

Pursuant to Governor Newsom's Executive Order N-29-20, members of the Resources & Infrastructure Standing Committee and staff will participate in this meeting via a teleconference. Members of the public can submit written comments to the Board Secretary at boardcomment@camabriacsd.org.



CAMBRIA COMMUNITY SERVICES DISTRICT

Karen Dean, Chair of the Resources & Infrastructure Committee, hereby calls a Special Meeting pursuant to California Government Code Section 54956. The Special Meeting will be held: **Monday, January 11, 2021, 10:00 AM**. The purpose of Special Meeting is to discuss or transact the following business:

NOTICE OF SPECIAL MEETING

CAMBRIA COMMUNITY SERVICES DISTRICT RESOURCES & INFRASTRUCTURE COMMITTEE

**Monday, January 11, 2021
10:00 AM**

Please click the link below to join the webinar:

<https://zoom.us/j/98512144090?pwd=TTNuRVZQcEpoT3FjOW1XL3ZVNnFFQT09>

Passcode: 946911

Or iPhone one-tap:

US: +16699006833,,98512144090# or +12532158782,,98512144090#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799 or +1 929 205 6099 or +1 301
715 8592 or +1 312 626 6799

Webinar ID: 985 1214 4090

International numbers available: <https://zoom.us/u/abGWf42GZw>

Copies of the staff reports or other documentation relating to each item of business referred to on the agenda are on file in the Office of the Board Secretary, available for public inspection during District business hours. The agenda and agenda packets are also available on the CCSD website at www.camabriacsd.org. Please call 805-927-6223 if you need any assistance. If requested, the agenda and supporting documents shall be made available in alternative formats to persons with a disability. The Committee Chairperson will answer any questions regarding the agenda.

1. **CALL TO ORDER**
2. **ESTABLISH QUORUM**

3. CHAIRMAN'S REPORT**4. AD HOC SUBCOMMITTEE REPORTS****5. PUBLIC COMMENT ON AGENDA ITEMS****6. CONSENT AGENDA**

- A. Consideration to Approve the November 9, 2020 Regular Meeting Minutes

7. REGULAR BUSINESS

- A. Receive Utilities Staff Presentation for Discussion and Consideration of the Installation of Piezometers for Ground Water Modeling Study, and Approve Recommendation to Refer the Project and Necessary Budget Adjustment to the Finance Committee
- B. Receive Updates on the UWMP and the State Requirements for the Plan
- C. Receive Update on the PG&E Investment Grade Audit
- D. Discussion and Consideration of 2021 Resources and Infrastructure Committee Meeting Dates

8. FUTURE AGENDA ITEMS**9. ADJOURN**

RESOURCES & INFRASTRUCTURE COMMITTEE

REGULAR MEETING

Monday, November 9, 2020 - 2:00 PM

MINUTES**A. CALL TO ORDER [0:00]***

Chairman Pierson called the meeting to order at 2:14 p.m.

B. ESTABLISH QUORUM [0:00]

Committee members present via Zoom: David Pierson, Paul Nugent, Brad Fowles, Tom Gray, James Webb**

Staff present via Zoom: Deputy District Clerk Haley Dodson, Board Secretary Ossana Terterian, District Engineer & Utilities Manager Ray Dienzo, Finance Manager Pamela Duffield

C. CHAIRMAN'S REPORT [0:00]

No chairman's report.

D. AD HOC COMMITTEE REPORTS [0:00]

Tom Gray, Ray Dienzo and David Pierson reported on work of joint Finance/R&I ad hoc committee on Sustainable Solutions Turnkey (SST) program funding. Reports covered:

--Prospects for California Energy Commission funding of some SST projects with high energy-saving pay-out.

--Potential funding from the California Infrastructure and Economic Development Bank (iBank), as well as U.S. Department of Agriculture in the longer term (about 1 year).

--Possible funding from State Water Resources Control Board for water supply, not wastewater, projects such as Stuart Street Tanks.

