CAMBRIA COMMUNITY SERVICES DISTRICT

MEETING	TIME & DATE	LOCATION
Board of Directors	1:00 PM Thursday, October 10, 2024	Cambria Veterans' Memorial Hall 1000 Main Street, Cambria, CA 93428

AGENDA

Regular Board Meeting

October 10, 2024 1:00 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 ID: 821 5434 1356
Passcode: 150418

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 Pledge of Allegiance

1.C Establishment of Quorum

1.D Report from Closed Session

1.E President's Report

1.F Agenda Review

2. ACKNOWLEDGEMENTS

3. BOARD MEMBER COMMUNICATIONS

Any Board Member may make an announcement, report briefly on his or her activities, or ask a question for clarification.

4. PUBLIC COMMENT

Members of the public may now address the Board on any item of interest within the jurisdiction of the Board but not on its agenda today. Future agenda items can be suggested at this time. In compliance with the Brown Act, the Board cannot discuss or act on items not on the agenda. Each speaker has up to three minutes. Members of the public who wish to comment on matters before the CCSD can submit written correspondence to boardcomment@cambriacsd.org. Note: Written correspondence will not be read into the record during the Board meeting; however, correspondence received at least one hour prior to the meeting commencement will be forwarded to the Board of Directors and posted on the District's website as part of the official meeting record. Your comments and information will become part of the official public record. If you do not want your personal information included in the official record, please do not include your address and/or phone number.

5. REGULAR BUSINESS

5.A Receive a Presentation from Stillwater Sciences and File the Instream Flow Study

5.B Receive, Review and File the Watershed Sanitary Survey

5.C Discussion and Consideration of Approval of a Public Works Contract with Alpha Electrical Service for Construction of the Rodeo Grounds Pump Station Back-up Power System Replacement Project and Authorization for the General Manager to Execute the Agreement

5.D Discussion and Consideration Regarding Directing the Policy Committee to Develop a Policy for Streetlights and Lights at Other Facilities under CCSD's Jurisdiction

5.E Discussion and Consideration of Reading Aloud Written Comments at Board Meetings

6. BOARD MEMBER, COMMITTEE AND LIAISON REPORTS

6.A Finance Committee's Report

6.B Policy Committee's Report

6.C PROS Committee's Report

6.D Resources & Infrastructure Committee's Report

6.E Other Liaison Reports and Ad Hoc Committee Reports

7. FUTURE AGENDA ITEM(S)

This is an opportunity to request a formal agenda report be prepared and the item placed on a future agenda. No formal action can be taken except to direct the General Manager to place a matter of business on a future agenda by majority vote.

8. ADJOURN

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Board of Directors

AGENDA NO. **5.A**

FROM: Matthew McElhenie, General Manager
Jim Green, Utilities Department Manager

Meeting Date: October 10, 2024

Subject: Receive a Presentation from Stillwater Sciences and File the Instream Flow Study

FISCAL IMPACT:
There is no fiscal impact associated with this item.

DISCUSSION:

The Instream Flow Study is an assessment of the stream, stream flows, and associated aquatic habitat in lower San Simeon Creek and the San Simeon Creek Lagoon to evaluate the impacts of municipal water diversions. The scope of the study was expanded in 2023 to include lower Van Gordon Creek based on the comments received on the first draft of the study. Instream flow analysis for San Simeon Creek was previously assessed by Stillwater during a County-wide assessment in 2014. The purpose of the Environmental Water Demand (EWD) study conducted in 2014 was to provide a preliminary estimate of the magnitude and timing of instream flows that would support Steelhead in creeks of San Luis Obispo County. The data gathered and represented in this updated study is more precise with regard to actual streamflow assessment.

After considerable planning and collaboration, on August 24, 2024, the CCSD successfully submitted the Coastal Development Permit (CDP) application for the Water Reclamation Facility and the San Simeon Creek Instream Flows Assessment to include Van Gordan Creek to the County of San Luis Obispo. This marks a significant milestone in our mission to secure Cambria's reliable and sustainable water supply. The Water Reclamation Facility is a critical element in our long-term water management strategy. This project is essential in ensuring our community remains resilient to water challenges, including droughts and climate change.This journey is long from over. We expect an information hold while we update our Adaptive Management Plan (AMP) with our consultants. However, in consultation with the County planners, they agreed that submitting the application was the correct choice while they worked with us through the permitting process. On September 19, 2024, the CCSD Board of Directors approved a scope change that will allow our consultant (SWCA) to work on several updates, including the AMP, EIR Addendum, Compliance memo, and Policy Consistency Analysis.It is recommended that the Board of Directors receive a presentation from Stillwater Sciences and file the completed Instream Flow Study.

ATTACHMENTS:
1. San Simeon Creek Instream Flows Assessment

FINAL REPORT ◦ AUGUST 2024

San Simeon Creek Instream Flows Assessment

PREPARED FOR

Cambria Community Services District
P.O. Box 65
Cambria, CA 93428

PREPARED BY

Stillwater Sciences
1203 Main Street
Morro Bay, CA 93442

Stillwater Sciences

Suggested citation:
Stillwater Sciences 2024. San Simeon Creek Instream Flows Assessment. Final Report. Prepared by Stillwater Sciences, Morro Bay, California, for Cambria Community Services District, Cambria, California.

Cover photos: Overview of San Simeon Creek during winter 2022 (top left), habitat surveys during 2022 (top right and bottom left), and adult steelhead observed in 2022 (bottom right).

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Acronyms and Abbreviations

°C	Celsius
°F	degrees Fahrenheit
1D	one dimensional
AFY	acre-feet per year
AWS	area weighted suitability
CCSD	Cambria Community Services District
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
cfs	cubic foot per second
cm	centimeter
CRLF	California red-legged frog
EWD	Environmental Water Demand
ft	foot
ft^2	square foot
gpm	gallons per minute
GPS	global positioning system
HSC	habitat suitability criteria
IFIM	Instream Flow Incremental Methodology
mg/L	milligram per liter
NMFS	National Marine Fisheries Service
ppt	part per thousand
SEFA	System for Environmental Flow Analysis
SZF	stage-of-zero-flow
TAC	Technical Advisory Committee
WRF	Water Reclamation Facility
WSCP	Water Shortage Contingency Plan
WSE	water surface elevation

1 INTRODUCTION

The Cambria Community Services District (CCSD) commissioned Stillwater Sciences to conduct this instream flow study to quantify the amount of streamflow that will support key species and habitat in lower San Simeon Creek. Water service provided by CCSD has the potential to influence surface flows in San Simeon Creek, but information about how surface flow conditions affect aquatic habitat for sensitive species is lacking. Findings from this study (Task 1) and concurrent groundwater studies (Task 2) will be used to identify a sustainable amount of groundwater that can be extracted during operation of the San Simeon groundwater wells and long-term operation of the Water Reclamation Facility (WRF, formerly the Sustainable Water Facility) without adversely affecting riparian and wetland habitat or surrounding agricultural activities. This report focuses on surface flow conditions and how those conditions influence aquatic habitat for special status species in lower San Simeon Creek where it flows over the groundwater basin (Figure 1). Results from this study will help inform basin management protocols and environmental monitoring plans based on the instream flow needs identified during this study.

