

**TROY WATER AND SEWER COMMISSIONERS MEETING**  
**September 22, 2022**  
**Page 1 of 1**

**PRESENT:** Ben Drugg, Courtney Davis, Adam Hopkins, Tom Lambert, Rhonda Sheats  
**ABSENT:** Carl Patten, Jr, Burt Lang

**CALL TO ORDER:** Vice Chair Adam Hopkins called the meeting to order at 6:00 PM

**PUBLIC COMMENTS:** Opportunity for the public comment was not offered at this meeting.

**MOTION:** Ben Drugg moved to table all Old Business and New Business except for the proposal from Underwood Engineers, the Draft Administrative Order from the EPA and the 2023 Budget Discussion. Second, Courtney Davis. All in favor: 3-0-0

**OLD BUSINESS:** Tabled

**NEW BUSINESS:**

1. **30 Monadnock Street (System Access Request)** – Tom Lambert shared with the Board recent correspondence he has had with the Developer, Eric Farris regarding the connection of the former Troy Mills property to the Town's Water and Sewer systems. Mr. Farris was following up regarding a site visit that was conducted by Tom. See the attached e-mail conversation (Attachment A) for details.
2. **Underwood Engineers Proposal** – Discussion regarding the Lagoon Treatment Optimization Study proposed by Underwood Engineers (Attachment B) was had. Ben Drugg made the motion to authorize Underwood Engineering to move forward with Task #1 of the two-phase proposal and to use funds from the PDIP account to pay for it. Courtney Davis Seconded. All in favor. 3-0-0. Tom will contact Chairman Burt Lang to sign the proposal. If the Chairman is unwilling (as he was not present for the vote) or unable, Vice Chair Adam Hopkins will sign.
1. **EPA Findings of Violation and Order of Compliance (Draft)** – Discussion was had regarding the Administrative Order (Attachment C) that was issued by the EPA. The order increases our effluent limitations for Copper, Phosphorus and Nitrogen for a 24-month period and, throughout that time frame, adds additional reporting requirements, as well as proof of efforts taken to correct the current violations of our NPDES permit. Rhonda and Tom confirmed that we will be able to comply with the increased limits outlined in the order based on our historical MOR reports. The draft was issued with a deadline for response of 9/26/22. Tom will contact the EPA/DES on 9/26/22 to see if there is anything else that is required from us before the Order takes effect. He will confirm with them what will happen once the order expires and what will happen if we violate the limits of the order during the order period.
2. **2023 Budget Preparation** – The 2023 budget was discussed line by line. Rhonda and Tom will work on the budget for our next meeting. They will ensure that every line item has a proposed figure and purpose for the proposal. We discussed the importance of annualizing this year's revenue to better understand the impact of the new rate increase that took effect on 1/1/22. Looking quickly at the revenue figures we determined that the gross revenues for 2021 were \$441,531 and the projected revenues for 2022 were approximately 491,000. These figures need to be confirmed for our final discussion on 10/12/22. The budget is to be presented to the Select Board on 10/20/22 and to the Budget Committee on 10/27/22.

**PUBLIC COMMENTS:** - Opportunity for the public comment was not offered at this meeting.

**ADJOURNMENT** – Vice Chair Adam Hopkins adjourned the meeting at 8:36 PM.

Respectfully submitted

Ben Drugg  
Secretary, Water/Sewer Department

# Attachment A

**bendrugg@hotmail.com**

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**From:** Troy Water <troywatersewer@gmail.com>  
**Sent:** Thursday, September 22, 2022 6:14 PM  
**To:** Benjamin Drugg  
**Subject:** Fwd: 30 Monadnock St

Rhonda Sheats  
Town of Troy Water/Sewer  
Office Manager  
603-242-3890

----- Forwarded message -----

From: **Troy Water** <[troywatersewer@gmail.com](mailto:troywatersewer@gmail.com)>  
Date: Thu, Sep 22, 2022 at 11:57 AM  
Subject: Re: 30 Monadnock St  
To: eric farris <[e\\_farris@hotmail.com](mailto:e_farris@hotmail.com)>

Eric,

The general purpose water connection is not the problem, the sewer main/service is. I've talked with Dennis Greene with the NHDES Wastewater Engineering Department (603-271-2980) has stated you need to apply for a sewer connection permit through them. Env-wq 703.07. He will be available to you with any questions..

Tom Lambert

Rhonda Sheats  
Town of Troy Water/Sewer  
Office Manager  
603-242-3890

On Wed, Sep 21, 2022 at 4:00 PM eric farris <[e\\_farris@hotmail.com](mailto:e_farris@hotmail.com)> wrote:

107 residential units. All one bedroom.

Your department calculated max and average flow.

It's in the letter we all have.

That's what I need.

That flow won't even begin for about 18 months.

In the meantime, it'll be a bathroom and general purpose water usage... little of which will end up in the sewer.  
(pressure Washing things mostly along with cleaning)

C Eric Farris, JD  
603 365 1820 mobile  
[E\\_farris@hotmail.com](mailto:E_farris@hotmail.com)

On Sep 21, 2022, at 2:19 PM, Troy Water <[troywatersewer@gmail.com](mailto:troywatersewer@gmail.com)> wrote:

Eric,

Can you provide up to date information/plans to what exactly you are proposing for that site. It is my understanding, you as the developer, have to apply to the State for a sewer connection permit (RSA 485-A) with what you had proposed before.

