



September 5, 2023

Project No. 2111010

Casey Myers, *Public Works Director*  
City of John Day  
450 East Main St  
John Day, OR 97845

## **RE: MONITORING WELL CONTRACTOR SELECTION, CONSTRUCTION OBSERVATION, AND YEAR-1 WATER QUALITY SAMPLING**

Dear Mr. Myers:

CwM H2O, LLC (CwM) presents the City of John Day (City) with this proposal for work related to the planning and installation of the Water Pollution Control Facility (WPCF) Permit groundwater monitoring network, and for the required background sampling and first year of quarterly sampling and analysis. In total, this proposal presents approximately 18 months of field work as specified in the water quality monitoring plans associated with the future construction of the City's new water treatment plant. Following this scope of work, CwM assumes that sampling and analysis will be taken over by City staff who will shadow our field team in the final two quarters of sampling for training on the sampling protocols required. The overall sampling program is structured to decrease in number of samples with time. A reduction in surface water sampling will begin approximately one year after the start of the new water treatment plant operations as the required surface water sampling in the federal and state programs comes to an end. The details of the programs are presented in each sampling plan.

The City currently has three water quality monitoring plans. Separate Groundwater and Surface Water Monitoring Plans were prepared as part of Oregon Department of Environmental Quality (ODEQ) requirements for the City's WPCF Permit. The third plan, referred to as the Conservations Measurements Monitoring Plan, has been proposed to address water quality concerns raised by the US Fish and Wildlife Service and the National Marine Fisheries Service (the Services). The plans were designed to share as many of the same monitoring locations, similar monitoring schedules, and monitoring methods as possible.

The full background and operation phase monitoring network will require the construction of five new monitoring wells. These new wells, which will be used to satisfy monitoring for all three plans, will either replace existing wells that will likely be decommissioned during construction of the new treatment facility or will be located in areas that do not currently have monitoring points (downgradient of the proposed subsurface infiltration point).

To maintain compliance with funding conditions and the WPCF permit, the City must follow the sampling and analysis program presented in the three plans, which include the following:

- Groundwater Monitoring Plan - WPCF Permit #103281 (ODEQ)
- Surface Water Monitoring Plan - WPCF Permit #103281 (ODEQ)

- Conservation Measure Monitoring Plan - Evaluation Surface & Groundwater Samples: U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services)

This scope of work is intended to manage the installation of the new groundwater monitoring network based on the locations proposed in the City’s monitoring plans. This scope also includes support to complete the first year (four quarters) of sampling field work once the network is in place and monitoring can begin. The following proposal includes a total of four tasks:

- Task 1 – Final Technical Specifications and Contractor Bidding
- Task 2 – Monitoring Well Construction Observation
- Task 3 – Well Elevation Survey
- Task 4 – Monitoring Program Sampling Field Work (1-Year)

## Scope of Work

### ***Task 1 – Technical Specifications and Contractor Bidding***

Technical specifications for the drilling, construction, and development of the monitoring wells are required for the contractor bidding process and to ensure quality work is completed in the field. CwM originally proposed to prepare technical specifications and cost estimates for the groundwater monitoring network in Task 4 of the 2111005 project (Groundwater & Surface Water Monitoring Plan Development for WPCF Permit #103281). However, due to the unexpected time commitments for the development of the additional Federal Conservation Measures Monitoring Plan, the specifications were completed as drafts but have not been finalized.

In Task 1 of this scope, CwM will finalize the preparation of the contractor technical specifications for the required five new monitoring wells. These specifications will be provided to at least three drilling contractors for bidding and cost estimate comparison. Once CwM and the City agree on a contractor, these technical specifications will be used as strict guidelines during the observation of well construction (Task 2). CwM will also prepare an updated Health and Safety plan for field work.

CwM visited the project site in March 2023 to place stakes at potential well sites. The City confirmed based on these locations that all of the wells were either on City-owned lots or within the City’s right-of-way for Patterson Bridge Road. As part of Task 1, CwM will coordinate with the City to reconfirm this information based on the final locations proposed in the monitoring plans. CwM will also submit a locate ticket with Oregon 811, and with a private utility locator if necessary, to mark utilities within 50 ft of the drilling sites.

#### ***Deliverables:***

- Final Technical Specifications for Monitoring Wells
- Cost Estimate Comparison for Contractor Bids
- Field Health and Safety Plan Update

***Task 2 – Monitoring Well Construction Observation***

Task 3 covers the anticipated field work related to the drilling and construction of the City’s WMCP groundwater monitoring network. CwM will meet with the selected drilling contractor to conduct a site walk and review the proposed locations of the five monitoring wells. CwM staff will observe the installation of the five 2-inch PVC monitoring wells (one upgradient, one at the proposed infiltration facility, three downgradient wells along Patterson Bridge Road).

