

#19023-7
AGREEMENT FOR PROFESSIONAL SERVICES
For LAKE COUNTY

This AGREEMENT is entered into by and between Lake County (“County”) and Donohue & Associates, Inc. (“Consultant”), 125 South Wacker Drive, Suite 1850, Chicago, IL 60606.

RECITALS

WHEREAS, Lake County is seeking a Consultant to provide Engineering services for sanitary sewer system modelling and capacity analysis; and

WHEREAS, the Consultant is a professional provider of Engineering services; and

WHEREAS, Lake County Purchasing Division issued Statement of Interest Number 19023 in connection with this procurement; and

WHEREAS, the Purchasing Agent and the selection committee have determined that the Proposals submitted by the Consultant on February 14, 2019 is the most advantageous proposal received, and best serves the interests of Lake County; and

WHEREAS, the Lake County Board has passed a resolution at its regular meeting on September 10, 2019 authorizing the Purchasing Agent to execute this Agreement;

SECTION 1. AGREEMENT DOCUMENTS

The Agreement Documents that constitute the entire Agreement between Lake County and Consultant are in order of precedence:

- A. This Agreement
- B. Consultant’s Proposal – Sanitary Sewer System Modeling and Capacity Analysis, noted herein as Exhibit A
- C. Statement of Interest (SOI) Number 19023, noted herein as Exhibit B
- D. Task A (Task Order A), Des Plaines River WRF and Southeast Interceptor Capacity Analysis, noted herein as Exhibit C

In the event of conflict between or among the above Documents, the Documents listed above are in the order of precedence.

SECTION 2. SCOPE OF WORK

Perform hydraulic modelling and capacity analysis for portions of the Lake County Public Works Department (LCPWD) sanitary sewer system. Create a report recommending strategic actions to optimize the LCPWD sanitary sewer networks to support a successful and sustainable system, capable of accommodating economic development. Provide resulting analysis in a software or database to be managed by the LCPWD after creation, allowing for in-house analysis of the effectiveness of solutions, evaluation of future land use decisions, and monitoring of long-term system performance. All deliverables should be compatible with ESRI Geographic Information Systems (GIS) software.

Exhibit A and the paragraph above summarize the general services and project approach. The project will

consist of individual tasks. For each task, the consultant shall provide a detailed scope of work with specific deliverables, as well as an estimate of hours and timeframe for completion for each task that will be mutually agreed upon by the Parties. Exhibit C identifies the first such task, and additional tasks may be assigned at the direction of the Director of Public Works, or their designee. The Consultant shall provide an estimate of hours and timeframe for completion for each additional task that will be mutually agreed upon by the Parties in accordance with Section 7 of this Agreement.

The Consultant shall perform its services consistent with the professional skill and care ordinarily provided by consultants practicing in the same locale under the same or similar circumstances ("Standard of Care").

SECTION 3. DURATION

This contract shall be in effect for a two (2) year period from the date of award. Lake County reserves the right to renew this contract for three (3) additional one (1) year period(s), subject to acceptable performance by the Consultant. At the end of any contract term, Lake County reserves the right to extend this contract for a period up to sixty (60) days for the purpose of getting a new contract in place.

SECTION 4. AGREEMENT PRICE

The County will pay the Consultant based on an hourly rate for services as noted in the Consultant’s proposal based on the following schedule and identified in Exhibit A. The total value of task orders shall not exceed \$350,000 in a fiscal year. Subject to the appropriation of sufficient funds.

Employee Classification	Hourly Billing Rate
Engineer/Specialist IX	\$240
Engineer/Specialist VIII	\$230
Engineer/Specialist VII	\$210
Engineer/Specialist VI	\$190
Engineer/Specialist V	\$175
Engineer/Specialist IV	\$160
Engineer/Specialist III	\$145
Engineer/Specialist II	\$130
Engineer/Specialist I	\$115
Technician II	\$90
Technician I	\$80
Administrative Assistance III	\$80
Administrative Assistance II	\$70
Administrative Assistance I	\$60

Hourly rates for services in the optional years 2 through 5 may be adjusted according to Section 5 of this Agreement.

Lake County shall make periodic payments to Consultant based upon actual progress within 30 days after receipt and approval of invoice. Said payments shall not exceed the hourly rates identified in the Agreement, and full payments for each task shall not be made until the task is completed and accepted by Lake County.

SECTION 5. PRICE ESCALATOR

Prices throughout the twelve months initial term of the contract shall remain firm/fixed. Written requests for price revisions after the first twelve months shall be submitted at least sixty (60) days in advance of the annual contract period. Requests must be based upon and include documentation of the actual change in the costs of the components involved in the contract and shall not include overhead and profit. Changes in the contract price shall be made in the amount of the actual change in cost or the percentage increase in the U.S. Average Consumer Price Index for the Midwest Urban - per category "All Items," or 3 percent, whichever is less. Surcharges for fuel and/or other costs shall not be allowed. The County reserves the right to reject any price increase and to terminate the contract.

SECTION 6. INVOICES & PAYMENT

- A. A purchase order will be issued for each project task order and Consultant shall submit invoice(s) detailing the products and services provided and identify the purchase order number on all invoices.
- B. Invoices may be submitted for work performed on a monthly basis based upon the percent of work completed in the amount not-to-exceed in Section 6. The County's fiscal year begins December 1st of each year. Prior to December 7th of any year, an invoice shall be submitted for all work completed prior to November 30th of the completed fiscal year. Submit invoice(s) detailing the services provided. Invoices shall clearly identify the work completed during the invoice period, the overall work completed to-date, as well as the percentage completion for each task. Payments shall be made in accordance with the Local Government Prompt Payment Act.
- C. Consultant shall maintain records showing actual time devoted and cost incurred. The County will reimburse consultant's other direct costs incurred, without mark-up which have been approved by the County. Consultant shall permit a representative from Lake County to inspect and audit all data and records of Consultant for work and/or services provided under this Agreement. Consultant shall make these records available at reasonable times during the Agreement period and for one year after the termination of this Agreement.
- D. All payments shall be made in accordance with the Illinois Local Government Prompt Payment Act (50 ILCS 505/1 et seq.).

SECTION 7. CHANGE ORDERS

In the event changes to the Scope of the project and/or additional work become necessary or desirable to the parties, the parties shall follow the procedures set forth in this Section. A Change shall be effective only when documented by a written, dated agreement executed by both parties which expressly references this Agreement (a "Change Order"). The Change Order shall set forth in detail: (i) the Change requested, (ii) the reason for the proposed Change; (iii) the cost of the Change; and (iv) the impact of the Change on time for completion of the project.

In the event either party desires a Change, the Project Manager for such party shall submit to the other party's Project Manager a proposed Change Order. If the receiving party does not accept the Change Order in writing within ten (10) days, the receiving party shall be deemed to have rejected the Change Order. If the parties cannot reach agreement on a proposed Change, Consultant shall nevertheless continue to render performance under this Agreement in accordance with its (unchanged) terms and conditions.

Changes that involve or increase in the amounts payable by the County may require execution by the County Purchasing Agent. Some increases may also require approval by the County Board. In those cases where the County Purchasing Agent's signature is required, or County Board approval is needed, the Change Order shall not be deemed rejected by County after ten (10) days provided the Project Manager has indicated in writing

within the ten (10) day period of his intent to present the Change Order for appropriate signature or approval.

SECTION 8. KEY PERSONNEL

Consultant shall not replace any Key Personnel without the County's prior written consent, which shall not be unreasonably withheld. Should one of the Key Personnel be reassigned, become incapacitated, cease employment by Consultant, and/or be unable to perform the functions or responsibilities assigned to him or her, Consultant shall (i) within ten (10) business days, temporarily replace them with another properly qualified employee and (ii) within thirty (30) calendar days, permanently replace the contact. Lake County reserves the right with advance notice, and Consultant having the opportunity to remedy, to request the dismissal and removal of Consultant staff from the project for reasonable cause. Any decision to substitute or replace Key Staff for the implementation of proposed solution, will need a prior written consent from the County.

- Provide a summary organizational chart. Identify the primary contact and describe the roles of each key person.
- Provide detailed resumes for all key professionals who will be directly responsible for providing services to the County. Include the following information; title, number of years at your firm, total number of years of experience, professional designations or licenses.

