caused solely by the willful misconduct or negligence of Donohue, its agents or employees.

12. **LIMITATIONS OF LIABILITY.** No owner, shareholder, principal, employee or agent of Donohue shall have individual liability to Owner; and Owner covenants and agrees not to sue any such individual in connection with the Services under this Agreement.

Owner agrees that, to the fullest extent permitted by law, Donohue's total liability to Owner for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in any way related to the Project or this Agreement from any causes including, but not limited to, Donohue's negligence, errors, omissions, strict liability, or breach of contract, shall not exceed the proceeds available from Donohue's professional liability insurance policy for a maximum of \$5,000,000 per claim and \$5,000,000 aggregate. Donohue agrees to maintain as a minimum this identified insurance limit for the duration of this Project.

IN NO EVENT AND UNDER NO CIRCUMSTANCES SHALL DONOHUE BE LIABLE TO OWNER FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL OR PUNITIVE DAMAGES.

13. **OWNERSHIP AND REUSE OF PROJECT DOCUMENTS.** All documents and other deliverables, in all media, prepared by or on behalf of Donohue in connection with this Agreement are instruments of service, and Donohue shall hold the copyright to and all other ownership and property interests in such instruments of service. Owner shall not reuse any such documents or other deliverables pertaining to the Project for any purpose other than that for which such documents or deliverables were originally prepared. Owner shall not cause or allow the alteration of such documents or deliverables without written verification and approval by Donohue for the specific purpose intended, and any alteration by Owner shall be at the Owner's sole risk. Owner agrees to defend, indemnify, and hold harmless Donohue from all claims, damages, and expenses (including reasonable attorneys' and consultants' fees), arising out of such reuse or alteration by Owner or others acting through Owner.

14. **ELECTRONIC MEDIA.** Copies of documents that may be relied upon by Owner are limited to printed copies that are signed and sealed by Donohue. Files or information in electronic media are furnished by Donohue to Owner solely for convenience of Owner. If there is a discrepancy between electronic files and printed copies, the printed copies govern.

Because data stored in electronic media format can deteriorate or be modified, the Owner agrees to perform acceptance tests within 60 days. Donohue will not be responsible to correct any errors or for maintenance of documents in electronic media format after the acceptance period.

15. **AMENDMENT.** This Agreement, upon execution by both parties hereto, can be amended only by a written instrument signed by both parties, except as provided in Paragraph 2.

16. **SUCCESSORS, BENEFICIARIES AND ASSIGNEES.** This Agreement shall be binding upon and inure to the benefit of the owners, administrators, executors, successors, and legal representatives of the Owner and Donohue.

The rights and obligations of this Agreement cannot be assigned by either party without written permission of the other party. This Agreement shall be binding upon and inure to the benefit of any permitted assignees.

17. **NO THIRD-PARTY BENEFICIARY.** Nothing contained in this Agreement, nor the performance of the parties hereunder, is intended to benefit, nor shall inure to the benefit of, any third party, including Owner's construction contractors, if any.

18. **STATUTE OF LIMITATION.** To the fullest extent permitted by law, parties agree that, except for claims for indemnification, the time period for bringing claims under this Agreement shall expire one year after Project completion.

19. **DISPUTE RESOLUTION.** Owner and Donohue shall provide written notice of a dispute within a reasonable time and after the event giving rise to the dispute. Owner and Donohue agree to negotiate any dispute between them in good faith for a period of 30 days following such notice. Owner and Donohue may agree to submit any dispute to mediation or binding arbitration, but doing so shall not be required or a prerequisite to initiating a lawsuit to enforce this Agreement.

20. **CONTROLLING LAW.** This Agreement is governed by the laws of the state in which the Project is located.

21. **NO WAIVER.** No waiver by either party of any default by the other party in the performance of any particular section of this Agreement shall invalidate any other section of this Agreement or operate as a waiver of any future default, whether like or different in character.

22. **SEVERABILITY.** The various terms, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.

23. **AUTHORITY.** The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the party for whom they are signing.

24. **SURVIVAL.** All express representations, indemnifications and limitations of liability included in this Agreement will survive its completion or termination for any reason.

Date: March 2009