

## STAFF REPORT

**To:** Coastside County Water District Board of Directors

**From:** Cathleen Brennan, Water Resources Analyst  
Via Mary Rogren, General Manager

**Agenda:** May 12, 2020

**Report Date:** May 06, 2020

**Subject:** Approval of a Professional Services Agreement with West Yost Associates for Assistance with Preparation of the District's 2020 Urban Water Management Plan

**Attachment:** Proposal for Engineering Services

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**Recommendation:** Authorize the General Manager to execute a contract with West Yost Associates for assistance with preparation of the District's 2020 Urban Water Management Plan, for a time-and-materials cost not exceed \$67,300.

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### Background:

Urban Water Management Plans (UWMP) are prepared by California's urban water suppliers to support their long-term resource planning and to ensure adequate water supplies. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 or more connections is required to assess the reliability of its water sources over a 20 year planning horizon. The requirements for UWMPs are found in two sections of California Water Code, §10610-10656 and §10608. The Department of Water Resources reviews the submitted plans to make sure water suppliers have completed the requirements identified in the Urban Water Management Planning Act.

The deadline for submitting the 2020 UWMP to the Department of Water Resources is July 1, 2021. The UWMP must be adopted by the Board of Directors before it can be submitted.

### 2020 UWMP:

Staff recommends using West Yost Associates, a leading water resources planning firm, to assist the District in publishing a 2020 UWMP that meets the Urban Water Management Plan Act requirements. West Yost Associates can provide expert peer review of staff analysis and assist with both electronic and paper publishing of the UWMP. The UWMP preparation and reporting involves significant District staff effort, along with the assistance that West Yost Associates will provide to make the best use of District staff's time. The attached proposal from West Yost Associates outlines their work scope and provides a time-and-materials cost estimate of \$67,300.

### Fiscal Impact:

Cost of \$67,300 in FY2020-2021.



February 28, 2020

SENT VIA: EMAIL

Ms. Cathleen Brennan  
Water Resources Analyst  
Coastside County Water District  
766 Main Street  
Half Moon Bay, CA 94019

**SUBJECT:** Proposal for Engineering Services – Preparation of 2020 Urban Water Management Plan Update

Dear Cathleen:

Per your request, presented herein is West Yost Associates' (West Yost) proposal to provide the Coastside County Water District (District) with engineering services related to the preparation of the District's 2020 Urban Water Management Plan (UWMP) Update.

As you know, the Urban Water Management Planning Act requires every urban water supplier in California that either provides over 3,000 acre-feet of water annually, or serves more than 3,000 urban connections, to prepare and adopt an UWMP that includes specified content, including an urban water shortage contingency analysis. The adopted UWMP must be submitted to the California Department of Water Resources (DWR) and other entities. Urban water suppliers are required to submit an UWMP every five years. The next UWMP, the 2020 UWMP, is due on July 1, 2021.

West Yost understands the District's need for a 2020 UWMP that provides an accurate description of the District's existing and projected future water demands and supplies, ensures consistency with the District's other planning efforts and meets the new 2020 UWMP requirements so that it is accepted by DWR. West Yost will prepare a 2020 UWMP for the District for submittal to DWR before the July 1, 2021 deadline. Our proposed scope of work will:

- Leverage our knowledge and understanding of the District's water supply and water system issues to efficiently prepare the District's 2020 UWMP
- Provide a coordinated approach to preparing the District's 2020 UWMP in conjunction with the DWR's anticipated release of the Guidebook for Preparation of the 2020 UWMPs
- Maximize and make best use of District staff's limited time

## NEW REQUIREMENTS FOR 2020 UWMPs

Requirements for UWMPs have changed dramatically since the Urban Water Management Planning Act was first passed in 1983. This is particularly true in recent years where UWMPs have become the primary document for reporting on water agencies' water conservation efforts, compliance requirements and water shortage contingency planning in response to unprecedented water supply conditions during the recent drought years and potential future threats due to climate change and environmental concerns.

