

TECHNICAL MEMORANDUM

DATE: March 19, 2024

Project No.: 1032-80-22-01

SENT VIA: EMAIL

TO: Puente Basin Water Agency

FROM: Erik Cadaret, PG, RCE #9965
Veva Weamer, Project Manager
Andy Malone, PG, RCE #8700



SUBJECT: Technical Memorandum 2: Goals and Concepts for
Improved Management of the Puente Basin

Technical Memorandum 2 (TM-2): Goals and Concepts for Improved Management of the Puente Basin completes Phase 1 of the scope of work to develop a Groundwater Management Plan (GMP) for the Puente Basin. TM-2 includes the following descriptions:

- Background information on the Puente Basin Water Agency's (PBWA) recent efforts to develop a GMP for the Puente Basin.
- Draft goals and objectives for improved management of the Puente Basin.
- Various general concepts for improved management of the Puente Basin.
- A scope of services and cost estimate for the next steps to develop the GMP.

BACKGROUND

The Puente Basin is a small groundwater basin located between the San Jose and Puente Hills in eastern Los Angeles County in Southern California that is approximately 20 square miles (12,800 acres). In 1971, the PBWA was formed as a joint powers authority between the Walnut Valley Water District (WVWD) and the Rowland Water District (RWD) to oversee the protection and utilization of local, imported, and recycled water within the Puente Basin. The following year in 1972, the PBWA entered into the Puente Narrows Agreement with the Upper San Gabriel Valley Municipal Water District to ensure that water management activities in the Puente Basin do not interfere with the subsurface groundwater outflow from the Puente Basin to the adjacent Main San Gabriel Basin. In 1986, the pumping rights in the Puente Basin were adjudicated pursuant to the Puente Basin Judgment (Judgment) which established a physical solution for the management of the Basin. The Judgment provided for the creation of the Puente Basin Watermaster to administer the Judgment and manage the Basin in accordance with the Physical Solution. Puente Basin groundwater is pumped and used primarily as a non-potable supply by five "Primary Parties" to the Judgment, including the WVWD and RWD.

In 2022, the PBWA contracted with West Yost to develop a GMP to enhance the management of the Puente Basin beyond the execution of the Judgment and the Puente Narrows Agreement. At that time, the PBWA expressed desires to maximize the beneficial use of the Puente Basin and thereby decrease dependence on less reliable imported water supplies. As described in the West Yost proposal¹ to develop the GMP, the work is being performed in three phases:

- **Phase 1 – Describe the State of the Puente Basin and Establish GMP Goals.** The objective of this phase is to develop an understanding of the physical structure and hydrology of the Puente Basin and articulate the specific goals of the Puente Basin stakeholders for improved groundwater basin management.
- **Phase 2 – Evaluate Alternatives for Basin Management.** The objective of this phase is to define and evaluate various management alternatives, and then based on the evaluations, select a preferred management alternative that will become the GMP for the Puente Basin.
- **Phase 3 – Prepare GMP and Implementation Plan.** The objective of this phase is to publish a final GMP and its implementation plan.

In late-2023, West Yost completed the first part of Phase 1. This included: (i) establishing a stakeholder group and process for the development of the GMP; (ii) collecting data and reports and preparing a hydrologic database; and (iii) preparing a detailed description physical structure and hydrology of the Puente Basin. A draft *Technical Memorandum 1: Description of the Puente Basin Groundwater Management Plan Area and Basin Setting* (TM-1) was completed in September 2023. The draft TM-1 was presented at a Stakeholder meeting on September 6, 2023 followed by a period for stakeholder review and comment. The final TM-1² was published on December 4, 2023 (West Yost, 2023) and included the following sections:

- **Section 2 GMP Area.** An overview of existing jurisdictions and existing management programs, including the Puente Narrows Agreement and Judgment; and description of the wells, monitoring programs, land use, and water supplies of the Puente Basin.
- **Section 3 Basin Setting.** Description of the surface-water and groundwater hydrology of the Puente Basin over a long-term historical period through current conditions, including the identification of data gaps and uncertainty in the hydrogeologic conceptualization.
- **Section 4 Basin Management Implications.** Summary of basin management challenges that are evident from the description of the Puente Basin GMP Area and hydrogeology of the basin in TM-1.