Tom Lambert

Rhonda Sheats  
Town of Troy Water/Sewer  
Office Manager  
603-242-3890

On Wed, Sep 21, 2022 at 1:26 PM eric farris <[e\\_farris@hotmail.com](mailto:e_farris@hotmail.com)> wrote:

Rhonda,

Since the site walk and review of the existing sewer structures, I have not been contacted as regards connection to the system.

Please advice.

Thank you.

Eric

C Eric Farris, JD  
603 365 1820 mobile  
[E\\_farris@hotmail.com](mailto:E_farris@hotmail.com)

# Attachment B

civil &  
environmental  
engineering



N3044

September 20, 2022

Mr. Bert Lang  
Chairman  
Troy NH Water & Sewer Department  
151 Dort Street  
Troy, NH 03465

Re: **General Services Agreement**  
Professional Engineering Services  
Troy Water & Sewer Department, Troy, New Hampshire

Dear Mr. Lang:

We are pleased to submit this Agreement whereby Underwood Engineers, Inc., hereinafter called the **Engineer**, would provide general professional engineering services as a consulting engineer for the Troy Water & Sewer Department, Troy, New Hampshire, hereinafter called the **Owner**. This Agreement is in response to your request for us to conduct a Lagoon Treatment Optimization Study. It is understood that the services to be rendered will be defined through separately issued requests defining a specific scope and budget, and may include other tasks and services at the discretion of the **Owner**. This General Services Agreement defines the General Conditions and billing rates.

## REQUEST FOR SERVICES

The **Engineer** will furnish services only at the specific request of the **Owner** and only for the specific purpose contained in each request. Whenever possible, the **Owner** will transmit such requests to the **Engineer** in writing. The attached sample form (Attachment A) for an Engineering Service Request (ESR) may be used for this purpose. The ESR includes a description of the work (scope of work), budget and schedule.

## ENGINEERING FEES AND CHARGES

Unless stated otherwise in the ESR, fees for engineering services will be on an hourly basis for the personnel involved. Such hourly fees will be based on the **Engineer's** standard technical payroll plus an allowance to cover overhead and profit. Expenses will be billed at cost, unless noted otherwise. Specialty subconsultants utilized by the **Engineer** will be charged to the **Owner** with a mark-up not to exceed 10% unless noted otherwise in the ESR.

The current hourly rates are attached (Attachment B). Hourly rates will be in effect for one-year from the date of this Agreement. Adjustments to the rates will be as issued by the **Engineer** annually.

### **OTHER ENGINEERING SERVICES**

On construction projects where federal or state funds are anticipated, the **Engineer** would prepare a separate Agreement utilizing the required contract documents to maintain eligibility, if necessary. The scope and fee would cover only the particular project in question, outlining the work to be done, and specifying the fee applicable to each phase of the work.

If any legal proceedings are required by the **Engineer**, the fee for appearance in a court of law or quasi-judicial hearing shall be on a per diem basis. The per diem rate is computed on the basis of each half day at a court or hearing regardless if active testimony is given. The per diem rate is based on 1.5 x the hourly rate of the employee involved (4-hour minimum). An ESR would be prepared and authorized in advance of any legal work.

### **AGREEMENT**

This letter Agreement and the attached General Provisions will represent the entire agreement between the **Owner** and the **Engineer**, with respect to the Project(s), and may only be modified in writing, signed by both parties. (**Note: Limitation of Liability, G.P., Section 5.7**)

### **BILLINGS AND PAYMENT**

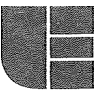
Billings for services will be made monthly and payment will be due the **Engineer** within 30 days of the billing date.

### **RENEWAL AND CANCELLATION**

This Agreement shall extend for three (3) years from its effective date but shall be automatically renewed on an annual basis on each anniversary of its effective date, unless canceled by either party by written notice as prescribed in the General Provisions. If the **Engineer** and the **Owner** mutually consent, this agreement or any renewal thereof may also be canceled, amended or superseded by a new agreement at times other than the anniversary date.

### **EFFECTIVE DATE OF AGREEMENT**

This letter Agreement and General Provisions, if accepted by the **Owner**, shall become an Agreement effective on the date of acceptance by the **Owner**. The return of one signed



Page 3 of 3  
Mr. Bert Lang  
September 20, 2022

and dated copy shall be interpreted by the **Engineer** as authorization to proceed with engineering services when requested.

Respectfully submitted,

UNDERWOOD ENGINEERS, INC.  
(**Engineer**)

Keith A. Pratt, P.E.  
President

David J. Mercier, P.E.  
Vice President

KAP/DJM  
Enclosures

APPROVED AND ACCEPTED

TROY WATER & SEWER DEPT.,  
TROY, NEW HAMPSHIRE  
(**Owner**)

On This \_\_\_\_ Day of \_\_\_\_\_, 2022

By \_\_\_\_\_  
Bert Lang  
Chairman

Attest: \_\_\_\_\_



## GENERAL PROVISIONS

Attached and made a part of a GENERAL SERVICES AGREEMENT dated \_\_\_\_\_ between:

Troy Water & Sewer Dept., Troy, NH  
(OWNER)

and

Underwood Engineers, Inc.  
(ENGINEER)

in respect to the project (Project) described herein.

### SECTION 1 – MEANING OF TERMS

1.1. As used herein the term "this Agreement" refers to the General Services Agreement to which these General Provisions are attached, as if they were part of one and the same document.