Recent legislation impacting the 2020 UWMPs includes the following:

- AB 1739, Dickinson. Groundwater management; SB 1168, Pavley. Groundwater management; SB 1319, Pavley. Groundwater (passed September 16, 2014) – aka the Sustainable Groundwater Management Act (SGMA) -- Required the formation of Groundwater Sustainability Agencies (GSAs) and the preparation of Groundwater Sustainability Plans (GSPs). Urban water suppliers are required to report on their progress in meeting SGMA requirements in their 2020 UWMPs.
- SB 555, Wolk. Urban retail water suppliers: water loss management (passed October 9, 2015) -- Requires the State Water Board, no earlier than January 1, 2019, and no later than July 1, 2020, to adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. Urban water suppliers are required to report on their plan to meet the water loss performance standards in their 2020 UWMPs.
- SB 664, Hertzberg. Water: urban water management planning (passed October 9, 2015) – Requires urban water suppliers to include within their UWMP, beginning January 1, 2020, a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities. This bill would authorize an urban water supplier to comply with this requirement by submitting a copy of the most recent adopted local hazard mitigation plan or multi-hazard mitigation plan under specified federal law that addresses seismic risk.
- SB 606, Hertzberg. Water management planning; AB 1668, Friedman. Water management planning (passed May 31, 2018) – Builds on efforts in Making Water Conservation a California Way of Life and creates a new foundation for long-term improvements in water conservation and drought planning. SB 606 and AB 1668 establish guidelines for efficient water use and a framework for the implementation and oversight of new urban water use efficiency standards to be adopted by the State Water Board, in coordination with DWR, by June 30, 2022. Requires DWR and the State Water Board to establish standards for (1) indoor residential use; (2) outdoor residential use; (3) outdoor CII use with dedicated irrigation meters; and (4) water losses. A supplement to the 2020 UWMP will be due by January 1, 2024 and is required to incorporate Demand Management Measures to meet the adopted water use standards.

Specific requirements for the 2020 UWMPs include the following:

- Include a water supply and demand assessment which compares the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years (to 2040, preferably to 2045), in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years (CWC §10635(a))
- Provide a report on compliance with previously adopted 2020 per capita water use targets in accordance with SB X7-7 (Water Conservation Act of 2009, SB X7-7)
- **NEW** -- Report on compliance with distribution water loss standards to be adopted by the State Water Board by July 1, 2020 (SB 555) (CWC §10608.34(a)(1))
- **NEW** -- Provide a status update on Sustainable Groundwater Management Act (SGMA) compliance activities (i.e., status of GSA formation and GSP preparation) (CWC §10631(b)(4))
- **NEW** -- Include a Water Shortage Contingency Plan (WSCP) with six (6) standard shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40 and 50 percent shortages and greater than 50 percent shortage (or cross-reference current WSCP stages to the six (6) standard stages) (CWC §10632)
- **NEW** -- Provide a seismic risk assessment of water facilities (may reference a recent adopted local hazard mitigation plan or a multi-hazard mitigation plan which addresses seismic risk) (SB 664) (CWC §10632.5)

Also note that a supplement to the 2020 UWMP will be due by January 1, 2024 and is required to incorporate Demand Management Measures to achieve the Urban Water Use Objective by January 1, 2027 based on State Water Board adoption of water use standards by June 30, 2022 (SB 606) (CWC §10621(f)(2)).

## **PROPOSED UPDATES TO THE DISTRICT'S UWMP**

It is anticipated that the required organization of the 2020 UWMP will be similar to the 2015 UWMP. Each chapter of the 2020 UWMP will be prepared based on DWR guidelines and required DWR tables. Table 1 outlines the anticipated 2020 UWMP chapters and describes the updates that are anticipated for each chapter.

