

Name of Project: **Dixon Watershed Management Plan – Phase 3 Update**

## **SOLANO COUNTY WATER AGENCY**

### **AGREEMENT FOR PROFESSIONAL SERVICES**

THIS AGREEMENT, **effective July 13, 2023**, is between SOLANO COUNTY WATER AGENCY, a public agency existing under and by virtue of Chapter 573 of the 1989 statutes of the State of California, hereinafter referred to as "Agency," and West Yost Associates, hereinafter referred to as "Contractor."

The Agency requires services for the **Dixon Watershed Management Plan – Phase 3 Update**; and the Contractor is willing to perform these services pursuant to the terms and conditions set out in this Agreement.

IT IS MUTUALLY AGREED, as follows:

#### 1. SCOPE OF SERVICES

The Agency hereby engages the Contractor, and the Contractor agrees to perform the services for the **Dixon Watershed Management Plan – Phase 3 Update**, as described in Exhibit A, in accordance with the terms of this Agreement and any applicable laws, codes, ordinances, rules or regulations. In case of conflict between any part of this Agreement, this Agreement shall control over any Exhibit.

#### 2. COMPENSATION

Compensation for services shall be as follows: Hourly rate of personnel plus any allowed reimbursable expenses based on unit costs as indicated on any allowed reimbursable expense in Exhibit B **not to exceed \$250,230** for all work contemplated by this Agreement.

#### 3. METHOD OF PAYMENT

Upon submission of an invoice by the Contractor, and upon approval of the Agency's representative, the Agency shall pay the Contractor monthly in arrears for fees and allowed expenses incurred the prior month, however in no event shall the cumulative total paid pursuant to this agreement exceed the maximum amount provided for in paragraph 2 of this Agreement. Every invoice shall specify hours worked for each task identified in Exhibit A undertaken.

Each invoice shall be accompanied by a spreadsheet showing, by month, costs incurred to date for the project broken down by the Tasks identified in Exhibit A. The spreadsheet shall show, for each task, budget amounts, total expended and remaining amounts. The spreadsheet shall show a subtotal for each fiscal year covered by the contract. Any amendments to the contract shall be listed and incorporated into spreadsheet. An example of a typical spreadsheet shall be provided by the Agency.

4. TIME OF PERFORMANCE

This Agreement shall become effective as of the date it is executed and said services will take place between this date and **June 30, 2025** as directed by the Agency.

5. MODIFICATION AND TERMINATION

This Agreement may be modified or amended only by written instrument signed by the parties hereto, and the Contractor's compensation and time of performance of this Agreement shall be adjusted if they are materially affected by such modification or amendment.

Any change in the scope of the professional services to be done, method of performance, nature of materials or price thereof, or to any other matter materially affecting the performance or nature of the professional services will not be paid for or accepted unless such change, addition or deletion be approved in advance, in writing, by the Agency's General Manager.

This Agreement may be terminated by the Agency at any time, without cause, upon written notification to the Contractor. The Contractor may terminate this Agreement upon 30 days written notice to Agency.

Following termination by the Agency or the Contractor, the Contractor shall be reimbursed for all expenditures made in good faith in accordance with the terms of this Agreement that are unpaid at the time of termination.

6. INDEMNIFY AND HOLD HARMLESS

**When the law establishes a professional standard of care for the Contractor's services, to the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees, and authorized volunteers from all claims and demands of all persons that arise out of, pertain to, or relate to the Contractor's negligence, recklessness, or willful misconduct in the performance (or actual or alleged non-performance) of the work under this agreement. The Contractor shall defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of Contractor's performance or non-performance of the work hereunder, and shall not tender such claims to Agency nor to its directors, officers, employees, or authorized volunteers, for defense or indemnity.**

**Other than in the performance of professional services, to the fullest extent permitted by law, Contractor will defend, indemnify and hold harmless the Agency, its directors, officers, employees and authorized volunteers from all claims and demands of all persons arising out of the performance of the work or furnishing of materials; including but not limited to, claims by the Contractor or Contractor's employees for damages to persons or property except for the sole negligence or willful misconduct or active negligence of the Agency, its directors, officers, employees, or authorized volunteers.**

## 7. INSURANCE

By his/her signature hereunder, Contractor certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and that Contractor will comply with such provisions before commencing the performance of the professional services under this agreement. Contractor and sub-contractors will keep workers' compensation insurance for their employees in effect during all work covered by this agreement.

Contractor will file with the Agency, before beginning professional services, a certificate of insurance satisfactory to the Agency evidencing professional liability coverage of not less than \$1,000,000 per claim and annual aggregate, requiring 30 days notice of cancellation (10 days for non-payment of premium) to the Agency. Any insurance, self-insurance or other coverage maintained by the Agency, its directors, officers, employees, or authorized volunteers shall not contribute to it. Coverage is to be placed with a carrier with an A.M. Best rating of no less than A-:VII, or equivalent, or as otherwise approved by the Agency. The retroactive date (if any) is to be no later than the effective date of this agreement. In the event that the Contractor employs other contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above.

Contractor will file with the Agency, before beginning professional services, certificates of insurance satisfactory to the Agency evidencing general liability coverage of not less than \$1,000,000 per occurrence (\$2,000,000 general and products-completed operations aggregate (if used)) for bodily injury, personal injury and property damage; auto liability of at least \$1,000,000 for bodily injury and property damage each accident limit; workers' compensation (statutory limits) and employer's liability (\$1,000,000) (if applicable); requiring 30 days (10 days for non-payment of premium) notice of cancellation to the Agency. Any insurance, self-insurance or other coverage maintained by the Agency, its directors, officers, employees, or authorized volunteers shall not contribute to it. Coverage is to be placed with a carrier with an A.M. Best rating of no less than A- :VII, or equivalent, or as otherwise approved by the Agency. In the event that the Contractor employs other contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above.

If any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement to the Agency at least ten (10) days prior to the expiration date.

8. COMPLIANCE WITH LAW

The Contractor shall be subject to and comply with all federal, state and local laws and regulations applicable with respect to its performance under this Agreement, including but not limited to, licensing, employment and purchasing practices; and wages, hours and conditions of employment.

9. RECORD RETENTION

Except for materials and records, delivered to the Agency, the Contractor shall retain all materials and records prepared or obtained in the performance of this Agreement, including financial records, for a period of at least three years after the Contractor's receipt of the final payment under this Agreement. Upon request by the Agency, the Contractor shall make such materials and records available to the Agency at no additional charge and without restriction or limitation to State and federal governments at no additional charge.

10. OWNERSHIP OF DOCUMENTS

All materials and records of a finished nature, such as final plans, specifications, reports and maps, prepared or obtained in the performance of this Agreement, shall be delivered to and become the property of the Agency. All materials of a preliminary nature, such as survey notes, sketches, preliminary plans, computations and other data, prepared or obtained in the performance of this Agreement, shall be made available, upon request, to the Agency at no additional charge and without restriction or limitation on their use.

