

**City of Blaine**  
**Request for Council Action**  
**Meeting Date: March 27, 2023**

**Subject:** Contract for the professional support for NPDES & State Reclaimed Water Permit renewal.

**Department:** Public Works

**Prepared By:** Manroop Kaur  
(Digital Signature)

**Agenda Location:**     Consent Agenda     Council Action     Unfinished Business

---

**Action Needed:** City Council accept the proposal and authorize City Manager to execute the contract with the Jacobs Engineering Group.

---

**Attachments:**

1. Scope of Work.
  2. Jacobs Engineering Group's Fees Proposal.
- 

**Background/Summary:**

The City of Blaine owns and operates an activated sludge membrane bioreactor (MBR) water reclamation facility (WRF) that discharges to Semiahmoo Bay in Blaine, WA. The Blaine WRF diverts a portion of treated effluent flow to a reclaimed water system serving a neighboring golf course, park, and apartment complex. The facility currently operates under NPDES and State Reclaimed Water Permit WA0022641, issued by the Washington State Department of Ecology (Ecology) June 25, 2019, and effective July 1, 2019. The Permit expires June 30, 2024.

Permit sections requiring renewal are:

- S4E – Infiltration and Inflow Correction
- S6E – Pretreatment Annual List of Industrial Users
- S10 – Outfall Evaluation
- S8 – Application for NPDES Permit Renewal
- R8 – Application for State Reclaimed Permit Renewal

Permit sections S4E, S6E, and S10 are due for submittal June 30, 2023. Permit section S8 and R8 are due for submittal November 1, 2023.

Jacobs Engineering Group (Jacobs) will provide professional engineering services to the Client in regulatory compliance activities. Jacobs have an existing contract with Department of Ecology to present local municipalities for showing compliance in nutrient optimization of the reclaimed water facilities. Therefore, the city officials requested proposal to complete the related studies and submit the permit renewal applications.

The professional support will include:

- Infiltration and Inflow Correction Reporting
- Compilation of a complete and up to date industrial user list
- Outfall Inspection Report Summary. Commercial divers will perform an outfall pipe inspection. Diving services shall be provided to perform general underwater inspection which will include inspection of the outfall pipe and diffuser section.
- Final NPDES Form 2A Application
- Final State Permit Application for the Generation, Distribution, and Use of Reclaimed Water

---

**Budget Implications:**     Current Budget     New Budget Request     Non-Budgetary

There are sufficient funds available in the wastewater treatment plant's 2023 M&O budget to cover this professional support.

---

**Recommendation:**

Staff recommends that City Council accept the proposal and authorizes the City Manager to execute the professional support contract with Jacobs Engineering Group in the amount of \$74,923.00 (excluding taxes).

---

**Reviewed By:**

City Manager \_\_\_\_\_ Finance Director \_\_\_\_\_ City Clerk \_\_\_\_\_  
(Digital Signature) (Digital Signature) (Digital Signature)

## **Exhibit A - Scope of Work**

### **City of Blaine**

### **Lighthouse Point Water Reclamation Facility**

### **Support for NPDES & State Reclaimed Water Permit Renewal**

#### **Introduction**

The purpose of this contract is to provide professional technical support to the City of Blaine (Client) in application for National Pollutant Discharge Elimination System (NPDES) and State Reclaimed Water Permit Renewals. Permit sections requiring renewal are:

- S4E – Infiltration and Inflow Correction
- S6E – Pretreatment Annual List of Industrial Users
- S10 – Outfall Evaluation
- S8 – Application for NPDES Permit Renewal
- R8 – Application for State Reclaimed Permit Renewal

#### **Background**

The City of Blaine owns and operates an activated sludge membrane bioreactor (MBR) water reclamation facility (WRF) that discharges to Semiahmoo Bay in Blaine, WA. The Blaine WRF diverts a portion of treated effluent flow to a reclaimed water system serving a neighboring golf course, park, and apartment complex. The facility currently operates under NPDES and State Reclaimed Water Permit WA0022641, issued by the Washington State Department of Ecology (Ecology) June 25, 2019, and effective July 1, 2019. The Permit expires June 30, 2024.

Permit sections S4E, S6E, and S10 are due for submittal June 30, 2023. Permit section S8 and R8 are due for submittal November 1, 2023.

Jacobs Engineering Group (Jacobs) will provide professional engineering services to the Client in regulatory compliance activities.