SECTION 9. STATEMENT OF OWNERSHIP

The drawings, specifications and other documents prepared by the Consultant for this Project are the property of the County, and Consultant may not use the drawings and specifications for any purpose not relating to the Project without the County's consent, except for the Consultant's services related to this Project. All such documents shall be the property of the County who may use them without Consultant's permission for any current or future Lake County project; provided, however, any use except for the specific purpose intended by this Agreement will be at the County's sole risk and without liability or legal exposure to the Consultant.

The Consultant shall retain its copyright and ownership rights in its design, drawing details, specifications, data bases, computer software, and other proprietary property. Intellectual property developed, utilized, or modified in the performance of the services shall remain the property of the Consultant.

SECTION 10. INDEMNIFICATION

Consultant agrees to indemnify, save harmless, and defend Lake County, its agents, servants, and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses, and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this Agreement caused directly by the negligence or willful or wanton conduct of Consultant. The foregoing indemnity shall apply except if such injury, death, or damage is caused directly by the gross negligence or willful or wanton conduct of Lake County, its agents, servants, or employees or any other person indemnified hereunder.

SECTION 11. INSURANCE

The Consultant must obtain, for the Contract term and any extension of it, insurance issued by a company or companies qualified to do business in the State of Illinois with an A.M. Best Rating of at least A-and provide the County with a Certificate of Insurance 15 days before the start of the project, and thereafter annually for contracts/ projects that will last more than one year. Insurance in the following types and amounts is necessary and/or where applicable:

Commercial General Liability Insurance

In a broad form on an occurrence basis shall be maintained, to include, but not be limited to, coverage for property damage, bodily injury (including death), personal injury and advertising injury in the following coverage forms where exposure exists:

- Premises and Operations
- Independent Contractors
- Products/Completed Operations
- Liability assumed under an Insured Contract/ Contractual Liability
- Personal Injury and Advertising Injury

With limits of liability not less than:

\$ 1,000,000 Each Occurrence

\$ 1,000,000 Products-Completed Operations

\$ 1,000,000 Personal and Advertising injury limit

\$ 2,000,000 General aggregate; the CGL policy shall be endorsed to provide that the General Aggregate limit applies separately to each of the contractor's projects away from premises owned or rented to contractor.

Automobile Liability Insurance (if applicable)

Automobile liability insurance shall be maintained to respond to claims for damages because of bodily injury, death of a person, or property damage arising out of ownership, maintenance, or use of a motor vehicle. This policy shall be written to cover any auto whether owned, leased, hired, or borrowed.

The Contractor's auto liability insurance, as required above, shall be written with limits of insurance not less than the following:

\$ 1,000,000 Combined single Limit (Each Accident)

Excess/ Umbrella Liability (if applicable)

The Contractor's Excess/ Umbrella liability insurance shall be written with the umbrella follow form and outline the underlying coverage, limits of insurance will be based on size of project:

\$ 2,000,000 per occurrence limit (*minimum, and may be higher depending on the project*)

Workers Compensation (Coverage A) and Employers Liability (Coverage B)

Workers Compensation Insurance covering all liability of the Contractor arising under the Worker's Compensation Act and Worker's Occupational Disease Act at limits in accordance with the laws of the State of Illinois. Employers' Liability Insurance shall be maintained to respond to claims for damages because of bodily injury, occupational sickness, or disease or death of the Contractor's employees, with limits listed below:

Employers Liability

- a) Each Accident \$1,000,000
- b) Disease-Policy Limit \$1,000,000
- c) Disease-Each Employee \$1,000,000

Such Insurance shall contain a waiver of subrogation in favor of Lake County.

Technology Errors and Omissions (if applicable)

The Contractor's Software Developer and/or IT Architect for the plans, including developing and implementing technology for Lake County, or of the project, shall be written with limits of insurance not less than the following:

\$ 1,000,000 per occurrence limit

Liability Insurance Conditions

Contractor agrees that with respect to the above required insurance:

- a) The CGL policy shall be endorsed for the general aggregate to apply on a “per Project” basis;
- b) The Contractor’s insurance shall be primary & non-contributory over Lake County’s insurance in the event of a claim.
- c) Contractor agrees that with respect to the above required insurance, Lake County shall be named as additional insured, including its agents, officers, and employees and volunteers and be provided with thirty (30) days’ notice, in writing by endorsement, of cancellation or material change. A blanket additional insured ISO endorsement is preferred for Contractors who have multiple projects with the County.
- d) Lake County shall be provided with Certificates of Insurance and the appropriate corresponding ISO form endorsements evidencing the above required insurance, prior to commencement of this Contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least thirty (30) days prior to the expiration of cancellation of any such policies. No manuscript endorsements will be accepted. Any hard copies of said Notices and Certificates of Insurance and Endorsements shall be provided to:

**Lake County
Purchasing Division
18 N. County 9th Floor
Waukegan, Illinois 60085
Attn: Ruth Anne Hall, Lake County Purchasing Agent**

- e) **Electronic copies of Notices, Certificates of Insurance and Endorsements can be emailed to Purchasing@lakecountyil.gov in place of hard copies.**

Failure to Comply: In the event the Contractor fails to obtain or maintain any insurance coverage required under this agreement, Lake County may purchase such insurance coverage and charge the expense to the Contractor.

SECTION 12. INDEPENDENT CONTRACTOR

Consultant is defined and identified as an independent contractor, not an employee or agent of Lake County and the County has no right to control or direct Consultant’s manner, detail, or means by which Consultant accomplishes tasks under this Agreement.

SECTION 13. DISPUTE RESOLUTION

All issues, claims, or disputes arising out of this Agreement shall be resolved in accordance with the Appeals and Remedies Provisions in Article 9 of the Lake County Purchasing Ordinance.

SECTION 14. NO IMPLIED WAIVERS

The failure of either party at any time to require performance by the other party of any provision of this Agreement shall not affect in any way the full right to require such performance at any time thereafter. Nor shall the waiver by either party of a breach of any provision of this Agreement be taken or held to be a waiver

of the provision itself.

SECTION 15. SEVERABILITY

If any part of this Agreement shall be held to be invalid for any reason, the remainder of this Agreement shall be valid to the fullest extent permitted by law.

SECTION 16. JURISDICTION, VENUE, CHOICE OF LAW AND PROFESSIONAL STANDARDS

This Agreement shall be governed by and construed according to the laws of the State of Illinois. Jurisdiction and venue shall be exclusively found in the 19th Judicial Circuit Court, State of Illinois.

SECTION 17. NOTICES AND COMMUNICATIONS

All notices and communications which may be given by Lake County to Consultant relative to this Agreement shall be addressed to the Consultant at the address shown herein below:

Donohue & Associates, Inc.
125 South Wacker Drive, Suite 1850
Chicago, IL 60606
Attn: Michelle Madrid

Copies of any notices and communications which propose to alter, amend, terminate, interpret, or otherwise change this Agreement shall be provided to: Lake County Purchasing Division, 18 North County Street, Waukegan, Illinois 60085-4350; Attention: Purchasing Agent.

SECTION 18. ASSIGNMENT

Neither the Consultant nor the County shall assign any duties of performance under this Agreement without the express prior written consent of the other.

SECTION 19. MODIFICATION

This Agreement may be amended or supplemented only by an instrument in writing executed by the party against whom enforcement is sought.

SECTION 20. TERMINATION

The County reserves the right to terminate this Agreement, or any part of this Agreement, upon thirty (30) days written notice. In case of such termination, the Consultant shall be entitled to receive payment from the County for work completed to date in accordance with terms and conditions of this Agreement. In the event that this Agreement is terminated due to Consultant's default, the County shall be entitled to contract for consulting services elsewhere and charge the Engineer with any or all losses incurred, including attorney's fees and expenses. Prior to termination due to Consultant's default, Consultant will be given opportunity to cure defects within 10 working days following written notice of defect(s).

SECTION 21. CONFIDENTIALITY

Both parties acknowledge that Consultant's documents and dealings related to this Agreement are subject to the Illinois Open Meetings Act (5 ILCS 120/1 et seq.) and the Illinois Freedom of Information Act (5 ILCS 140/1 et seq.).

SECTION 22. NEWS RELEASES

Consultant may not issue any news releases regarding this Agreement without prior approval from Lake County.

IN WITNESS HEREOF, the undersigned have caused this Agreement to be executed in their respective names on the dates hereinafter enumerated.

Lake County:

Donohue & Associates, Inc.