11. SUBCONTRACT AND ASSIGNMENT

This Agreement binds the heirs, successors, assigns and representatives of the Contractor. The Contractor shall not enter into subcontracts for any work contemplated under this Agreement and shall not assign this Agreement or monies due or to become due, without the prior written consent of the General Manager of the Agency or his designee, subject to any required state or federal approval. *(Note: list any subcontractors here)*

12. NONRENEWAL

The Contractor understands and agrees that there is no representation, implication, or understanding that the services provided by the Contractor under this Agreement will be purchased by the Agency under a new agreement following expiration or termination of this Agreement, and waives all rights or claims to notice or hearing respecting any failure to continue purchase of all or any such services from the Contractor.

13. NOTICE

Any notice provided for herein are necessary to the performance of this Agreement and shall be given in writing by personal delivery or by prepaid first-class mail addressed as follows:

AGENCY

Chris Lee, General Manager  
Solano County Water Agency  
810 Vaca Valley Parkway, Suite 203  
Vacaville, CA 95688

CONTRACTOR

Jeff Pelz, Vice President  
West Yost Associates  
2020 Research Park Drive, Suite 100  
Davis, CA 95618

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The parties have executed this Agreement the day and year first above written. If the Contractor is a corporation, documentation must be provided that the person signing below for the Contractor has the authority to do so.

Solano County Water Agency  
a Public Agency

West Yost Associates  
a California Corporation

By: \_\_\_\_\_  
Chris Lee,  
General Manager

By: \_\_\_\_\_  
Jeff Pelz,  
Vice President

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**FOR SCWA USE ONLY**

Contract Period: July 13, 2023 to June 30, 2025  
File Number: AG-W-7  
Account Manager: Gustavo Cruz  
G/L Account #: 6610AC  
Job Cost #: 3003  
Contract Type: Professional Services (Arch & Eng)

## **EXHIBIT A**

### **SCOPE OF SERVICES**

#### **SCOPE OF WORK**

The Dixon Regional Watershed Joint Powers Authority (JPA) includes the City of Dixon, Dixon Resource Conservation District (RCD), Maine Prairie Water District (MPWD), and Reclamation District (RD) 2068 which collectively have been working on drainage issues in the region for over 20 years. The Solano County Water Agency (SCWA) helped assist the Dixon agencies with the Dixon Regional Watershed Plan in the early 2000s. Since that time, several of the flood control projects in the Watershed Plan, including Pond A and Pond C have been constructed, as well as significant effort spent on the Eastside Drainage Improvements for the Tremont 3 Watershed. In 2018, after spending over 15-years in planning and engineering studies for the Eastside Drainage Improvement Project, the JPA members requested assistance from SCWA to relook at improvements in the Tremont 3 Watershed and facilitate stakeholder outreach. Over the last 5 years, SCWA has funded the Phase 1 and Phase 2 updates of the Dixon Regional Watershed Plan, which has focused on the Tremont 3 Watershed. Furthermore, the JPA stakeholders as well as Solano County have been engaged in this planning effort.

For the Phase 3 study, SCWA in partnership with the JPA and City of Dixon, are interested in running hydraulic models for the Tremont 3 watershed to simulate several important buildout and drainage improvement scenarios. The reason for this, is the City of Dixon is actively engaged with land developers in the Northeast Quadrant (NEQ) and Milk Farm portions within the City Limits of the Tremont 3 Watershed. The City of Dixon and land developers are interested in drainage improvements that would meet City drainage standards but help the overall regional drainage issues within the greater Tremont 3 Watershed. The JPA, Solano County, and SCWA are also interested in looking at flood control solutions that could help with groundwater recharge, as much of the area overlies the Solano Subbasin and is close to the Northwest Focus Area, which would benefit from groundwater recharge. The specific tasks below are designed to address several of the City of Dixon concerns, regional JPA concerns, and seek regional solutions with a multi-benefit approach, mirroring Solano County's One Water Approach, that is currently underway.

#### **TASKS**

##### **Task 1 – Document Baseline Conditions**

This task will run hydraulic modeling for Baseline Conditions before development occurred within the NEQ. The consultant will provide hydrographs and stagegraphs for the Baseline Conditions. The hydraulic modeling will also use the updated City of Dixon drainage standard including design storm. The main purpose of Task 1 is to document predevelopment conditions including land use, flows, and water surface elevations before significant development occurred with the Tremont 3 watershed.

##### **Task 2 – Document No City Conditions and Buildout Land Use Conditions**

This task will run hydraulic modeling with the NEQ and Milk Farm contributing areas removed. However, floodplain storage within the NEQ and Milk Farm regions will still be included. The main purpose of the modeling is to differentiate flow contributions from the unincorporated and City Limit portions of the watershed. The consultant will also update the model to include full

Buildout within the NEQ region but with no NEQ drainage facilities in place. The analysis will identify the drainage impact of City related development, specifically the NEQ and Milk Farm developments.

#### Task 3 – Evaluate Buildout with NEQ Drainage Facilities

This task will run hydraulic modeling with full buildout of the NEQ and Milk Farm areas with the existing and several new drainage facilities in place. The modeling will not include any regional drainage improvements, but simply analyze existing and proposed drainage improvements as a result of development within the City of Dixon.

#### Task 4 – Evaluate Buildout with Modifications to the NEQ Drainage Facilities

This task will consist of a staff level workshop to discuss any operational or physical modifications that could be done to the existing and proposed drainage facilities within the NEQ and Milk Farm areas to prevent and/or reduce upstream and downstream flooding within the Tremont 3 watershed. Hydraulic modeling will be done of the full Buildout with Modifications to the NEQ Drainage Facilities. The results of Task 4 will show the level of improvements by modifying the existing and proposed NEQ and Milk Farm drainage facilities.

#### Task 5 – Putah Creek Diversion Channel Regional Drainage Project

The consultant will develop a schematic of the Putah Creek Diversion Channel including stakeholder refinements. The facility will consist of a new open channel and culverts from the NEQ to Putah Creek. The channel will have sufficient capacity to convey flows from the Tremont 3 Watershed at I-80 as well as Milk Farm, the Southeast NEQ Basin, and the Flying J Basin. The project may include a pump station near Tremont 1 and detention basin along or near the channel alignment. Hydraulic modeling will be done with full buildout of the NEQ and Milk Farm areas as well as hydrograph and stagegraphs to show the model results. The task will also include construction and capital cost estimates of the Putah Creek Diversion Channel Regional Drainage Project.