--Possible private-sector financing for most SST projects, depending on attractiveness of loan rates.

E. PUBLIC COMMENT [0:10]

Public Comment:
Crosby Swartz

1. CONSENT AGENDA [0:12]**A. Consideration to Approve the October 10, 2020 Regular Meeting Minutes**

Motion to approve the minutes.

Motion by: Member Nugent

Seconded by: Member Fowles

The motion was approved 3-Ayes (Fowles, Gray, Nugent, Webb), 0-Nays, 2-Absent.

2. REGULAR BUSINESS

- A. Discussion and consideration regarding the new Capital Improvement Project (CIP) list to be forwarded to Finance Committee for Review. **[0:12]**

No action: Following discussion, item continued to December meeting.

- B. Discussion and consideration to appoint an Ad Hoc Committee for the Urban Water Management Plan update. **[0:28]**

No action. Item continued to January meeting.

- C. Receive update on the Investment Grade Audit. **[0:28]**

Report from Ray Dienzo. Schedule has been accelerated, with first projects expected to go forward by end of year. Lift Station B-1 project to be converted to gravity project.

3. FUTURE AGENDA ITEMS [0:35]

Chairman Pierson noted that Ray Dienzo will present an update on the Urban Water Management Plan update at the January meeting.

4. ADJOURN [0:39]

Chairman Pierson adjourned the meeting at 2:53 p.m.

*Time on recording (hrs:mins)

**Member Webb arrived at meeting after quorum was established.

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Resources & Infrastructure Committee

AGENDA NO. 7.A.

FROM: John F. Weigold IV, General Manager
Ray Dienzo, Utilities Department Manager/District Engineer

Meeting Date: January 11, 2021

Subject: Receive Utilities Staff Presentation for Discussion and Consideration of the Installation of Piezometers for Groundwater Modeling, and Approve Recommendation to Refer Project and Necessary Budget Adjustment to the Finance Committee

RECOMMENDATION:

Staff recommends the Resources & Infrastructure (R&I) Committee receive a presentation for discussion and consideration of the installation of piezometers for groundwater modeling and approve staff's recommendation to refer the project and necessary budget adjustment to the Finance Committee.

DISCUSSION:

Staff proposes authorization of \$75,758 in expenditures to Todd Groundwater for groundwater modeling and monitoring in support of District permitting efforts for the Sustainable Water Facility (SWF). The attached proposal has been modified from the original scope to emphasis the focus on the SWF.

Over the course of 2020, Staff has worked with resource agencies and the CCSD's contract biologist, Ms. Cindy Cleveland, and hydrologist, Mr. Gus Yates (Todd Groundwater), to develop and refine a scope for an Instream Flow Study (IFS). The IFS is required to satisfy the County of San Luis Obispo's Information Hold for the CCSD's pending Land Use Permit DRC2013-00112 for the SWF project. The groundwater model and associated monitoring will enable CCSD staff and consultants to quantify potential effects of CCSD operations on groundwater outflow to lower San Simeon Creek and the lagoon.

Summary of Proposed Work to be Performed

- Activate and calibrate the 2014 model developed by CDM Smith. The model is critical for our understanding of the impact of CCSD operations on coastal resources and will assist Staff in making accurate projections regarding water availability under various drought, operational, and demand scenarios.
- Install piezometers (shallow monitoring wells) to obtain water level measurements that will provide insight regarding aquifer properties which can then be utilized to further calibrate the groundwater model. The data collected from the piezometers will be used to create a legitimate data set that will confirm or improve the model by determining aquifer parameters such as hydraulic conductivity, vertical flow variations and specific yield. The data will provide direct observed evidence of the time it takes pumping to start impacting water levels near the creek. This real-time monitoring will also be used to update the Adaptive Management Plan to ensure that CCSD staff have the data required to operate the SWF without impacting coastal resources found within and along the creek and lagoon.