### SECTION 2 – SERVICES OF ENGINEER

2.1. ENGINEER shall not be obligated to perform any prospective work unless and until OWNER and ENGINEER agree in writing as to the particulars of the Specific Project, including the scope of ENGINEER's services, time for performance, ENGINEER's compensation, and all other appropriate matters.

2.2. Each duly executed Scope of Work or Engineering Service Request (ESR) shall be subject to the terms and conditions of this Agreement.

2.3. ENGINEER shall not be required to sign any documents, no matter by whom requested, that would result in ENGINEER having to certify, guarantee, or warrant the existence of conditions whose existence ENGINEER cannot ascertain within its services for that Specific Project. OWNER agrees not to make resolution of any dispute with ENGINEER or payment of any amount due to the ENGINEER in any way contingent upon ENGINEER signing any such certification.

### SECTION 3 - OWNER'S RESPONSIBILITIES

3.1. The OWNER will furnish or make available to ENGINEER any or all of its records, maps, or other data which, in the judgment of ENGINEER, are pertinent to his work. The OWNER will authorize and assist ENGINEER in obtaining any such pertinent information from other public and private sources. When requested by ENGINEER, the OWNER will furnish all reasonable manual assistance of OWNER's forces in performing investigations requiring such assistance.

Owner shall be responsible for, and Engineer may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.

3.2. OWNER shall provide all criteria and full information as to OWNER's requirements for the Project; designate a person to act with authority on OWNER's behalf in respect of all aspects of the Project; examine and respond promptly to ENGINEER's submissions; and give prompt written notice to ENGINEER whenever he observes or otherwise becomes aware of any defect in the work.

3.3. OWNER shall also do the following and pay all costs incident thereto:

- Guarantee access to and make all provisions for ENGINEER to enter upon public and private property, when required.
- Provide such legal, accounting, independent cost estimating and insurance counseling services as may be required for the Project.
- Provide any auditing service required.

### SECTION 4 – BUDGETS AND PAYMENTS

4.1. Suggested budgets, as used in this Agreement, are best estimates by ENGINEER.

The budgets are based on available information and prior to any detailed research on the Project. Budgets are not intended to be fixed prices but are reasonable estimates of average costs to complete projects of similar size.

4.2 Invoices for ENGINEER'S services shall be submitted on a monthly basis, mailed to OWNER at the address of OWNER indicated. All such invoices shall be payable within thirty (30) days after the date indicated on the invoice and shall, in the event that payment is not duly made, bear interest at 1% per month starting thirty (30) days from the date of original billing. It is further understood that if there be failure by OWNER to pay any invoice due to ENGINEER within ninety (90) days after the date of the invoice, ENGINEER may, without waiving any other claim or right against OWNER, and without liability whatsoever to OWNER, terminate its performance hereunder. After ninety (90) days from the date of invoice, the ENGINEER may also place unpaid balances in the hands of any agency or an attorney for collection. OWNER shall pay all costs and expenses of such collection, including reasonable attorney's fees and court costs, if any. Should it be necessary to institute legal proceedings for collection, it is understood and agreed that interest at the rate set forth above shall continue to accrue during the pendency of any such action and until such time as ENGINEER receives actual payment in full, whether by settlement, judgment, award or otherwise.

## SECTION 5 – GENERAL CONSIDERATIONS

**5.1. Standard of Care:** The standard of care for all professional engineering and related services performed or furnished by ENGINEER under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER'S services.

**5.2. Indemnification:** The ENGINEER agrees, to the fullest extent permitted by law, to

indemnify and hold harmless the OWNER, its officers, directors and employees (collectively, OWNER) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the ENGINEER's negligent performance of professional services under this Agreement and that of its subconsultants or anyone for whom the ENGINEER is legally liable. The OWNER agrees, to the fullest extent permitted by law, to indemnify and hold harmless the ENGINEER, its officers, directors, employees and subconsultants (collectively, ENGINEER) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the OWNER's negligent acts in connection with the Project and the acts of its contractors, subcontractors or consultants or anyone for whom the OWNER is legally liable. Neither the OWNER nor the ENGINEER shall be obligated to indemnify the other party in any manner whatsoever for the other party's own negligence or for the negligence of others.

### **5.3. Construction Phase Engineering:**

5.3.1. ENGINEER shall not at any time supervise, direct, control, or have authority over any contractor work, nor shall ENGINEER have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a contractor to comply with Laws and Regulations applicable to such contractor's furnishing and performing of its work.

5.3.2. ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform the Work in accordance with the Contract Documents.

5.3.3. ENGINEER shall not provide or have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or for enforcement of construction insurance or surety bonding requirements.



5.3.4. ENGINEER shall not be responsible for the acts or omissions of any Contractor, Subcontractor, or Supplier, or of any of their agents or employees or of any other persons (except ENGINEER's own employees and its subconsultants) at a Site or otherwise furnishing or performing any of a Contractor's work; or for any decision made regarding the Contract Documents, or any application, interpretation, or clarification of the Contract Documents other than those made by ENGINEER.

5.3.5. While at a Site, ENGINEER's employees and representatives shall comply with the specific applicable requirements of Contractor's and Owner's safety programs of which ENGINEER has been informed in writing.

5.3.6. For each design performed or furnished, ENGINEER shall be responsible only for those construction phase services that have been itemized and expressly required of Engineer in writing through an ESR.

#### **5.4. Ownership of Instruments of Service:**

5.4.1. The OWNER acknowledges the ENGINEER's documents, including electronic files, as the work papers of the ENGINEER and are the ENGINEER's instruments of professional service. The ENGINEER retains the right to re-use the documents for any purpose.