The Basin Management Implications (Section 4 of TM-1) are important because they can guide the design of project alternatives to improve basin management. The Basin Management Implications included:

- The size and yield of the Puente Basin that can be reliably pumped on an annual basis is relatively small (approximately 1,400 afy). Therefore, attempts to increase annual groundwater pumping without simultaneously increasing recharge could cause significant declines in groundwater levels.

¹ Proposal to Develop a Groundwater Management Plan for the Puente Basin. West Yost. Submitted December 3, 2021.

² https://puentebasin.com/wp-content/uploads/2023/12/TM-PBWA_TM1_20231204-Final.pdf

- Recharge to the Puente Basin is limited due to the small tributary watersheds, concrete-lining of the creeks that cross the basin, small volumes of subsurface inflows from upgradient groundwater basins, and the absence of artificial recharge of supplemental water supplies.
- Depth to groundwater is relatively shallow (ranges from 20-50 ft-bgs) and therefore, the basin has limited volumes of unused storage.
- Due to the presence of elevated TDS, nitrate, TCE, PCE, and other VOCs that are generally higher than primary and secondary MCLs, groundwater is currently only used as a non-potable supply. If potable groundwater use is desired in the future, treatment will be required.
- Several data gaps exist that will need to be filled to support the design and implementation of certain basin management strategies. These gaps include:
 - *Water Quality*. Currently, there is a paucity of groundwater-quality data across the basin for potential constituents of concern, including: hexavalent chromium, perchlorate, 1,2,3-trichloropropane, TCE, PCE, TDS and nitrate.
 - *Groundwater Dependent Ecosystems (GDEs)*. There are five potential GDEs that exist within the basin and would need to be evaluated if groundwater management activities could cause declines in groundwater levels such that it negatively impacts these potential GDEs.
 - *Water Supplies for Recharge*. The quantities, availability, and reliability of water supplies that could be used for artificial recharge is not well understood and would need to be characterized and monitored if recharge projects are contemplated for the GMP.
 - *Land Subsidence*. It is unknown what the potential is for pumping-induced land subsidence, if groundwater levels were to decline due to increased groundwater utilization.
 - *Underflow Obligation*. Defining how and if the PBWA underflow obligation through the Puente Narrows will be met with basin management strategies that are identified through the development of the GMP.
 - *Aquifer Properties*. There is a data gap in the understanding of the aquifer properties in areas where bedrock appears to be shallow. Developing a better understanding of aquifer properties in these areas is necessary if the stakeholders wish to increase the utilization of groundwater in these areas.

Organization of TM-2

TM-2 documents the remaining tasks to complete Phase 1, which include descriptions of the following:

- Basin management goals and a GMP objective statement
- Various project concepts for improving basin management
- A scope-of-work and cost estimate for the next steps to prepare the GMP (Phase 2 – Part 1)

GOALS FOR BASIN MANAGEMENT AND GMP OBJECTIVE STATEMENT

At the September 6, 2023 PBWA Stakeholder meeting, West Yost presented the findings of the draft TM- 1 and facilitated a stakeholder discussion on their goals for improved management of the Puente Basin. Based on the stakeholder feedback, West Yost has prepared *draft* Basin Management Goals and Objective Statement for the GMP.

Management Goals

The management goals for the Puente Basin GMP are:

- Increase use of Puente Basin groundwater to become less reliant on imported water.
- Manage the Puente Basin in a manner that avoids adverse impacts, such as chronic lowering on groundwater levels, land subsidence, degrading water quality, impacting to GDEs, etc.
- Control groundwater underflow through the Puente Narrows in a manner to comply with the Puente Narrows Agreement while utilizing existing credits and minimizing the accumulation of credits in the future.

GMP Objective Statement

Based on the Management Goals, the *draft* Objective Statement for the Puente Basin GMP is:

Enhance the use of Puente Basin groundwater in a sustainable manner to become less reliant on imported water while maintaining compliance with the Puente Narrows Agreement.