- Monitor groundwater levels in the piezometers via pressure transducer data loggers. CCSD staff will collect data monthly and transmit data to Todd Groundwater for analysis.

Project Milestones

Model activation and initial calibration	January 2021
Piezometer Installation	April 2021
Piezometer Monitoring	April-September 2021
SWF scenario definitions and simulations	October-November 2021
Technical Memo re Model	December 2021

After the project is completed, ongoing model calibration based on actual groundwater monitoring from the piezometers will be performed on a time and materials basis. The CCSD is separately contracted with Todd Groundwater for hydrogeologic support for the CDP through June 25, 2022. Ongoing consultant costs will be minimal and proposed within the FY 2021-2022 budget.

Intersections with other CCSD Goals and Objectives

The proposed groundwater modeling can help validate assumptions currently being developed for the CCSD's 2020 Urban Water Management Plan (UWMP). Any UWMP-related scope would be subcontracted by the CCSD's consultant team and included in the approved contract budget.

Additionally, the groundwater model outputs and real-time monitoring can be utilized to implement the CCSD's Water Shortage Contingency Plan (WSCP), a component of the 2020 UWMP. The WSCP will include six stages of water shortage severity and a framework for moving within those stages. Model outputs can be utilized by staff to optimize implementation of the WSCP.

Completion of the CDP permit application and development of the 2020 UWMP were both identified by the Board of Directors as goals for calendar year 2020.

<https://www.cambriacsd.org/board-goals-objectives>

Repercussions of Foregoing the Proposed Work

Without the proposed groundwater modeling and monitoring, CCSD staff will be unable to definitively quantify potential effects of CCSD operations on groundwater outflow to lower San Simeon Creek and the lagoon. This information is critical to satisfying long-standing concerns voiced by the California Coastal Commission and echoed by members of the community. Staff's current draft IFS outline has been modeled after the California Department of Fish & Wildlife's Instream Flow Study Plan, which includes an analysis of hydrology, groundwater hydrology, and hydrologic connectivity. Significant data gaps and/or a delay in obtaining the required data could result without the proposed work. Most importantly, the repercussions will undoubtedly include additional delays in obtaining the regular Coastal Development Permit for the SWF.

Attachment: Todd Groundwater Proposal Dated January 6, 2021.



January 6, 2021

MEMORANDUM

To: Ray Dienzo and Melissa Bland, Cambria Community Services District

From: Gus Yates, Senior Hydrologist

Re: Scope of Work and Cost Estimate for Groundwater Modeling and Installation of Piezometers in the Percolation Pond Area to Support the Instream Flow Study and Coastal Development Permit

Cambria Community Services District (District) is preparing an instream flow study as a requirement for obtaining a Coastal Development Permit for the District's Sustainable Water Facility (SWF). SWF operation will affect groundwater conditions near the downstream end of the San Simeon Creek groundwater basin by way of changes in pumping (at the SWF supply well and at the District's well field), injection of purified recycled water and changes in wastewater percolation in the percolation pond area. Todd Groundwater will quantitatively estimate the effects of these operational changes on groundwater levels, groundwater inflow to San Simeon Creek lagoon, and ocean boundary outflow using a modified, existing groundwater model of the San Simeon Creek basin. The analysis will focus on drought periods when SWF would likely be operated and when ecological impacts would be most severe.

An additional task is to install shallow piezometers in the percolation pond area to measure drawdown associated with pumping at the District's gradient relief well (Well 9P7) and/or Clyde Warren's irrigation well (Well 9P4) under normal operation. That information will be used to improve model calibration and accuracy for simulating the effects of SWF operation.

SCOPE OF WORK

Task 1. Activate CDM-Smith Model with NWT Solver

The existing groundwater model was developed by CDM-Smith in 2014 for the purpose of simulating subsurface travel time of purified recycled water injected by the Sustainable Water Facility (SWF) project. In 2019, Todd Groundwater received a hard drive containing modeling files from Michael Smith, the model developer. However, initial testing revealed problems with numerical convergence stemming from the use of a non-standard proprietary solver. We will switch to the public-domain MODFLOW NWT solver, which simulates unsaturated flow and avoids cell dry-up that can be problematic in models with many thin layers, such as this one.