5.4.2. In recognition of 5.4.1, final design and construction documents prepared under this Agreement shall become the property of the OWNER upon completion of the services and payment in full of all monies due to the ENGINEER. The OWNER shall not reuse or make any modification to the construction documents without the prior written authorization of the ENGINEER. The OWNER agrees, to the fullest extent permitted by law, to defend, indemnify and hold harmless the ENGINEER, its officers, directors, employees and subconsultants (collectively, Consultant) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of

the construction documents by the OWNER or any person or entity that acquires or obtains the construction documents from or through the OWNER without the written authorization of the ENGINEER.

5.4.3. Under no circumstances shall the transfer of ownership of the ENGINEER's drawings, specifications, electronic files or other instruments of service be deemed a sale by the ENGINEER, and the ENGINEER makes no warranties, either express or implied, of merchantability and fitness for any particular purpose, nor shall such transfer be construed or regarded as any waiver or other relinquishment of the ENGINEER's copyrights in any of the foregoing, full ownership of which shall remain with the ENGINEER, absent the ENGINEER's express prior written consent.

**5.5. Opinions of Cost:** ENGINEER's opinions of probable Construction Cost are to be made on the basis of Engineer's experience and qualifications and represent ENGINEER's estimate as an experienced and qualified professional generally familiar with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If OWNER requires greater assurance as to probable Construction Cost, OWNER must retain an independent cost estimator.

**5.6. Insurance:** ENGINEER shall procure and maintain insurance to protect from claims for Worker's Compensation, General Liability, Automobile Liability, and Professional Liability. Upon request, the OWNER will be listed as additional insured with respect to applicable general liability insurance policies for a specific project.

**5.7. Limitation of Liability:** OWNER agrees to limit the liability of ENGINEER to OWNER due to negligent acts, errors or omissions by

ENGINEER, such that the total aggregate liability to all those named shall not exceed \$50,000 or the total fee for services rendered on this project by ENGINEER, whichever is the greater.

**5.8. Governing Law:** The terms of this Agreement shall be governed by the laws of the State of New Hampshire.

**5.9. Termination:** The obligation to provide further services under this Agreement may be terminated by either party upon seven days' written notice (or as indicated above for non-payment) in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In the event of any termination, ENGINEER will be paid for all services rendered to the date of termination, all Reimbursable Expenses and termination expenses.

**5.10. Successors and Assigns**

5.10.1. OWNER and ENGINEER each binds himself and his partners, successors, executors, administrators, assigns and legal representatives to the other party of this Agreement, and to the partners, successors, executors, administrators, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations of this Agreement.

5.10.2. Neither OWNER nor ENGINEER shall assign, sublet or transfer any rights under or interest in (including, but without limitation, moneys that may become due or moneys that are due) this Agreement without the written consent of the other except to the extent that the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent ENGINEER from employing such independent consultants, associates and subcontractors as he may deem appropriate to assist him in the performance of services hereunder.

5.10.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than OWNER and ENGINEER.

**5.11. Severability:** Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and ENGINEER, which agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

**5.12. Non-Exclusive Agreement:** Nothing herein shall establish an exclusive relationship between OWNER and ENGINEER. Owner may enter into similar agreements with other professionals for the same or different types of services contemplated hereunder, and ENGINEER may enter into similar or different agreements with other project owners for the same or different services contemplated hereunder.

**5.13. Dispute Resolution:** In an effort to resolve any conflicts that arise during the design and construction of the Project or following the completion of the Project, the OWNER and the ENGINEER agree that all disputes between them arising out of or relating to this Agreement or the Project shall be submitted to nonbinding mediation.

The OWNER and the ENGINEER further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the Project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with their subcontractors, subconsultants, suppliers and fabricators, thereby providing for mediation as the primary method for dispute resolution among the parties to all those agreements.

ATTACHMENT A

**SAMPLE**

ENGINEERING SERVICES REQUEST  
AUTHORIZATION TO PROCEED

To: Underwood Engineers, Inc. (**Engineer**)  
25 Vaughan Mall  
Portsmouth, New Hampshire 03801

ESR No.: #\_\_  
File No.:  
Date: Month, Day, Year  
Description: **Project Name**

From: \_\_\_\_\_ (**Owner**)  
\_\_\_\_\_  
\_\_\_\_\_

Owner's Contact(s) (this project): \_\_\_\_\_  
Engineer's Contact(s) (this project): \_\_\_\_\_

Under agreement for Professional Services as Consulting **Engineer** for the **Owner** (General Services Agreement dated \_\_\_\_\_), **Engineer** is authorized to proceed with the following work:

**Description:**

**Scope of Work:**

**Engineer** will provide the following engineering services:

**Owners Responsibility**

Owner shall make available to the Engineer the following:

**Work Not Included**

The following is not included in the Scope of Work:

**Budget Costs:**

Task 1 – _____	\$0
Task 2 – _____	\$0
Task 3 – _____	\$0
Task 4 – _____	\$0
Task 5 – _____	\$0
<b>TOTAL</b>	<b>\$0</b>

Fees for engineering services will be on an hourly basis for the personnel involved. Such hourly fees will be based on the Engineer's technical payroll plus an allowance to cover overhead and profit. Fees also include reimbursement for transportation expenses (per mile), out-of-pocket travel expenses (tolls), prints, telephone calls and miscellaneous materials that may be required to complete the work.