#### **General project assumptions include:**

- As the applicant, it is the Client's responsibility to submit all application pieces to the Ecology via the Water Quality Permitting Portal and will assume all associated permit fees
- Jacobs will reasonably rely on the accuracy, and completeness of the information/data provided by the Client or other third parties
- Client will provide comments on Draft deliverables within two (2) weeks of receipt

This scope of services consists of the tasks described below.

#### **Task 1 – Infiltration and Inflow Correction**

Prepare a report summarizing all completed and ongoing infiltration and inflow correction projects, as well as any recommendations and a timeline for additional corrective actions.

***Assumptions:***

- The Client will provide any available information on past and ongoing efforts to reduce I/I in the last five years

***Deliverables:***

- Draft Infiltration and Inflow Correction Reporting
- Final Infiltration and Inflow Correction Reporting

**Task 2 – Pretreatment Annual List of Industrial Users**

Compilation of a complete and up to date industrial user list. The survey will identify all significant industrial users (SIUs) and potential significant industrial users (PSIUs) as defined by 40 CFR 403.3 discharging to the Blaine WRF. The existing list of SIUs and PSIUs (attached as Exhibit 1) will be built upon by means of searching water utility billing records, and the Washington State Department of Ecology PARIS database. Business no longer in operation will be eliminated from the list.

Once developed, the industrial survey user list will include all SIUs and PSIs along with their individual business name, telephone number, address, industrial process description, and any known wastewater volumes and characteristics. Jacobs will conduct phone interviews with responsive dischargers to determine any known discharge characteristics.

***Assumptions:***

- The Client will provide a list of all current known SIUs and PSIUs
- Water billing utility records
- 2 interview attempts per discharger will be made; responsiveness of each discharger cannot be guaranteed

***Deliverables:***

- Draft Industrial User List
- Final Industrial User List

**Task 3 – Outfall Evaluation**

Commercial divers will perform an outfall pipe inspection. Diving services shall be provided to perform general underwater inspection which will include inspection of the outfall pipe and diffuser section. A health and safety plan will be prepared for work authorized under this task.

The inspection itself shall include:

- Assessment of the physical condition of the outfall pipe, diffuser, and associated couplings
- Quantification of the extent of sediment accumulation in the vicinity of the diffuser
- Checking that the diffuser ports are free of obstructions and are allowing uniform flow

- Confirming the physical location (latitude/longitude) and depth (at mean lower low water) of the diffuser section of the outfall
- Assessment of the physical condition of the submarine line (submerged outfall pipe) conveying WRF discharge to diffuser
- Assessment of the physical condition of anchors used to secure the submarine line to ensure there is no structural damage to the concrete anchors

Photographic and/or videographic documentation will be requested as conditions allow. Following the inspection, a summary technical memorandum detailing finding of the outfall condition will be developed for review by the Client prior to submittal to Ecology.

***Assumptions:***

- Inspection will require a three-person diving team at a minimum
- Divers will be trained commercial divers from accredited commercial diving schools
- Divers shall comply with all local, state, and federal rules and regulations pertaining to commercial diving
- Jacobs will deliver the inspection report summary technical memorandum (TM) no later than two (2) weeks prior to submission due date (June 30, 2023) to allow the Client adequate review time
- Notice to proceed for this task will be issued on or before March 20, 2023.

***Deliverables:***

- Final Outfall Inspection Report Summary TM
- Any photographic or videographic evidence obtained during the inspection

**Task 4 – Application for NPDES Permit Renewal**

Jacobs will prepare NPDES Form 2A with data received from the Client. The renewal application will be developed based on influent and effluent data collected under the current permit’s monitoring schedule (Section S2.A) since the previous permit application, through **December 2021** (four- and one-half years).

A draft NPDES Permit Application will be developed for review by the Client, and following receipt of review comments and reviewing meeting, a Final NPDES Permit Application prepared for the Client to submit to Ecology.

***Assumptions:***

- The Client will provide all influent and effluent monitoring data available for the period **of June 2017 – December 2021** (four- and one-half years from last permit application), in electronic format.
- Up to two Jacobs staff team members will attend two, thirty-minute-long review meetings.
- Deliverables will be in MS Word and pdf files format of Form 2A applications with supporting documents
- Request for extension may be submitted to Ecology if necessary

***Deliverables:***

- Draft NPDES Form 2A Application May 1, 2023
- Final NPDES Form 2A Application May 15, 2023
- Supplemental materials as requested

**Task 5 – Application for State Reclaimed Water Permit Renewal**

Completion of the State Permit Application for the Generation, Distribution and Use of Reclaimed Water. Jacobs will review previous permit applications and identify any changes in the existing volume or characteristics of reclaimed water produced, distribution or collection system, and/or treatment process. Jacobs will prepare the application with data received from the Client and package all required attachments of the application.