#### Task 6 – Evaluate the Upper Watershed Regional Detention-Recharge Basin

The consultant will conduct a stakeholder workshop to develop an Upper Watershed Regional Detention-Recharge Basin. The consultant will develop a schematic of the Upper Watershed Basin based upon the stakeholder input. The basin will be a multi-benefit regional project that may provide benefits for flood control, groundwater recharge, habitat, recreation, and supplemental flows into Putah Creek.

#### Task 7 – Additional Regional Detention Basin Project

Upon completion of Task 6 above, another workshop will be held to evaluate an additional Regional Detention Basin Project that may incorporate the McCune Creek watershed, upper Tremont 3 watershed, and/or upper Tremont 1 watershed. The consultant under the direction of Water Agency staff will look at existing facilities of the Solano Irrigation District, City of Dixon, and others to determine the location and evaluation of Another Regional Multi-Benefit Detention Basin Project.

#### Task 8 – Presentations

The consultant will prepare a PowerPoint presentation summarizing the above evaluations to the following agencies, as requested: Dixon Regional Watershed JPA, Dixon RCD, City of Dixon, Solano County, SCWA, joint meeting of the SID and Solano Subbasin GSAs, and one other

organization. The presentation will be customized to the specific agency and practiced with the appropriate agency staff members.

## **DELIVERABLES**

The deliverables will include completion of the above listed tasks, as well as the following:

- Draft and Final Technical Memorandum on the Base Conditions and Buildout Conditions without the City NEQ Drainage Facilities.
- Draft and Final Technical Memorandum on Buildout with City NEQ Drainage Facilities.
- Draft and Final Technical Memorandum on Buildout with Modifications to the NEQ Drainage Facilities.
- Draft and Final Technical Memorandum on the Putah Creek Diversion Channel Regional Drainage Project.
- Draft and Final Technical Memorandum on the Upper Watershed Regional Basin.
- Draft and Final Technical Memorandum on an Additional Regional Detention Basin Project.
- Five (5) Workshops to Seek Stakeholder Input.

## **SCHEDULE**

<b>Task</b>	<b>Completion</b>
Task 1 – Document Baseline Conditions	Sep 2023
Task 2 – Document No City Conditions and Buildout Land Use Conditions	Sep 2023
Task 3 – Buildout with NEQ Drainage Facilities	Oct 2023
Task 4 – Buildout with Modifications to the NEQ Drainage Facilities	Nov 2023
Task 5 – Putah Creek Diversion Channel Regional Drainage Project	Feb 2023
Task 6 – Evaluate the Upper Watershed Regional Basin	Mar 2024
Task 7 – Additional Regional Detention Basin Project	May 2024
Task 8 – Presentations	Jun 2024



## VENDOR PROPOSAL

June 22, 2023

SENT VIA: EMAIL

Mr. Alex Rabidoux  
Principal Water Resources Engineer  
Solano County Water Agency  
810 Vaca Valley Parkway, Suite 203  
Vacaville, CA 95688

Ms. Deborah Barr  
City Engineer  
City of Dixon  
600 East A Street  
Dixon, CA 95620

**SUBJECT: Proposal to Provide Engineering Services for the Dixon Regional Watershed Management Plan Update, Phase 3**

Dear Alex and Deborah:

We appreciate this opportunity to continue to provide drainage engineering support for the Solano County Water Agency (SCWA) and the City of Dixon (City) for the Tremont 3 Watershed, including the City of Dixon (City) Northeast Quadrant (NEQ). For this proposal, the term NEQ includes the areas in the City Limits north and south of Interstate 80 (I-80), including the Milk Farm. Our proposed scope of services, schedule, and budget are presented below.

As discussed, the funding for this proposal is to be shared by SCWA and the City. Consequently, the budget table (below) specifies the costs allocated to each agency. As shown, SCWA is to fund \$133,606 and the City is to fund \$116,624 of the total budget of \$250,230.

The Dixon Regional Watershed Joint Powers Authority (DRWJPA), the City, and SCWA have been and are committed resolving the flooding issue in the Tremont 3 Watershed, as demonstrated by the efforts summarized below.

- **Solano County Water Agency, Dixon Watershed Management Plan, August 24, 2001:** This study evaluated City Watersheds A and C, particularly as they relate to the downstream Dixon Resource Conservation District (DRCD) drainage channels (Laterals 1 and 2). This study also evaluated City Watershed D as it relates to the downstream DRCD Tremont 3 Drain. This study led to the construction of the Dixon Pond A and Lateral 1 project (\$4.6 million, funded by the City) and the Dixon Pond C project (\$2.9 million, funded by the City).
- **Solano County Water Agency, Dixon Regional Watershed Management Plan Update, Phase 1, 2018:** This update evaluated the combined drainage impacts of the City's Northeast Quadrant and the County's Agricultural Industrial Services Area on the Dixon Resource Conservation District's Tremont 3 Drain (\$61,900, funded by SCWA).

- **DRWJPA, Northeast Quadrant Detention Basin Planning, 2019:** This work included developing a revised drainage plan that isolated the City's Northeast Quadrant from the adjacent County development with a goal of enabling the City's development to proceed (\$107,000 funded by the DRWJPA).
- **Solano County Water Agency, Dixon Regional Watershed Management Plan Update, Phase 2, 2020:** This work verified the drainage model calibration and evaluated several preliminary drainage options for the Tremont 3 Watershed (about \$280,000 funded by SCWA). This work was led by Wood Rodgers but is being closed prior to completion of the full scope of work. The remaining, un-completed work will be replaced by the evaluations covered in the Scope of Services presented below.

## SCOPE OF SERVICES

West Yost's proposed scope of services consists of the following tasks. Each task is described below:

- Task 1. Document Base Case Conditions
- Task 2. Evaluate the No City Conditions (NCC) and the Buildout Land Use Conditions (BLUC)
- Task 3. Evaluate BLUC with the City NEQ Facilities
- Task 4. Evaluate BLUC with the City NEQ Facilities with Temporary Operational or Physical Modifications to Reduce Downstream or Upstream Flooding  
This task could include evaluating options to reduce the flow crossing I-80 for the interim period between when the City NEQ facilities are constructed and when the Regional Drainage Project (RDP) is constructed.
- Task 5. Evaluate the Putah Creek Diversion Channel (PCDC) RDP
- Task 6. Evaluate the Upper Watershed Detention Basin(s) (UWDB) RDP
- Task 7. Evaluate a Yet to be Determined RDP
- Task 8. Presentations

## TASK 1. DOCUMENT BASE CASE CONDITIONS

For this evaluation, we will document Base Case Conditions (BCC). The BCC represents roughly the year 2000 (before Walmart, TEC Equipment, and the Dixon Distribution Center were constructed). This task is essential because the Dixon Watershed Management Plan (DWMP) addressed the full development of the NEQ from completely undeveloped to completely developed. However, since the DWMP was prepared, Walmart, TEC Equipment, and the Dixon Distribution Center have been constructed along with their associated retention basins. Also, one segment of drainage channel crossing the NEQ was filled, which changes the elevation at which water flows across the NEQ and changes the depth of flooding on the Milk Farm and on I-80 for some storm events. Consequently, for this evaluation BCC is different than existing conditions as of 2023.