ATTACHMENT A

Suggested budgets, as used herein, are best estimates by Underwood Engineers. The budgets are based on available information and prior to a detailed research on the Project. Budgets are not intended to be fixed prices but are reasonable estimates of average costs to complete projects of similar size. Budget will not be exceeded without written authorization.

**Schedule:**

Underwood Engineers, Inc. will begin work within \_\_ days of authorization to proceed and provide the project deliverables within \_\_ days thereafter.

**Approval:**

Approval and authorization to proceed with the work:

\_\_\_\_\_  
<Client>  
<Title, Town>

\_\_\_\_\_  
Date

\_\_\_\_\_  
Keith Pratt, P.E., President or                      Date  
W. Steven Clifton, P.E., Vice President  
Underwood Engineers, Inc.

ATTACHMENT B

**UNDERWOOD ENGINEERS, INC.**  
**Portsmouth, New Hampshire**  
**STANDARD BILLING RATES**  
Effective through December 31, 2022

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**Labor Rates:**

Principal-in-Charge	\$175 to \$230 per hour
Senior Project Manager	\$130 to \$190 per hour
Project Manager	\$100 to \$190 per hour
Senior Project Engineer	\$90 to \$160 per hour
Project Engineer	\$70 to \$130 per hour
Senior Resident Engineer	\$70 to \$145 per hour
Resident Engineer	\$50 to \$125 per hour
Technician	\$50 to \$125 per hour
Clerical	\$50 to \$80 per hour

**Reimbursables**

Mileage	IRS Reimbursable Rate
Field Supplies	At Cost
Postage	At Cost
Food & Lodging	At Cost
Subcontractors	At Cost
Miscellaneous Job Related Expenses	At Cost

Approved by Board of Directors: February 8, 2022

KAP MP  
WSC WSC  
DJM DJM  
CAM CAM

ENGINEERING SERVICES REQUEST  
AUTHORIZATION TO PROCEED

To: Underwood Engineers, Inc. (**Engineer**)      ESR No.: # 1  
25 Vaughan Mall      File No.: N3044  
Portsmouth, New Hampshire 03801      Date: September 20, 2022  
Description: **Lagoon Treatment  
Optimization Study**

From: Town of Troy (**Owner**)  
Water & Sewer Department  
151 Dort Street  
Troy, New Hampshire 03465

Owner's Contact (this project): Bert Lang, W&SD Chairman, Town of Troy

Engineer's Contact (this project): David Mercier, P.E., Vice President, Underwood Engineers

Under agreement for Professional Services as Consulting **Engineer** for the **Owner** (General Services Agreement, Underwood File # \_\_\_\_\_, dated \_\_\_\_\_, 2022), **Engineer** is authorized to proceed with the following work:

**Description:**

The Town of Troy, NH, owns and operates a 0.265 MGD aerated facultative lagoon wastewater treatment facility. Treatment currently consists of an influent headworks building which contains a manual bar rack and a location for alkalinity addition, followed by two covered aerated lagoons, with each lagoon divided into two cells by a center baffle, followed by chlorination and dechlorination disinfection prior to discharge to the Ashuelot River. The treatment plant was originally constructed circa 1980 and with the exception of one major upgrade that occurred in 2005, which converted two of the lagoons to baffled, covered, aerated lagoons utilizing the Lemna process, no other major upgrades have occurred. It is important to note that during the 2005 upgrade, the first lagoon, which is roughly equal in volume to the volume of Lagoons 2 and 3 combined, was taken offline and has not been utilized for treatment since. Currently original Lagoons 2 and 3 are now referred to as Lagoons 1 and 2 with each having two cells deemed Cell 1A, 1B, 2A and 2B.

In 2015, Troy received a NPDES Discharge Permit that contained limits for ammonia and copper and also reporting for nitrogen, phosphorus and aluminum. Since that time, the facility has struggled to consistently meet the ammonia and copper limits and has on occasion failed to meet the goal for phosphorus removal as well. In 2021, Troy's Discharge Permit was renewed, and they were rolled into the General Permit for Massachusetts and New Hampshire communities with flows less than 1.0 MGD. With the new General Permit came an actual fixed total phosphorous limit as well as a more stringent summer ammonia limit.

In 2015, the Town added chemical feed systems to add both alum and sodium aluminate to the lagoons to enhance their potential to meet the copper limit and phosphorous goal. Since it has been seven years since the addition of chemical feed and the facility is still not meeting copper or the new phosphorus limit consistently, the EPA has indicated that an Administrative Order is

forthcoming. As a result, the Water & Sewer Department has requested that Underwood Engineers provide the following Scope of Services in order to determine if the plant's nitrogen, phosphorous and copper limits can be met in the near term through treatment process optimization. It should be noted that the Town is also pursuing the potential to implement rapid infiltration for effluent disposal and potentially remove their outfall from the Ashuelot River.

