RESOLUTION 2022-19

ACCEPTING SCOPE OF WORK WITH CIVIL WEST ENGINEERING FOR WATER SYSTEM IMPROVEMENTS

WHEREAS, the State of Oregon has determined the City water system has continually exceeded the MCL for Disinfectant-by-Products (DBP) as set by the Oregon Heath Authority (OHA); and

WHEREAS, OHA has given the City an Administrative Order to resolve the issue and directed the City to produce a feasibility study that identifies possible remedies and a plan for implementing some or all the recommendations; and

WHEREAS, City has utilized the services of Civil West Engineering to produce both the City water and waste master plans; and

WHEREAS, The Monroe City Council recognizes the need to provide safe and reliable water to its citizens;

NOW THEREFORE, THE CITY OF MONROE RESOLVES AS FOLLOWS:

1. Accept the Scope of Work from Civil West Engineering (ATTACHMENT A)

2. Funding for the scope of work may be from the following sources and not to exceed:
   a. SIPP grant $20,000
   b. ARPA funds $61,000
   c. SDC (water) funds $26,000

3. The Council authorizes the mayor to sign contractual agreements with Civil West Engineering for the feasibility study and project management to comply with the OHA Administrative Order.

Adopted by the City Council this 26th day of September, 2022.

APPROVED:

Dan Sheets, Mayor — Date 9/26/22

ATTEST:

Steve Martinenko, City Recorder

ATTACHMENT A

Civil West Engineering Services, Inc.

South Coast Office
486 E Street
Coos Bay, OR 97420

Willamette Valley Office
200 Ferry Street SW
Albany, OR 97321

Rogue Valley Office
830 O'Hare Parkway, Suite 102
Medford, OR 97504

North Coast Office
609 SW Hurbert Street
Newport, OR 97365

ENGINEERING SCOPE OF SERVICES

Date: September 22, 2022

To: Steve Martinenko, City Administrator, City of Monroe

From: Matt Wadlington, Principal; Civil West Engineering Services, Inc.

RE: **2022 Water System Improvements**
Civil West Project Number: 2204-TBD

This document summarizes the tasks Civil West Engineering Services (Civil West) will complete to prepare design and bid documents to address the City of Monroe water treatment system to reduce Disinfection Byproducts (DBPs)

Project Overview

The City of Monroe is located in southern Benton County, Oregon, between Corvallis and Eugene. The City provides residents with potable water which is sourced from the Long Tom River. Upstream from the City, the Long Tom River routes through the Fern Ridge Reservoir and is metered out through a dam managed by the U.S. Army Corps of Engineers. The Long Tom River basin soils, land use, and river management strategies have led to a water source that is typically high in turbidity and organic loading.

The City's water treatment plant consists of coagulant dosing at the intake pump station, and two ultrafiltration units which were installed in 2008. Treated water is then disinfected with sodium hypochlorite (chlorine) prior to entering the 40,000 gallon clearwell located beneath the plant where it is then pumped out of and into the distribution system. The distribution system includes a network of various sized pipes and a 1-million-gallon storage reservoir. Average daily demand for water within the City is approximately 50,000 gallons (although higher in the summer). This means that with the reservoir full, the average "age" of the water, after treatment, is approximately 20 days.

Disinfection by-products are caused by the interaction of chlorine used for disinfection and organic matter still in the produced water after filtration. DBPs increase with chlorine dose, with the level of organics, and with the amount of time the two are in contact (age of water).

The City has struggled in recent years to meet the State of Oregon Drinking Water Standards for DBPs. In the summer of 2020 the City entered into a Bilateral compliance agreement (BCA) with the Oregon Health Authority, but was unable to make substantive changes to the water system to reduce DBPs. In April of 2022, the OHA, cancelled the BCA and issued a Notice of Violation and Administrative Order. Among the actions required to achieve compliance is for the City to submit a feasibility study and a revised action plan describing how the City will modify it's system in order to meet drinking water standards. **This scope will allow the City to meet items 1 & 2 of the Actions Required to Achieve Compliance.**

Civil West Engineering is proposing to lead a small team to help determine the best approach for the City to take to reduce DBPs. This team would include Civil West Engineering, and BWS Inc. who will provide operational and chemical analysis.

Part A: Scope of Work

The following tasks have been identified to track the project progress. Each task will be assigned an estimated number of hours for completion.

Task 1 – Project Management and Administration

The purpose of this task is to provide the necessary project management and administrative services to conduct an orderly and well-managed project. This will include organizational issues, coordination, financial, and other administrative services.

Task 1 Assumptions:

- The project is expected to take approximately four (5) months to complete. While most of the work will be completed within three (3) months of project authorization, regulatory review and revisions may take several months.

Task 1 Deliverables:

- Monthly invoices with required supporting documentation.

Task 2 – Feasibility Study

The purpose of this task is to evaluate improvement and operational strategies for their effectiveness at reducing DBPs. This study would develop and recommend a project (DBP Reduction Project, Phase 1) that would mostly be focused on making minor changes to the plant and operation strategies.

Task 2 Assumptions:

- Improvement and operation strategy change investigations will include; adding finished and/or raw water flow meter(s), SCADA changes to restore automation and allow for flow paced chlorine dosing, clean clearwell, and optimize coagulant dosing.
- A one-day site visit and meeting with WTP operations staff will be required to collect information to produce the Plan, and will likely include Jar Testing of water quality and coagulant effectiveness.
- The City will provide all analytical data that may be required for incorporation into the Study.
- The City will review and comment on the Preliminary Draft of the Feasibility Study within ten (10) business days.
- The Feasibility Study will be submitted to OHA for their cursory review prior to advancing to Task 3.
- The City will pay any fees associated with regulatory review..
- Regulatory coordination will be limited to coordination with OHA Drinking Water Services. The project budget assumes one round of comments will be received from OHA.