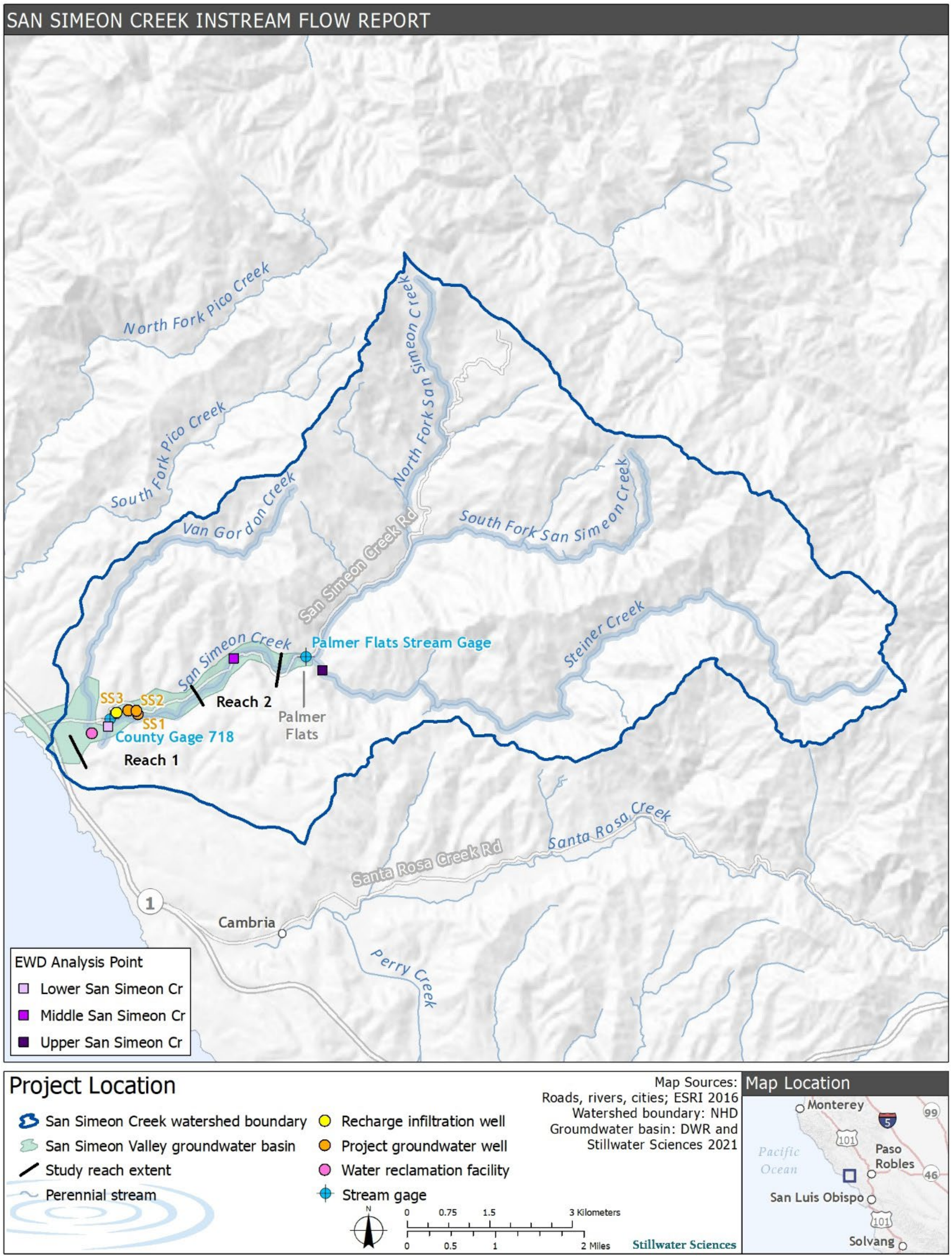
CCSD provides water service to the unincorporated town of Cambria. All of Cambria's potable water is supplied from groundwater wells operated by CCSD. CCSD operates three groundwater wells that extract water from the basin beneath San Simeon Creek and two groundwater wells that extract water from the basin beneath Santa Rosa Creek. In addition to the three groundwater wells CCSD operates along San Simeon Creek, CCSD has a fourth groundwater well that is located downstream near the confluence of San Simeon and Van Gordon Creek and is only used during operation of the WRF. CCSD constructed the WRF in 2014 under an emergency Coastal Development Permit (CDP) to address water shortage conditions in the community of Cambria during a historical drought event. The WRF enables CCSD to provide a reliable water supply to residents of Cambria during water shortages by using a combination of advanced water treatment, groundwater recharge, and groundwater extraction during periods of declared water shortages.

The WRF is designed to supply water by pumping brackish subsurface water from the western (i.e., coastal) edge of the groundwater basin. That water is then treated and reinjected back into the groundwater basin via a recharge infiltration well located upstream near the three existing San Simeon groundwater wells to maintain groundwater levels that allow for extraction. Through groundwater augmentation, the WRF was designed to provide up to 250 acre-feet of water to the community of Cambria during the dry season (typically late spring through fall). Furthermore, when operational, the WRF is designed to provide up to 100 gallons per minute (gpm) (equivalent to 0.23 cubic foot per second [cfs]) for surface water augmentation to maintain water levels in San Simeon Creek Lagoon.

Under CCSD's current emergency CDP, the WRF is allowed to operate only during declared Stage 3 water shortages. As part of its 2020 Urban Water Management Plan, CCSD replaced its three-stage Emergency Water Conservation Program (legacy program) with a new six-Stage Water Shortage Contingency Plan (WSCP). The legacy program's Stage 3 met the definition of a water shortage emergency per California Water Code Section 350 and was intended to conserve the water supply for critical uses only: human consumption, sanitation, and fire protection. Stages 4, 5, and 6 of the WSCP meet the definition of a water shortage emergency, with Stages 5 and 6 being the closest equivalent to the legacy program Stage 3. Ordinance 03-2021, which describes the WSCP in detail, including implementation criteria and procedures to initiate water shortage stages, can be viewed in CCSD's Public Repository.[1]

Sustained, long-term use of the WRF during the dry season is being considered as part of the regular CDP application. Operation of the San Simeon groundwater wells and the WRF may affect the distribution and/or behavior of sensitive aquatic species in stream sections where streamflow is affected by groundwater pumping and groundwater infiltration. Sensitive species that occur in Simeon Creek include federally threatened south-central California coast steelhead (anadromous *Oncorhynchus mykiss*), tidewater goby (*Eucyclogobius newberryi*), and California red-legged frog (*Rana draytoni*) (National Marine Fisheries Service [NMFS] 2013, Rathburn et al. 1993).