Since the DWMP was prepared, the City has updated their drainage engineering standards to address future climate change by including an 18 percent increase in design storm rainfall depths and intensities. This change results in higher peak runoff rates and runoff volumes than in the original DWMP, which results in larger detention basins and conveyance channels and culverts.

As the regional model has been used for various studies, other changes have been made to the model, including:

- The Upper Tremont 3 watershed (upstream of I-80) was refined from two subsheds to 18 subsheds using 2008 Lidar topographic mapping and the channels and culverts were added to the model based on field delineations and measurements and the Lidar mapping.
- The Tremont 3 watershed (between the railroad and I-80) was refined into about 28 subsheds using 2008 Lidar topographic mapping the constructed developments and their associated stormwater infrastructure.
- The Tremont 3 watershed agricultural flood storage was refined to more accurately represent the actual available storage using 2008 Lidar topographic mapping.
- To remain consistent with the City Engineering Standards, the model was revised to include design storms with an 18 percent increase in rainfall depths and intensities to ensure the detention basins and conveyance channels and culverts would function correctly in the future as climate change progresses. All the evaluations included in this proposal include use of the 18 percent increase in rainfall for climate change.
- To remain consistent with the City Engineering Standards the model runoff method was revised, and the revised model was verified using the original model calibration.
- Other minor changes have been made to improve the accuracy of the model as it has been used for specific studies like the Milk Farm drainage study, the Large Detention Basin East of the Railroad Study and the predesign of the detention basin between the UPRR and Pedrick Road.

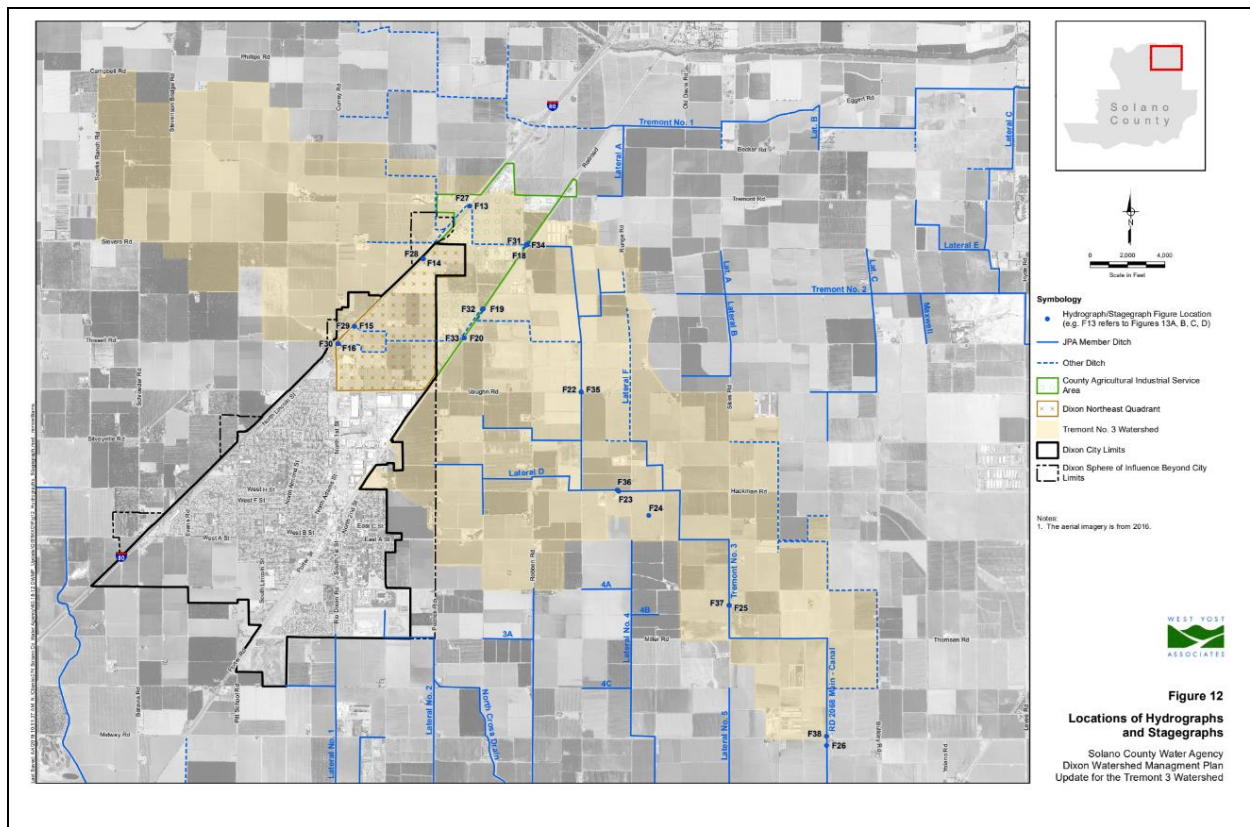
We will prepare a map showing the BCC land uses. We will update the BCC hydrographs and stagegraphs (H&S) for the locations shown on Figure 12 of West Yost technical memorandum (TM) *Addendum to the Dixon Watershed Management Plan Updating the Tremont3 Watershed Regional Drainage Project*, June 27, 2019 (Figure 12 is shown below). Additionally, we will prepare H&S for up to six locations north of I-80. The map will also identify which drainage facilities are included in the BCC.

The map and updated/new H&Ss (for the 10-year/4-day and 100-year/4-day design storms with the 18 percent rainfall increase for climate change) will be presented in the draft TM for Task 2.

The BCC evaluation is essential to document the land uses, flows, and water surface elevation throughout the Tremont 3 Watershed to provide a basis against which the following evaluations of various land use and drainage facility conditions can be compared. By comparing the following evaluations with the BCC, the impacts and benefits of the land development projects, and drainage facilities can be quantified.

#### **Task 1 Deliverables**

- See Task 2.



**Figure 1. Locations of Hydrographs and Stagegraphs**

## Task 2. Evaluate the No City Conditions (NCC) and the Buildout Land Uses Conditions (BLUC)

West Yost will update the model to include NCC. This evaluation will include removing the NEQ areas (including the Milk Farm) from the runoff component of the model to demonstrate the magnitude of the upstream and downstream flooding resulting from runoff from the NEQ lands. The floodplain storage on the Milk Farm and NEQ will remain in the model because this evaluation is intended to demonstrate how much the City's runoff contributes to the overall flooding in comparison to the runoff from the remaining watershed. We will update the map to show the areas removed from the model, the H&S figures to show magnitude of the City contribution to the flooding, and the TM to include the NCC evaluation. The NCC model run will include only the current existing culverts crossing I-80 and the UPRR.