During installation, a CwM hydrogeologist will record the geologic and groundwater conditions encountered and the as-built construction of each well in a well log. The final depth and screened interval of each well will be determined by the hydrogeologist in the field based on site-specific conditions.

All wells will be developed by the drilling contractor under observation of a CwM hydrogeologist. The hydrogeologist will measure and record water quality to determine when development is completed at each well. A field activity log will be submitted for each day in the field during the well installation and development process. The well installations will be documented in a technical memorandum with well log figures and images from the field. CwM proposes scheduling a remote meeting with the City to review the monitoring network installation process.

***Deliverables:***

- Field Activity Logs and Well Construction Diagrams
- Well Construction and Development Technical Memorandum

***Task 3 – Well Elevation Survey***

In Task 4, CwM will coordinate with a local land surveyor to arrange an elevation survey of the newly completed groundwater monitoring network. CwM will mark the measurement point on each well casing, as well as on the ground adjacent to each well. The survey will measure these points to less than 0.01 ft so that manual depth measurements can be converted to absolute elevations.

***Deliverables:***

- Groundwater Monitoring Network Elevation Table

***Task 4 – WPCF and Federal Water Quality Monitoring Field Work – Year-1***

This task includes the first year, or the first four quarterly events, of field work necessary to completed the required background phase of the water quality monitoring programs. Monitoring and sampling for the two WPCF Permit programs and for the Conservation Measures program occur on quarterly schedules. Monitoring once the new WWTP comes on-line (operations phase) will continue on the same quarterly schedule following the same general procedures. CwM plans to collect measurements and samples for each monitoring program during the same sampling events. Details of the required water quality monitoring parameters and methods can be found in the three monitoring plan documents (listed in introduction).

The initial background sampling event will take place as soon as possible once the groundwater monitoring network is in place. Background monitoring will include groundwater samples from the monitoring wells, upstream sampling from the John Day River on City property, and downstream surface water sampling at the County Roads Department property.

Each sampling event will include a different set of sampling sites, sampling parameters, and other measurements collected in the field based on the City's three monitoring plans. However, each sampling event will require depth measurements at all wells, purging of groundwater wells prior to sampling, groundwater sample collection and splitting (for Conservation Measures plan), surface water grab sample collection and splitting (for Conservation Measures plan), field parameter measurement, equipment decontamination, and sample transport to the analytical lab. Each sampling event will likely span two days between collection, transport, and processing at the receiving lab. CwM staff will demonstrate the sampling and data collection methods to City staff during this time, with the assumption that City staff will take over monitoring after the first year.

CwM will provide the City with copies of the analytical lab reports for each sampling event, as well as a summary memorandum for the first year of sampling, which will address all three monitoring programs for the City's use. CwM will also prepare the required reporting documents for the WMCP permit and construction measures.

***Deliverables:***

- Laboratory Reports for Sampling Events
- Technical Memorandum for First Year of Monitoring
- Required Water Quality Report(s) for ODEQ
- Reporting and Statistical Analyses Required by Federal Services

***General Schedule***

The water quality monitoring field work for all three monitoring plans will occur on a synchronized quarterly schedule. The initial background sampling for the Conservation Measures Plan (Services) and Groundwater Monitoring Plan (ODEQ) will begin as soon as possible once the new groundwater wells are installed (likely spring 2024). Sampling events will then progress on a quarterly basis (roughly March, June, September, and December). The timing of construction of the new monitoring wells (Task 3) will depend on drilling contractor availability and weather conditions. Ideally, the wells would be installed before March 2024. The proposed schedule is as follows:

- Sep – Oct 2023: Finalizing technical specifications and bidding (Task 1)
- Dec 2023 – Mar 2024: Monitoring well construction (Task 2) and survey (Task 3)
- Mar 2024 – March 2025: Year-1 monitoring before new WTP operations (Task 4)

***Cost Estimate***

Please see the attached time and materials cost estimate for CwM to provide the above services outlined in Tasks 1 – 4 on a time and materials basis (Attachment 1). CwM estimates that about 415

hours of professional time will be required to support the proposed services. Including a 10% contingency margin for possible increases in labor, fuel, lodging, materials, and laboratory service costs over the lifespan of the project, the estimated total cost to complete the four tasks is approximately **\$104,800**. This cost does include travel and field expenses for CwM staff (Tasks 2 and 4), the estimated cost of the well elevation survey contractor based on previous work (Task 3), as well as the anticipated costs of lab analyses for the first year of sampling (Task 4).

The cost of the well drilling and construction contractor is not included in this scope of work. The cost of the drilling contractor will be determined in response to the technical specifications. Based on the costs to install the wells for the City's hydrogeologic investigation, CwM anticipates a contractor cost between about \$35,000 and \$45,000 for the well installation. These costs will be narrowed down as part of Task 1.

