



CAMBRIA COMMUNITY SERVICES DISTRICT

MEETING	TIME & DATE	LOCATION
Resources & Infrastructure Committee	2:00 PM Tuesday, February 18, 2025	Cambria Veterans' Memorial Hall, 1000 Main Street, Cambria, CA 93428

AGENDA

Regular Resources & Infrastructure Committee Meeting

February 18, 2025 2:00 PM

In person at:

**Cambria Veterans' Memorial Hall
1000 Main Street, Cambria, CA 93428**

AND via Zoom at:

Please click the link to join the webinar: [HERE](#)

Webinar: 873 7001 5736

Passcode: 575668

Copies of the staff reports or other documentation relating to each item of business referred to on the agenda are on file in the CCSD Administration Office, available for public inspection during District business hours. The agenda and agenda packets are also available on the CCSD website at <https://www.cambriacsd.org/>. In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting or if you need the agenda or other documents in the agenda packet provided in an alternative format, contact the Confidential Administrative Assistant at 805-927-6223 at least 48 hours before the meeting to ensure that reasonable arrangements can be made. The Confidential Administrative Assistant will answer any questions regarding the agenda.

1. OPENING

1.A Call to Order

1.B Establishment of Quorum

1.C Chair Report

1.D Introduction of New Committee Members

1.E Election of Vice Chair and Secretary

1.F Ad Hoc Subcommittee Report(s)

1.G Committee Member Communications

1.H [Utilities Department Manager Report](#)

2. PUBLIC COMMENT

Members of the public may now address the Committee on any item of interest within the jurisdiction of the Committee but not on its agenda today. Future agenda items can be suggested at this time. In compliance with the Brown Act, the Committee cannot discuss or act on items not on the agenda. Each speaker has up to three minutes.

3. CONSENT AGENDA

3.A Consideration to Approve the January 13, 2025 Regular Meeting Minutes

4. REGULAR BUSINESS

4.A Review 2025 Resources & Infrastructure Committee Meeting Dates

4.B Receive and Discuss Proposed On-Call Civil Engineering Contract for Water and Wastewater Emergency Repairs and Consider Forwarding Recommendation to CCSD Board of Directors

4.C Receive and Discuss Project Status Update for the San Simeon Water and Wastewater Transmission Line Project

4.D Discussion and Consideration of an Instream Flow Study of Santa Rosa Creek and Consider Forwarding a Recommendation to the Board of Directors

5. FUTURE AGENDA ITEM(S)

6. ADJOURN



CAMBRIA COMMUNITY SERVICES DISTRICT

MINUTES OF JANUARY 13, 2025, REGULAR RESOURCES & INFRASTRUCTURE COMMITTEE MEETING OF THE CAMBRIA COMMUNITY SERVICES DISTRICT

A regular meeting of the Resources & Infrastructure Committee of the Cambria Community Services District was held at the Cambria Veterans' Memorial Hall, located at 1000 Main Street, Cambria, CA 93428, on Monday, January 13, 2025, at 2:00 PM

1. **OPENING**

1.A **Call to Order**

Chairperson Dean called the meeting to order at 2:00 pm.

1.B **Establishment of Quorum**

A quorum was established.

Committee members present: Chair Karen Dean, James Webb, Steve Siebuhr, Mark Meeks, Derrick Williams, and Dennis Dudzik.

Staff present: General Manager Matthew McElhenie, Confidential Administrative Assistant Haley Dodson, Program Manager Tristan Reaper, Water Systems Superintendent Cody Meeks, and Administrative Technician Eric Johnson (remote).

Others Present: Board member Harry Farmer (remote), public members Allan Dean, Jim Grimaud, Dr. Elizabeth Bettenhausen (remote), Tina Dickason (remote), and Jeff Wilson (remote).

1.C **Chair Report (Time: 2:01)**

Chair Dean gives the following report

- This is the last meeting of the current R&I Committee members' 2-year term. The new two-year term takes effect February 1.
- The Board has not yet appointed the members for the next 2-year terms. Standing committee member appointments are anticipated at the February 13 board meeting.
- The Policy Committee has been disbanded.
- The District will have a new standing committee for fire suppression.
- The 2024 year-end report is available on the District's website.
- The Board of Directors elected new officers at the December 12 meeting. Debra Scot was elected president. Michael Thomas was elected vice president.
- Chair Dean will remain as the appointed chair of the R&I Committee.
- The District's strategic plan workshop is scheduled for March 3 and 4.