<b>Table 1. Anticipated UWMP Chapter Updates</b>	
<b>Chapter</b>	<b>Anticipated Updates</b>
Chapter 1. Introduction and Overview	<ul style="list-style-type: none"> <li>An introduction and overview of the 2020 UWMP will be provided</li> </ul>
Chapter 2. Plan Preparation	<ul style="list-style-type: none"> <li>The process for plan preparation will be documented</li> <li>The District will provide documentation of coordination with the public and with other agencies</li> </ul>
Chapter 3. System Description	<ul style="list-style-type: none"> <li>The District will provide updates to the written description of the physical service area and will provide historical and projected (through 2045) service area population data</li> <li>West Yost will work with District staff to update required maps including a jurisdictional area map, service area map, distribution area map, and system schematic</li> <li>West Yost will report on the District's seismic risk assessment of water facilities conducted in accordance with SB 664</li> </ul>
Chapter 4. System Water Use	<ul style="list-style-type: none"> <li>The District will provide updates to the historical demand data for the last five years (2016-2020) and a written description of any updates to the District's water use reduction plan</li> <li>The District will provide information and data related to its water loss reporting policies and procedures and compliance with new State water loss standards</li> <li>The District will provide water demand projections through 2045 based on the DSS Demand Projection model to be prepared by Maddaus</li> <li>The District will provide recycled water demand projections through 2045, if any</li> </ul>
Chapter 5. SBx7-7 Baselines and Targets	<ul style="list-style-type: none"> <li>The District will provide 2020 water use, once actual 2020 water use is available in early 2021, for West Yost to report on the District's compliance with its 2020 per capita water use target</li> </ul>
Chapter 6 System Supplies	<ul style="list-style-type: none"> <li>The District will provide updates to the written descriptions of existing water sources, including SFPUC supplies, groundwater supplies and recycled water supplies</li> <li>West Yost will work with the District to prepare updated descriptions of water transfer opportunities, desalinated water opportunities, and future water projects</li> <li>The District will provide updates to the general written descriptions of imported (purchased) supplies and agreements with SFPUC and BAWSCA</li> <li>West Yost will incorporate information on climate change impacts to the District's supply sources to the extent that information is available</li> <li>West Yost will document information regarding the District's compliance with SGMA, including GSA formation and GSP preparation</li> </ul>
Chapter 7. Water Supply Reliability Assessment	<ul style="list-style-type: none"> <li>The District will provide written descriptions of water supply reliability, water quality, and drought planning</li> </ul>
Chapter 8. Water Shortage Contingency Planning	<ul style="list-style-type: none"> <li>The District will provide a written description of the District's current Water Shortage and Drought Contingency Plan (WSDCP) and will prepare the required revenue and expenditure analysis</li> <li>West Yost will work with the District to update the WSCP to align the stages to meet the six standard shortage levels required by CWC §10632</li> </ul>
Chapter 9. Demand Management Measures	<ul style="list-style-type: none"> <li>The District will provide a written description of the District's current and planned implementation of the Demand Management Measures</li> </ul>

Table 1. Anticipated UWMP Chapter Updates	
Chapter	Anticipated Updates
Chapter 10. Plan Adoption, Submittal and Implementation	<ul style="list-style-type: none"><li>West Yost will document the District's adoption of the 2020 UWMP</li></ul>
Supporting Documents	Appendices will include, but not be limited to, the following: <ul style="list-style-type: none"><li>UWMP tables required by DWR (prepared by West Yost)</li><li>SBx7-7 tables required by DWR (prepared by West Yost)</li><li>Notification letters of UWMP update (prepared by District)</li><li>Public notice of UWMP hearing (prepared by District)</li><li>UWMP adoption resolution (prepared by District)</li><li>DWR UWMP checklist (prepared by West Yost)</li><li>Water loss audits (prepared by District)</li><li>Energy Intensity Documentation (prepared by District) – Inclusion of water energy data is limited to information that the urban water supplier can readily obtain and calculation or estimation of energy intensity remains voluntary (CWC §10631.2); water energy information related to the District's system supplies will be included to the extent that information is available</li></ul>

Our proposed Scope of Work is described below.