A general schedule is included above. A detailed proposed schedule for the completion of each task will be developed during Task 1. It is CwM's understanding that it is the City's intent to develop the groundwater monitoring network as soon as possible to begin the required background monitoring for funding and construction of the proposed wastewater treatment plant facilities.

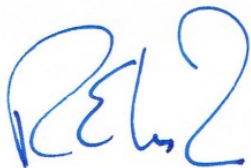
### ***Contract and Work Order Authorization***

Accompanying this scope of work, you will find CwM's Work Order Authorization (WOA) for the proposal (Attachment 2) and our current rate schedule (Attachment 3). Please sign a copy of the WOA and return it for our records. The work proposed will be completed under our Master Services Agreement with the City of John Day (dated August 9, 2022).

Please do not hesitate to call or email me with any questions.

Sincerely,

**CwM H2O, L.L.C.**



Robert Long, RG, LHG, CWRE  
Principal Consultant

Attachments:

- 1) Cost Estimate
- 2) Work Order Authorization
- 3) CwM 2022 Rate Schedule

Task	Description	Labor Hours	Labor	Outside Services, Affiliates and Expenses	Total
1	Task 1 - Technical Specifications and Contractor Bidding	31	\$4,500	\$0	\$4,500
3	Task 2 - Monitoring Well Construction Observation	88	\$12,735	\$1,693	\$14,428
4	Task 3 - Well Elevation Survey	12	\$1,410	\$2,314	\$3,724
5	Task 4 - WPCF & Federal Monitoring Background & Year-1	284	\$36,085	\$36,545	\$72,630
<b>TOTALS</b> Project Total					
		415	\$54,730	\$40,552	\$95,282

Attachment 2  
2111010 - City of John Day  
John Day, Oregon  
Work Order Authorization 001

**CwM H2O, LLC**

Project Name and Site	Client Reference No.	CwM H2O Project No.
Monitoring Well Contractor Selection, Construction Observation, and Year-1 Water Quality Sampling	2111	2111010

**SCOPE OF SERVICES**

The scope of services is outlined in the attached proposal, dated September 5, 2023. This scope includes five tasks aimed at installing the WPCF water quality monitoring system and completing the groundwater and surface water sampling and analysis field work for the first year of monitoring.

**AGREEMENT COST**

Time and Materials estimate: \$104,800

**SCHEDULE**

The project will commence once CwM receives the signed documents. The tasks will be completed based on the availability of drilling contractors, City staff review, and other factors. A general conceptual schedule is included in the attached scope of work.

The work covered by this Work Order Authorization shall be performed under the terms and conditions of our active City of John Day Professional Services Agreement dated August 9, 2022. Please endorse the signature page of this document and return to CwM-H2O, LLC. Thank you.

Casey Myers, *Public Works Director*  
City of John Day

By:  
Authorized Representative

Its:

Date: \_\_\_\_\_

CwM-H2O, LLC



By:  
Authorized Representative  
Robert E. Long Jr.

Its: Member Manager

Date: September 5, 2023

**ATTACHMENT 3**

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**CwM H2O, LLC  
Professional Services Rate Schedule for Calendar Year  
2022-2023**

Invoices from CwM H2O, LLC include all labor charges, other direct costs, and costs associated with in-house services. Charges include only those services directly attributable to a client’s individual project. Time spent when traveling in the interest of work will be charged in accordance with the hourly rates.

An additional 50% will be added to the applicable labor rate for technical support of legal counsel, litigation support, expert testimony, and response to subpoena related to any client projects, including time spent preparing for and in depositions and for the preparation of testimony.

Labor charges are based upon standard hourly billing rates for each category of staff. The billing rates include costs for salary, payroll taxes, insurance associated with employment, benefits (including holiday, sick leave, and vacation), administrative overheads, and profit. Rates by labor category are as follows:

<i><b>Personnel Level</b></i>	<i><b>Personnel Category</b></i>	<i><b>Hourly Rate (U.S. \$)</b></i>
LA1	Admin Support	\$75
LA2	Staff Admin Support	\$95
LT1	Technician	\$85
LT2	Staff Technician	\$100
LD1	CAD/Graphics	\$105
LD2	Staff CAD/Graphics	\$130
LV1	Engineer/Scientist	\$105
LV2	Staff Engineer/Scientist	\$115
LV3	Project Engineer/Scientist	\$140
LV4	Senior Project Engineer/Scientist	\$160
LV5	Senior Engineer/Scientist	\$180
LV6	Senior Consultant	\$215
LV7	Principal Consultant	\$240

Other approved direct costs, including materials, rental equipment, and approved subcontractor costs will be invoiced at cost plus a minimum general and administrative fee of 15% or as required by contract.

Rates for laboratory services and use of equipment owned by CwM H2O, LLC will be provided upon request.