Purchasing Agent
Lake County

Eric Cockerill
Vice President

Date _____

Date _____

EXHIBIT A



Donohue & Associates, Inc.
125 S. Wacker Drive, Suite 1850 | Chicago, IL 60606
312.236.9147 | donohue-associates.com

September 10, 2019

Purchasing Agent
Lake County
18 North County Street, 9th Floor
Waukegan, IL 60085

Re: Proposal – Sanitary Sewer System Modeling and Capacity Analysis
Lake County SOI Number 19023

Dear Sir or Madam:

Donohue & Associates, Inc. (Donohue) is pleased to provide this proposal for the Lake County Public Works Department Sanitary Sewer System Modeling and Capacity Analysis project. The following presents our proposed summary of general services, identification of key team members, description of project approach and communication, and rates for our services.

SUMMARY OF GENERAL SERVICES

Perform hydraulic modelling and capacity analysis for portions of the Lake County Public Works Department (LCPWD) sanitary sewer system. Create a report recommending strategic actions to optimize the LCPWD sanitary sewer networks to support a successful and sustainable system, capable of accommodating economic development. Provide resulting analysis in a software or database to be managed by the LCPWD after creation, allowing for in-house analysis of the effectiveness of solutions, evaluation of future land use decisions, and monitoring of long-term system performance. All deliverables should be compatible with ESRI Geographic Information Systems (GIS) software.

IDENTIFICATION OF KEY TEAM MEMBERS

We propose the following *key team members for this project*:

POSITION	RESPONSIBLE PERSON
Principal-in-Charge	Eric Cockerill
Client Liaison	Nathan Cassity
Project Manager	Michelle Madrid
Modeling / GIS / Flow Monitoring	Stephen Sticklen
WRF Capacity Analysis	Nathan Cassity
Underground Utilities / Field Coordination	Paul Shadrake

DESCRIPTION OF APPROACH AND ROUTINE CHECK-INS

Donohue will be responsible for comprehensive coordination of the project portfolio, including overall relationship management. Donohue will assist the County with specific projects identified as individual

task orders. Project services to be identified in the scope development of each task order proposal will include, but will not be limited to, the following considerations:

- **Joint scope meeting:** Donohue will conduct up to two (2) scoping meeting with relevant LCPWD staff, including internal and external stakeholders, such as LCPWD Operations and Maintenance personnel.
- **Develop Detailed Scope of Work:** Donohue will develop project proposals for each independent task order, working closely with Lake County Public Works Department (LCPWD) staff. The scope of work will identify specific tasks, levels-of-effort, and deliverables, as well as a proposed value of staff time and expenses for the project. The following considerations will be given to scope development:
 - Requests for information
 - Communications services, including meetings and community outreach
 - Coordination convention and milestones
 - Timeline for each meeting and project deliverable
 - Quality Assurance / Quality Control

RATES

Rates for our services are provided below.

Employee Classification	Hourly Billing Rate
Engineer/Specialist IX	\$240
Engineer/Specialist VIII	\$230
Engineer/Specialist VII	\$210
Engineer/Specialist VI	\$190
Engineer/Specialist V	\$175
Engineer/Specialist IV	\$160
Engineer/Specialist III	\$145
Engineer/Specialist II	\$130
Engineer/Specialist I	\$115
Technician II	\$90
Technician I	\$80
Administrative Assistance III	\$80
Administrative Assistance II	\$70
Administrative Assistance I	\$60

We appreciate the opportunity to provide this proposal and to be of service to Lake County Public Works Department.

Sincerely,

Eric Cockerill, Vice-President

<http://doingbusiness.lakecountyil.gov/>

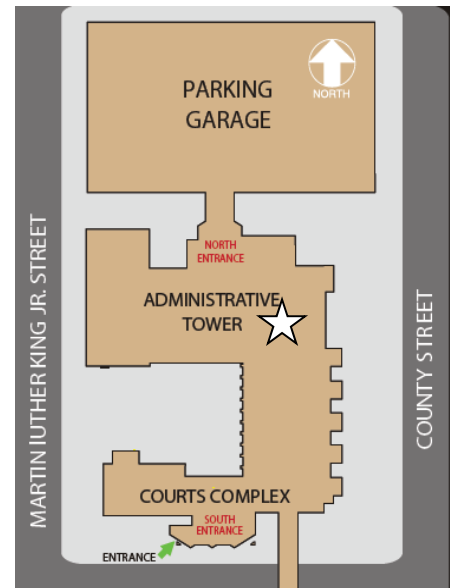
Please note the submission location is:

Lake County
Attn: Purchasing Division
 18 N. County Street – 9th Floor
 Waukegan, IL 60085

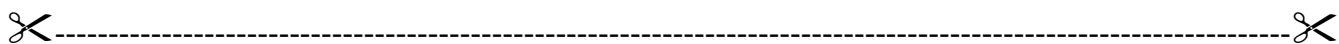
Contact information for Lake County Purchasing is:

Purchasing Division
 Phone 847-377-2992
 Fax 847-984-5889
 Email: purchasing@lakecountyil.gov

Waukegan Campus



ALL SUBMITTALS SHOULD BE LABELED ACCORDINGLY. PLEASE USE BELOW LABEL FOR YOUR CONVENIENCE.



SOI No. 19023	Deliver to: Lake County ATTN: PURCHASING DIVISION 18 N. County Street – 9 th Floor Waukegan, IL 60085
Buyer: Yvette Albarran	
<u>SOI Description</u> Professional Consulting, Surveying and Engineering Services for Lake County Public Works	
<u>SOI Due Date*</u> February 14, 2019 at 2:00 p.m.	

*Please note: Responses are due at the 9th floor reception desk and shall be time stamped by 2:00 p.m. local time on the required due date. Please allow sufficient time for parking, passing through security and arriving at the 9th floor.

STATEMENT OF INTEREST # 19023
STATE OF ILLINOIS
Professional Architectural and Engineering Services
for Lake County

Notice is hereby given that Statements of Interest (SOI) (one original and one electronic unprotected copy) will be received from qualified, professional architectural and engineering firms interested in providing the services, as described herein. Firms are encouraged to submit the minimum amount of information as necessary to indicate their interest, experience, and qualifications to perform the work described for any project, service, or combination thereof. Proposals do not need to cover the entire scope of the project types listed in this SOI; firms may submit for as many or as few services as desired. **To Lake County Purchasing, 18 N. County St., 9th Floor, Waukegan, IL 60085 until February 14, 2019 at 2:00 p.m.**

CONTACT / QUESTIONS: Please submit questions on our website at <http://lakecountypurchasingportal.com> by selecting the SOI number and addendum link. Questions may also be submitted via email to purchasing@lakecountyil.gov. All questions shall be submitted no less than seven (7) days prior to the SOI opening date. No interpretation of the meaning of the Statement of Interest will be made orally. Failure to request an interpretation constitutes a waiver to later claim that ambiguities or misunderstandings caused a firm to improperly submit a proposal. Lake County will review submissions and conduct negotiations in accordance with the Local Government Professional Services Selection Act (50 ILCS 510/).

LAKE COUNTY

Lake County is located in northeast Illinois, between the Chicago and Milwaukee metropolitan areas. Lake County is home to more than 700,000 residents. Lake County is committed to open government and transparency, and the County board's conservative fiscal policies have allowed the County to maintain fiscal stability and achieve AAA bond rating from Standard & Poor's and Moody's. Lake County is governed by a 21-member board and managed by a County Administrator.

PROJECT BACKGROUND

The Lake County Public Works Department (LCPWD) provides essential water and wastewater services to over 40% of the County's residents, and the LCPWD owns and operates three water reclamation facilities, twelve water distribution systems, 345 miles of sewer main, 300 miles of water main, and all associated infrastructure. Additionally, the LCPWD ownership portfolio includes many buildings, including administrative offices, maintenance facilities, and operational buildings (pump houses, treatment processes housing). The LCPWD has undertaken a strategic prioritization process to identify critical capital improvement projects. Major capital projects are anticipated for the foreseeable future, with an estimated annual value of \$10 million.

GENERAL QUALIFICATIONS

The statement of interest must provide your firm's qualifications, including ability of professional staff, its past record and experience, performance data on file, willingness to meet time and budget requirements, location, workload of the firm, work on similar projects, past performance on similar projects and financial stability related to design, bidding, and construction inspection for the following projects. Please indicate, by project type, the project type(S) listed for which your firm is interested in providing Professional Consulting Services.