### **Scope of Services:**

#### Task 1 – Treatment Process Optimization Study

Under this task, Underwood would propose to perform the following work:

- Analyze and graph the last three years' worth of influent and effluent data for the facility.
- Based on the last three years of data, calculate a site-specific K-factor for the Troy lagoons, and use it in the Marais & Shaw equation to calculate the BOD removal capacity of the lagoons.
- Perform calculations to determine the amount of oxygen required for BOD and ammonia removal, and also the alkalinity required to achieve full nitrification at both 23°C and 7°C.
- Review the 2005 Lemna design drawings and basis of design information.
- Review the existing aeration blower and existing aeration system design criteria to determine if it is adequate to provide the oxygen necessary to fully nitrify at 7°C.
- Review the existing location of chemical injection and mixing provided for the alum and sodium aluminate addition.
- Conduct a site visit with a coagulant/polymer vendor to perform jar testing to see if a better combination of chemicals can be identified to achieve greater phosphorus and copper removal.
- Provide recommendations for future chemical addition including chemical type and chemical addition location points.
- Formulate a full-scale piloting plan for optimizing lagoon removal of ammonia, phosphorous, and copper.
- Summarize the evaluations performed in a draft technical memo for distribution to the Town.
- Meet with the Town to present the draft technical memo and obtain comments.
- Finalize the technical memo and issue it to the Town and NHDES.

#### Task 2 – Treatment Optimization Pilot Assistance **(To be Awarded at a Later Date)**

It is anticipated that Task 2 will involve assistance with a year-long pilot study to test the lagoon treatment optimization plan recommended in Task 1. The following tasks are proposed to be performed on a monthly basis for one year (12 months):

- Review data generated during the previous month and enter the data into tracking spreadsheets and trend charts.

- Create a summary email presenting the results of the previous month including thoughts regarding treatment plant performance and recommendations for changes in pilot operations, if any.
- Conduct bi-weekly check-ins via email or telephone with the plant operator to discuss the pilot and respond to questions raised.
- An allowance of eight hours per month for the above tasks has been included in the budget.

At the end of the 12-month long pilot period, Underwood will prepare a technical memo summarizing the results, conclusions, and recommendations from the 12-month long pilot study. The technical memo will be provided in draft form to the Town for review and comment, and after a meeting to discuss comments, it will be finalized and submitted to both the Town and NHDES.

Note: Costs for sampling and laboratory analysis during the 12-month pilot are assumed to be borne by the Town and are not included in this scope.

**Owner Responsibilities:**

- Pertinent Record Drawings of the WWTF and the 2005 Lemna Upgrade shall be provided to the Engineer.
- A copy of the Lemna Operation and Maintenance Manual shall be provided to the Engineer.
- The last three years' worth of monthly operating report data shall be provided to the Engineer. In addition, the last three years' worth of process data including daily alkalinity addition, alum addition, and sodium aluminate addition shall be provided to the engineer.
- O&M Manuals and basis of design criteria for the aeration blowers shall be provided to the Engineer.
- Previous reports and basis of design information for the alum and sodium aluminate chemical feed systems shall be provided to the Engineer.
- A copy of the Town's 2021 NPDES Discharge Permit including Town-specific limit table shall be provided to the Engineer.
- The Owner shall provide all sample collection and laboratory analysis as agreed to during the 12-month long pilot period.

**Work Not Included:**

- Design phase services
- Bidding phase services
- Construction phase services
- Surveying and subsurface exploration services
- Permitting services
- Funding assistance services



**Budget Cost:**

Task 1 - Treatment Process Optimization Study	\$12,400.00
Task 2 - Treatment Optimization Pilot Assistance	\$22,800.00
Total	\$35,200.00

Total Authorized under this ESR#1 (Task 1 only) **\$12,400.00**

Fees for engineering services will be on an hourly basis for the personnel involved. Such hourly fees will be based on the Engineer's technical payroll plus an allowance to cover overhead and profit. Fees also include reimbursement for transportation expenses (per mile), out-of-pocket travel expenses (tolls), prints, telephone calls and miscellaneous materials that may be required to complete the work.

Suggested budgets, as used herein, are best estimates by Underwood Engineers. The budgets are based on available information and prior to detailed research on the Project. Budgets are not intended to be fixed prices but are reasonable estimates of average costs to complete projects of similar size. Budget will not be exceeded without written authorization

**Schedule:**

Assuming that this contract is executed by September 30, 2022, Underwood will complete the Task 1 activities by December 31, 2022. Assuming authorization to proceed with Task 2 is issued in January 2023, Underwood will complete the Task 2 work by January 2024.

**Approval:**

Approval and authorization to proceed with the work:

\_\_\_\_\_  
Bert Lang Date  
W&SD Chairman, Town of Troy, NH

\_\_\_\_\_  
David J. Mercier, P.E., Date  
Vice President, Underwood Engineers, Inc

# Attachment C

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION I

IN THE MATTER OF	)	DOCKET NO. CWA-AO-R01-FY22-18
	)	
Town of Troy, New Hampshire	)	FINDINGS OF VIOLATION
NPDES Permit No. NHG580001	)	
	)	AND
Proceedings under Sections 308(a) and	)	
309(a)(3) of the Clean Water Act,	)	ORDER OF COMPLIANCE
as amended, 33 U.S.C. §§ 1318 and	)	
1319(a)(3)	)	

### I. STATUTORY AUTHORITY

The following FINDINGS are made, and ORDER issued pursuant to Section 308(a) and Section 309(a)(3) of the Clean Water Act, (the “Act”), 33 U.S.C. §§ 1318, 1319(a)(3). Section 309(a)(3) of the Act grants the Administrator of the U.S. Environmental Protection Agency (“EPA”) the authority to issue orders requiring persons to comply with Sections 301, 302, 306, 307, 308, 318 and 405 of the Act and any permit condition or limitation implementing any of such sections in a National Pollutant Discharge Elimination System (“NPDES”) permit, issued under Section 402 of the Act, 33 U.S.C. § 1342. Section 308(a) of the Act, 33 U.S.C. § 1318(a), authorizes EPA to require the submission of any information required to carry out the objectives of the Act. These authorities have been delegated to the EPA Region 1 Administrator, and, in turn, to the EPA, Region 1 Director of the Enforcement and Compliance Assurance Division (the “Director”).