West Yost will update the model to include BLUC. The BLUC does not include any of the NEQ Facilities; thus, the BLUC model results will illustrate the potential impacts from the NEQ development. The floodplain storage on the Milk Farm and NEQ will remain in the model because this evaluation is intended to demonstrate how the land development (increase in impervious coverage with no fill or drainage facilities) contributes to the overall flooding in comparison to the BCC. This model evaluation is needed to document that the land development causes increased runoff and increased flooding, thereby documenting the requirement for land development projects to fund the NEQ facilities. We will update the map to show the buildout land uses, the H&S figures to show the BLUC model results, and the TM to include the BLUC evaluation. The BLUC model run will include only the current existing culverts crossing I-80 and the UPRR.

SCWA is to distribute the TM to the stakeholders, collect stakeholder comments, and provide a consolidated, non-conflicting set of comments and edits to West Yost to use to finalize the TM.

#### **Task 2 Deliverables**

- West Yost will provide a draft and final BCC and BLUC TMs.

### **Task 3. Evaluate BLUC with the City NEQ Facilities**

The NEQ Facilities include the existing retention basins, proposed detention basins, and the major channels and culverts that convey the agricultural flow from upstream of the Milk Farm to the Union Pacific Railroad (RR). This represents an interim condition in which the NEQ is fully developed with associated drainage facilities, but before the regional drainage facilities have been constructed. This task will identify if the Tremont 3 Watershed downstream of the UPRR is impacted or benefits from this interim condition. This task will include evaluating the on-site trunk storm drains that collect and convey runoff from within the NEQ to the three NEQ detention basins. The NEQ Facilities are a critical part of the Regional Drainage Project (RDP). For example, an RDP that does not include facilities for the Upper Tremont 3 Watershed would clearly be incomplete. Similarly, an RDP that does not include the NEQ Facilities would leave about 600 acres of land non-compliant with the Dixon Regional Watershed Joint Powers Authority (DRWJPA) goals and would also be incomplete.

We will prepare a map that schematically shows the NEQ Facilities consistent with the NEQ and Milk Farm drainage plans. This generally includes:

- For the Milk Farm: a conveyance channel/culverts that conveys the flow from the Upper Tremont 3 Watershed to I-80 and a detention basin that reduces the flow from the Milk Farm site to a discharge of 0.011 cfs per acre, or 0.66 cfs for the entire Milk Farm site. The discharge will be pumped from the basin. The pump station will have a firm capacity of 0.66 cfs and a total capacity of 1.32 cfs. The Milk Farm may also need new trunk culvert(s) under I-80. Consistent with the DRWJPA agreement, section 10.f.(3)(a), when the downstream system is flowing at capacity, the discharge will be limited to 0.66 cfs, but when there is adequate downstream capacity, the discharge will be increased to 1.32 cfs. This variable discharge will help ensure the basin empties quickly so that the basin has capacity available for future storm events. To represent the existing flooding volume on the Milk Farm site, the model uses a table of elevation versus flooding surface area (representing the flooding storage volume). The fill placed on the Milk Farm site will reduce the flood storage volume on the Farm site. The fill will be included in the evaluation by reducing the flood areas up to the elevation of the fill.
- Culverts under I-80 that convey the agricultural runoff under I-80 and reduce/prevent flooding of I-80, the Milk Farm site, and the adjacent farmlands and roads. The number and sizes of the culvert will be determined through this evaluation.
- A drainage ditch along the south side of I-80 and an associated trunk storm drain that convey the flow crossing I-80 to the railroad ditch. The sizes of the ditch and culvert(s) will be determined through this evaluation.
- For the central portion of the NEQ (the AKT, Buzz Oates, Dixon 257, and the Vaughn Road parcels) the Southeast NEQ basin and pump station (firm capacity of about 5.4 cfs and total capacity of 10.8 cfs). Consistent with the DRWJPA agreement, section 10.f.(3)(a), when the downstream system is flowing at capacity, the discharge will be limited to 5.4 cfs, but when

there is adequate downstream capacity, the discharge will be increased to 10.8 cfs. This variable discharge will help ensure the basin empties quickly so that the basin has capacity available for future storm events.

- For the Flying J parcel, a detention basin and pump station that reduces the flow from the Flying J parcel to a discharge of 0.011 cfs per acre, or about 0.66 cfs. Consistent with the DRWJPA agreement, section 10.f.(3)(a), when the downstream system is flowing at capacity, the discharge will be limited to 0.66 cfs, but when there is adequate downstream capacity, the discharge will be increased to 1.32 cfs. This variable discharge will help ensure the basin empties quickly so that the basin has capacity available for future storm events.
- The existing retention basins at Walmart, TEC Equipment and the Dixon Distribution Center.
- No new or enlarged culverts under the UPRR are proposed for the BLUC or the City NEQ facilities.

A subcontractor will perform up to \$3,000 of surveying services to establish elevations and locations of critical existing facilities, if needed. The regional drainage model will be used to size these facilities and document the peak flows and maximum water surface elevations (WSEs).

West Yost will update the model to include BLUC with City NEQ Facilities. We will update the map to show the NEQ Facilities, the H&S figures to show the model results, and the TM to include this task evaluation. We will present the evaluations for Tasks 1, 2, and 3 at a workshop and receive feedback on the evaluations at a workshop. SCWA is to organize this workshop (and all workshops) and determine what agencies and staff should attend (potentially including Ludorff and Scalimini).

This evaluation will attribute the loss of floodplain storage to the NEQ and Milk Farm development projects since the fill placed by these developments and the lowering of the water level at the Milk Farm will be the cause of the lost storage volume.

It is unclear at this time if the BLUC with the City NEQ Facilities will reduce or increase upstream or downstream flooding.

### **Task 3 Deliverables**

- West Yost will conduct a workshop.
- West Yost will provide draft and final TMs.

## **Task 4. Evaluate BLUC with the City NEQ Facilities with Temporary Operational or Physical Modifications to Reduce Downstream or Upstream Flooding**

This task includes the following:

- Conduct a workshop to present the results of Task 3 and to discuss temporary operational or physical modifications to reduce downstream or upstream flooding. Some examples of possible modifications are: 1) holding more water in the detention basins in smaller, frequent storms, and discharging more water in larger, infrequent storms, 2) using a restriction on the culvert from the ditch south of I-80 that uses the channel freeboard to obtain more storage capacity, 3) revising the operation of the existing retention basins (Walmart, TEC Equipment, and Dixon Distribution Center) to function as detention basins or other modifications (these basins are privately owned and any revisions would require



cooperation of the private owners), and 4) implementing other modifications identified through the workshop, some which could include reducing the flow crossing I-80 and the UPRR. A set of feasible modifications of is to be identified through the workshop.