[1] Available at: www.cambriacsd.org/public-repository.



Note: EWD = Environmental Water Demand

Figure 1. Study Area.

2 BACKGROUND

The San Simeon Creek watershed drains a 35-square-mile area of the southern Coast Range. Originating from the flanks of the Santa Lucia Mountains, San Simeon Creek transitions from mountainous headwater terrain (maximum elevation approximately 3,400 feet [ft] above mean sea level) to lower gradient valley depositional areas before draining to the Pacific Ocean approximately 2.5 miles north of the town of Cambria. San Simeon Creek has two major tributary basins with their headwaters in the Santa Lucia Mountains: Van Gordon Creek and Steiner Creek (Figure 1). Streamflow entering from these tributaries has been shown to be important for maintaining surface flows in San Simeon Creek (D.W. Alley and Associates 2004).

Instream flows for San Simeon Creek were previously assessed during a county-wide assessment conducted by Stillwater Sciences (2014) to estimate the Environmental Water Demand (EWD) for watersheds throughout San Luis Obispo County. EWD is defined as the minimum amount of surface flows required to sustain aquatic habitat and ecosystem processes. The purpose of the EWD study was to provide a preliminary estimate of the magnitude and timing of instream flows that would support steelhead in creeks of San Luis Obispo County but was not intended to provide sufficient detail for establishing regulatory or mandatory water permit limits. The Stillwater 2014 report explicitly recommended site-specific analysis to establish flow recommendations, such as the study described here.

In an attempt to avoid estimating EWD for locations that naturally dry out (without human water extractions) during the summer/fall seasons, analysis points for estimating EWD were selected based on modeling that predicted locations with perennial flows and a high potential for suitable summer rearing habitat for juvenile steelhead (Boughton and Goslin 2007). EWD was then estimated at each analysis point based on a predictive model (Stillwater Sciences 2014). Within San Simeon Creek, EWD was estimated at three locations: (1) lower San Simeon Creek, just upstream of Van Gordon Creek, (2) middle San Simeon Creek, just upstream of the San Simeon Creek Road Bridge, and (3) upper San Simeon Creek, which is within Steiner Creek just upstream from the confluence with San Simeon Creek (Figure 1 and Table 1).

Table 1. Environmental water demand estimates for San Simeon Creek (from Stillwater Sciences 2014).

Analysis Point	Drainage Area (mi^2)	Environmental Water Demand (cfs)	
		Spring	Summer
Lower San Simeon Creek	26.2	1.6	0.5
Middle San Simeon Creek	24.3	1.5	0.5
Upper San Simeon Creek	9.8	0.8	0.3

Notes: cfs = cubic feet per second; mi^2 = square mile

Limited streamflow data exist for San Simeon Creek. Mean daily streamflow data was recorded for the Palmer Flats Gage (formerly#14) covering the period from October 1970 through September 1995 after which time the gage was discontinued. The U.S. Geological Survey (USGS) established a second stream gage (USGS Gage #11142300) located near CCSD wells in October of 1987 and operated it until July 1989, after which the county of San Luis Obispo took over operation of this gage (County Gage #718, formerly County Gage #22) and monitored streamflow through 2003. However, after 2003, the county stopped maintaining the stage discharge rating curve and recorded only stage levels. Therefore, data from this gage location included in this study covers only the periods from 1987 to 1989 (USGS Gage #11142300) and 1987 through 2003 (County Gage #718, formerly County Gage #22). Mean daily flow for each gage location is provided in Appendix A.

Similar to other Central Coast Range watersheds, San Simeon Creek naturally exhibits seasonal surface flow and extensive intermittent reaches due to highly variable patterns of precipitation and the complex geology of the region (NMFS 2013). Flows in San Simeon Creek closely follow the seasonal precipitation patterns of the region. The available stream gage data from San Simeon Creek shows the highest flows generally occur in the winter when maximum daily flows can exceed 1,000 cfs, while minimum flows during the summer are often 0 cfs (Table 2). Flood flows in San Simeon Creek typically increase, peak, and subside rapidly in response to high-intensity rainfall. This hydrologic attribute is characteristic of a “flashy” hydrograph, whereby a rapid increase in discharge occurs over a relatively short period with a quickly developed peak discharge in relation to normal baseflow. During the dry season, the lower section of San Simeon Creek often goes dry from near the confluence with Steiner Creek downstream to approximately the confluence with Van Gordon Creek (D.W. Alley and Associates 2004). While flashy flows and intermittent reaches are natural occurrences of coastal streams in Central California, San Simeon Creek has a number of groundwater pumps—municipal and agricultural—that likely increase the extent and frequency of intermittent flows above that which would occur under natural conditions.

Table 2. Mean daily flow for San Simeon Creek based on data collected at County Gage #718 (formerly County Gage #22) located just downstream of CCSD wells based on data collected from 1987 through 2003 and at the Palmer Flats Gage (formerly County Gage #14) based on data collected from 1970 through 1995.

Month	Daily Flow Statistics at County Gage[1]				Daily Flow Statistics at Palmer Flats Gage[1]			
	Min (cfs)	Mean (cfs)	Max (cfs)	Median (cfs)	Min (cfs)	Mean (cfs)	Max (cfs)	Median (cfs
October	0.0	0.2	51.0	0.0	0.0	0.2	15.0	0.0
November	0.0	10.1	1,200.0	0.0	0.0	12.2	832.0	0.0
December	0.0	23.3	1,020.0	0.0	0.0	25.7	920.0	1.0
January	0.0	83.6	1,480.0	9.4	0.0	66.0	1,592.0	10.0
February	0.0	115.7	2,590.0	35.5	0.0	72.6	1,106.0	14.0
March	0.0	72.2	4,270.0	25.0	0.0	73.5	1,530.0	23.0
April	0.0	16.5	286.0	8.7	0.0	20.4	1,164.0	7.9
May	0.0	4.3	215.0	1.2	0.0	4.9	67.0	1.9
June	0.0	0.7	7.0	0.0	0.0	1.9	20.0	0.2
July	0.0	0.1	3.6	0.0	0.0	1.2	21.0	0.0
August	0.0	0.0	0.2	0.0	0.0	0.4	20.0	0.0
September	0.0	0.0	0.0	0.0	0.0	0.1	18.0	0.0

Notes: CCSD = Cambria Community Services District, cfs = cubic feet per second

1 While data were recorded daily for several seasons, there are periods when no flow was recorded. It is unknown whether the lack of data represents dry conditions or whether data were not collected for other reasons. Therefore, blank data cells were not included in calculation of statistics.