### **BASIC SCOPE OF WORK**

West Yost's Basic Scope of Work includes the following tasks:

- Task 1. Attend Meetings with District Staff
- Task 2. Collect and Review Data
- Task 3. Prepare Administrative Draft 2020 UWMP
- Task 4. Prepare Draft 2020 UWMP
- Task 5. Provide Support Related to Public Hearing for Draft UWMP
- Task 6. Prepare Final 2020 UWMP
- Task 7. Respond to Questions/Comments from DWR
- Task 8. Project Management and Quality Assurance/Quality Control

Each of these tasks is described below.

## **Task 1. Attend Meetings with District Staff**

West Yost will attend the Project kick-off meeting and progress meetings as discussed below.

### Task 1-1. Attend Kick-off Meeting and Develop Plan Preparation Strategy

Upon receiving Notice to Proceed, West Yost will schedule a kick-off meeting with District staff. The main purpose of the kick-off meeting will be to discuss preparation of the 2020 UWMP, data requirements, and plan objectives, and to define roles and responsibilities of District staff and West Yost for the preparation of the 2020 UWMP. The following items will be discussed at the kick-off meeting:

- Proposed organization of the 2020 UWMP;
- Proposed schedule for the preparation of the 2020 UWMP;
- Receive copies of District data and current plans and studies pertinent to the 2020 UWMP (see Task 2); and
- Set dates and times for progress meetings (see Task 1-2).

Based on the meeting discussion, West Yost will prepare a detailed chapter outline for the 2020 UWMP, including a description of chapter contents and due dates for completion of the various chapters of the 2020 UWMP. This chapter outline will then be referenced during the progress meetings to track overall project progress (see Task 1-2).

West Yost will also prepare a schedule for the preparation of the 2020 UWMP showing key milestone dates including completion of the Draft 2020 UWMP, public noticing requirements, public review and comment periods, public hearing dates, and dates for the District Board of Directors to consider adopting the 2020 UWMP. Establishing and meeting these milestone dates will be critical for the efficient and timely development of the 2020 UWMP and the ability to meet the July 1, 2021 deadline for submittal of the District Board of Directors adopted 2020 UWMP to DWR.

**Task 1-1 Deliverables:** Chapter outline for 2020 UWMP and project schedule

### Task 1-2. Progress Meetings

Throughout the preparation of the 2020 UWMP, West Yost will coordinate with District staff on the progress of the project. This coordination is assumed to occur via conference calls with key District and West Yost staff. For budgeting purposes, West Yost has assumed that twelve (12) 30-minute conference calls will be conducted at regular intervals during the preparation of the 2020 UWMP. These calls will be scheduled on mutually agreed upon days and times during the period from approximately Fall 2020 through Spring 2021. During these calls, progress on the various sections of the 2020 UWMP will be discussed, along with any issues or problems being encountered. Progress in meeting the key project milestone dates established in the project schedule will also be discussed. These coordination calls will assist in keeping the project on schedule.

**Task 1-2 Deliverables:** Meeting notes, decisions and action items discussed during progress meetings



## **Task 2. Collect and Review Data**

West Yost will collect and review the data and available reports needed to prepare the 2020 UWMP. The following specific data will be required from the District for the 2020 UWMP:

- Water Service Area Statistics (including number of connections by customer sector and population served);
- Historical (through 2020) and projected (through 2045) potable water and recycled water (if any) use by customer sector;
- Historical (through 2020) and projected (through 2045) potable water and recycled water (if any) production by source;
- Documented cutbacks in water supply;
- Low income housing projections;
- Water loss data; and
- Current and planned demand management measures and other water conservation program data.

West Yost will prepare an initial data request that will be submitted to the District prior to the kick-off meeting. A second data request will be submitted in late 2020 or early 2021 to request water use and production data for the 2020 calendar year, for use in confirming compliance with the District's adopted SBx7-7 target for 2020 (see Task 3).