- Model the feasible modifications to prevent upstream or downstream flood increases or to achieve a greater level of downstream flood reduction.
- Present the model results in an update of the Task 3 map, H&S figures, and TM and at a workshop.

It is critical to the City that Tasks 1, 2, 3, and 4 be completed as fast as possible (see schedule below).

#### **Task 4 Deliverables**

- West Yost will conduct a workshop.
- West Yost will provide draft and final TMs.

### **Task 5. Evaluate the Putah Creek Diversion Channel (PCDC) Regional Drainage Project (RDP)**

The NEQ Facilities by themselves are not expected to achieve the DRWJPA goals for the Tremont 3 Watershed, but the NEQ Facilities are considered a first step toward achieving the JPA goals. Additional detention or conveyance facilities will be needed to fully achieve the DRWJPA goals. The additional facilities combined with the NEQ Facilities constitute the RDP.

The PCDC would serve the NEQ, serve the Solano County Agricultural Industrial Services Area (AISA), reduce downstream Tremont 3 Drain flooding, and reduce downstream Tremont 1 Drain flooding.

We will develop a schematic of the PCDC, including potential minor variations and prepare preliminary cost estimates. We will conduct a workshop to seek stakeholder input to refine the PCDC to a single set of improvements, which are expected to include:

- The City NEQ Facilities.
- A new open channel and culverts from the NEQ to Putah Creek. The upstream capacity of the channel will be sufficient to convey the flow from the I-80 channel and trunk drain, the pumped flows from the Milk Farm Basin, the Southeast NEQ Basin, and the Flying J Basin. The capacity of the channel will increase moving downstream as needed.
- A pump station that lifts flow from Tremont 1 into the new channel. An alternative to this pump station would be a diversion channel and culverts for the Tremont 1 Drain along the north side of I-80 to Putah Creek. Another alternative to the pump station would be flood easements along the low ground adjacent to the Tremont 1 Drain near the PCDC. A project goal will be to avoid pump stations if possible.
- A detention basin located near Putah Creek would be an optional facility that could hold water and release it when needed to provide fish flows in Putah Creek. A small pump station and force main may be required to convey the flow to the upstream side of I-80. A project goal will be to avoid pump stations if possible.

A subcontractor will perform up to \$5,000 of surveying services to establish elevations and locations of critical existing facilities. The regional drainage model will be used to size all of these facilities and document the peak flows and maximum WSEs. The Putah Creek model will be used to establish the changes in the Putah Creek WSE resulting from the increased flow to Putah Creek. The PCDC is expected to achieve and exceed the JPA goal for the entire Tremont 3 Watershed.

West Yost will update the model to include BLUC with City NEQ Facilities and the PCDC facilities. We will update the map to show the NEQ Facilities and the PCDC, the H&S figures to show the model results, and the TM to include this task evaluation. We will also prepare construction and capital cost estimates.

SCWA staff are to lead discussions on which agency(ies) will own, operate, and maintain the PCDC drainage facilities. SCWA is to distribute the TM to the stakeholders, collect stakeholder comments, and provide a consolidated, non-conflicting set of comments and edits to West Yost to use to finalize the TM.

#### **Task 5 Deliverables**

- West Yost will conduct a workshop.
- West Yost will provide draft and final TMs.

### **Task 6. Evaluate the Upper Watershed Detention Basin(s) UWDB RDP**

We will develop a schematic of the UWDB RDP, including potential minor variations and prepare preliminary cost estimates. We will conduct a workshop to seek stakeholder input to refine the UWDB RDP to a single set of improvements, which are expected to include:

- The City NEQ Facilities. This alternative could include modifications of the City facilities to provide joint uses such as groundwater recharge, habitat, recreation, etc.
- A detention basin or basins located upstream of the Milk Farm. This basin(s) could provide groundwater recharge, surface water storage, habitat, or other additional benefits. The basin(s) could include a pump station to allow the basin to be deeper but require less total area. The location of the basin(s) will affect the overall sizing and level of benefit of the basin(s); thus, input from the stakeholders on the location(s) will be essential. This basin evaluation could include use of other agency's existing facilities to maximize the benefit of the basins and use of the stored water.

The regional drainage model will be used to size the UWDB facilities and document the upstream, City, and downstream peak flows and maximum WSEs. A subcontractor will perform up to \$5,000 of surveying services to establish elevations and locations of critical existing facilities. The UWDB RDP is expected to achieve the JPA goals for the South Upper Tremont 3 Watershed. The UWDB RDP will not reduce the flows in the North Upper Tremont 3 Watershed and will not serve the AISA.

West Yost will update the model to include BLUC with City NEQ Facilities and the UWDB Facilities. We will update the map to show the UWDB Facilities, the H&S figures to show the model results, and the TM to include this task evaluation. We will also prepare construction and capital cost estimates.

SCWA staff are to lead discussions on which agency(ies) will own, operate, and maintain the UWDB drainage facilities. SCWA is to distribute the TM to the stakeholders, collect stakeholder comments, and provide a consolidated, non-conflicting set of comments and edits to West Yost to use to finalize the TM.



**Task 6 Deliverables**

- West Yost will conduct a workshop.
- West Yost will provide draft and final TMs.

**Task 7. Evaluate a Yet to be Determined RDP**

When Task 6 is completed, we will evaluate one additional RDP option. The evaluation will be similar to the evaluations for Tasks 5 and 6 in terms of workshops and presentations. This yet to be determined RDP could include facilities such as 1) incorporation of an upper McCune Creek watershed diversion to Putah Creek that could also divert part of the upper Tremont 3 and/or Tremont 1 Watersheds, 2) use of Solano Irrigation District facilities, 3) use of retention basins throughout the NEQ, 4) maximizing multiple benefits like groundwater recharge, habitat, recreation, etc., or 5) other facilities identified by the stakeholders. We will conduct a workshop to identify the facilities to be included in this evaluation. We will model the facilities and update the map, H&S figures, and TM.

**Task 7 Deliverables**

- West Yost will conduct a workshop.
- West Yost will provide draft and final TMs.

**Task 8. Presentations**

We will prepare a PowerPoint presentation summarizing these evaluations and will give the presentation to the following agencies, as requested: Dixon JPA Board, Dixon RCD Board, City Council of Dixon, Solano County Board, up to two Solano County Committees, SCWA Board, joint meeting of SID/Solano Subbasin Groundwater Sustainability Agencies, and one other organization. We anticipate the presentation will be in-person, but we will also be able to give the presentation remotely. For each presentation, we will customize the presentation to the specific audience, practice the presentation with Staff, and finalize the presentation based on Staff input.