Instream flows provide many functions throughout the year, including sufficient flow for fish migration and rearing (Figure 2), suitable water quality in San Simeon Creek Lagoon, and essential geomorphic processes. The central focus in 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).

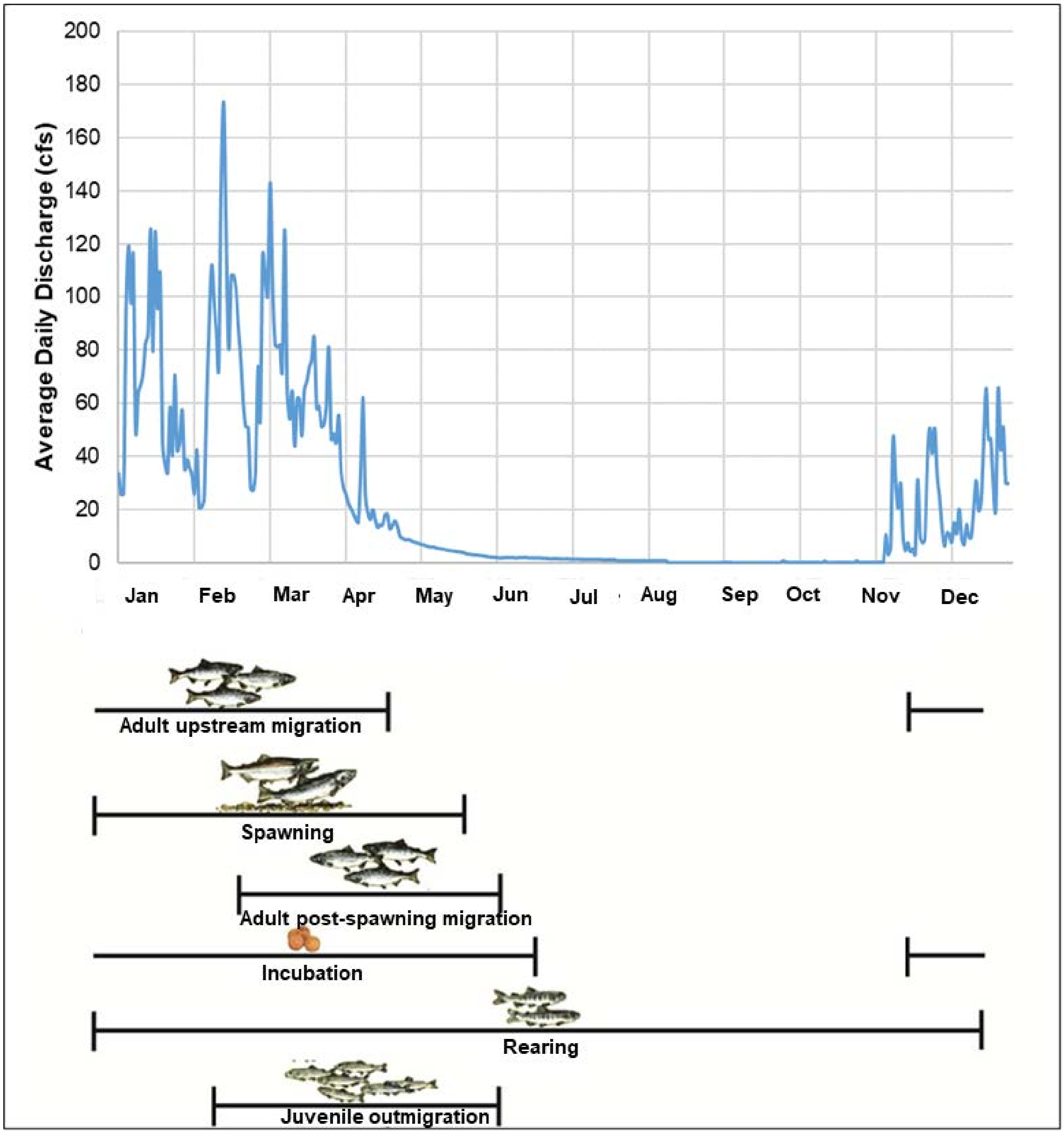


Figure 2. Average daily flows in San Simeon Creek, based on Palmer Flats Gage data for the period from 1970 through 1995 with life-history timing of steelhead (Shapovalov and Taft 1954).

Streamflow in lower San Simeon Creek is influenced by groundwater levels. During the winter when the groundwater basin is full, streamflow is generally steady; however, when basin-wide pumping exceeds the amount of streamflow contributions to the groundwater basin, groundwater levels quickly decline. This decline typically begins in the late spring when streamflow reaches about 1.3 cfs at the Palmer Flats Gage near the upstream end of the groundwater basin (Yates and Konynenburg 1998). Groundwater levels within the San Simeon groundwater basin generally become saturated after the first streamflow event in the winter, and the San Simeon Groundwater basin remains full until early summer, when the groundwater levels begin to recede before stabilizing near their minimum elevation, which typically occurs by the beginning of September and remains there until the first streamflow event recharges the groundwater basin (CCSD 2015).

2.1 Special Status Species

Special status aquatic species that occur in San Simeon Creek include two federally listed fish species—steelhead and tidewater goby—and one federally listed amphibian—California red-legged frog (CRLF).

2.1.1 Steelhead

Lower San Simeon Creek supports a population of federally threatened south-central California coast steelhead (NMFS 2013). One of the primary threats to steelhead production in San Simeon Creek was identified by NMFS includes reducing instream flow and water availability (NMFS 2013). Steelhead found in the San Simeon Creek watershed belong to the South-Central California Coast Distinct Population Segment, which includes steelhead populations that inhabit coastal stream networks from the Pajaro River (San Benito County) south to, but not including, the Santa Maria River (NMFS 2013). Within this Distinct Population Segment, the population of steelhead in the San Simeon Creek watershed has been identified as a Core 1 population, which means it has the highest priority for recovery actions, has a known ability or potential to support viable populations, and has the capacity to respond to recovery actions. One critical recovery action listed by NMFS includes the implementation of operating criteria to ensure streamflow allows for essential steelhead habitat functions (NMFS 2013).

Adult steelhead generally leave the ocean to return to their natal streams from December through March and spawn in late winter or spring (Meehan and Bjornn 1991, Behnke 1992). Spawning occurs primarily from January through April (Hallock et al. 1961, Moyle 2002). Female steelhead construct redds in suitable gravels (0.39–1.18 inches in diameter [Moyle 2002]), often in pool tailouts and heads of riffles, or in isolated patches in cobble-bedded streams. Steelhead eggs incubate in the redds for 3 to 14 weeks, depending on water temperatures (Shapovalov and Taft 1954, Barnhart 1991). After hatching, young steelhead remain in the gravel for an additional 2 to 5 weeks while absorbing their yolk sacs and then emerge in spring or early summer as fry (Barnhart 1991).