PROJECT CONCEPTS FOR IMPROVED BASIN MANAGEMENT

Using the information in the Basin Management Implications (Section 4 of TM-1), the stakeholder feedback received to date, and the draft Basin Management Goals and GMP Objective Statement above, three high-level project concepts are proposed below for the GMP.

- ***Increase Groundwater Pumping***
 - *Purpose:* Enhance the use of the groundwater basin to create new potable or non-potable water supplies, decrease reliance on imported water, and minimize subsurface outflow of groundwater to the Main San Gabriel Basin.
 - *Conceptual Project Alternatives:* There can be various alternatives for increased pumping from new or increased pumping at various locations across the Puente Basin. In addition, there can be various alternatives for the ultimate use of the water that could include potable or non-potable uses (i.e., projects that require treatment of the pumped groundwater or not).
- ***Enhance Recharge***
 - *Purpose:* Utilize local reliable water sources that are not currently used in the basin (e.g., surplus recycled water, storm water runoff, dry weather flow) for artificial recharge to enhance the sustainable yield of the Puente Basin.
 - *Conceptual Project Alternatives:* There can be various project alternatives based on location of recharge, method of recharge (e.g., injection, spreading, or infiltration galleries), and different types of recharge waters.

- **Expand Monitoring Program**
 - *Purpose:* Fill data gaps to support the design and implementation of any of the project alternatives listed above.
 - *Conceptual Project Alternatives:* Expansion of the monitoring program should be designed to specifically support the project alternatives that are chosen for implementation. Expansion of the monitoring program could include, but not be limited to: increased groundwater monitoring at existing wells (e.g., water-levels, water-quality, pumping); construction of new monitoring wells; controlled aquifer-system testing; remote-sensing of land subsidence and potential GDEs; etc.

These are generalized descriptions of project concepts to achieve the Basin Management Goals and GMP Objective Statement. The projects can be implemented individually or in combination with a range of potential alternatives for each concept depending on the PBWA needs and desires.

Phase 2 to develop a GMP is divided into two parts:

- **Part 1** requires the PBWA to first identify and describe more specific “Basin Management Alternatives” that consist of one or more project concepts. The PBWA will then identify which of the Basin Management Alternatives should be evaluated in Part 2. The scope of the evaluation in Part 2 will be dependent upon the specific Basin Management Alternatives that are selected; hence, Part 1 will include the preparation of the cost estimate to perform Part 2.
- **Part 2** consists of the evaluation of selected Basin Management Alternatives. The evaluation will include (i) a hydrologic analysis of the impacts to the Puente Basin and (ii) a cost analysis for project implementation to produce the new water supply. The evaluation will result in the selection of the preferred Basin Management Alternative that will become the basis for the GMP.

SCOPE OF SERVICES TO PERFORM PHASE 2 - PART 1

This section describes a proposed scope of services and cost estimate for Phase 2 – Part 1 to: (i) develop and describe various Basin Management Alternatives; (ii) identify which Basin Management Alternatives warrant further evaluation; and (iii) develop a scope of services and cost estimate to evaluate the selected Basin Management Alternatives and their relative effectiveness at achieving the goals and objectives of the GMP.

Task 1. Develop Basin Management Alternatives

In this task, West Yost will work with the PBWA and other stakeholders to develop an initial description of up to six (6) Basin Management Alternatives. The descriptions will be used to prepare the first two sections of *Technical Memorandum 3 - Basin Management Alternatives for Puente Basin Groundwater Management Plan* (TM-3). The final TM-3 will include the following sections:

1. Background and Objectives (prepared in Task 1)
2. Description of Basin Management Alternatives (prepared in Task 1)
3. Basin Management Alternatives Selected for Evaluation (prepared in Task 2)
4. Scope and Cost to Evaluate Basin Management Alternatives (prepared in Task 3)