Task 2 Deliverables:

- Preliminary Draft of the Feasibility Study in PDF format for review by City staff.
- Regulatory Review Draft of the Feasibility Study in PDF format for review by OHA.

Task 3 – DBP Reduction Project, Preliminary Process and Chemistry Trial
The purpose of this task is to perform an 8-hour Chemistry and Process trial to assess filter performance with a recommended coagulant and dosage.

Task 3 Assumptions:

- Consultant team will be onsite and will set up the trial and will monitor filter performance. Time includes mobilization of team, pre-trial data collection, and trial setup, clean-up and data compilation and analysis.

Task 3 Deliverables:

- Report containing results and analysis of 8-hour trial in pdf format.

Task 4 – DBP Reduction Project, Process and Chemistry Trial
The purpose of this task is to perform a 30-day Chemistry and Process trial to assess filter performance based on the outcome of Task 3.

Task 4 Assumptions:

- Consultant team will be onsite and will set up the trial and will monitor filter performance. Time includes mobilization of team, pre-trial data collection, and trial setup, clean-up and data compilation and analysis.

Task 4 Deliverables:

- Report containing results and analysis of 30-day trial in pdf format.

Task 5 – DBP Reduction Project, Engineering and Bid Phase Support
The purpose of this task is to design necessary improvements and prepare a bidding package (including drawings, specifications, and bidding documents) to facilitate the City hiring a contractor to do the recommended work.

Task 5 Assumptions:

- Plans will be prepared as a single plan set.
- The City will provide all analytical data that may be required for incorporation into the Plan.
- Publicly available information will be adequate for any mapping which may need to be produced for the Plan. Detailed topographic or boundary surveys can be performed via an amendment to this scope of services if required to produce an approved Plan.
- The City will be responsible for submitting documents to OHA for review.
- The City will pay any fees associated with regulatory review.
- Regulatory coordination will be limited to coordination with OHA. The project budget assumes one round of comments will be received from OHA.
- Plans are estimated to include description of clearwell cleaning processes, meter installation, Scada Upgrades, and any other improvements identified in tasks 2 - 4.
- Bid documents will be based on 2019 EJCDC Documents.
- Individual project elements will be compiled into a single bid package.
- Any plan review fees will be paid directly by the City.

Task 5 Deliverables:

- Bid Documents in pdf format (Schedule 1 of Bid Documents)
- Technical Specifications in pdf format (Schedule 2 of Bid Documents)
- Engineering Plans in pdf format (Schedule 3 of Bid Documents).
- Attendance and summary report from Public Bid Opening.

Task 6 – DBP Reduction Project, Phase 1 Construction Phase Support
The purpose of this task is to support the City during the construction phase of the project by acting as the City's representative to the Contractor. Work would include periodic inspections, review of contractor payments, answering questions, and processing change orders if necessary.

Task 6 Assumptions:

- Construction contract will be with a single contractor (may be multiple subconsultants).
- Construction will last no longer than 4 months.
- Inspections will occur 2x per week, on average.

Task 3 Deliverables:

- Inspection Reports in pdf format submitted monthly.
- Closeout project documents in pdf format.

Reimbursables
This budget include an allowance to cover costs associated with mileage, reproductions, shipping, and other reimbursable items related to the project.

This engineering scope of services is limited to the tasks and areas discussed above. It is possible that additional services may be required as part of this project as the process moves forward. We can provide other services, as needed and upon request. Additional work, outside the scope presented herein may be performed at the current hourly rates. The scope identified above does not include any fees payable to agencies for review or permitting.

Part B: Fee Proposal

A summary of the engineering fee proposal is provided below:

Task	Description	Fee
1	Project Management and Administration	$3,024
2	Feasibility Study	$26,048
3	Preliminary Process and Chemistry Trial	$8,849
4	Process and Chemistry Trial	$27,669
5	Engineering and Bid Phase Services	$22,110
6	Construction Phase Services	$18,610
7	Reimbursable	$600
	Total	$106,910

The above budget breakdown is based on the estimated hours to complete each task. We propose that the project will proceed on a time and materials basis. If additional support is required beyond these allowances, we will coordinate with the City on an amendment to the agreement.

Part C: Project Schedule

Civil West proposes the following schedule of deliverables for this project:

- October 19, 2022 – Kickoff meeting and WTP tour and investigation (Task 2).
- November 3, 2022 – Feasibility Study Complete (Task 2)
- November 17, 2022 – 8-hour coagulant trial (Task 3)
- December 6, 2022 – Bid documents (plans, specs, and contract documents) submitted to City for review. (Task 5)
- January 5, 2023 – Request for Bid advertised. (Task 5)
- February 1, 2023 – Bids Due (Task 5)
- March 4, 2023 – Construction Authorized (Tasks 4 & 6)
- June 30, 2023 – Construction Complete. (Task 6)

We are grateful for this opportunity to provide these services to the City of Monroe and are pleased to be a part of your team. Please let us know if you have any questions or if you wish to see any alterations to our proposed approach. If this proposed scope of services is acceptable, please sign the attached Agreement and return a copy to our office for our records. Signing and returning this scope of services will also act as our notice to proceed.

Sincerely,
Civil West Engineering Services, Inc.

Matt Wadlington, P.E.
Principal