After emergence, steelhead fry use shallow, low-velocity habitats, typically found along stream margins and in low-gradient riffles (Hartman 1965, Fontaine 1988). As fry grow and improve their swimming abilities in late summer and fall, they increasingly show a preference for higher water velocity and deeper mid-channel areas near the thalweg (the deepest part of the channel) in locations with cover (Hartman 1965, Everest and Chapman 1972, Fontaine 1988). Locations with high water velocity and cover likely provide juvenile steelhead with resting locations while they watch for drifting invertebrates being carried by flow. Aquatic invertebrates comprise a key item in the diet of juvenile steelhead. After rearing in freshwater for 1 to 3 years, juvenile steelhead migrate to the ocean, typically from March through June.

San Simeon Creek Lagoon conditions have an important influence on anadromous fish survival because steelhead must pass through these areas during upstream adult migration and downstream smolt outmigration. In some central California coast watersheds, seasonal lagoons have also been shown to provide a critical role in supporting steelhead populations by providing important juvenile steelhead rearing habitat. Juvenile steelhead that rear in lagoon habitat over the summer have been shown to have rapid growth rates compared to growth in upstream locations (Hayes et al. 2008). Larger steelhead that reared in seasonal lagoon habitat in Scott Creek (Santa Cruz County), for example, were found to account for greater than 80% of the returning adult population (Bond et al. 2008). In some cases, lagoons have the potential to contribute to the majority of steelhead smolt produced in small coastal watersheds (Smith 1990). Water quality conditions within lagoon habitat reported to support steelhead rearing include the following criteria:

- Water temperatures between 15–24 degrees Celsius (°C) (59–75.2 degrees Fahrenheit [°F]) (Hayes et al. 2008).
- Salinities less than 10 parts per thousand (ppt) (Daniels et al. 2010).
- Dissolved oxygen concentrations greater than 5 milligrams per liter (mg/L) (ISU 2008, as cited in Daniels et al. 2010).

Flows to support steelhead migration in San Simeon Creek were previously assessed by D. W. Alley and Associates (1992). The study focused on water depth at critical riffles located within the lower 4 miles of San Simeon Creek. D. W. Alley (1992) estimated that flows to support adult steelhead upstream migration ranged from approximately 21 cfs to 68 cfs, depending on the critical riffle location, while juvenile steelhead downstream migration was supported at flows ranging from approximately 4 cfs to 11 cfs. Studies monitoring the downstream migration of steelhead in San Simeon Creek observed juvenile steelhead migration primarily during April and May with higher catch often occurring during periods of increased flows (Table 3) (Nelson 1995, Nelson et al. 2005).

Table 3. Steelhead outmigrant trapping results summary for San Simeon Creek in 1993 and 2005 (Nelson 1995, Nelson et al. 2005).

Week	Parr	Silvery Parr	Smolt	Rainbow Trout Coloration	Kelt	Total	Stream Flow (date)
1993 Outmigrant Trapping							
April 7	0	0	1	0	0	1	Not recorded
April 12	0	0	0	0	0	0	Not recorded
April 19	0	0	4	0	0	4	Not recorded
April 26	0	0	5	0	0	5	Not recorded
May 3	0	0		0	0	0	6.27 (May 5, 1993)
May 10	0	0		0	0	0	4.41 (May 12, 1993)
May 17	0	0		0	0	0	2.65 (May 19, 1993)
May 24[a]	Na	Na	Na	Na	Na	Na	5.29 (May 25, 1993)
2005 Outmigrant Trapping							
March 14	1	2	0	0	0	3	Not recorded
April 11	1	4	16	0	0	21	Not recorded
April 18	1	5	11	0	1	18	15.8 (April 20,2005)
April 25	0	33	17	3	0	53	31.3 (April 28,2005)
May 2	8	11	2	0	0	21	9.6 (May 4,2005)

Week	Parr	Silvery Parr	Smolt	Rainbow Trout Coloration	Kelt	Total	Stream Flow (date)
May 9	49	10	1	0	0	60	11.6 (May 11,2005)
May 16	11	0	0	0	0	11	7.2 (May 18,2005)
May 23	9	0	0	0	0	9	4.9 (May 24,2005)
May 30	30	0	0	0	0	30	3.7 (June 2,2005)
June 6	1	0	0	0	0	1	2.4 (June 7,2005)

[a] Traps were removed after the week of May 17 in 1993; however, the week of May 24 is included in the table to show an increase in flow that may have triggered additional smolt migration.

2.1.2 Tidewater goby

Tidewater goby is federally listed as endangered under the federal Endangered Species Act (59 Federal Register 5494 5499) and designated as a species of special concern by the State of California. Critical habitat was designated for tidewater goby in San Simeon Creek Lagoon (USFWS 2013). Tidewater goby is an estuarine/lagoon-adapted species that is endemic to the California coast, mainly in small lagoons and near stream mouths in the uppermost brackish portion of larger bays (Moyle 2002, USFWS 2005).

Tidewater gobies are short lived (generally 1 year) and highly fecund fish (females produce 300–500 eggs per batch and spawn multiple times per year) that disperse infrequently via marine habitat but have no dependency on marine habitat for their life cycle (Swift et al. 1989, Lafferty et al. 1999). Reproduction is generally associated with the closure and filling of the estuary (late spring to fall), typically beginning in late April or May and continuing into the fall, although the greatest numbers of fish are usually produced in the first half of this period. Breeding occurs in slack shallow waters of seasonally disconnected or tidally muted lagoons, estuaries, and sloughs. Males dig burrows vertically into sand, 4 to 8 inches deep, and defend the burrows until hatching (SCR Project Steering Committee 1996). Their diet consists mainly of small animals, usually mysid shrimp (*Mysidopsis bahia*), gamarid amphipods (*Gammarus roeseli*), and aquatic insects, particularly chironomid midge (Diptera: Chironomidae) larvae (Swift et al. 1989, Swenson 1997, Moyle 2002). Juvenile and adult tidewater gobies are reported to prefer water temperatures of 12–24°C (54–75°F), within a tolerance range of 6–25°C (42–77°F) (Stillwater Sciences 2006).

The USFWS (2013) states that habitat characteristics required to sustain the tidewater goby's life history processes include the following:

> Persistent, shallow (in the range of approximately 0.3 to 6.6 ft), still-to-slow-moving lagoons, estuaries, and coastal streams with salinity up to 12 ppt, which provide adequate space for normal behavior and individual and population growth that contain one or more of the following: (a) Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction; (b) Submerged and emergent aquatic vegetation, such as pondweed (Potamogeton pectinatus), widgeongrass (*Ruppia maritima*), bulrush (*Typha latifolia*), and sedges (*Scirpus* spp.), that provides protection from predators and high flow events; or (c) Presence of a sandbar(s) across the mouth of a lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, thereby providing relatively stable water levels and salinity.