- *Task 1.1* – West Yost will conduct an in-person meeting with PBWA staff to brainstorm and develop an initial list and conceptual descriptions of up to six (6) potential Basin Management Alternatives.
- *Task 1.2* – West Yost will prepare maps, graphics, and tables to visually describe the potential Basin Management Alternatives.
- *Task 1.3* – West Yost will conduct a virtual workshop (Workshop 1) with PBWA and other interested stakeholders to review the conceptual descriptions of the Basin Management Alternatives using the maps and graphics prepared in Task 1b. West Yost will use the verbal feedback obtained in Workshop 1, and any follow-up correspondence with PBWA staff and other stakeholders, to refine the Basin Management Alternatives.
- *Task 1.4* – West Yost will prepare a draft of Sections 1 and 2 of TM-3 that includes the conceptual descriptions of up to six Basin Management Alternatives. The draft Sections 1 and 2 will be distributed to PBWA and stakeholders for a one-month review period. The PBWA and stakeholders will submit written comments and suggestions to West Yost after the review period.

Task 1 Deliverables

- West Yost will provide the PowerPoint and minutes from Workshop 1.
- West Yost will provide a draft of Sections 1 and 2 of TM-3: *Basin Management Alternatives for the Puente Basin GMP*.

Task 2. Select Basin-Management Alternatives for Further Evaluation

In this task, the six conceptual Basin Management Alternatives are ranked and up to four (4) Basin Management Alternatives are selected for further evaluation in Phase 2 – Part 2.

- *Task 2.1* – West Yost will prepare draft ranking criteria for the Basin Management Alternatives and distribute to PBWA staff for review. Ranking criteria may include, but not limited to: groundwater yield produced by the project(s); ease of project implementation; mitigation requirements to address adverse impacts; use of underflow credits; regulatory/institutional challenges; cost; etc.
- *Task 2.2* – West Yost will conduct a virtual meeting with PBWA staff to review the draft ranking criteria and begin developing an initial ranking of the Basin Management Alternatives.
- *Task 2.3* – West Yost will prepare a draft of Section 3 of TM-3 that includes a draft ranking of the Basin Management Alternatives and a recommendation for the selection of Basin Management Alternatives for further evaluation. The draft Section 3 of TM-3 will be distributed to PBWA and stakeholders for a one-month review period. This also includes development of updated maps, graphics, and tables.
- *Task 2.4* – West Yost will conduct a virtual workshop (Workshop 2) with PBWA and other interested stakeholders to review the draft ranking of Basin Management Alternatives in Section 3 of TM-3. The workshop will be held during the first two weeks of the one-month review period. The PBWA and stakeholders will submit written comments and suggested edits on Section 3 to West Yost after the review period.
- *Task 2.5* – West Yost will conduct one as-needed virtual meeting with the PBWA staff to obtain additional feedback on the ranking of Basin Management Alternatives.

Task 2 Deliverables

- West Yost will provide the PowerPoint and minutes from Workshop 2.
- West Yost will provide a draft Section 3 of TM-3: *Basin Management Alternatives for the Puente Basin GMP*.

Task 3. Develop Scope and Cost to Evaluate Basin-Management Alternatives

In this task, West Yost prepares a scope-of-work and cost estimate to perform the evaluations for the up to four (4) selected Basin Management Alternatives in Phase 2 – Part 2. The evaluations will include (i) a hydrologic analysis of the impacts to the Puente Basin and (ii) a cost analysis for project implementation to produce the new water supply. The level of effort (scope and costs) to perform the evaluations may cause the PBWA and stakeholders to revise their rankings and/or decisions to perform one or more of the evaluations. Hence, this task will result in the final selections of Basin Management Alternatives for further evaluations, which will be documented in a final TM-3.

- *Task 3.1* – West Yost will prepare a draft of Section 4 of TM-3 that describes a scope-of-work and cost estimate to perform the evaluations for the four (4) selected Basin Management Alternatives. The draft Section 4 of TM-3 will be distributed to PBWA and stakeholders for a one-month review period.
- *Task 3.2* – West Yost will conduct a virtual workshop (Workshop 3) with PBWA and other interested stakeholders to review the draft Section 4 of TM-3. The workshop will be held during the first two weeks of the one-month review period. The PBWA and stakeholders will submit written comments and suggested edits on Section 4 to West Yost after the review period.
- *Task 3.3* – West Yost will conduct one as-needed virtual meeting with the PBWA staff to obtain additional feedback on Section 4 of TM-3.
- *Task 3.4* – West Yost will address all feedback received from PBWA staff and stakeholders and will finalize TM-3, which will include an appendix of responses to stakeholder comments.