West Yost will actively track the data collection effort, indicating data received and data that is still outstanding, and will report on the data collection effort progress during project status meetings.

**Task 2 Deliverables:** Data request list (initial list at beginning of project and a second list in early 2021 to request 2020 data) with status updates on the data still outstanding.

## **Task 3. Prepare Administrative Draft 2020 UWMP**

### Task 3-1: Evaluate SBx7-7 Compliance

Compliance with the Water Conservation Act of 2009 (SBx7-7) was first required as part of the 2010 UWMP cycle. With the 2020 UWMP cycle, the District must report on its compliance with its adopted 2020 per capita water use target. The District's actual water use for 2020 will be compared to the adopted 2020 per capita water use target to confirm the District's compliance with SBx7-7.

**Task 3-1 Deliverables:** Completed SBx7-7 compliance tables to be included as an appendix to the 2020 UWMP.

### Task 3-2: Prepare/Revise Required UWMP Sections/Chapters

The District's 2015 UWMP will be used as the base document and chapters will be revised and updated as needed to comply with the specific requirements for 2020 UWMPs and to update water



demand and supply data and projections as needed. Table 1 lists the specific chapters anticipated for the 2020 UWMP, along with assumptions for their preparation. Draft versions of key chapters of the 2020 UWMP will be submitted to the District for review and comment, as they are completed.

It should be noted that as of the date of this proposal, the DWR Guidebook for the Preparation of 2020 UWMPs has not yet been released. It is possible that the DWR Guidebook may have different and/or additional requirements that are not listed in Table 1. Once the DWR Guidebook is available, specific requirements for the 2020 UWMPs will be reviewed. If different and/or additional DWR requirements will require additional work effort beyond that included in this proposal, West Yost will notify the District. Any additional services not included in this Scope of Work will be performed only after receiving written authorization and a corresponding budget augmentation from the District.

**Task 3-2 Deliverables:** Drafts of key chapters of the 2020 UWMP will be submitted to the District for review and comment as they are completed to ensure a collaborative process throughout the preparation of the 2020 UWMP. Comments received from the District on draft chapters will be incorporated into the Admin Draft 2020 UWMP prepared under Task 3-3.

#### Task 3-3. Prepare Administrative Draft 2020 UWMP for District Review and Comment

The draft 2020 UWMP chapters prepared in Task 3-2 will be compiled into a complete Administrative Draft (Admin Draft) 2020 UWMP for District review and comment. The Admin Draft 2020 UWMP will include all the required chapters, associated required data tables and plan appendices.

**Task 3-3 Deliverables:** Two (2) hard bound copies of the Admin Draft 2020 UWMP will be provided to the District along with a PDF of the document.

#### Task 3-4. Prepare DWR 2020 UWMP Checklist

Upon completion of the Admin Draft 2020 UWMP, West Yost will also complete DWR's Urban Water Management Plan Checklist to ensure that all of the required elements for the 2020 UWMP have been addressed. A copy of the completed checklist will be included in an appendix of the 2020 UWMP to demonstrate to DWR that all of the required elements have been addressed and have been included in the District's 2020 UWMP, including where they are located within the 2020 UWMP.

**Task 3-4 Deliverables:** DWR Urban Water Management Plan Checklist to be included as an appendix of the 2020 UWMP.

#### **Task 4. Prepare Draft 2020 UWMP**

Upon receipt of comments from District staff on the Admin Draft 2020 UWMP, West Yost will incorporate comments and prepare the Draft 2020 UWMP for the District's circulation and public review.

**Task 4 Deliverables:** Five (5) hard bound copies of the Draft 2020 UWMP will be provided along with a PDF copy of the document for the District's circulation and public review.