Monthly visual observation surveys conducted in San Simeon Creek Lagoon from May 1992 through April 1993, documented observations of more than 7,000 juvenile and more than 1,000 adult tidewater gobies (Rathburn et al. 1993). More recently, during a single day of beach seining in October 2014, more than 1,000 tidewater gobies were captured in San Simeon Creek Lagoon (D.W. Alley 2015)

2.1.3 California red-legged frog

CRLF is federally listed as threatened and is a California Department of Fish and Wildlife (CDFW) Species of Special Concern. The species' range occurs from south of Elk Creek in Mendocino County to Baja California, with isolated remnant populations occurring in the Sierra foothills from sea level to approximately 8,000 ft (Stebbins 1985, Shaffer et al. 2004). Currently, most CRLF populations are largely restricted to coastal drainages on the central coast of California.

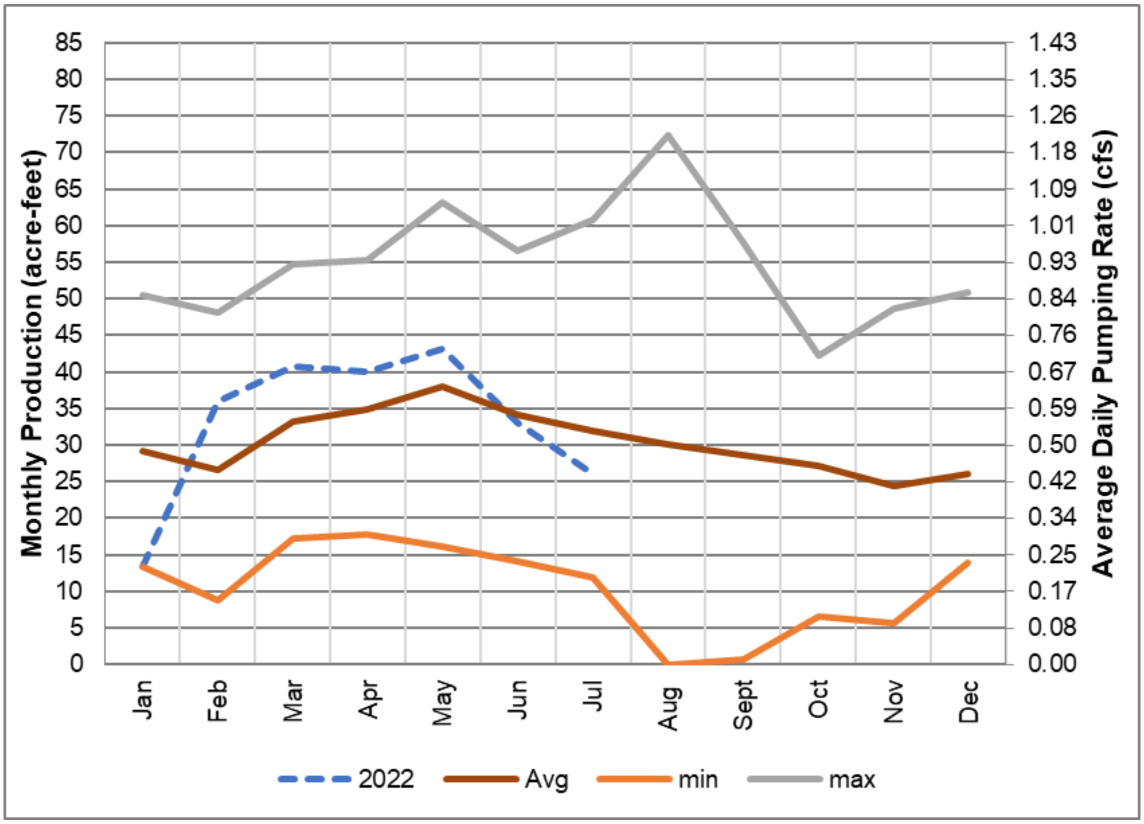
CFLF habitat includes wetlands, wet meadows, ponds, lakes, and low-gradient, slow-moving stream reaches. Breeding generally occurs from December through April in aquatic habitats characterized by still or slow-moving water with deep pools (usually 2.3 ft deep or greater) and emergent and overhanging vegetation (Jennings and Hayes 1994). Breeding sites can be ephemeral or permanent; if ephemeral, inundation is usually necessary into the summer months (through July or August) for successful metamorphosis. Although some adults may remain resident year-round at favorable breeding sites, others may disperse overland up to 1 mile or more (Fellers and Kleeman 2007). Movements may be along riparian corridors, but many individuals move directly from one site to another without apparent regard for topography or watershed corridors (Bulger et al. 2003). CRLFs sometimes enter a dormant state during summer or in dry weather (aestivation), finding cover in small mammal burrows, moist leaf litter, root wads, or cracks in the soil. However, CRLFs in coastal areas are typically active year-round because temperatures are generally moderate (USFWS 2002, Bulger et al. 2003). CRLF eggs and tadpoles require daily average water temperatures <23°C (73.4°F) (USFWS 2002) and salinities of 4.5 ppt or below (Jennings and Hayes 1990).

2.2 Operations Information

CCSD operates the three groundwater wells located along lower San Simeon Creek fairly consistently throughout the year (Figure 3). Existing water right conditions limit pumping to an annual maximum of 799 acre feet per year (AFY) from the San Simeon aquifer and of that amount up to 370 AFY can be pumped during the dry season (defined as "from the time the creek ceases flow at the Palmer Flats Gage, until October 31") (Water Systems Consulting 2021). CCSD typically extracts between 24 to 38 acre-feet per month (Figure 3), which equates to daily average extraction rates of approximately 0.41 cfs to 0.64 cfs; however, pumping rates can be as high as 85 acre-feet per month, which equates to 1.43 cfs (Water Systems Consulting 2021).

In addition to the wells operated by CCSD, numerous private wells irrigate farmlands on flat areas adjacent to the San Simeon creek channel. Agricultural pumping within the valley has been estimated at approximately 180 AFY (CDM Smith 2014). The majority of agricultural pumping occurs from two agricultural operations: one located along the upstream end of the basin spanning from just upstream of the three CCSD wells to just downstream of Steiner Creek and the other is located adjacent to the WRF. The upstream agricultural operation currently uses approximately 130 AFY and only plants half of the total acreage each year, indicating that at full production groundwater pumping there could increase up to 260 AFY (Yates 2022). This rate is estimated to require pumping at rates ranging from 0.24 cfs to 0.42 cfs during the spring (April and May). The agricultural pumping that occurs adjacent to the WRF, is allocated up to 183.5 AFY; however, recent use has averaged around approximately 15 AFY per year. The maximum pump capacity of this well is 275 gpm (0.61 cfs) (Warren 2023).