A draft State Reclaimed Water Permit Application will be developed for review by the Client, and following receipt of review comments and reviewing meeting, a Final State Reclaimed Water Permit Application prepared for the Client to submit to Ecology.

***Assumptions:***

- The Client will provide all necessary attachments and supplemental information to complete the Permit Application. Attachments and supplemental documents include:
  - PDF map of the existing collection system and service area
  - PDF map of reclaimed water distribution system
  - Records from the past year of all reclaimed water use including type of use, location of use, volume per day per user
  - All available plant drawings
  - Reclaimed water facility operations and maintenance manual
  - Most recent feasibility analysis, water rights impairment analysis, engineering report, and/or plans and specifications

***Deliverables:***

- Draft State Permit Application for the Generation, Distribution, and Use of Reclaimed Water May 1, 2023 (electronic copies only). Water use data will be used to summarize the recommended agronomic rate of application of agricultural or landscape users compared to actual use. The non-crop use of water will be summarized and compared to industry standards.
- Final State Permit Application for the Generation, Distribution, and Use of Reclaimed Water May 15, 2023

**Task 6 – Project Management**

Provide services to manage the work tasks and team to achieve the objectives of this scope document. In addition, this task includes those elements necessary to properly manage, lead, and control the project.

**Activities**

- Project documentation and coordination
- Quality control review of work activities and project deliverables.
- Monitor project activities for potential changes. Should changes occur, and with Client approval, modify tasks, task budgets, and approach. Inform Client if any changes will impact the cost of engineering services or schedule.
- Maintain records, manage and process communications, and coordinate Project administrative matters.
- Preparing and submitting monthly invoicing.

**Deliverables**

- Monthly invoices with narratives providing updates on work completed and tasks to be completed in the following months.
- Completed change management forms, as needed, to document impacts of potential changes on engineering fee, or schedule.

### **Assumptions**

- 9 months of invoicing.
- Should the project extend beyond the estimated schedule, Consultant will be entitled to additional compensation

### **Exhibit 1: SIU/PSIU List from 2012 SIU Survey**

- Justesen Industries – DOE permitted
- Nature’s Path – NPDES permit
- Totally Chocolate – Food manufacturer
- Golden Nut – Food manufacturer
- Automotive repair businesses
  - Alley auto repair/NAPA Auto Parts
  - Foreign auto clinic
- Restaurants (approximately 20)
- High water users
  - Semiahmoo Resort & Hotel
  - Stafholt Good Samaritan Center

**Exhibit B**

**PROJECT & FEE SCHEDULE**

## Exhibit B – Project & Fee Schedule

### City of Blaine

### Lighthouse Point Water Reclamation Facility

### Support for NPDES & State Reclaimed Water Permit Renewal

**Table 1: Project Schedule**

<b>Deliverable</b>	<b>Target Delivery Date</b>
Draft I&I Correction Report	June 1, 2023
Final I&I Correction Report	June 15, 2023
Draft SIU Survey	June 1, 2023
Final SIU Survey	June 15, 2023
Final Outfall Inspection Technical Memorandum	June 15, 2023
Draft NPDES Permit Application	May 1, 2023
Final NPDES Permit Application	May 15, 2023
Draft State Reclaimed Water Permit Renewal Application	May 1, 2023
Final State Reclaimed Water Permit Renewal Application	May 15, 2023

**Table 2: Fee Schedule**

<b>Task</b>	<b>Estimated Staff Hours</b>	<b>Total Fee</b>
1. Infiltration & Inflow Correction	39	\$6,648
2. Pre-treatment Annual List of Industrial Users	36	\$6,095
3. Outfall Evaluation	38	\$5,833
3. Outfall Inspection	1 day of professional commercial diving services	\$9,378
4. Application for NPDES Permit Renewal	45	\$16,416
5. Application for State Reclaimed Water Permit Renewal	93	\$19,766
6. Project Management	74	\$10,787
TOTAL	325	\$74,923