1. Project and Construction Management Services

Manage and oversee consultant capital improvement projects on behalf of the Lake County Public Works Department (LCPWD). Act as the principal agent of the LCPWD in the management of administrative duties of project management, providing resident engineering services, reviewing design and bid documents. Maintain mission alignment, ensure quality, oversee project timeline, track processes and procedures, perform issue

resolution, arrange and attend regular coordination meetings with County staff, manage pay requests, review and negotiate change orders, and address contract issues in partnership with Lake County staff. Oversee field construction and resolve issues. Projects are often highly complex infrastructure improvements including complex coordination sequencing with stakeholders to maintain operational needs throughout the rehabilitation project. Engage with stakeholders and the public, as necessary.

2. Facility Master Plan/Risk Assessments for Capital Planning

Perform risk assessments of infrastructure owned, operated and/or maintained by the Lake County Public Works Department, which includes 72 lift stations, seven pump houses, 29 well houses, 10 reservoirs, seven water towers, and three water reclamation facilities. At a minimum, the firm will perform an assessment of these assets and will prioritize repair/replacement by risk of failure; establish a multi-year replacement program utilizing a risk-based asset ranking approach and provide an estimated schedule to prepare the preliminary engineering report. Additionally, the repair/replacement program will account for proposed capital projects by other public agencies that may impact the scheduling and completion of water and sewer main replacement projects. Engage with stakeholders, as necessary, and coordinate with villages, the Illinois Department of Transportation, the Lake County Division of Transportation, and Townships to consider their upcoming capital plans that may affect projects planned for the Lake County Public Works Department. A similar assessment has been performed for underground sewer and water mains.

3. Building Facility Improvement Design, Technical Analysis and Construction Oversight

Prepare plans, specifications and cost estimates for various facility improvements at Lake County Public Works Department facilities including, but not limited to:

- Mechanical improvements, including, but not limited to, the replacement of air handling units, variable air volume boxes, ductwork, chillers, piping and appurtenances, independent temperature control systems, motorized control valves, flow meters and direct digital controls.
- Electrical improvements including, but not limited to, the replacement of electrical switchgears, automatic transfer switches, transformers, main distribution panels, local panels, motor control centers, stand-by generators and direct digital controls.
- Elevator modernizations improvements including, but not limited to, traction elevators, hydraulic elevators, screw lifts, escalators and direct digital controls.
- Various security improvements including, but not limited to, IP-wireless duress alarm systems, access control systems, high definition security camera systems, and enterprise security automation systems.
- Various fire alarm improvements including, but not limited to, control panels, initiating devices, notification devices, networking and integration.
- Various fire protection systems improvements including, but not limited to, fire suppression systems, fire barriers, smoke barriers, smoke control, smoke evacuation, space planning and risk analysis.
- Various building automation improvements including, but not limited to, geographical representation of mechanical equipment, geographical representation of electrical equipment, HVAC controls and monitoring, electrical system monitoring, lighting system controls and monitoring, fire alarm system monitoring, life safety controls and monitoring, equipment run conditions, energy usages, and e-mail alarming.

4. Design Standards and Details

Develop design standards and details language for the Lake County Public Works Department (LCPWD). The standards and details will be applied to all construction projects related to LCPWD infrastructure, including new construction, repair, and replacement of the following: water main, gravity sanitary sewer main, sanitary force main, pump stations, lift stations, valves, hydrants, air release valves, manholes, record drawing standards etc. The LCPWD has published standard details, which will be used as the starting point for this document, along with the most recent version of the Standard Specifications for Water and Sewer Construction in Illinois. Coordinate with LCPWD staff to gather input from internal stakeholders, including engineers, field inspectors,

maintenance staff, operations personnel, and leadership. Provide a final draft in Microsoft Word, Adobe PDF, and AutoCAD format to be shared online.

5. Annual Inflow and Infiltration (I&I) Monitoring and Sanitary Sewer Evaluation Survey (SSES) Services

Review the sanitary sewer systems owned and operated by the Lake County Public Works Department and recommend a strategic, long-term approach to comprehensively address inflow and infiltration to ensure the systems operate at optimal conditions, reducing stress on infrastructure, including interceptor sewers, lift stations, pump stations, and water reclamation facilities. Perform flow monitoring activities and provide data via an easy to use portal. Complete sanitary sewer evaluation services, including, but not limited to, manhole inspections, smoke testing, dye flooding, and televising. Monitor and assess the success of I&I reduction measures. Provide annual program reports focused on overall strategy, meter basin performance, results achieved, and recommended next steps. Data should be compatible with ESRI Geographic Information Systems (GIS) software. Engage with stakeholders, including outside jurisdictions with competing priorities and limited resources.

6. Water System Modelling and Capacity Analysis

Perform hydraulic modelling and capacity analysis for portions of the Lake County Public Works Department (LCPWD) water systems. Create a report recommending strategic actions to optimize the LCPWD water systems to support a successful and sustainable facilities, capable of accommodating economic development. Provide resulting analysis in a software or database to be managed by the LCPWD after creation, allowing for in-house analysis of the effectiveness of solutions, evaluation of future land use decisions, and monitoring of long-term system performance. All deliverables should be compatible with ESRI Geographic Information Systems (GIS) software.

7. Sanitary Sewer System Modelling and Capacity Analysis

Perform hydraulic modelling and capacity analysis for portions of the Lake County Public Works Department (LCPWD) sanitary sewer system. Create a report recommending strategic actions to optimize the LCPWD sanitary sewer networks to support a successful and sustainable system, capable of accommodating economic development. Provide resulting analysis in a software or database to be managed by the LCPWD after creation, allowing for in-house analysis of the effectiveness of solutions, evaluation of future land use decisions, and monitoring of long-term system performance. All deliverables should be compatible with ESRI Geographic Information Systems (GIS) software.

8. General Engineering Consulting Services

Provide general engineering consulting services, including, but not limited to, sewer and water investigations, preliminary studies, preliminary design, final studies, and final design for unplanned needs, such as time-sensitive repair/improvement project design/review and analysis of complex development proposals. Monitor construction and assist with issue resolution. In addition to civil engineering expertise, electrical engineering, mechanical engineering, structural engineering and automation engineering services may be required. Complete other related work, as assigned. Engage with stakeholders and the public, as necessary.

9. Underground Utility Design Engineering Consulting Services

Provide engineering consulting services for utility relocation design projects, including, but not limited to, preliminary review, survey, preliminary design, final design, permitting, bidding and construction services. Example projects include, but are not limited to, relocation as a result of a roadway project. Coordinate with roadway or utility authority and their consultant. Essential skills include understanding complex roadway and utility projects, including, but not limited to, understanding complex construction phasing, obtaining variances to allow utilities to remain under the pavement, experience coordinating permitting with roadway authorities, experience coordinating relocation in cooperation with utility companies, negotiating agreements with the transportation authority to perform work as a shared service, securing grant funds where possible, interpreting

conditions of existing easements, and securing new easements. Oversee field construction and resolve issues. Review the history of easements and aid in obtaining necessary easements. Engage with stakeholders and the public, as necessary.

10. General Surveying Consulting Services

Provide general survey consulting services, including, but not limited to, producing map exhibits based on legal descriptions, Parcel Index Number (PIN) lists, and surveyed boundary descriptions, locating and staking property lines and construction improvements, preparing topographic survey exhibits and plats of survey. Locate all easement documents associated with specific properties and projects. Visual renderings of legal descriptions and surveyed boundary descriptions must be provided within five business days. Complete other related work, as assigned.

11. Sewer Facilities Analysis, Design and Construction Oversight

Investigate sanitary sewer system issues and improvement options, prepare all necessary surveys, preliminary and final engineering studies, design documents, and bid documents. Flow monitoring data and reports are available for areas of the system. Provide bidding services, including, but not limited to, addressing all addendum. Conduct construction-related services, including, but not limited to, evaluating shop drawings, monitoring construction, preparing change orders, and reviewing contractor pay requests. Obtain all permit approvals and provide as-built record drawings and related documents. Engage with stakeholders and the public, as necessary. Example projects include miscellaneous investigations, sewer lining, and force main rehabilitation.

12. Water Facilities Analysis, Design and Construction Oversight

Investigate water system issues and improvement options, prepare all necessary surveys, preliminary and final engineering studies, design documents, and bid documents. Provide bidding services, including, but not limited to, addressing all addendum. Conduct construction-related services, including, but not limited to, evaluating shop drawings, monitoring construction, preparing change orders, and reviewing contractor pay requests. Obtain all permit approvals and provide as-built record drawings and related documents. Engage with stakeholders and the public, as necessary. Example projects include miscellaneous investigations, watermain replacement design, and lined watermain construction.