- Grace Environmental Services was awarded the contract for installing the AMI water meter upgrades.
- Mission Country Disposals Proposition 218 rate increase procedure is currently underway. The protest hearing is scheduled for Thursday, January 16 at 10:00 am.
- The Board reviewed and requested minor changes to the Capital Improvement Project (CIP) list format. The R&I committee will be reviewing the CIP list and hearing from department managers at an upcoming meeting.
- The next R&I committee meeting is scheduled for Tuesday, February 18.

Public Comments

None

1.D Ad Hoc Subcommittee Report(s) (Time: 2:07)

None

1.E Committee Member Communications (Time: 2:07)

None

1.F Utilities Department Manager Report (Time: 2:09)

Water Systems Superintendent Meeks gives the water utilities update.

- There was a fire hydrant hit and run at the corner of Pierce and Pineridge.
- The District recently met with the SLO County Air Control District to review compliance.
- The District will be soon install a water meter for the old Santa Rosa schoolhouse near the corner of Main Street and Santa Rosa Creek.
- A water line was damaged from digging on Sandown.
- A PG&E power loss impacted communication from the wellfield's turbidity meter.
- The District terminated service for a backflow inspection being delayed.
- The District received a 2nd leak report on Pinewood. The District will be further investigating the pipes in this area.

Program Manager Reaper gives the wastewater utilities update (Time: 2:14)

- The District is training a new operator in the wastewater department.
- There was a large air leak at the plant that caused the blowers to shut off for approximately 8 hours. The problem was fixed and regulators were notified.
- The wastewater collection system suffered a couple small power losses during December.
- The SST program is continuing to work through contract issues.

Program Manager Reaper gives the District’s project update (Time: 2:16)

- The District met with the North Coast Advisory Committee to tour the Stuart Street tank site.
- The District is meeting with San Luis Obispo County to determine if a Coastal Development Permit is needed for lift station B4.
- The District has selected a contractor for AMI meter installation.
 - Committee member Meeks asks how many meters will be installed under this contract. Program Manager Reaper says it is a minimum of 3,500 meters.
 - Chair Dean asks if the initial installations will focus on current meters that need to be read manually. Program Manager Reaper says all installations along a street will be done at the same time; it would be inefficient to identify and focus on only the manually read meters.
 - Chair Dean states that many people have been concerned that these meters might interfere with their Flume meters. Water Systems Superintendent Meeks states that the Flume meters will continue to work.
- The building pad for the East Ranch restroom has been installed. The building will arrive around the beginning of February.
- The District is replacing its fuel tanks: one is at the rodeo grounds and one is at the fire station.
- Committee member Webb asks if there is any progress on the ZLD testing. General manager McElhenie reports that the ZLD testing has been delayed until fall, 2025.
- Committee Member Dudzik asks if there have been any recent meetings with SLO County Flood Control District regarding flood management. Chair Dean reports that SLO County agreed to look into the local flood control issues, and Mr. Green has spoken with the County at the December WRAC meeting.

Public Comment

None

2. PUBLIC COMMENT (Time: 2:28)

None

3. CONSENT AGENDA (Time: 2:28)

3.A Consideration to Approve the November 4, 2024 Regular Meeting Minutes

Committee Member Meeks notes that in the public comment section, the words “but deployed” should be changed to “be deployed.”

Committee Member Meeks moved to accept the minutes with the proposed correction.

Committee Member Webb seconded the motion.

The motion was approved: 5-Ayes; 0-Nays; 0-Abstain; 0-Absent

4. REGULAR BUSINESS (Time: 2:30)

4.A Discussion and Consideration for a Contract with ASTERRA Satellite Leak Protection Services for Water and Wastewater Departments and Consider Forwarding a Recommendation to the CCSD Board of Directors (Time: 2:30)

Water Systems Superintendent Meeks presents the item. He reports that two firms other than Asterra were contacted to provide bids on the satellite leak detection system, but neither group responded. The proposal is for two years of service for a cost of approximately \$101,000. Asterra will scan both the District's water and wastewater systems for leaks.

Committee member Meeks asks if the District has estimates of water loss; if so, the cost of the Asterra contract could be justified by providing a cost/benefit analysis to the Board. Program Manager Reaper says the 2023 water loss analysis was just completed.