#### **Task 5. Provide Support for the Public Hearing for the Draft 2020 UWMP**

West Yost will provide support to District staff related to preparing for and conducting a public hearing for the Draft 2020 UWMP. Specific support tasks will include assistance with the development of a PowerPoint presentation for the public hearing and attendance at the public hearing to assist in responding to any questions from the District Board of Directors and/or the public. It is assumed that the District will prepare the required notices for the public hearing and the staff report.

**Task 5 Deliverables:** PowerPoint presentation for Draft 2020 UWMP for presentation at public hearing.

#### **Task 6. Prepare Final 2020 UWMP**

Upon receipt of comments from the public and the District Board of Directors on the Draft 2020 UWMP, West Yost will incorporate comments and prepare the Final 2020 UWMP for consideration for adoption by the District Board of Directors. West Yost will also upload the final document to DWR's WUEdata portal.

**Task 6 Deliverables:** Ten (10) hard bound copies of the Final 2020 UWMP will be provided along with a PDF copy of the document for the District's distribution and use.

#### **Task 7. Respond to Questions/Comments from DWR**

West Yost will provide the District with assistance in responding to DWR comments on the submitted Final 2020 UWMP, if any. Because the exact nature or extent of DWR's comments cannot be determined at this time, our level of effort to respond cannot be specifically estimated. However, for budgetary purposes, up to eight (8) hours of senior-level engineering support has been estimated.

**Task 7 Deliverables:** Response to DWR review comments as needed.

#### **Task 8. Project Management and Quality Assurance/Quality Control**

Project management tasks will include on-going coordination and communications with District staff and the West Yost project team to ensure that the project work is progressing in accordance with the scope, schedule and budget. For quality assurance/quality control, it is West Yost's policy that all work products are reviewed at the principal level prior to submittal.

## ASSUMPTIONS

Key assumptions for the proposed scope of work include the following:

- The tasks and proposed schedule described above are based on the current (as of February 2020) water code provisions as they relate to UWMPs. If subsequent changes are made to the water code which require additional elements and/or additional analysis to be included in the 2020 UWMP, the scope of work may need to be revised to complete the 2020 UWMP.
- It is assumed that the DWR Guidebook for the 2020 UWMPs will be available by Fall 2020 and will provide guidance on 2020 UWMP requirements, organization and tables.
- It is assumed that the District will prepare and send required notices and provide documentation of coordination with the public and other agencies. West Yost can provide templates for required notices upon request. Copies of such notices will be included in an appendix to the 2020 UWMP.
- It is assumed that the water facility seismic risk assessments required by SB 664 have been or will be conducted by the District as a separate effort from this project. Completion of these assessments will be documented in the 2020 UWMP; however, budget to complete seismic risk assessments is not included in this project. It should be noted that the District may comply with this requirement by submitting a copy of the most recent adopted local hazard mitigation plan or multi-hazard mitigation plan under specified federal law that addresses seismic risk.
- A public hearing must be conducted for the 2020 UWMP and the District Board of Directors must adopt the 2020 UWMP before submittal to DWR. The due date for submittal of the 2020 UWMP to DWR is July 1, 2021.
- As previously noted, a supplement to the 2020 UWMP will be due by January 1, 2024 and is required to incorporate Demand Management Measures to achieve Urban Water Use Objectives by January 1, 2027 based on State Water Board adoption of water use standards by June 30, 2022 (SB 606) (CWC §10621(f)(2)). Preparation of this 2020 UWMP Supplement is not included in this project but can be provided by West Yost under a subsequent future agreement with the District.

## SCHEDULE

West Yost will work with District staff to meet the current required deadline for adoption and submittal of the 2020 UWMP to DWR by July 1, 2021. If this deadline date is changed by DWR, West Yost will coordinate with District staff to modify the project schedule as needed.

## COMPENSATION

West Yost will perform the Basic Scope of Work described above on a time and materials basis, at the billing rates set forth in West Yost's attached Billing Rate Schedule, for a not-to-exceed budget of \$67,300. Any additional services not included in this Scope of Work will be performed only after receiving written authorization and a corresponding budget augmentation from the District. The costs associated with performing the Basic Scope of Work described above are summarized in Table 2.