**BUDGET AND SCHEDULE**

The budget is summarized by task in Table 1. Attachment A is West Yost's detailed Level of Effort and Budget Spreadsheet. Attachment B is West Yost 2023 Billing Rate Schedule. The schedule in Table 2 is based on receiving notice to proceed by August 1, 2023 and leads to presentations in June 2024. Construction of the NEQ Development project is anticipated to start in the late summer or fall of 2024.

<b>Table 1. Proposed Level of Effort, Budget, and Schedule</b>				
<b>Task</b>	<b>Level of Effort, hours</b>	<b>City Budget, dollars</b>	<b>SCWA Budget, dollars</b>	<b>Total Budget, dollars</b>
Task 1. Document Base Case Conditions	66	8,138	8,137	16,275
Task 2. Evaluate the No City Conditions (NCC) and the Buildout Land Uses Condition (BLUC)	46	15,987	0	15,987
Task 3. Evaluate BLUC with the City NEQ Facilities	134	36,978	0	36,978
Task 4. Evaluate BLUC with the City NEQ	134	0	33,678	33,678
Task 5. Evaluate the Putah Creek Diversion Channel (PCDC) Regional Drainage Project (RDP)	156	44,315	0	44,315
Task 6. Evaluate the Upper Watershed Detention Basin(s) UWDB RDP	138	0	42,842	42,842
Task 7. Evaluate a Yet to be Determined RDP	156	0	37,744	37,744
Task 8. Presentations	74	11,206	11,205	22,411
<b>Total</b>	<b>904</b>	<b>\$116,624</b>	<b>\$133,606</b>	<b>\$250,230</b>

<b>Table 2 Schedule Completion Dates</b>	
<b>Tasks</b>	<b>Schedule Completion Date</b>
Task 1. Document Base Case Conditions	September 8, 2023
Task 2. Evaluate the No City Conditions (NCC) and the Buildout Land Uses Condition (BLUC)	September 8, 2023
Task 3. Evaluate BLUC with the City NEQ Facilities	October 13, 2023
Task 4. Evaluate BLUC with the City NEQ	November 10, 2023
Task 5. Evaluate the Putah Creek Diversion Channel (PCDC) Regional Drainage Project (RDP)	February 23, 2024
Task 6. Evaluate the Upper Watershed Detention Basin(s) UWDB RDP	March 29, 2024
Task 7. Evaluate a Yet to be Determined RDP	May 24, 2024
Task 8. Presentations	June, 2024

Please call me at 530-574-3905 or email me at [dmoore@westyost.com](mailto:dmoore@westyost.com) if you have any questions.

Sincerely,  
WEST YOST



Douglas T. Moore, PE  
Principal Engineer

RCE #58122

Attachment(s): A. West Yost Detailed Effort and Budget Worksheet  
B. West Yost 2023 Billing Rate Schedule



## Attachment A

### West Yost Detailed Effort and Budget Worksheet

West Yost Associates	EM/SM/GM II \$315	ESG II \$190	PE/PS/PG I \$273	ADM IV \$144	P \$318	Labor		Technology & Admin 6%	SVR	Costs		
						Hours	Fee			Sub. w/ markup 10%	Other Direct	Total Costs
PROJECT: Stormwater Drainage Planning for the City of Dixon Northeast Quadrant	D Moore	J Steiner and L Russell	M Duffy									
Task 3 Evaluate BLUC with the City NEQ Facilities												
3.01 Prepare Map	2	4				6	\$ 1,390	\$ 83				\$ 1,473
3.02 Survey	2	2				4	\$ 1,010	\$ 61	\$ 3,000	\$ 3,300		\$ 4,371
3.03 Update Model	12	32	4			48	\$ 10,952	\$ 657				\$ 11,609
3.04 Prepare H&S Figures	8	16	4			28	\$ 6,652	\$ 399				\$ 7,051
3.05 Draft and Final TM	12	16	2	4		34	\$ 7,942	\$ 477				\$ 8,419
3.06 Agency Coordination and Task Project Management	8	4	2			14	\$ 3,826	\$ 230				\$ 4,056
Subtotal, Task 3 (hours)	44	74	12	4	0	134						
Subtotal, Task 3 (\$)	\$ 13,860	\$ 14,060	\$ 3,276	\$ 576			\$ 31,772	\$ 1,906	\$ 3,000	\$ 3,300		\$ 36,978
Task 4 (Optional). Evaluate BLUC with the City NEQ Facilities with Temporary Operational or Physical Modifications to Reduce Downstream or Upstream Flooding												
4.01 Prepare Map	2	4				6	\$ 1,390	\$ 83				\$ 1,473
4.02 Workshop and/or Temporary Operational or Physical Modifications	2	2				4	\$ 1,010	\$ 61				\$ 1,071
4.03 Update Model	12	32	4			48	\$ 10,952	\$ 657				\$ 11,609
4.04 Prepare H&S Figures	8	16	4			28	\$ 6,652	\$ 399				\$ 7,051
4.05 Draft and Final TM	12	16	2	4		34	\$ 7,942	\$ 477				\$ 8,419
4.06 Agency Coordination and Task Project Management	8	4	2			14	\$ 3,826	\$ 230				\$ 4,056
Subtotal, Task 4 (hours)	44	74	12	4	0	134						
Subtotal, Task 4 (\$)	\$ 13,860	\$ 14,060	\$ 3,276	\$ 576			\$ 31,772	\$ 1,906				\$ 33,678
Task 5 Evaluate the Putah Creek Diversion Channel (PCDC) Regional Drainage Project (RDP)												
5.01 Prepare Map	2	4				6	\$ 1,390	\$ 83				\$ 1,473
5.02 Survey	2	2				4	\$ 1,010	\$ 61	\$ 5,000	\$ 5,500		\$ 6,571
5.03 Refine concepts (workshop)	4	16	2			22	\$ 4,846	\$ 291				\$ 5,137
5.04 Update Model	12	32	4			48	\$ 10,952	\$ 657				\$ 11,609
5.05 Prepare H&S Figures	8	16	4			28	\$ 6,652	\$ 399				\$ 7,051
5.06 Draft and Final TM	12	16	2	4		34	\$ 7,942	\$ 477				\$ 8,419
5.07 Agency Coordination and Task Project Management	8	4	2			14	\$ 3,826	\$ 230				\$ 4,056
Subtotal, Task 5 (hours)	48	90	14	4	0	156						
Subtotal, Task 5 (\$)	\$ 15,120	\$ 17,100	\$ 3,822	\$ 576			\$ 36,618	\$ 2,197	\$ 5,000	\$ 5,500		\$ 44,315
Task 6 Evaluate the Upper Watershed Detention Basin(s) UWDB RDP												
6.01 Prepare Map	2	4				6	\$ 1,390	\$ 83				\$ 1,473
6.02 Survey	2	2				4	\$ 1,010	\$ 61	\$ 5,000	\$ 5,500		\$ 6,571
6.03 Refine concepts (workshop)	4	16	2			22	\$ 4,846	\$ 291				\$ 5,137
6.04 Update Model	12	24	4			40	\$ 9,432	\$ 566				\$ 9,998
6.05 Prepare H&S Figures	8	12	4			24	\$ 5,892	\$ 354				\$ 6,246
6.06 Draft and Final TM	10	24	2	4		40	\$ 8,832	\$ 530				\$ 9,362
6.07 Agency Coordination and Task Project Management	8	4	2			14	\$ 3,826	\$ 230				\$ 4,056
Subtotal, Task 6 (hours)	46	86	14	4	0	150						
Subtotal, Task 6 (\$)	\$ 14,490	\$ 16,340	\$ 3,822	\$ 576			\$ 35,228	\$ 2,114	\$ 5,000	\$ 5,500		\$ 42,842
Task 7 (Optional). Evaluate a Yet to be Determined RDP												
7.01 Prepare Map	2	4				6	\$ 1,390	\$ 83				\$ 1,473
7.02 Refine concepts (workshop)	4	16	2			22	\$ 4,846	\$ 291				\$ 5,137
7.03 Update Model	12	32	4			48	\$ 10,952	\$ 657				\$ 11,609
7.04 Prepare H&S Figures	8	16	4			28	\$ 6,652	\$ 399				\$ 7,051
7.05 Draft and Final TM	12	16	2	4		34	\$ 7,942	\$ 477				\$ 8,419
7.06 Agency Coordination	8	4	2			14	\$ 3,826	\$ 230				\$ 4,056
Subtotal, Task 7 (hours)	46	88	14	4	0	152						
Subtotal, Task 7 (\$)	\$ 14,490	\$ 16,720	\$ 3,822	\$ 576			\$ 35,608	\$ 2,136				\$ 37,744
Task 8 Presentations												
8.01 Up to 8 Presentations	54	16	4			74	\$ 21,142	\$ 1,269				\$ 22,411
Subtotal, Task 8 (hours)	54	16	4	0	0	74						
Subtotal, Task 8 (\$)	\$ 17,010	\$ 3,040	\$ 1,092				\$ 21,142	\$ 1,269				\$ 22,411
TOTAL (hours)	315	516	79	26	0	936						
TOTAL (\$)	\$ 99,225	\$ 98,040	\$ 21,567	\$ 3,744			\$ 222,576	\$ 13,355	\$ 13,000	\$ 14,300		\$ 250,231