13. Drainage Improvement Analysis, Design and Construction Oversight: North Libertyville Estates Levee

The North Libertyville Estates levy is approximately 5,700 feet in length and protects roughly 200 homes from Des Plaines River flooding. Presently stormwater ponds upstream of the levy, and the Lake County Public Works Department desires to improve the drainage and install an automatic pumping system. Prepare all necessary surveys, preliminary and final engineering studies, design documents, and bid documents. Provide bidding services, including, but not limited to, addressing all addendum. Conduct construction-related services, including, but not limited to, evaluating shop drawings, monitoring construction, preparing change orders, and reviewing contractor pay requests. Obtain all permit approvals and provide as-built record drawings and related documents. Coordinate utility service (electric) to the site. Review and compile an emergency evacuation plan, including graphic exhibits and an executive summary. Prepare educational information materials for local area residents; topics include, but are not limited to, description of the levee and its purpose, improvement notices, explanation of evacuation plans. Engage with stakeholders and the public, as necessary, including attendance at community meetings.

14. Annual Water Tower and Reservoir Repair/Rehabilitation

The Lake County Public Works Department owns seven water towers and 10 water reservoirs and conducts an annual repair/rehabilitation program. Perform all necessary inspections and investigations to prepare bid documents for this work. Engage with stakeholders, as necessary.

15. Supervisory Control and Data Acquisition (SCADA) Engineering Consulting Services

Perform field telemetry survey relative to sites within the Southeast Operational Region of Lake County water and sewer systems. Design a telemetry network based on the results of the field survey, existing SCADA network information and historian. Prepare design documents and bid documents. Provide bidding services, including, but not limited to, addressing all addendum conduct construction-related services, including, but not limited to, evaluating shop drawings, monitoring construction, preparing change orders, and reviewing contractor pay requests. Obtain all permit approvals and provide as-built record drawings and related documents. Engage with stakeholders and the public, as necessary. Due to the geographic distance between sites communication between sites using cellular radios and a private network set up by Verizon Wireless has been configured. Panels will be built to house the cellular modem, Programmable Logic Controllers (PLCs) and other necessary equipment. Previous phases of this project installed 900 MHz unlicensed radio and cellular radio communication in other operational areas of the County.

SUBMISSION REQUIREMENTS

Respondents shall include in their SOI a prioritized listing of the above design projects (1 through 15) which are best suited to the capabilities and qualifications of their firm. The SOI shall include a brief description of why they should be chosen for a project(s). The SOQ should be concise and directly relate to the project(s) of interest. The SOI shall be limited to 1 page and each SOQ shall be limited to 10 pages per project.

The County, in accordance with the laws of the State of Illinois, hereby notifies all firms expressing statements of interest that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded without discrimination on the grounds of race, color or national origin.

Where appropriate, the responses provided under this section shall include a brief description of examples of outcome based accomplishments that have measurable success factors to demonstrate a firm's qualifications and expertise. All examples should include owner name and contact information.

Section 1.0 – Executive Summary

Provide a brief summary, which describes and highlights your interest, experience and qualifications for these projects. Submit documentation to establish the professional licensing necessary to be eligible for these projects.

Section 2.0 – Relevant Experience

Relevant Experience shall clearly indicate the firm and which member on the project team participated in all relevant experience submitted. All experience submitted for a team member while in the employment of a different firm shall include their title and role on the project as well as the firm name that held the contract for all work submitted for relevant experience.

Section 3.0 – Project Management Team

Describe your approach relative to the delegation of responsibility and assignment of authority and interaction points with the County. Include a listing of key personnel and/or sub consultants proposed for the project team. Include a resume and/or relevant experience of each key team member and a brief description of the tenure or work history among team members.

Provide an organization chart graphically illustrating how your firm would staff and structure your proposed team to perform these projects. Include delegation of responsibility and assignment of authority and interaction points with the County.

List specific personnel (including sub consultants) proposed for the project team, including the project assignment and role or area of responsibility of each individual. Identify the staff team and each members' availability capacity throughout project stages. Provide a resume for each proposed team member, specifically stating tenure or experience with your firm, experience and qualifications of each individual. The above list represents a minimum submittal for key personnel from the Owner's Representative and Project Manager Team.

Section 4.0 – Budget

Describe your firm's methods to maximize and maintain quality project management and project image while maintaining tight budget constraints. Cite examples of specific things that you have done on other projects to meet this objective.

Describe your firm's approach to value engineering and what contribution does the firm typically provide during each phase of design and construction. Value engineering should include the ability of the proposer to evaluate cost saving opportunities in the construction project and add value to the project by applying a creative approach to optimize lifecycle, energy consumption and operational costs resulting from the design.

Section 5.0 - Quality of Documents

List the steps and describe the quality control processes we can expect from the firm during each phase of the design process to assure careful coordination of all disciplines and a high quality of design and contract documents.

EVALUATION PROCESS

Lake County will review submissions and conduct negotiations in accordance with the Local Government Professional Services Selection Act (50 ILCS 510/). The following qualifications will be considered by the County:

- A. Proven experience in design and successful implementation of similar projects.
- B. The strength of value engineering approach, and the proposed engineering approach.
- C. The evaluation of examples of outcome-based accomplishments that have measurable success factors to demonstrate a firm's qualifications and expertise including the testimonials of owners or owner's agents.
- D. The depth of talent and staffing experienced in the execution of similar projects.
- E. The ability of the proposer to work with other consultants to maximize a design solution while maintaining budgetary discipline.
- F. Design quality control and the ability to understand and translate the client's design goals.
- G. Quality and time availability of key project team members.
- H. A proven consistent engineer team leader that listens to the client and appropriately manages and directs the team's efforts.
- I. Experience and capability presenting to policymakers, stakeholders and the public.

As part of its evaluation process the County may seek additional information from firms found to have resources and methodologies best suited to any one of these projects.

TERM OF AWARDED CONTRACTS

The term of awarded contracts shall be in effect for a two (2) year period from the date of award (initial term) or other period as indicated in each Project Description. Lake County reserves the right to renew the contract for three (3) additional one (1) year periods, or as indicated in each project description, subject to acceptable performance by the Contractor. At the end of any contract term, Lake County reserves the right to extend the contract for a period of up to sixty (60) days for the purpose of getting a new contract in place. For any year beyond the initial year, the contract is contingent on the appropriation of sufficient funds. No charges shall be assessed for failure of the County to appropriate funds in future contract years.

General Information Sheet

AUTHORIZED NEGOTIATORS:

Name: _____ Phone # _____ Email: _____

Name: _____ Phone # _____ Email: _____

RECEIPT OF ADDENDA: The receipt of the following addenda is hereby acknowledged:

Addendum No. _____, Dated _____

Addendum No. _____, Dated _____

In submitting this statement of interest, it is understood that the County reserves the right to reject any or all submittals, to accept any alternate submittals, and to waive any informalities in any submittal.

BUSINESS ORGANIZATION: (check one only)

____ Sole Proprietor: An individual whose signature is affixed to this proposal.

____ Partnership: State full names, titles, and addresses of all responsible principals and/or partners on attached sheet.

____ Corporation: State of Incorporation: _____

____ Non-profit Corporation

____ 501c3-- U.S. Internal Revenue Code

By signing this proposal document, the proposer hereby certifies that it is not barred from bidding on a contract as a result of a violation of either Section 33E-3 or 33E-4 of the Illinois Criminal Code of 1961, as amended.