Committee member Dudzik suggests the Board recommendation include a list of other agencies that use this technology. Committee member Dudzik additionally suggests the staff report to the Board document how staff have investigated other companies that provide the same service.

Committee Member Meeks moved to recommend the contract to the Board of Directors with the recommended information and additions.

Committee Member Williams seconded the motion.

The motion was approved: 5-Ayes; 0-Nays; 0-Abstain; 0-Absent

4.B Receive and Discuss Information Regarding a Proposed Instream Flow Study for Santa Rosa Creek (Time: 2:41)

Program Manager Reaper reports that Stillwater Sciences has been working on an instream flow study for the San Simeon Creek basin. The District would like a similar study for the Santa Rosa Creek basin. This will provide a baseline for how District pumping might or might not impact the creek. The District does not have a proposal from Stillwater Sciences yet, but the San Simeon Creek study cost approximately \$150,000

Committee member Dudzik asked if there are objectives other than what were included in the San Simeon Creek basin study. Program Manager Reaper states that many of the objectives from the San Simeon Creek basin study carryover into the Santa Rosa Creek basin study.

Committee member Dudzik points out that in the East Ranch area, the District owns land adjacent to Santa Rosa Creek. Any changes to Santa Rosa Creek for flood control will impact the environmental benefits of the Creek. The District should be aware of the interconnections between flood control in Santa Rosa Creek and environmental impacts. General Manager McElhenie says the study's goal is to show that the pumping from Santa Rosa Creek basin is not impacting habitat. He acknowledges that the interplay between flood control and environmental benefits should be kept in mind, but it probably will not change the scope of the study.

Committee member Meeks asks how much similarity there is between the hydrology of the San Simeon Creek basin and the hydrology of the Santa Rosa Creek basin. Program Manager Reaper states that one significant difference is that the District recharges water in the San Simeon basin, but not in the Santa Rosa Creek basin.

Public comment

Ms. Dickason points out the report does not name the contractor, only the estimated cost. Program Manager Reaper admits it is implicit. Chair Dean points out this is an informational item, and the full proposal and discussion will come to the committee next month.

5. FUTURE AGENDA ITEM(S) (Time: 2:58)

Chairperson Dean asked for any future agenda items. Upcoming items include:

- A proposal from Stillwater Sciences for the Santa Rosa Creek in stream flow Study.
- A review of the CIP list, as well as various department proposals (likely in March).
- An update on the SR4 well tank repair.
- An update on the Stuart Street tank replacement.
- Chair Dean states she would like the project update report that goes to the board be included in the R&I agenda packet.
- There will be an SST update from Wastewater Systems Superintendent Artho
- Chair Dean discusses a potential WRF field trip for the committee. Confidential Administrative Assistant Dodson states this has been set up for Feb 26 at 10:00 am.
- Chair Dean discusses a potential field trip for the committee members to see the new AMI meters being installed. Program Manager Reaper suggests the meter at the Vets Hall be installed during a regular meeting.
- The Committee will review ad hoc committee assignments in February or March. The Committee will also appoint a new vice-chair and secretary

6. ADJOURN

Chairperson Dean adjourned the meeting at 3:04 p.m.



CAMBRIA COMMUNITY SERVICES DISTRICT RESOURCES & INFRASTRUCTURE STANDING COMMITTEE 2025 REGULAR MEETING SCHEDULE

January 13, 2025, at 2:00 p.m.
February 18, 2025, at 2:00 p.m.
March 17, 2025, at 2:00 p.m.
April 14, 2025, at 2:00 p.m.
May 12, 2025, at 2:00 p.m.
June 16, 2025, at 2:00 p.m.
July 14, 2025, at 2:00 p.m.
August 18, 2025, at 2:00 p.m.
September 15, 2025, at 2:00 p.m.
October 14, 2025, at 2:00 p.m.
November 17, 2025, at 2:00 p.m.
December 15, 2025, at 2:00 p.m.

Regular meetings are subject to cancellation and will be held at the Veterans' Hall located at 1000 Main Street, Cambria, CA 93428, and via Zoom Webinar. Special meetings may be held on other dates, pursuant to Government Code Section 54956.