The Order herein is based on findings of violation of Section 301 of the Act, 33 U.S.C. § 1311, and the conditions of NPDES Permit No. NHG580001. Pursuant to Section 309(a)(5)(A) of the Act, 33 U.S.C. § 1319(a)(5)(A), the Order provides a schedule for compliance that the Director has determined to be reasonable.

### II. DEFINITIONS

Unless otherwise defined herein, terms used in this Order shall have the meaning given to those terms in the Act, 33 U.S.C. §§ 1251 *et seq.*, the regulations promulgated thereunder, and any

applicable NPDES permit. For the purposes of this Order, “NPDES Permit” means the Town of Troy NPDES Permit, No. NHG580001 and all amendments and modifications thereto, and renewals thereof, as are applicable and in effect at the time.

### III. FINDINGS

The Director makes the following findings of fact:

1. The Town of Troy (the “Town” or “Permittee”), established under the laws of the State of New Hampshire, is a “municipality” as defined in Section 502(4) of the Act, 33 U.S.C. § 1362(4).
2. The Town is a person under Section 502(5) of the Act, 33 U.S.C § 1362(5). The Town is the operator of a Wastewater Treatment Facility (“WWTF”) from which it discharges pollutants, as defined in Sections 502(6) and (12) of the Act, 33 U.S.C. §§ 1362(6) and (12), from a point source, as defined in Section 502(14) of the Act, 33 U.S.C. § 1362(14), to the South Branch of the Ashuelot River.
3. The South Branch of the Ashuelot River is a “navigable water” under Section 502(7) of the Act, 33 U.S.C. § 1362(7).
4. On September 28, 2021, EPA Region 1 issued the Small Wastewater Treatment Facilities General Permit (NPDES Permit No. NHG580000) (the “General Permit”) for eligible WWTFs that discharge wastewater from a Publicly Owned Treatment Works (“POTW”) and other treatment works that treat domestic sewage. The General Permit became effective on April 1, 2022.
5. The NPDES Permit authorizes the Town of Troy to discharge pollutants, including total recoverable copper, total phosphorus and ammonia nitrogen, from outfall serial number 001, to the South Branch of the Ashuelot River, subject to the effluent limitations, monitoring requirements and other conditions specified in the NPDES Permit. Part III.A of the Permit establishes effluent limitations and monitoring requirements for the discharge of treated effluent from outfall serial number 001.
6. The Town is subject to a Total Recoverable Copper monthly average concentration limit of 3.1 µg/L, and daily maximum concentration limit of 4.2 µg/L.
7. The Town is subject to a Total Phosphorus monthly average load limit of 0.34 lb/day from April 1<sup>st</sup> to October 31<sup>st</sup>.

8. The Town is subject to an Ammonia Nitrogen monthly average concentration limit of 4.2 mg/L and a monthly average load limit of 9.3 lb/day from May 1<sup>st</sup> to September 30<sup>th</sup>; and a monthly average concentration limit of 13.2 mg/L and a monthly average load limit of 29.2 lb/day from October 1<sup>st</sup> to April 30<sup>th</sup>.
9. From at least April 1, 2022 through the present, in violation of the NPDES permit, the Town has discharged wastewater containing total recoverable copper, total phosphorus and ammonia nitrogen, in concentrations and loadings greater than the effluent limitations for outfall serial number 001 contained in the NPDES Permit.
10. Section 301(a) of the Act, 33 U.S.C. § 1311(a), makes unlawful the discharge of pollutants to waters of the United States except in compliance with, among other things, the terms and conditions of an NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.
11. The Town's discharges of pollutants from the WWTF to the South Branch of the Ashuelot River in excess of the effluent limits for total recoverable copper, total phosphorus and ammonia nitrogen contained in the NPDES Permit, have occurred in violation of Section 301(a) of the Act, 33 U.S.C. § 1311(a).

#### **IV. ORDER**

Accordingly, pursuant to Sections 308 and 309(a)(3) of the Act, it is hereby ordered that the Town shall:

1. Within 24 months of the effective date of this Order submit to EPA and NHDES a Copper and Nutrient Reduction Report ("the copper/nutrient report"). The submitted report shall:
  - i. analyze new and existing technologies for improving total recoverable copper and nutrient removal from the treatment plant effluent,
  - ii. propose modifications to current work practices to improve the removal of total recoverable copper and nutrients from the treatment plant effluent,
  - iii. review alternatives to better remove copper and nutrients from the treatment plant effluent,
  - iv. provide the relative costs associate with each technology or modification of a current work practice,

- v. provide recommendation(s), associated costs and schedules for implementation for achieving total recoverable copper and nutrient limits at the treatment plant.
2. Until further notice, beginning January 31, 2023, and each January 31<sup>st</sup> annually, thereafter, submit the Annual Optimization Report Update (“Annual Report”) to EPA and NHDES. The report shall detail all actions taken during the prior calendar year by the Town or known by the Permittee to have been taken by other parties, including water suppliers as applicable, to further optimize the removal of total recoverable copper, total phosphorus, and ammonia as nitrogen from the treatment plant effluent. The Annual Report shall also address all of the items specified in Attachment #1 and must specifically include trend analysis of both influent and effluent total copper loadings. The Annual Report shall include a calculation of total copper, total phosphorous and ammonia nitrogen discharges from the WWTF during the prior calendar year.
3. The schedules described in Part IV. of this Order shall be incorporated and enforceable hereunder.
4. All work pursuant to this Order shall be performed using sound engineering practices to ensure that construction, management, operation and maintenance of the Town’s WWTF, complies with the CWA.