Business Name

Signature

Print or Type Name

Title

Date

References

Provide FIVE (5) references for projects. Governmental references are preferred over others. (Attach additional pages as needed)

Entity: _____

Address: _____

City, State, Zip Code: _____

Name of Contact Person _____

Email Address: _____

Telephone Number: _____

Description of Services Provided: _____

Date of Service: ____/____/____ To ____/____/____

Entity: _____

Address: _____

City, State, Zip Code: _____

Name of Contact Person _____

Email Address: _____

Telephone Number: _____

Description of Services Provided: _____

Date of Service: ____/____/____ To ____/____/____

Entity: _____

Address: _____

City, State, Zip Code: _____

Name of Contact Person _____

Email Address: _____

Telephone Number: _____

Description of Services Provided: _____

Date of Service: ____/____/____ To ____/____/____

Entity: _____

Address: _____

City, State, Zip Code: _____

Name of Contact Person _____

Email Address: _____

Telephone Number: _____

Description of Services Provided: _____

Date of Service: ____/____/____ To ____/____/____

Entity: _____

Address: _____

City, State, Zip Code: _____

Name of Contact Person _____

Email Address: _____

Telephone Number: _____

Description of Services Provided: _____

Date of Service: ____/____/____ To ____/____/____

COMPANY NAME _____

AUTHORIZED SIGNATURE _____

TITLE _____

DATE _____

FIRM QUALIFICATIONS

Name and Address of Office from which this contract will be administered
(ATTACH ADDITIONAL PAGES AS NEEDED)

Name: _____

Address: _____

Phone: _____ Fax: _____

Email Address _____

Project Manager: _____

Years in Business: _____ Number of Employees: _____

Annual Sales: \$ _____ Dunn & Bradstreet #: _____

Indicate if firm is a certified M/W/DBE and attach certification: _____

List employees who will be dedicated to the Project: (Attach additional pages as necessary)

NAME	POSITION TITLE	NUMBER OF YEARS	AREA OF RESPONSIBILITY/TASK EXPERIENCE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SUSTAINABILITY STATEMENT INSTRUCTIONS

Lake County is committed to green and sustainable practices and good environmental stewardship. Consequently, we are asking Bidders to provide a Statement of Sustainability to ensure our vendors are also incorporating sustainability into their firms' practices.

INSTRUCTIONS

On the following Sustainability Statement form, provide a clear description of your firm's sustainable practices, policies, or procedures. These practices may include, but may not be limited to, the following categories and examples:

Waste Minimization within your office or facilities, such as a recycling programs, double-sided copying, electronic internal communications (i.e. memos), use of recycled-content materials and reusable cups, limiting printing, electronic document management, instituting green purchasing policies, using green cleaning supplies and practices, or reducing packaging in materials you procure or supply.

Energy Efficiency within your office, facilities, or firm, such as lighting retrofits, photo-sensor switches for lighting, effective use of daytime lighting, using Energy Star rated appliances or equipment, using an alternative fuel or having efficient fleet policies, an anti-idling policy, or indoor temperature management (i.e. turning the thermostat up in the summer and down in the winter).

Water Efficiency within the office, facilities, or firm, such as faucet or fixture retrofits, switching from individual bottled water to office water coolers or drinking fountains, and installing drought-tolerant landscaping.

Staff encouraged to adopt sustainable practices and supported by your firm through public transit benefits, bicycle accommodations, telecommuting options, support for green seminar attendance, becoming US Green Building Council LEED accredited, or creating an internal "green team."

Education of your staff about green practices, education of your business peers about your green accomplishments, education of your community by your sustainability, or notice of any environmental awards your firm has achieved.

CONTINUE TO NEXT PAGE

SUSTAINABILITY STATEMENT

Attach additional sheets if necessary.

Waste Minimization

Energy Efficiency

Water Efficiency

Staff

Education



Lake County Disclosure Statement

This disclosure statement is being filed in accordance with the Lake County Ethics Ordinance and Lake County Purchasing Ordinance. Vendors wishing to contract with Lake County for goods and services shall submit this form in advance of award and disclose any **immediate familial relationships* between each owner, principal, or officer of the company and employee(s) of Lake County. This disclosure statement is not required for publicly traded companies and utilities.

***Immediate familial relationship means a person who is a spouse, son, daughter, parent-in-law, or parent.**

Entity Completing Form

Address

City, State, Zip

()

Telephone Number

Indicate if you are exempt

Yes No Publicly traded / Utility (Circle one)

This form is provided with:

Contract Statement of Interest Request for Proposal Invitation to Bid Contract Renewal

List below the name(s) of all elected officials or employees of Lake County with whom each owner, principal, or officer of the company has an immediate family relationship. Identify the Department/Agency for which the elected officials/employees work. (Attach additional sheets if necessary.)

Name of Public Official/Employee

Department/Agency

Continuing disclosure is required, and I agree to update this disclosure form as follows:

- If information changes, within five (5) days of change, or prior to county action, whichever is sooner
- 30 days prior to the optional renewal of any contract
- With any request for change order except those issued by the county for administrative adjustments.

The full text of the county's ethics and procurement policies and ordinances are available at lakecountyil.gov.

I hereby acknowledge that I am an authorized agent of my entity and have read and understood these requirements.

Authorized Signature

Printed Name

Title

Date

Failure to complete and return this form may result in delay or cancellation of the County's Contractual Obligation.

EXHIBIT C
TASK ORDER A – DES PLAINES RIVER WATER RECLAMATION FACILITY AND
SOUTHEAST INTERCEPTOR CAPACITY ANALYSIS

SCOPE OF SERVICES

The following presents the scope of services for Task #1 of the Sanitary Sewer System Modeling and Capacity Analysis Project (Contract #19023-7).

Task 1 – Scoping Meetings

Consultant will attend two (2) scoping meetings. These meetings will establish project goals, objectives, methods, and tasks. Consultant will prepare and circulate meeting notes.

In addition, Consultant will attend 2 information gathering meetings. At these meetings, Consultant will coordinate with County personnel to determine what information is required and what is available to accomplish project goals.

Deliverables:

- Meeting notes

Task 2 – Project Meetings

During the execution of the project, Consultant will attend up to four (4) meetings to present and refine project findings, specifically:

1. Meeting to discuss estimates of future flows;
2. Meeting to brainstorm potential capacity solutions;
3. Meeting to present the Draft Report.
4. Additional meeting at a date & time TBD.

Deliverables:

- Meeting notes

Task 3 – Information Gathering & Review

Consultant will collect, compile, and review information required to complete the project. This includes:

- Utility geodatabase
- Sewer record drawings
- Sewer condition information (IT Pipes)
- Pump station plans / record drawings, technical details, and pumping records
- Intergovernmental agreements
- Relevant development plans and comprehensive plans
- Chicago Metropolitan Agency for Planning (CMAP) population projections
- Water / customer billing records
- Flow monitoring reports / data
- Operational records
- Sewer design standards

Task 4 – Stakeholder Coordination

Consultant will assist the County in coordinating with up to eight (8) of the communities and entities served by the County. Consultant will assist in requesting information regarding community planning and development. Consultant will compile this information into a GIS feature class indicating where and when potential developments are likely to occur, and to which sewer they are likely to discharge.

Deliverables:

- GIS polygon feature class of potential developments

Task 5 – Field Survey / Manhole Inspections

Consultant will spot check the available utility records by conducting a field survey of up to 20 manholes. This will include using GPS survey equipment to obtain rim elevations accurate to ± 0.1 feet and measuring the size and inverts of all connecting pipes.

Deliverables:

- Survey data

Task 6 – Evaluate Pumping & Flow Monitoring Data

Pumping records can provide valuable information for establishing system flows. Since pumping records are collected no more than once every 24 hours, these records will be used primarily for establishing average dry weather flows. They can only provide a general sense of total wet weather volumes; additional data collection may be required to characterize short-term peak flows.

Consultant will review the records of up to 14 pump stations. Only two pump stations record flow; the remaining stations record pump run times that will have to be converted to flows. Consultant will obtain manufacturers' pump performance curves for these stations. Consultant will perform pump hydraulic analyses by preparing system curves in order to estimate each pump's theoretical capacity. These capacities will be used to convert pump run times into flows.

In February 2019, RJN submitted a Flow Monitoring Report that summarized flow data collected at 16 locations in the Des Plaines River WRF service area from 2013-2016. However, the report lacks the specificity to ascertain how best to quantify wet weather flows at specific locations. The County will obtain all electronic flow and rainfall data and analyses from RJN. Consultant will review this information and, in collaboration with the County, make a determination as to how best to account for wet weather flows in the model and capacity analyses (Task 9).

This task assumes that existing pumping and flow monitoring records will be sufficient to quantify dry and wet weather flows for model development and capacity analyses.

Task 7 – Evaluate Water Billing Records

Consultant will evaluate water billing records to quantify the sewage component of wastewater flows. For retail areas, Consultant will geocode and aggregate address-based billing into sewer loads. For wholesale customers, Consultant will review billing records to determine point loads to be input into the model.

Deliverables:

- Geocoded water billing records

Task 8 – Prepare Sewer Model

Consultant will prepare a hydraulic model of the major sewers (highlighted in Attachment A) tributary to the Des Plaines River WRF. This includes approximately 15 miles of pipes generally 12 inches or larger in diameter. Consultant will include the following 5 pump stations in the hydraulic model: Ela Lift Station #2, Deerfield Road Lift Station, Portwine Road Lift Station, Des Plaines WRF influent pump station, old screw pumps near Pekara Dr and Walnut Dr. Consultant will review IT Pipe records so as to identify those pipes that may be in a condition that warrants increasing the Manning's roughness coefficients above standard values.