354 Pacific Street
San Luis Obispo, CA 93401
805-329-4773 **PHONE**
805-904-6532 **FAX**

February 10, 2025

Jim Green
Water Systems Superintendent
Cambria Community Services District
Delivered electronically - jgreen@Cambriacsd.org

Re: On-Call Engineering Support

Dear Mr. Green,

At the District's request, Michael K. Nunley & Associates, Inc. (MKN) has prepared this proposal to provide on-call engineering services for the District. Services may include, but are not limited to, review of contractor submittals, review of draft plans and specifications provided by others, assistance with project management, alternatives assessments, etc., as directed by District staff. The scope of services and duration for each assignment is subject to the District's direction. MKN will update District staff on the budget status regularly and provide advanced notice if it appears the budget is insufficient to complete the requested services.

MKN proposes perform services on a time and materials basis in accordance with the attached Fee Schedule. Rates will be revised annually. Costs for copies and other district reimbursables will be charged to the District in addition to the rates provided above. Subconsultants and other direct costs will be charged with a 10% markup.

Thank you for the opportunity to continue working to support the District. Should you have any questions or wish to discuss this proposal, please do not hesitate to contact me at your convenience. My phone number is (805) 440-4380 and email is jhanlon@mknassociates.us.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Hanlon", with a long, sweeping horizontal line extending to the right.

Jon Hanlon, PE
Principal Engineer



2025 FEE SCHEDULE

CATEGORY	POSITION	HOURLY RATE
Communications and Administrative	Administrative Assistant	\$113
	Strategic Communications Coordinator	\$121
	Strategic Communications Specialist	\$147
Designers and Technicians	CAD Technician I	\$137
	CAD Design Technician II	\$158
	Senior Designer	\$176
Planning	Assistant Planner I	\$140
	Assistant Planner II	\$160
	GIS Specialist	\$173
	Planner I	\$189
	Planner II	\$205
	Senior Planner	\$215
Engineers	Engineering Technician	\$103
	Assistant Engineer I	\$140
	Assistant Engineer II	\$160
	Project Engineer I	\$189
	Project Engineer II	\$205
	Senior Engineer I	\$221
	Senior Engineer II	\$231
	Senior Engineer III	\$247
	Principal Engineer	\$257
Project Management	Project Manager	\$231
	Senior Project Manager	\$267
	Project Director	\$289
	Senior Project Director	\$308
Construction Management Services	Scheduler	\$179
	*** Construction Inspector	\$200
	Assistant Resident Engineer	\$200
	Resident Engineer	\$212
	Construction Manager	\$231
	Principal Construction Manager	\$272

The foregoing Billing Rate Schedule is effective through December 31, 2025 and will be adjusted each year after at a rate of 2 to 5%.

DIRECT PROJECT EXPENSES

Outside Reproduction	Cost + 10%
Subcontracted or Subconsultant Services	Cost + 10%
Travel & Subsistence (other than mileage)	Cost
Auto Mileage	Current IRS Rate

*** 40 hrs per week assumed; part-time rates can be provided upon request
 Rates also subject to prevailing wage mandatory increases during a calendar year

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Resources and Infrastructure Committee

AGENDA NO. **4.C.**

FROM: Jim Green Utilities Department Manager

Meeting Date: February 18, 2025

Subject: Receive and Discuss Project Status Update
for the San Simeon Water and Wastewater
Transmission Line Project

PROJECT UPDATE:

The project is currently in the design phase. The District's consultant, Cannon, is working on the plans, which are between 30% and 50% complete.

In November, the consultant submitted an application for a Caltrans Encroachment Permit. However, on January 13, 2025, the Caltrans District 05 Encroachment Permits Office issued a letter indicating that the application was incomplete. The District's consultant is expected to respond to Caltrans by January 31, 2025.

While Caltrans permitting and the design of the 65% plan set are ongoing, permitting with other State Agencies has also begun. Caltrans has indicated that the lead time for obtaining a permit is approximately six to nine months.

A Streambed Alteration application with the California Department of Fish and Wildlife (CDFW) is being prepared for submission. Additionally, a determination under the California Environmental Quality Act (CEQA) is required, and an Initial Study Mitigated Negative Declaration (ISMND) is also being prepared for submission.

The permitting processes for CDFW and CEQA will be conducted concurrently while the Caltrans permit is finalized. Obtaining a Streambed Alteration Permit from CDFW typically takes five to six months.

All environmental surveys have been completed, except for the Historic and Cultural surveys, which are not seasonally dependent.

District staff and consultants agree that a late summer date for groundbreaking is reasonable.

FISCAL IMPACT:

No fiscal impact. The permitting expense was incorporated into the initial contract.