The influence of the two major agricultural wells on groundwater levels as well as CCSD wells was assessed under the Task 2 groundwater modeling effort (Appendix B). Results from the expanded groundwater model indicate that pumping from the private well located adjacent to the WRF has a smaller influence on groundwater basin conditions compared to the pumping from the well located upstream of CCSD wells (Appendix B). This smaller influence is likely attributed to the stabilizing effects of San Simeon Creek Lagoon on the groundwater levels in the coastal end of the basin.



Notes: cfs = cubic feet per second; CCSD = Cambria Community Services District

Figure 3. Monthly well extraction volume from CCSD San Simeon basin wells in 2022 and average, minimum, and maximum monthly well extraction volumes with average daily pumping rates for the period from 2012 through July 2022**.**

2.3 Study Goals and Objectives

CCSD initiated two tasks to gather information about its operations within the San Simeon groundwater basin. Task 1 includes this instream flow study, which focuses primarily on surface flow conditions within lower San Simeon Creek. Task 2 entails groundwater modeling related to the instream flow study efforts and aims to quantitatively estimate the effects of 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 included in Task 2 focuses on drought periods when the WRF would likely be operated and when potential ecological impacts would be most severe (Appendix B), while Task 1 focuses on the amount of surface flows needed to support aquatic species. The goal of the Task 1 and 2 studies is to inform water allocation in the San Simeon Creek watershed as it relates to sensitive species that occur in lower San Simeon Creek. Results from both studies will be used to inform CCSD's Adaptive Management Plan for San Simeon Creek.

This report focuses on surface flows and identifies flows needed for sensitive species and habitats in lower San Simeon Creek assessed under Task 1. The study objective is to determine the relationship between habitat and streamflow as it relates to the needs of aquatic species in lower San Simeon Creek with operation of the San Simeon groundwater wells and long-term operation of the WRF having the potential to alter surface flow.

2.4 Study Area

The Study Area focuses on the section of San Simeon Creek where surface flows are most likely influenced by groundwater pumping and recharge associated with CCSD's operations. It covers an approximately 3.5-mile section of San Simeon Creek that runs along the San Simeon Valley groundwater basin, which begins just upstream of the lagoon and extends upstream to the Palmer Flats area located just downstream of Steiner Creek (Figure 1). This section of San Simeon Creek is between two major tributaries—Van Gordon Creek at the downstream end and Steiner Creek at the upstream end—and within the alluvial section of the watershed, where surface flows infiltrate into the groundwater basin. The stream channel within the Study Area is characterized as a low-gradient, broad channel with substate that is predominately sand and gravel with lesser amounts of cobble channel (Nelson et al. 2005).

Surface flow in San Simeon Creek within the Study Area generally occurs during the late fall through late spring with flows typically becoming intermittent between May and July, depending on water year type. Previous habitat mapping efforts found the section of San Simeon Creek within the Study Area to have diverse channel characteristics and substrate composition; however, it was treated as a single reach because it was intermittent during the 2005 survey (Nelson et al. 2005). For modeling purposes, the two distinct sections within the Study Area were treated as separate reaches. The modeling focused on the larger downstream reach (Reach 1) that extends along CCSD well field (Figure 1). While this study covered both reaches within the Study Area, modeling was limited to the Reach 1 because it is more accessible and closer to CCSD operations.

3 METHODS

3.1 Technical Advisory Committee

This project engaged stakeholders by creating a Technical Advisory Committee (TAC). The TAC included individuals from the CDFW, California State Parks, California Coastal Commission, San Luis Obispo County, and the Upper Salinas-Las Tablas Resource Conservation District. The TAC provided guidance on the technical approach during study plan development.

3.2 Habitat Typing

Surveys to delineate aquatic habitat units were conducted in nearly 3 miles of continuous stream channel of lower San Simeon Creek. Because this section of the creek was dry at the start of this study (early December 2021), habitat mapping was conducted during the winter after flows returned to San Simeon Creek within the Study Area and the stream stage level had become stable at County Gage #718. Winter base flow conditions were targeted to facilitate the evaluation of habitat composition, while low flows made distinct habitat unit breaks most apparent. Habitat units were classified using a three-tiered habitat mapping classification system (Hawkins et al. 1993) to assist in the identification of individual habitat units in the field. Level III categories were generally modified/adopted from McCain et al. (1990). Figure 4 shows the relationship among the three levels.

Habitat mapping was conducted by a team of two biologists on foot within the two Study Reaches. Individual habitat units were designated a habitat type (e.g., riffle, run, pool) using the habitat types described in Table 4. Each habitat unit was identified where the unit length was greater than the active channel width (Flosi et al. 2010). The length of each habitat unit was measured using a hip chain, which was referenced back to a known starting point or landmark. The mapping was contiguous, so each habitat unit abutted to the next unit. Each distinct habitat unit was numbered consecutively in an upstream direction, beginning at the downstream end of the Study Reach.

Data from the habitat mapping were used to characterize each Study Reach. A single Study Reach (Reach 1) near CCSD's operations in San Simeon Creek was selected for one-dimensional (1D) modeling to assess streamflow conditions and available habitat for steelhead. Habitat typing data were used to establish study sites that were appropriate for use in the 1D model and representative of conditions throughout the Study Reach to allow for data extrapolation.