Task 2. Verify Model Performance for 2013-2014

CDM-Smith calibrated the model to conditions in 2001-2002. Todd Groundwater will develop inputs for 2013-2014 to verify model performance under drought conditions. All scenarios simulated for the UWMP will involve drought conditions, so this recent drought period is appropriate for verification. We will prepare inputs to simulate two years using 24 semi-monthly stress periods. This will require correlating San Simeon Creek flow at Palmer Flats (the upstream end of the model) with flow at the gage near the District's well field. In addition to stream inflow, we will prepare two years of model inputs for rainfall recharge, irrigation return flow, bedrock inflow, irrigation pumping, District pumping and wastewater percolation. Some of these may simply involve adjustments to the 2001-2002 values already in the model. Irrigation pumping has not been estimated since 1988. We will interview upstream landowners and inspect recent aerial photographs to prepare updated estimates of irrigation pumping and return flow.

We will compare simulated water levels with measured water levels at the 10-15 wells along San Simeon Creek routinely monitored by the District. We expect the simulated water levels to reasonably match measured water levels, based on the good calibration achieved for the 2001-2002 period. If there are obvious discrepancies, we will undertake limited calibration adjustments.

Task 3. Develop and Simulate SWF Operational Scenarios

Todd Groundwater will work with District staff to develop criteria defining when the SWF would be turned on and off. Because the facility is expensive to operate, it would be used only in dry years. For example, the operation criteria might be based on projected duration of the dry season or amount of creek recharge prior to the dry season.

Todd Groundwater will simulate a baseline scenario (without SWF operation) and two SWF operational scenarios, each with different amounts of irrigation pumping by Mr. Warren, which can significantly affect groundwater levels and outflow in the lower basin area. This would produce a total of five scenario simulations.

Each two-year simulation will cover two types of drought conditions. The first year will start with a full basin but have a long dry season, which can produce water shortages at the end of the dry season. This will be followed by a winter with little stream flow and incomplete basin refilling. This reduces the amount of storage available for pumping during the dry season of the second simulation year.

Key model outputs that will be recorded and evaluated include groundwater levels in the well field and percolation pond areas, simulated groundwater inflow to the lagoon, lagoon water levels, and groundwater outflow (or seawater inflow) at the ocean boundary.

Task 4. Prepare Technical Memorandum

Todd Groundwater will prepare a technical memorandum describing model verification and simulation inputs and outputs for the SWF scenarios. A draft version will be provided to the District for review, and a final version will be prepared that incorporates responses to the comments.

Task 5. Meetings and Project Management

This task includes periodic coordination by telephone or videoconference with the District. It also covers a small amount of time for invoicing and other project management activities.

Task 6. Install Piezometers

The ability of the model to simulate pumping effects on the San Simeon Creek lagoon is limited by lack of data defining drawdown associated with pumping at the two production wells in the percolation pond area (9P4 and 9P7). By installing piezometers (shallow monitoring wells) close to those wells, and monitoring water levels during normal well operation, the three-dimensional pattern of drawdown in space and time can be better defined.

For costing purposes, it is assumed that four piezometers approximately 25 feet deep will be drilled at different locations on levee roads separating the percolation ponds. Drilling will be by hollow-stem auger. The piezometers will have 2-inch PVC casings and screens, and the well heads will be below-grade in traffic-rated meter boxes. Todd Groundwater will select piezometer locations, depths and construction, subcontract with a drilling company, supervise the work on-site, log the borehole geology, and provide information for the Well Completion Reports. A brief memo will be prepared documenting piezometer locations, geology and construction.