Task 3 Deliverables:

- West Yost will provide the PowerPoint and minutes from Workshop 3.
- West Yost will prepare a draft Section 4 of TM-3.
- West Yost will prepare a final TM-3: *Basin Management Alternatives for the Puente Basin GMP*.

Task 4. Ad-Hoc Meetings and Project Management

In this task, West Yost will: prepare for and conduct up to two virtual coordination meetings with PBWA staff to discuss as needed topics for the development of TM-3; coordinate staffing over the duration of the project quarterly; and provide monthly invoices and progress reports to PBWA staff of project progress, schedule, and budget status.

COST ESTIMATE TO PERFORM PHASE 2 – PART 1

West Yost’s proposed level of effort and budget for each of the tasks described above is shown in Table 1. West Yost will perform the scope of services described above on a time-and-expenses basis, at the billing rates set forth in West Yost’s attached 2024 and 2025 Billing Rate Schedule, with a not-to-exceed budget of \$147,202. Any additional services not included in this scope of services will be performed only after receiving written authorization and a corresponding budget augmentation.

Table 1. Cost Estimate for Phase 2 - Part 1

		2024						2025										
		Scientist Manager I	Principal Geologist II	Principal Geologist I	Senior Geologist I	Associate Geologist I	Admin III	QC Review	Scientist Manager I	Principal Geologist II	Principal Geologist I	Senior Geologist I	Associate Geologist I	Admin III	QC Review	Labor Hours	Fee	Costs Total Costs
West Yost Associates		\$ 335	\$ 322	\$ 302	\$ 272	\$ 226	\$ 145	\$ 322	\$ 348	\$ 335	\$ 314	\$ 283	\$ 235	\$ 151	\$ 335			
Task 1 Develop Basin-Management Alternatives																		
1.01	Meeting to Develop Basin Management Alternatives		6	12	14											32	\$ 9,364	\$ 9,364
1.02	Prepare Draft Maps, Figures, and Tables	1	1	4	32	20										58	\$ 15,089	\$ 15,089
1.03	Workshop 1		2	8	12	6										28	\$ 7,680	\$ 7,680
10.4	Draft Sections 1 & 2 of TM	1	1	18	32	12	4	4								72	\$ 19,377	\$ 19,377
Subtotal, Task 1, hours		2	10	42	90	38	4	4	0	0	0	0	0	0	0	190		
Subtotal, Task 1, dollars		\$ 670	\$ 3,220	\$ 12,684	\$ 24,480	\$ 8,588	\$ 580	\$ 1,288	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 51,510	\$ 51,510
Task 2 Select Basin-Management Alternatives for Further Evaluation																		
2.01	Ranking of Basin Management Alternatives		1	4	10	8										23	\$ 6,058	\$ 6,058
2.02	Meeting to Review Ranking of Basin Management Alternatives		2	4	8	8										22	\$ 5,836	\$ 5,836
2.03	Draft Section 3 of TM	1	1	12	32	16	2	2								66	\$ 17,535	\$ 17,535
2.04	Workshop 2		2	8	12	6										28	\$ 7,680	\$ 7,680
2.05	As-needed Meeting		1	4	4											9	\$ 2,618	\$ 2,618
Subtotal, Task 2, hours		1	7	32	66	38	2	2	0	0	0	0	0	0	0	148		
Subtotal, Task 2, dollars		\$ 335	\$ 2,254	\$ 9,664	\$ 17,952	\$ 8,588	\$ 290	\$ 644	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 39,727	\$ 32,047
Task 3 Develop Scope and Cost to Evaluate Basin-Management Alternatives																		
3.01	Draft Section 4 of TM			2	4				1	1	8	12	6	2	2	38	\$ 10,665	\$ 10,665
3.02	Workshop 3		1	2	4					1	6	8	6			28	\$ 7,907	\$ 7,907
3.03	As-needed Meeting									1	4	4				9	\$ 2,723	\$ 2,723
3.04	Stakeholder Comments										4	8	10			22	\$ 5,870	\$ 5,870
Subtotal, Task 3, hours		0	1	4	8	0	0	0	1	3	22	32	22	2	2	97		
Subtotal, Task 3, dollars		\$ -	\$ 322	\$ 1,208	\$ 2,176	\$ -	\$ -	\$ -	\$ 348	\$ 1,005	\$ 6,908	\$ 9,056	\$ 5,170	\$ 302	\$ 670		\$ 27,165	\$ 27,165
Task 4 Ad-Hoc Meetings and Project Management																		
4.01	Quarterly coordination with PBWA Staff		2	9	9					2	3	3				28	\$ 8,271	\$ 8,271
4.02	Two ad-hoc meetings with PBWA Staff		2	5	5					2	5	5				24	\$ 7,169	\$ 7,169
4.03	Prepare monthly invoices, progress reports, and internal PM coordination			8	24		8				4	6		2		52	\$ 13,360	\$ 13,360
Subtotal, Task 4, hours		0	4	22	38	0	8	0	0	4	12	14	0	2	0	104		
Subtotal, Task 4, dollars		\$ -	\$ 1,288	\$ 6,644	\$ 10,336	\$ -	\$ 1,160	\$ -	\$ -	\$ 1,340	\$ 3,768	\$ 3,962	\$ -	\$ 302	\$ -		\$ 28,800	\$ 28,800
Total, hours)		3	22	100	202	76	14	6	1	7	34	46	22	4	2	539		
TOTAL, dollars		\$ 1,005	\$ 7,084	\$ 30,200	\$ 54,944	\$ 17,176	\$ 2,030	\$ 1,932	\$ 348	\$ 2,345	\$ 10,676	\$ 13,018	\$ 5,170	\$ 604	\$ 670		\$ 147,202	\$ 147,202