Table 2. Estimated Level of Effort and Costs		
Description	Level of Effort, hours	Costs, dollars
Task 1. Attend Meetings with District Staff	20	4,900
Task 2. Collect and Review Data	26	5,900
Task 3. Prepare Administrative Draft 2020 UWMP	179	34,500
Task 4. Prepare Draft 2020 UWMP	24	4,600
Task 5. Provide Support for the Public Hearing for the Draft 2020 UWMP	10	2,600
Task 6. Prepare Final 2020 UWMP	14	2,600
Task 7. Respond to Questions/Comments from DWR	8	2,400
Task 8. Project Management and Quality Assurance/Quality Control	28	8,200
Direct Costs		1,600
<b>Total Basic Scope of Work</b>	<b>309</b>	<b>\$67,300</b>

We look forward to continuing to work with you and assisting the District with this important project. Please do not hesitate to call me at (925) 461-6793, if you have any questions or need additional information.

Sincerely,

WEST YOST ASSOCIATES



Elizabeth Drayer, PE  
Project Manager  
RCE #46872

Attachment: 2020 Billing Rate Schedule

# 2020 Billing Rate Schedule

(Effective January 1, 2020 through December 31, 2020) \*

POSITIONS	LABOR CHARGES (DOLLARS PER HR)
<b>ENGINEERING</b>	
Principal/Vice President	\$298
Engineering/Scientist/Geologist Manager I / II	\$283 / \$295
Principal Engineer/Scientist/Geologist I / II	\$257 / \$272
Senior Engineer/Scientist/Geologist I / II	\$230 / \$241
Associate Engineer/Scientist/Geologist I / II	\$198 / \$212
Engineer/Scientist/Geologist I / II	\$160 / \$185
Engineering Aide	\$92
Administrative I / II / III / IV	\$81 / \$102 / \$123 / \$135
<b>ENGINEERING TECHNOLOGY</b>	
Engineering Tech Manager I / II	\$291 / \$294
Principal Tech Specialist I / II	\$268 / \$279
Senior Tech Specialist I / II	\$245 / \$256
Senior GIS Analyst	\$224
GIS Analyst	\$211
Technical Specialist I / II / III / IV	\$156 / \$178 / \$200 / \$223
CAD Manager	\$178
CAD Designer I / II	\$138 / \$155
<b>CONSTRUCTION MANAGEMENT</b>	
Senior Construction Manager	\$289
Construction Manager I / II / III / IV	\$174 / \$186 / \$198 / \$251
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	\$152 / \$169 / \$188 / \$196
Apprentice Inspector	\$138
CM Administrative I / II	\$74 / \$99
Field Services	\$196

- Hourly rates include Technology and Communication charges such as general and CAD computer, software, telephone, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside Services such as vendor reproductions, prints, shipping, and major West Yost reproduction efforts, as well as Engineering Supplies, etc. will be billed at actual cost plus 15%.
- Mileage will be billed at the current Federal Rate and Travel will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness, research, technical review, analysis, preparation and meetings billed at 150% of standard hourly rates. Expert witness testimony and depositions billed at 200% of standard hourly rates.
- A Finance Charge of 1.5% per month (an Annual Rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

\* This schedule is updated annually

## 2020 Billing Rate Schedule (continued)

(Effective January 1, 2020 through December 31, 2020) \*

### Equipment Charges

EQUIPMENT	BILLING RATES
Gas Detector	\$80/day
Hydrant Pressure Gauge	\$10/day
Hydrant Pressure Recorder, Standard	\$40/day
Hydrant Pressure Recorder, Impulse (Transient)	\$55/day
Trimble GPS – Geo 7x	\$220/day
Vehicle	\$10/hour
Water Flow Probe Meter	\$20/day
Water Quality Multimeter	\$185/day
Well Sounder	\$30/day

\* This schedule is updated annually