Consultant will prepare a hydrologic model which will generate dry and wet weather flows to be routed through the hydraulic model. Sewage flows will generally be estimated from water billing records as described in Task 7. Base (groundwater) infiltration will be estimated during model calibration (Task 9). The exact method of simulating wet weather flows will be determined during the evaluation of flow monitoring data & pumping records, and following acceptance of the appropriate modeling software under Task Order #2. The type of modeling software selected will not affect the effort required to prepare the sewer model.

In conjunction with the development of the hydrologic model, Consultant will delineate the Des Plaines River WRF service area according to areas tributary to pump stations and manholes. In addition, Consultant will further delineate the service area as necessary to quantify flows into key model nodes (manholes) as determined by the Consultant and the County. Finally, in collaboration with the County, the service area will be further delineated into neighborhoods and/or somewhat homogenous areas with comparatively equal numbers of parcels.

Deliverables:

- GIS polygon feature class of service area delineation

Task 9 – Model Calibration

Consultant will perform dry and wet weather model calibrations. Dry weather flows will initially consist of diurnal wastewater loads derived under Task 7. These flows will initially be run through the model and compared to average dry weather flows (ADWF) at pump stations and flow monitoring sites. Differences between measured and simulated dry weather flows will be ascribed to base (groundwater) infiltration. Infiltration will be distributed to model subcatchments according to pipe volume and/or subcatchment area.

Depending on the conclusions of Task 6, wet weather flows may or may not be explicitly modeled. This Task Order assumes that constant 1-year and 10-year wet weather flows and/or peaking factors will be sufficient.

The type of modeling software selected under Task Order #2 will not affect the effort required to calibrate the model as described above. However, additional model development and calibration effort beyond the scope described above may be required if more robust modeling of wet weather flows is

desired. This may include the development of a hydrologic model that explicitly accounts for antecedent soil moisture, rainfall-derived infiltration, and the seasonal variability thereof.

Task 10 – Existing Capacity Analysis

Consultant will evaluate existing flows and system capacity during dry weather and 1-year and 10-year storms. Model results will be transferred to GIS as a lookup table of model results. This table can be joined to the utility geodatabase via the pipes' unique FeatureIDs. This will enable assessing each modeled pipe's available capacity within ArcMap. Pipe data entered for development of the model (Task 8), such as diameter and slope, will be included in the lookup table.

It is presumed that wet weather flows will be accounted for within the model by adding peak wet weather flows and/or peaking factors for the 1-year and 10-year design storms. These will also be added to the model output lookup table that can be joined to the utility geodatabase within ArcMap.

Consultant will perform an estimate of available freeboard during dry and wet weather. This analysis will indicate, for each modeled manhole, the amount of available freeboard. Generally, freeboard values less than 6 feet are an indication that surcharging is sufficient to risk SSOs. Consultant will develop a freeboard lookup table that can be joined to the utility geodatabase within ArcMap via each modeled manholes' FeatureID. Manhole rim and invert elevations will be included in the lookup table.

Deliverables:

- GIS lookup table of existing pipe flows & capacities for dry and wet weather conditions.
- GIS lookup table of existing manhole freeboard values for dry and wet weather conditions.

Task 11 – Land Use / Future Flow Analysis

Consultant will compile CMAP's estimates of 2050 populations for communities within the study area. Consultant will evaluate community development plans and comprehensive plans obtained in Task 4. Significant discrepancies will be noted. Consultant will prepare a GIS feature class and map indicating areas of potential growth and increases in flow over time. The GIS feature class will consist of polygons delineating areas of future growth, with corresponding land use and flow information as attributes. Consultant will attend a meeting (Task 2) with the County to review projected development areas and subsequent future flow projections. Upon receipt of comments, Consultant will update the future flow feature class.

Deliverables:

- Draft & final GIS feature class of future flows
- Draft & final map of future flows

Task 12 – Future Capacity Analysis

Consultant will perform a series of model simulations that include projected future flows over time developed under Task 11. Consultant will repeat the analyses performed under Task 10, with future flows included. Consultant will note where and when potential system bottlenecks are likely to occur and under what conditions. Consultant will prepare a GIS lookup table of future flows and available capacities. Consultant will attend a "brainstorming meeting" (Task 2) with County personnel to review capacity analyses and develop conceptual improvements.

Deliverables:

- GIS lookup table of future pipe flows & capacities for dry and wet weather conditions.
- GIS lookup table of future manhole freeboard values for dry and wet weather conditions.

Task 13 – Identify Potential Collection System Improvements

Using the model, Consultant will develop recommended alternatives to provide reliable collection system service capacity through the year 2050 based on the future flow and capacity analyses completed in Tasks 11 and 12. The year that each recommended improvement is likely to be required will be noted. Consultant will compile a recommended capital improvements plan with project phases to the year 2050. Consultant will prepare opinions of probable construction costs.

Deliverables:

- List of recommended improvements and opinions of probable construction costs.

Task 14 – Water Reclamation Capacity Evaluation

Consultant will evaluate the treatment facility's hydraulic and process capacities and compare results to existing and future conditions developed in previous tasks. Consultant will prepare a spreadsheet model to assess existing plant hydraulic capacity. Consultant will develop recommended improvements to increase plant capacity to match projected increases in flow. Finally, Consultant will prepare opinions of probable construction costs for recommended improvements.

Deliverables:

- Draft WRF Capacity Evaluation Memorandum (3 hard copies, 1 electronic)
- Final WRF Capacity Evaluation Memorandum (3 hard copies, 1 electronic)

Task 15 – Prepare Report

Consultant will document all work including preliminary system improvement recommendations in a Draft Report. Consultant will present the Draft Report at a meeting (Task 2) to be held with County personnel. Upon receipt of comments, Consultant will prepare a Final Report to be submitted to the County. Three (3) hard copies and a PDF of the final report will be delivered. Model input/output files, GIS data/analyses, and other relevant electronic records will be delivered to the County.

Deliverables:

- Draft Report (3 hard copies, 1 electronic)
- Final Report (3 hard copies, 1 electronic)
- Model input/output files
- GIS data/analyses