SCHEDULE

Activation and verification of the groundwater model will be done in January 2021. Installation of four piezometers will require 4-5 days of field work. The schedule is partly contingent on the availability of drilling contractors but can certainly be completed by April 2021. Water levels monitored in the piezometers during April-September will be used to improve model calibration in the percolation pond area. Recalibration and simulations of SWF operations, mitigation discharges and Warren pumping will then be completed in October-November. The draft modeling report will be completed in December 2021 and the final report the following month.

The model might also be used to simulate scenarios for the Urban Water Management Plan. In that case, the scenarios would be defined and simulated in February-March 2021 under a separate scope of work using the existing model calibration.

COST ESTIMATE

The estimated cost for the modeling work is \$42,863 and the cost estimate for piezometer installation is \$32,895 for a total of \$75,758. A breakdown of costs by task and individual is shown in Table 1. Gus Yates will be the project manager, assisted by Dan Craig for modeling and Nicole Grimm for data preparation and analysis. Iris Priestaf will serve as internal reviewer and principal-in-charge.

Table 1. Cost Estimate for Groundwater Modeling and Piezometer Installation to Support Instream Flow Study and SWF Coastal Development Permit

Todd Groundwater													
	Iris Priestaf	Gus Yates	Dan Craig	Nicole Grimm	Drafting /GIS	Admin	Total Hours	Total Labor Costs	2% Communications Fee	Travel	Drilling Contractor	Markup on ODC's 15%	Total Labor and Expenses
	Principal	Sr. Hydrologist	Sr. Hydrogeologist	Staff Geologists									
	\$250	\$235	\$235	\$140									
Task 1: Activate model with NWT solver													
	0	0	16	0	0	0	16	\$3,760	\$75		\$0	\$0	\$3,835
Subtotal Task 1:	0	0	16	0	0	0	16	\$3,760	\$75	\$0	\$0	\$0	\$3,835
Task 2: Verification simulation of 2013-2014													
	0	21	30	18	0	0	69	\$14,505	\$290		\$0	\$0	\$14,795
Subtotal Task 2:	0	21	30	18	0	0	69	\$14,505	\$290	\$0	\$0	\$0	\$14,795
Task 3: Develop and simulate SWF scenarios													
	0	20	26	7	0	0	53	\$11,790	\$236		\$0	\$0	\$12,026
Subtotal Task 3:	0	20	26	7	0	0	53	\$11,790	\$236	\$0	\$0	\$0	\$12,026
Task 4: Prepare draft and final tech memo													
	4	26	10	0	4	1	45	\$10,100	\$189		\$0	\$0	\$10,289
Subtotal Task 4:	4	26	10	0	4	1	45	\$10,100	\$189	\$0	\$0	\$0	\$10,289
Task 5: Project management and meetings													
	0	8	0	0	0	0	8	\$1,880	\$38		\$0	\$0	\$1,918
Subtotal Task 5:	0	8	0	0	0	0	8	\$1,880	\$38	\$0	\$0	\$0	\$1,918
Task 6: Install piezometers													
	0	78	0	0	4	1	87	\$19,910	\$385	\$600	\$12,000	\$90	\$32,895
Subtotal Task 6:	0	78	0	0	4	1	87	\$19,910	\$385	\$600	\$12,000	\$90	\$32,895
Todd Project Total	4	153	82	25	8	2	278	\$61,945	\$1,213	\$600	\$12,000	\$90	\$75,758



CAMBRIA COMMUNITY SERVICES DISTRICT
RESOURCES & INFRASTRUCTURE COMMITTEE
2021 REGULAR MEETING SCHEDULE

January ____, 2021 at ____

February ____, 2021 at ____

March ____, 2021 at ____

April ____, 2021 at ____

May ____, 2021 at ____

June ____, 2021 at ____

July ____, 2021 at ____

August ____, 2021 at ____

September ____, 2021 at ____

October ____, 2021 at ____

November ____, 2021 at ____

December ____, 2021 at ____

Regular meetings are held via Zoom until further notice.