SCHEDULE TO PERFORM PHASE 2 – PART 1

West Yost anticipates completing Tasks 1 through 4 within 11 months of a notice-to-proceed. Table 2 below shows the anticipated schedule of meetings and milestones for Tasks 1 through 4.

Table 2. Schedule and Milestones

Task	May 2024		Jun 2024		Jul 2024		Aug 2024		Sep 2024		Oct 2024		Nov 2024		Dec 2024		Jan 2025		Feb 2025		Mar 2025	
	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late	Early	Late
Task 1. Developing Basin-Management Alternatives	M			W																		
Task 2. Select Basin-Management Alternatives for Further Evaluation									M		W		A									
Task 3. Scope and Cost for Evaluating Basin Management Alternatives																	W		A			
Task 4. Ad-Hoc Meetings and Project Management			Q						Q						Q					Q		
Meetings: M - Meeting with PBWA; W - Public Workshop with PBWA and Stakeholders; A - As Needed Meeting; Q - Quarterly Check-in Meetings with PBWA																						
	Task Duration																					
	Deliverable																					
	Deliverable Review Period																					

STAFFING AND CLOSING COMMENTS

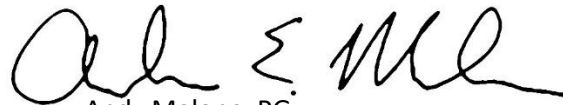
Veva Weamer will serve as the lead scientist and project manager and will be responsible for implementing the project per the final approved scope and budget. Ms. Weamer will be supported by West Yost geologists, engineers, and scientists for implementation of the scope of services. Andy Malone will serve as the technical reviewer and will provide technical support to the project team and QA/QC of all project deliverables. Samantha Adams will serve as the Principal-in-Charge and will also perform technical review.

Thank you for providing West Yost the opportunity to assist the PBWA in developing the GMP. We look forward to working with you on this important project. Please call if you have any questions or require additional information.