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Resources and Infrastructure Committee

AGENDA NO. **4.D.**

FROM: James Green, Utilities Department Manager
Tristan Reaper, Program Manager

Meeting Date: February 18, 2025

Subject: Discussion and Consideration of an
Instream Flow Study of Santa Rosa Creek and
Consider Forwarding a Recommendation to the
Board of Directors

RECOMMENDATIONS:

It is recommended that the Resources & Infrastructure Committee forward a recommendation to the Board of Directors regarding an Instream Flow Study for Santa Rosa Creek.

FISCAL IMPACT:

The preliminary cost estimate is \$160,500.00, based on the Tasks and Deliverables in the proposal.

DISCUSSION:

The Instream Flow Study assesses the stream, stream flows, and associated aquatic habitat in the lower reach of Santa Rosa Creek to assess the impacts of municipal water diversions.

Instream flows provide many functions throughout the year, including sufficient flow for fish migration and rearing, suitable water quality in Santa Rosa Creek, and essential geomorphic processes. The central focus of this study is to evaluate a range of flows and assess their ability to protect basic ecological processes that occur throughout the year but are most limiting when flows are at their lowest (dry season; late spring through fall).

The report would focus on surface flows and identify flows needed for sensitive species and habitats within the lower reach of Santa Rosa Creek. The study objective is to determine the relationship between habitat and streamflow as it relates to the needs of aquatic species in the lower reaches of Santa Rosa Creek with the operation of the Santa Rosa groundwater wells. The study will provide precise and timely data, ensuring a thorough evaluation of the current streamflow conditions.

Attachment: Stillwater Proposal - Santa Rosa Creek Instream Flow Study



February 11, 2025

James Green
Utilities Department Manager
Cambria Community Services District
5500 Heath Lane
Cambria, CA 93428

Tristan Reaper
Program Manager, Engineering and Utilities
Cambria Community Services District
5500 Heath Lane
Cambria, CA 93428

Re: Scope of work for the Santa Rosa Creek Instream Flow Study

Dear Mr. Green and Mr. Reaper,

Thank you for the opportunity to support the Cambria Community Services District in evaluating water needs for aquatic species in Santa Rosa Creek. Stillwater Sciences has been working in Santa Rosa Creek for nearly a decade, and we are excited to continue our work in the watershed. Our recent work on San Simeon Creek gives us considerable insight into what it takes to develop and implement a defensible instream flow study to meet agency requirements. For this study we are teaming with Gus Yates who has in-depth knowledge of the Santa Rosa Creek groundwater basin as well as District operations. Given our history in this watershed project and our extensive experience with instream flow studies, we believe that Stillwater Sciences' team is uniquely qualified to efficiently conduct and complete technical analyses and assessments that will meet the data needs of identifying critical flows that are protective of steelhead and understanding how those flows may be influenced by ground water pumping operations.

Sincerely,

Ken Jarrett
Fisheries Biologist
Stillwater Sciences
1203 Main Street,
Morro Bay, CA 93402
(805) 570-7499

Berkeley, CA
510.848.8098

Arcata, CA
707.822.9607

Davis, CA
530.756.7550

Morro Bay, CA
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Los Angeles, CA
213.336.0001

Ventura, CA
213.336.0001

Portland, OR
503.267.9006

Boulder, CO
720.656.2330

Fort Collins, CO
720.656.2330

SCOPE OF WORK AND BUDGET

SANTA ROSA CREEK INSTREAM FLOW STUDY

DATE:	February 11, 2025
TO:	James Green and Tristan Reaper, Cambria Community Services District
FROM:	Ken Jarrett and Ethan Bell, Stillwater Sciences

This proposed scope of work includes tasks to assess instream flow needs for federally listed steelhead (*Oncorhynchus mykiss*) in Santa Rosa Creek using the Instream Flow Incremental Methodology (IFIM), and an evaluation of how groundwater pumping may influence surface flows needed to support important life stages that occur in the watershed. Stillwater has partnered with Gus Yates (Todd Groundwater) as a subconsultant to provide groundwater analysis and expertise for this project.