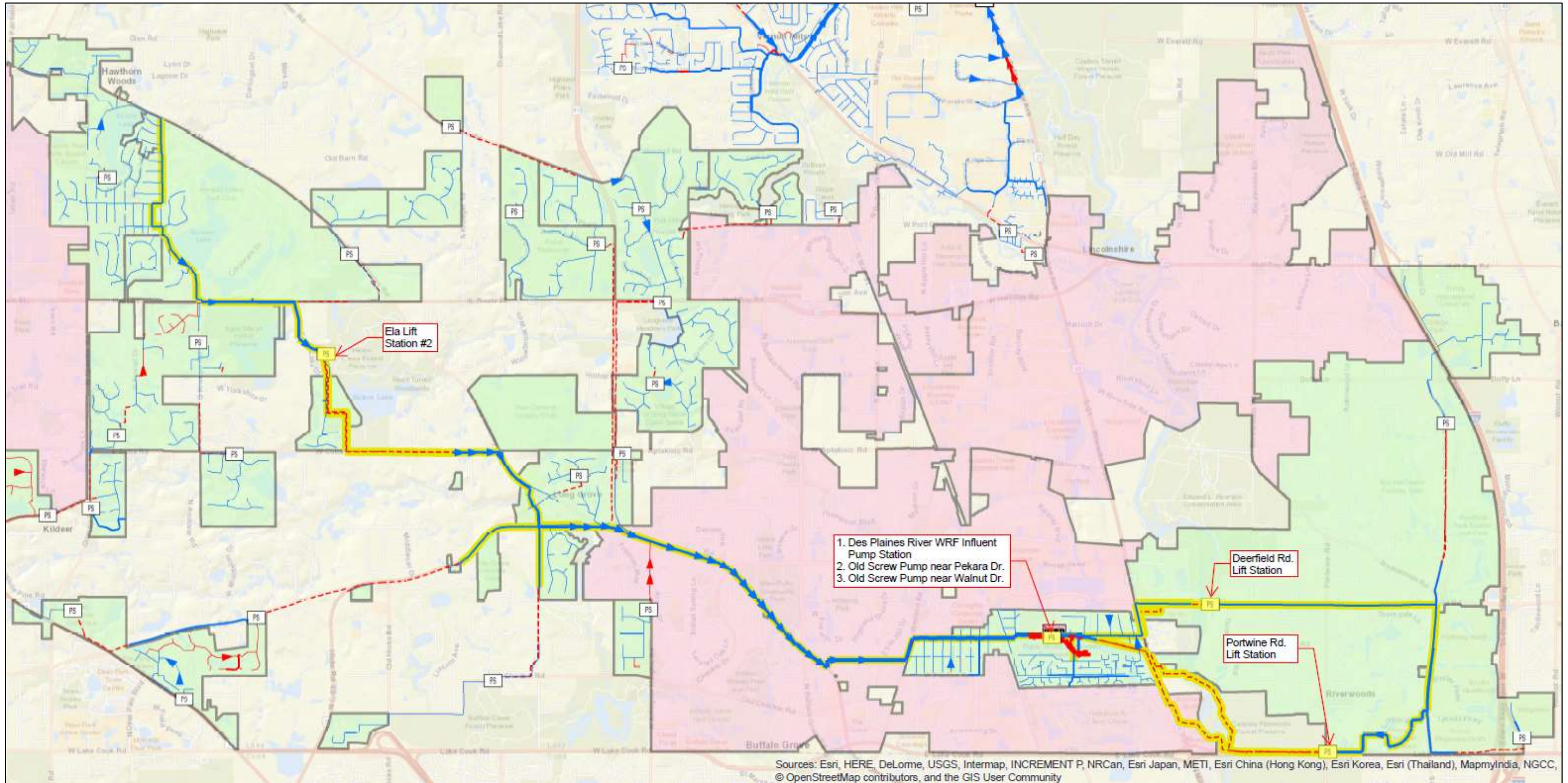
Task 16 – Project Administration

Consultant will manage the day-to-day work on the project by the project team monitoring scope, schedule, and budget. Consultant will maintain ongoing communication with the County, and address any issues that may arise. Consultant will prepare and submit monthly invoices and progress reports. The invoices will be itemized by task.

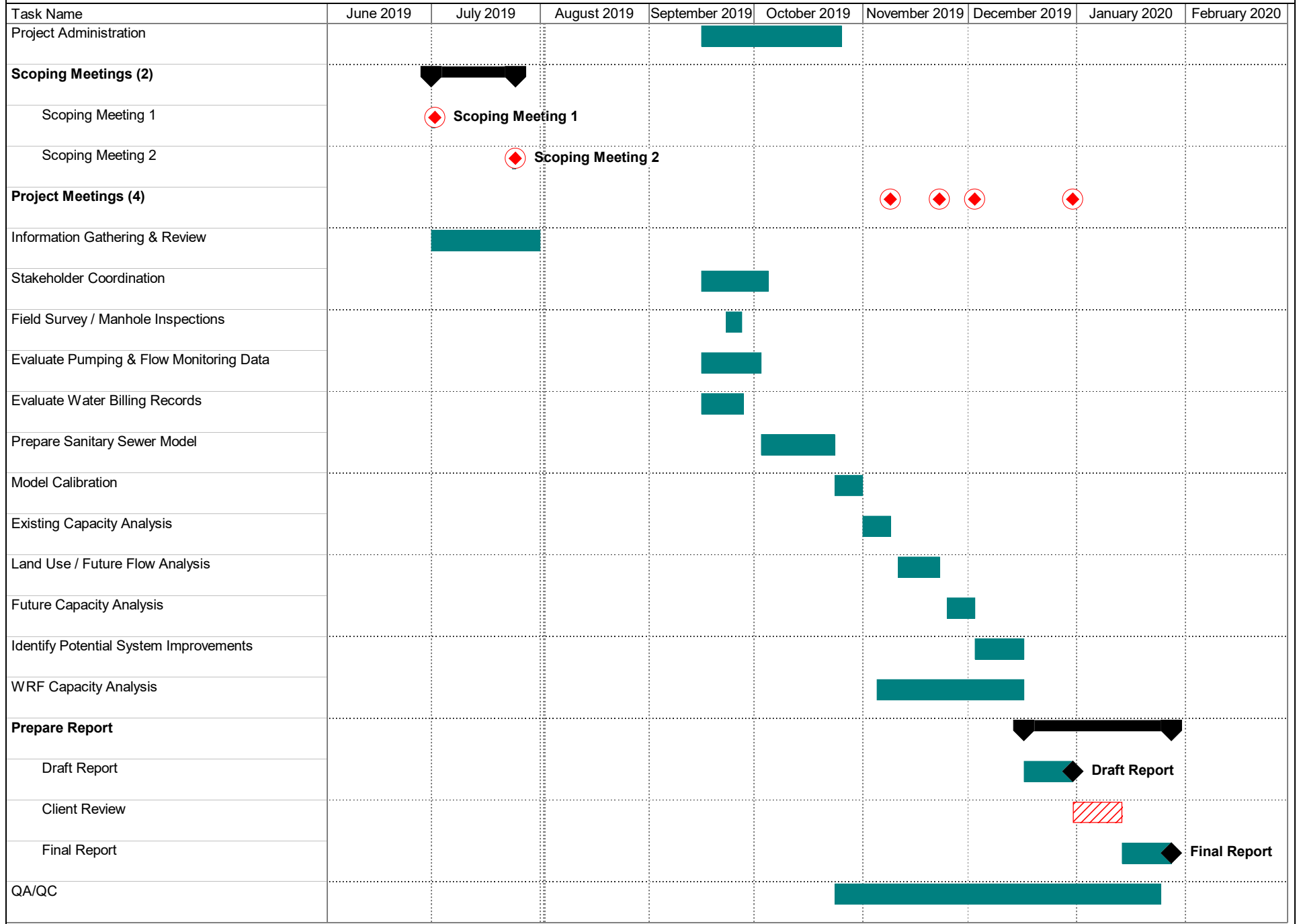
Task 17 - Quality Assurance/Quality Control (QA/QC)

The Consultant will implement Quality Assurance (QA) and Quality Control (QC) measures throughout the project. Consultant will utilize a QA/QC form that documents that QA/QC reviews have been completed prior to submittal of each deliverable to the County.

ATTACHMENT A – MODELED SEWERS



ATTACHMENT B - Task Order A Schedule



ATTACHMENT C
Lake County Public Works Department
Sanitary Sewer Modeling and Capacity Analysis - Des Plaines River Service Area
Fee Estimate Summary for Task Order A
Donohue & Associates, Inc.

Task	Eng. VI \$ 190	Eng. IV \$ 160	Eng. III \$ 145	Eng. II \$ 130	Eng. I \$ 115	Admin I \$ 60	Total Hours	Total Labor	Travel	Printing	Other	Total Cost
1 Scoping Meetings (2)	22		12				34	\$ 5,920	\$ 200			\$ 6,120
2 Project Meetings (4)	28		38				66	\$ 10,830	\$ 400			\$ 11,230
3 Information Gathering & Review	32						32	\$ 6,080				\$ 6,080
4 Stakeholder Coordination	2		12				14	\$ 2,120				\$ 2,120
5 Field Survey / Manhole Inspections			20		20		40	\$ 5,200	\$ 100		\$ 200	\$ 5,500
6 Evaluate Pumping & Flow Monitoring Data	12		32				44	\$ 6,920				\$ 6,920
7 Evaluate Water Billing Records	4		16				20	\$ 3,080				\$ 3,080
8 Prepare Sanitary Sewer Model	16		60				76	\$ 11,740				\$ 11,740
9 Model Calibration	8		24				32	\$ 5,000				\$ 5,000
10 Existing Capacity Analysis	8		24				32	\$ 5,000				\$ 5,000
11 Land Use / Future Flow Analysis	8		40				48	\$ 7,320				\$ 7,320
12 Future Capacity Analysis	8		24				32	\$ 5,000				\$ 5,000
13 Identify Potential CS Improvements	16		40				56	\$ 8,840				\$ 8,840
14 WRF Capacity Analysis	40			130			170	\$ 24,500	\$ 300	\$ 120		\$ 24,920
15 Prepare Report	24		40			8	72	\$ 10,840		\$ 1,000	\$ 100	\$ 11,940
16 Project Administration	60	12					72	\$ 13,320			\$ 350	\$ 13,670
17 QA/QC		16					16	\$ 2,560				\$ 2,560
Total	288	28	382	130	20	8	856	\$ 134,270	\$ 1,000	\$ 1,120	\$ 650	\$ 137,040
Total Labor Dollars by Labor Class	\$54,720	\$ 4,480	\$55,390	\$16,900	\$ 2,300	\$ 480						