Sincerely,
WEST YOST



Veva Weamer
Project Manager



Andy Malone, PG
QA/QC
PG #86007

cc: Samantha Adams, Principal in Charge;
Erik Cadaret, Senior Geologist

Attachment A: West Yost 2024/2025 Billing Rate Schedule

West Yost 2024/2025 Billing Rate Schedule

2024 - 2025 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2025)

POSITIONS	LABOR CHARGES	
	2024	2025
ENGINEERING		
Principal/Vice President	/ \$355	/ \$369
Engineer/Scientist/Geologist Manager II	/ \$351	/ \$365
Engineer/Scientist/Geologist Manager I	/ \$335	/ \$348
Principal Engineer/Scientist/Geologist II	/ \$322	/ \$335
Principal Engineer/Scientist/Geologist I	/ \$302	/ \$314
Senior Engineer/Scientist/Geologist II	/ \$286	/ \$297
Senior Engineer/Scientist/Geologist I	/ \$272	/ \$283
Associate Engineer/Scientist/Geologist II	/ \$243	/ \$253
Associate Engineer/Scientist/Geologist I	/ \$226	/ \$235
Engineer/Scientist/Geologist II	/ \$205	/ \$213
Engineer/Scientist/Geologist I	/ \$176	/ \$183
Engineering Aide	/ \$106	/ \$110
Field Monitoring Services	/ \$131	/ \$136
Administrative IV	/ \$160	/ \$166
Administrative III	/ \$145	/ \$151
Administrative II	/ \$121	/ \$126
Administrative I	/ \$97	/ \$101
ENGINEERING TECHNOLOGY		
Engineering Tech Manager II	/ \$351	/ \$365
Engineering Tech Manager I	/ \$349	/ \$363
Principal Tech Specialist II	/ \$331	/ \$344
Principal Tech Specialist I	/ \$320	/ \$333
Senior Tech Specialist II	/ \$306	/ \$318
Senior Tech Specialist I	/ \$293	/ \$305
Senior GIS Analyst	/ \$265	/ \$276
GIS Analyst	/ \$251	/ \$261
Technical Specialist IV	/ \$267	/ \$278
Technical Specialist III	/ \$239	/ \$249
Technical Specialist II	/ \$213	/ \$222
Technical Specialist I	/ \$187	/ \$194
Technical Analyst II	/ \$160	/ \$166
Technical Analyst I	/ \$134	/ \$139
Technical Analyst Intern	/ \$108	/ \$112
Cross-Connection Control Specialist IV	/ \$189	/ \$197
Cross-Connection Control Specialist III	/ \$170	/ \$177
Cross-Connection Control Specialist II	/ \$151	/ \$157
Cross-Connection Control Specialist I	/ \$140	/ \$146
CAD Manager	/ \$211	/ \$219
CAD Designer II	/ \$185	/ \$192
CAD Designer I	/ \$164	/ \$171

2024 - 2025 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2025)

POSITIONS	LABOR CHARGES	
	2024	2025
CONSTRUCTION MANAGEMENT		
Senior Construction Manager	/ \$338	/ \$352
Construction Manager IV	/ \$289	/ \$301
Construction Manager III	/ \$228	/ \$237
Construction Manager II	/ \$215	/ \$224
Construction Manager I	/ \$201	/ \$209
Resident Inspector (Prevailing Wage Groups 1)	/ \$232	/ \$241
Resident Inspector (Prevailing Wage Groups 2)	/ \$224	/ \$233
Resident Inspector (Prevailing Wage Groups 3)	/ \$201	/ \$209
Resident Inspector (Prevailing Wage Groups 4)	/ \$181	/ \$188
Apprentice Inspector	/ \$164	/ \$171
CM Administrative II	/ \$118	/ \$123
CM Administrative I	/ \$87	/ \$90
Field Services	/ \$232	/ \$241

- Hourly rates include charges for technology and communication, such as general and CAD computer software, telephone calls, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside services, such as vendor reproductions, prints, and shipping; major West Yost reproduction efforts; as well as engineering supplies, etc., will be billed at the actual cost plus 15%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable when the mileage costs were incurred. Travel other than mileage will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness services, research, technical review, analysis, preparation, and meetings will be billed at 150% of standard hourly rates. Expert witness testimony and depositions will be 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 amount if not paid within 45 days from the date of the invoice.