SCOPE OF WORK

Task 1 – Project Coordination and Meetings

Task 1.1 Kickoff meeting

Stillwater will work with the Cambria Community Services District (CCSD) to coordinate a project kickoff meeting with District staff. The kickoff meeting will serve to clarify project goals and objectives, discuss the approach and project schedule, and ensure the team has the most suitable technical advisors identified for the Technical Advisory Committee (TAC). Ideally the TAC will consist of qualified staff from California State Parks, California Coastal Commission, California Department of Fish and Wildlife (CDFW), County of San Luis Obispo, and the Upper Salinas Las Tablas Resource Conservation District; however, coordination with other groups may be useful, including Creek Lands Conservancy, and the National Marine Fisheries Service.

Task 1.2 Technical Advisory Committee

Following the kickoff meeting, Stillwater will engage with potential TAC members and inform them of the study objectives, approach, and its relationship with CCSD pumping operations. Stillwater will prepare a detailed schedule for distribution to the CCSD and the TAC. Stillwater will engage with the TAC early in the development of the Instream Flow Study Plan (Study Plan). Stillwater will schedule the first meeting to occur immediately after completing review and analysis of existing information. The first meeting will focus on existing information and project background, study goals and objectives, with the following meetings becoming more detail oriented. These meetings will focus on study specifics such as defining the study area, number of study reaches, number of survey transects, and identifying suitable species habitat criteria for use in the study, as well as discussing the draft report. It is anticipated that this study will focus on

key life stages of federally threatened steelhead specifically, adult migration and spawning, and juvenile steelhead migration and rearing.

Task 1.3 Public Meetings

Stillwater will prepare and deliver presentations on the draft components of the Study Plan to the CCSD Board of Directors and/or other committees as key sections of the plan are developed, such as study area and study timeline. In conjunction with CCSD staff, Stillwater will present the draft Study Plan to the CCSD Board of Directors at up to two (2) public meetings and Stillwater will attend up to two (2) additional meetings with the CCSD Board of Directors to present the draft report and final report. Stillwater will assist with developing meeting agendas and presentation materials and provide technical expertise to respond to questions posed at the CCSD Board of Directors meetings and other public meetings.

Task 1.4 General Project Coordination

Stillwater will coordinate with the CCSD, TAC, and technical team members as necessary, provide informal check-ins via phone and email, and deliver monthly progress reports.

Task 1 Assumptions:

- Assumes one kick-off meeting will be attended by two Stillwater staff.
- Includes time for two Stillwater staff to attend up to four TAC meetings.
- Includes time for two Stillwater staff to attend up to four public meetings.

Task 1 Deliverables:

- Detailed schedule of the project, including milestones and project completion date.

Task 2 – Existing Data Review and Analysis

Existing information review will be used to 1) inform the instream flow study plan development and 2) assess water needs for sensitive species compared to CCSD groundwater pumping operations. Stillwater will conduct streamflow analysis from existing hydrology and stream gage data on Santa Rosa Creek. Results from this analysis will be used to calculate mean monthly flows to determine appropriate calibration flows to include in the IFIM model. Additional analysis may be required to augment existing information related to historical water production estimates, net production from the Santa Rosa Creek watershed, and the connection between groundwater recharge on surface flows in Santa Rosa Creek. Review of historic groundwater modeling conducted in Santa Rosa Creek. Review District pumping operations and groundwater pumping from private wells is included under Task 5 Groundwater pumping assessment.

Task 2 Assumptions:

- Historical surface water data and groundwater data (going back to 2000 or further) are available in a usable format for analysis.

Task 2 Deliverables:

- A summary of relevant flow statics will be provided in the draft and final technical reports described under Task 6.

Task 3 – Develop Instream Flow Study Plan

Stillwater will prepare a draft and final Study Plan based on review of existing information and discussion with the TAC. Based on our knowledge of conditions in Santa Rosa Creek, we anticipated that two study reaches will be required to accurately model representative conditions in the Study Area due to (1) the anticipated extent of the Study Area, (2) the location of the District pumps being roughly two miles upstream of the lagoon, and (3) the influence of a key tributary – Perry Creek – about one quarter mile upstream of the District pumps. The study will use accepted standard methods for assessing habitat-stream flow relationships, primarily the Instream Flow Incremental Methodology (IFIM) (Bovee and Milhous 1978, Bovee et al. 1998) to assess rearing habitat, and critical riffle analysis (CDFW 2017) to assess fish passage. Calibration flows targeted for the IFIM should cover a range of somewhat stable seasonal flows in Santa Rosa Creek, including roughly 0.5 cubic feet per second (cfs), 3 cfs, and 8 cfs (to be confirmed in Task 2). Flows higher than roughly 10 cfs are likely rain-driven events that are not likely to be affected by project pumping operations or influenced by groundwater recharge. The Study Plan will be developed to provide a thorough assessment of the relationship between instream flow and suitable habitat available for federally listed steelhead life stages that occur in Santa Rosa Creek.