#### **Interim Limits and Monitoring Requirements**

5. Upon the effective date of this Order, the Permittee shall, at a minimum, comply with the interim effluent limitations for total recoverable copper, total phosphorus and ammonia nitrogen set forth in Attachment #2 of this Order.
6. The Permittee shall comply with all other effluent limitations, monitoring requirements and other conditions specified in the Permit for the parameters not covered in Part IV of this Order or Attachment #2.

#### **V. NOTIFICATION PROCEDURES**

1. Where this Where this Order requires a specific action to be performed within a certain time frame, the Town shall submit to EPA and NHDES a written notice of compliance or noncompliance with such action within seven (7) days following the applicable deadline; however, written notice of compliance is not necessary if the action required by the Order

includes submission of a document, report, or other written material, and the Town has timely submitted such document, report, or written material to EPA and NHDES.

2. If noncompliance is reported, the written notification must include the following information:
  - a. A description of the noncompliance;
  - b. A description of any actions taken or proposed by the Town to comply with the required action;
  - c. A description of any factors that explain or mitigate the noncompliance; and
  - d. The date by which the Town will perform the required action.<sup>1</sup>
3. After a notification of noncompliance has been filed, compliance with the past-due requirement shall be reported by submitting all required documents or providing EPA with a written report indicating that the required action has been achieved. Submissions required by this Order shall be in writing and sent via email to the addresses below. EPA or NHDES may request that some items, such as design reports, to be sent in hard copy as well to the following addresses:

U.S. Environmental Protection Agency  
Region 1, New England  
Enforcement and Compliance Assurance Division  
5 Post Office Square – Suite 100  
Boston, MA 02109-3912  
Attn: Solanch Pastrana-Del Valle  
[Pastrana-Del-Valle.Solanch@epa.gov](mailto:Pastrana-Del-Valle.Solanch@epa.gov)

and

New Hampshire Department of Environmental Services  
Water Division  
Wastewater Engineering Bureau  
29 Hazen Drive, P.O. Box 95  
Concord, New Hampshire 03302-0095  
Attn: Teresa Ptak  
[Teresa.b.ptak@des.nh.gov](mailto:Teresa.b.ptak@des.nh.gov)

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<sup>1</sup> Note that this is not an extension to the original deadline.

## VI. GENERAL PROVISIONS

1. This Order does not constitute a waiver or a modification of the terms and conditions of the Town's NPDES Permit. The Town's NPDES Permit remains in full force and effect.
2. EPA reserves the right to seek any and all remedies available under Section 309 of the Act, 33 U.S.C. § 1319, as amended, for any violation cited in this Order.
3. The Town may seek federal judicial review of the Order pursuant to Chapter 7 of the Administrative Procedure Act, 5 U.S.C. §§ 701-706.
4. This Order shall become effective upon receipt by the Town.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Karen McGuire, Director  
Enforcement and Compliance Assurance Division  
EPA Region 1

## ATTACHMENT #1

### Annual Optimization Report Update Requirements

1. Summarize the current corrosion control program being implemented by the local supplier(s) including the pH level maintained and any corrosion inhibitors used by the supplier(s).
2. Summarize those measures that have been taken to reduce the contributions of copper and nutrients from household domestic wastes, industrial users, institutions and commercial businesses.
3. Summarize those public outreach efforts and public education programs that have been conducted to inform the public of the level of copper and nutrients in household and commercial products, their impact on the publicly-owned treatment works (POTW), and the existence of alternative products.
4. Summarize the specific measures that have been taken by the Permittee, septage haulers, industrial sewer users, local water supplier(s), etc. to reduce the level of copper and nutrients entering, and ultimately discharged from, the POTW including:
  - a. septage and side-stream treatment, or reduction or elimination of the introduction of septage to the POTW;
  - b. further reduction of copper in the water supply through additional or modified corrosion control treatment;
  - c. additional or modified chemical treatment at the POTW, including the use of different treatment chemicals, increased chemical dosing, and multiple chemical addition points at the POTW, for further removal; and,
5. Assess the annual copper and nutrient reduction that has resulted from the implementation of the above measures.



## ATTACHMENT #2

### Interim Effluent Limits and Monitoring Requirements

The Town shall comply with the following interim effluent limit and monitoring requirement from the effective date of the Order until the date the applicable improvements implemented pursuant to Paragraph IV of this Order are fully operational or by the date that EPA determines that the Town has not complied with the milestones set forth in this Order, whichever is earlier.

<b><u>Effluent Characteristic</u></b>	<b><u>Effluent Limitation</u></b>			<b><u>Monitoring Requirements</u></b>	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Total Recoverable Copper	7.0 µg/L	---	9.5 µg/L	2/Month	Grab
Total Phosphorus (April 1 – October 31)	1.63 lb/day	---	Report lb/day	2/Month	Grab
Ammonia Nitrogen (October 1 – April 30)	40.0 mg/L 29.2 lb/day	---	Report mg/L Report lb/day	1/Week	Grab
Ammonia Nitrogen (May 1 – September 30)	34.5 mg/L 24.0 lb/day	---	Report mg/L Report lb/day	1/Week	Grab