## EXHIBIT B

### RATE OF COMPENSATION

#### **Budget Breakdown by Task**

*(a more detailed breakdown is included in Exhibit A)*

<b>Task</b>	<b>Budget</b>
Task 1 – Document Baseline Conditions	\$ 16,275
Task 2 – Document No City Conditions and Buildout Land Use Conditions	\$ 15,987
Task 3 – Buildout with NEQ Drainage Facilities	\$ 36,978
Task 4 – Buildout with Modifications to the NEQ Drainage Facilities	\$ 33,678
Task 5 – Putah Creek Diversion Channel Regional Drainage Project	\$ 44,315
Task 6 – Evaluate the Upper Watershed Regional Basin	\$ 42,842
Task 7 – Additional Regional Detention Basin Project	\$ 37,744
Task 8 – Presentations	\$ 22,411
<b>Total Budget =</b>	<b>\$250,230</b>



## Attachment B

### West Yost's 2023 Billing Rate Schedule

# 2023 Billing Rate Schedule

(Effective January 1, 2023 through December 31, 2023)\*



POSITIONS	LABOR CHARGES (DOLLARS PER HOUR)
<b>ENGINEERING</b>	
Principal/Vice President	\$338
Engineer/Scientist/Geologist Manager I / II	\$319 / \$334
Principal Engineer/Scientist/Geologist I / II	\$288 / \$307
Senior Engineer/Scientist/Geologist I / II	\$259 / \$272
Associate Engineer/Scientist/Geologist I / II	\$215 / \$231
Engineer/Scientist/Geologist I / II	\$173 / \$201
Engineering Aide	\$101
Field Monitoring Services	\$125
Administrative I / II / III / IV	\$92 / \$115 / \$138 / \$152
<b>ENGINEERING TECHNOLOGY</b>	
Engineering Tech Manager I / II	\$332 / \$334
Principal Tech Specialist I / II	\$305 / \$315
Senior Tech Specialist I / II	\$279 / \$291
Senior GIS Analyst	\$252
GIS Analyst	\$239
Technical Specialist I / II / III / IV	\$178 / \$203 / \$228 / \$254
Technical Analyst I / II	\$128 / \$152
Technical Analyst Intern	\$103
Cross-Connection Control Specialist I / II / III / IV	\$133 / \$144 / \$162 / \$180
CAD Manager	\$201
CAD Designer I / II	\$156 / \$176
<b>CONSTRUCTION MANAGEMENT</b>	
Senior Construction Manager	\$322
Construction Manager I / II / III / IV	\$197 / \$211 / \$224 / \$283
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	\$172 / \$191 / \$213 / \$221
Apprentice Inspector	\$156
CM Administrative I / II	\$83 / \$112
Field Services	\$221

- 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%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable to 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, 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.



## 2023 Billing Rate Schedule

(Effective January 1, 2023 through December 31, 2023)\*



### Equipment Charges

EQUIPMENT	BILLING RATES
2" Purge Pump & Control Box	\$300 / day
Aquacalc / Pygmy or AA Flow Meter	\$28 / day
Emergency SCADA System	\$35 / day
Field Vehicles (Groundwater)	\$1 / mile
Gas Detector	\$80 / day
Generator	\$60 / day
Hydrant Pressure Gauge	\$10 / day
Hydrant Pressure Recorder, Impulse (Transient)	\$55 / day
Hydrant Pressure Recorder, Standard	\$40 / day
Low Flow Pump Back Pack	\$135 / day
Low Flow Pump Controller	\$200 / day
Powers Water Level Meter	\$32 / day
Precision Water Level Meter 300ft	\$30 / day
Precision Water Level Meter 500ft	\$40 / day
Precision Water Level Meter 700ft	\$45 / day
QED Sample Pro Bladder Pump	\$65 / day
Stainless Steel Wire per foot	\$0.03 / day
Storage Tank	\$20 / day
Sump Pump	\$24 / day
Transducer Components (per installation)	\$23 / day
Trimble GPS – Geo 7x	\$220 / day
Tube Length Counter	\$22 / day
Turbidity Meter	\$30 / day
Vehicle (Construction Management)	\$10 / hour
Water Flow Probe Meter	\$20 / day
Water Quality Meter	\$50 / day
Water Quality Multimeter	\$185 / day
Well Sounder	\$30 / day