Task 3 Assumptions:

- Two review drafts of the Study Plan and one final draft Study Plan will be prepared; comments for each draft will be provided in a single, track-changed document.
- The Study Plan will focus on steelhead only.

Task 3 Deliverables:

- One administrative draft, one agency draft, and one final draft of the Study Plan.

Task 4 – Conduct Instream Flow Study

Task 4.1 Implement IFIM

Stillwater will implement the finalized Study Plan. The first step of study plan implementation will be to conduct stream habitat mapping of the study reach to determine frequency of habitat types (e.g., riffle, run, pool habitat) for use in survey transect selection and modeling purposes. Habitat mapping will be conducted during baseflow conditions, likely during late-spring or early-summer 2025.

Survey transect locations will be selected during fall 2025. A minimum of three survey transects per habitat type is required for the IFIM, and in cases where there is an unequal distribution of habitat types or where unique habitat features occur, additional transects are required to allow for reasonable representation of study reach condition. Therefore, we assume up to a total twelve survey transects will be required for each study reach for a total of up to 24 transects over two study reaches. However, the number of study reaches will be determined based on review of existing data, hydraulic analysis, TAC input on study plan, and habitat mapping results.

Field surveys will be conducted at all transects when calibration flows are achieved within the Study Area, anticipated to be during winter 2025/2026.

Task 4.2 Fish Passage Evaluation

The critical riffle analysis method (CDFW 2017) will be used to assess juvenile and adult migration flows within the study reaches. Fish passage evaluations were previously conducted at two locations in Santa Rosa Creek, however, flows included in the analysis were higher than around 20 cubic feet per second cfs. Additional fish passage assessments are proposed for this study to understand conditions at a more precise range of flows covering from between approximately 3 cfs to 15 cfs. Fish passage assessments will be conducted near the two locations previously assessed which include one location near Main Street and one location upstream of Perry Creek. Up to 4 flows will be assessed for fish passage.

4.2 Data Analysis and Modeling

Analysis will include a description of existing aquatic habitat in the study reaches based on data collected during the habitat mapping effort (described under Task 4.1). The Physical Habitat Simulation (PHABSIM) component of IFIM will be used to link the hydraulic model with species habitat suitability criteria to compute an index of habitat suitability for steelhead over a range of flows. Information from the habitat mapping data collected under Task 4.1 will also be used to determine transect weighting for modeling purposes. Hydraulic models (PHABSIM) will be calibrated to established protocols. The PHABSIM modeling results and associated transect weighting will be combined with approved habitat suitability criteria to generate Area Weighted Suitability (AWS previously referred to as Weighted Area Suitability [WUA]) curves for steelhead life stages of interest. A set of time series tables and graphs will be generated on a monthly time step (by water year type) to depict AWS habitat values on a monthly basis under various low-to-moderate flow regimes (no attempt will be made to estimate AWS under very high flow conditions).

Task 4 Assumptions:

- Assumes adequate flows will occur to complete the survey between late-fall 2025 and Spring of 2026.

Task 4 Deliverables:

- All methods and analysis will be described in draft and final reports described in Task 6 below.

Task 5 – Groundwater Pumping Assessment

A groundwater pumping assessment will be conducted to understand how critical flows that are protective of steelhead may be influenced by CCSD and larger private ground water pumping operations. The groundwater pumping assessment task will be led by Gus Yates of Todd Groundwater.

Task 5.1 Update Estimate of Agricultural Pumping and Consumptive Use

Gus Yates (Todd Groundwater) will provide a preliminary review of historical aerial photographs suggests that cropping intensity in Santa Rosa Creek Valley is less than it was when last inventoried for the U.S. Geological Survey study in the late 1980s. Updated cropping information is needed to develop updated estimates of irrigation and consumptive use of groundwater and associates stream flow depletion. Information from historical aerial photographs (Google Earth)

will be supplemented with landowner interviews to obtain information about crop types, rotations, growing seasons irrigation methods and water use. Several major landowners/growers in the valley will be interviewed by telephone for this purpose.

Task 5.1 Deliverables:

- A digital map of cultivated fields overlying the Santa Rosa Creek groundwater basin.
- A table summarizing cropping patterns in recent years for each of the fields.
- Estimates of irrigation pumping, consumptive use and return flows for each field.

Task 5.2 Extract Relationships between Groundwater Pumping and Stream Flow from the USGS Study

The 1998 U.S. Geological Survey groundwater study report documented the development and use of a groundwater flow model of the Santa Rosa Creek groundwater basin. Some of the simulations included changes in selected categories of pumping. The effects of those changes on other components of the water budget were presented as percentages of average annual flows. Those changes will be converted into estimated changes in daily Santa Rosa Creek stream flow using assumptions regarding the timing of irrigation pumping and concurrent seasonal groundwater storage changes.

Task 5.2 Deliverables:

- Summary of pumping-flow relationships presented in the USGS study
- A workbook containing measured daily flow for the gage at the Main Street bridge since the 1990s and similar time series of estimated flow depletion due to agricultural pumping and municipal pumping.

Task 5.3 Compile and Plot CCSD Santa Rosa Creek Production Information

Cambria CSD obtains part of its water supply from wells along Santa Rosa Creek in the town of Cambria. CCSD meters well production and compiles the information monthly. Those data will be compiled into a single Excel workbook, and time series plots and statistical summaries will be prepared.

Task 5.3 Deliverables:

- A consolidated workbook of monthly production data for CCSD wells since 2000 in a format that facilitates plotting and analysis.
- Time series plots of production and a table of production statistics.
- A brief summary of historical production patterns for CCSD's Santa Rosa wells.

Task 6 – Draft and Final Technical Report

Results from the instream flow study and the groundwater pumping assessment will be pulled into a single report that identifies critical flows for steelhead in Santa Rosa Creek and describes how those flows may be influenced by groundwater pumping. Stillwater with support from Gus Yates will prepare two drafts and one final report of the instream flow study. The instream flow study report will include the following:

1. A thorough assessment of the relationship between instream flow and suitable habitat available for federally listed steelhead life stages that occur in Santa Rosa Creek.

2. A thorough assessment of the relationship between instream flow and fish passage for adult and juvenile steelhead.
3. An assessment of groundwater pumping including seasonal demand and extraction rates, and how they may influence surface flows
4. A summary of operational constraints and considerations based on watershed hydrology and groundwater conditions.

Assumptions:

- Two review drafts of the Study Report and one final Study Report will be prepared; assumes that comments for each draft will be provided by the CCSD in a single, track-changed document.

Task 6 Deliverables

- One administrative draft, one agency draft, and one final draft of the Instream Flow Study Report.

SCHEDULE

Work will begin shortly after contracting is completed. Coordination, TAC outreach, and review of background documents and data will occur in 2025. Habitat mapping will begin in the late spring and summer (2025) if sections of Santa Rosa Creek become dry before habitat mapping is completed, additional habitat mapping will be conducted when flows return to the dry sections, likely in winter 2025/2026. Instream flow surveys and fish passage assessments will occur based on when target flows occur likely between November 2025 through March 2026. All reporting will occur in spring 2026.

BUDGET

Table 1. Santa Rosa Creek instream flow study budget summary.

Task	Budget
Task 1. Project Coordination and Meetings	\$16,700
Task 2. Existing Data Review and Analysis	\$11,000
Task 3. Develop Instream Flow Study Plan	\$15,100
Task 4. Conduct Instream Flow Study	\$59,400
Task 5. Groundwater Pumping Assessment	\$17,700
Task 6. Reporting	\$40,600
Total	\$160,500

REFERENCES

Bovee, K. D., and R. T. Milhous. 1978. Hydraulic simulation in instream flow studies: Theory and techniques. Instream Flow Information Paper 5. U.S. Fish and Wildlife Service FWS/OBS-78/33. U.S. Fish and Wildlife Service.

Bovee, K. D., B. L. Lamb, J. M. Bartholow, C. B. Stalnaker, J. Taylor, and J. Henriksen. 1998. Stream habitat analysis using the instream flow incremental methodology. U.S. Geological Survey, Biological Resources Division Information and Technology Report USGS/BRD- 1998-0004.

California Department of Fish and Wildlife (CDFW). 2017. Standard operating procedure for critical riffle analysis for fish passage in California. Instream Flow Program. Sacramento, CA. Available: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=150377&inline>