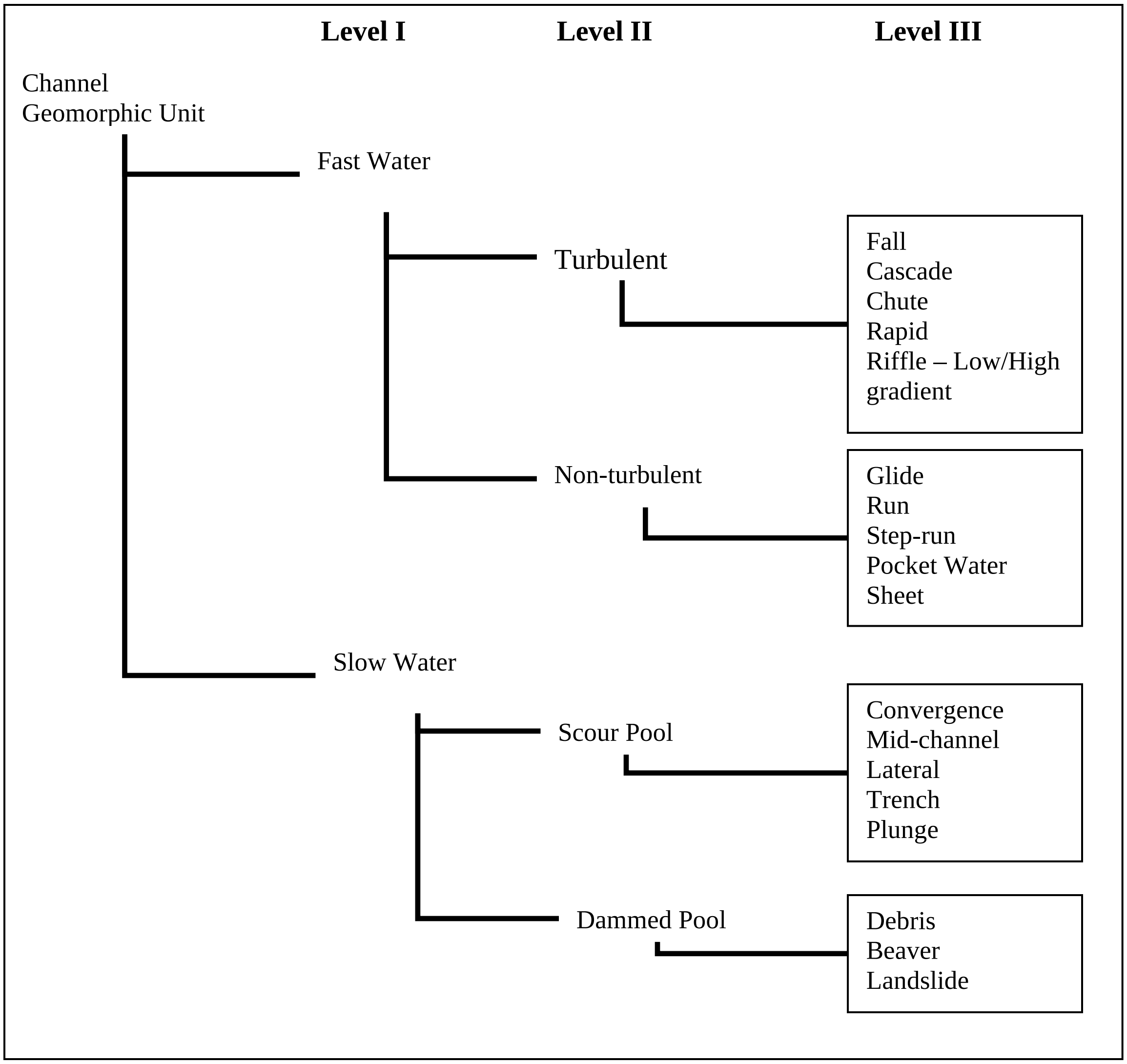


Figure 4. Three-tiered habitat mapping classification system adapted from Hawkins et al. (1993) and McCain et al. (1990).

Table 4. Habitat types to be used in mapping for the San Simeon Creek instream flow study (adapted from McCain et al. 1990, Armantrout 1998, Payne 1992, McMahon et al. 1996, and Hawkins et al. 1993).

I. Fast Water:	**Riffles, rapid, shallow stream sections with steep water surface gradient.**
A. Turbulent:	**Channel units having swift current, high channel roughness (large substrate), steep gradient, and non-laminar flow and characterized by surface turbulence.**
1. Fall:	Steep, vertical drop in water surface elevation. Generally not modellable.
2. Cascade:	Series of alternating small falls and shallow pools; substrate usually bedrock and boulders. Gradient high (more than 4%). Generally not modellable.
3. Chute:	Narrow, confined channel with rapid, relatively unobstructed flow and bedrock substrate.
4. Rapid:	Deeper stream section with considerable surface agitation and swift current; large boulder and standing waves often present. Generally not modellable.
5. Riffles:	Shallow, lower-gradient channel units with moderate current velocity and some partially exposed substrate (usually cobble). • Low gradient—Shallow with swift flowing, turbulent water. Partially exposed substrate dominated by cobble. Gradient moderate (less than 4%). • High gradient—Moderately deep with swift flowing, turbulent water. Partially exposed substrate dominated by boulder. Gradient steep (greater than 4%). Generally not modellable.
B. Non-turbulent:	**Channel units having low channel roughness, moderate gradient, laminar flow, and lack of surface turbulence.**
1. Sheet:	Shallow water flowing over smooth bedrock.
2. Run/Glide:	Shallow (glide) to deep (run) water flowing over a variety of different substrates.
3. Step Run	A sequence of runs separated by short riffle steps. Substrates are usually cobble and boulder dominated.
4. Pocket Water:	Swift flowing water with large boulder or bedrock obstructions creating eddies, small backwater, or scour holes. Gradient low to moderate.
II. Slow Water:	**Pools; slow, deep stream sections with nearly flat-water surface gradient.**
A. Scour Pool:	**Formed by scouring action of current.**
1. Trench:	Formed by scouring of bedrock.
2. Mid-channel:	Formed by channel constriction or downstream hydraulic control.
3. Convergence	Formed where two stream channels meet.
4. Lateral:	Formed where flow is deflected by a partial channel obstruction (streambank, rootwad, log, or boulder).
5. Plunge:	Formed by water dropping vertically over channel obstruction.
B. Dammed Pool:	**Water impounded by channel blockage.**
1. Debris:	Formed by rootwads and logs.
2. Beaver:	Formed by beaver dam.
3. Landslide:	Formed by large boulders.
4. Backwater:	Formed by obstructions along banks (recorded as a comment or note to mapping).
5. Abandoned Channel:	Formed along main channel, usually associated with gravel bars (not part of the main active channel; recorded as a comment or note to mapping).

3.3 Instream Flow Surveys

The Instream Flow Incremental Methodology (IFIM) was used to evaluate the relationship between flow and habitat quantity/quality throughout Reach 1. The IFIM applies a mesohabitat (e.g. riffle, run, and pool) and transect-based approach (commonly referred to as the 1D method) for implementing the 1D modeling component of the IFIM to address flow-habitat relationships. For this analysis, the System for Environmental Flow Analysis (SEFA; Jowett et al. 2017) model was applied using a one-flow velocity calibration approach, where transect and cell-specific data were derived from field survey data. The SEFA model calculates a habitat index that reflects the area weighted suitability (AWS) (previously referred to as the weighted usable area) based on simulation of water depths and velocities from the 1D hydraulic models. Cross sections (transects) are used to represent the stream, and habitat suitability criteria (HSC) are applied which define the physical and hydraulic characteristics considered suitable for specific species and life stages. Details of the approach are provided below.

3.3.1 Study site selection for one-dimensional modeling

Study sites were selected for 1D modeling within Reach 1. Prior to study site selection, Reach 2 was removed from the process due to access limitations. The study sites for 1D modeling were selected within Reach 1 using a combination of random selection and professional judgment following the procedure outlined in CDFW (2015). The procedure is based on the number and overall proportion of habitat types and provides assurance that all major habitat types will be sampled in relative proportion to the overall reach (Table 5). To account for habitat variation within the Study Reach, Reach 1 was subdivided into three sub-sections of approximately equal length (Table 6).

Within each sub-section, the habitat unit corresponding with the least abundant mesohabitat served as the basis for random selection. These units were assigned sequential numbers, and a random number was generated for each unit. The randomly selected units were then located in the field and included as a study site if they appeared representative of that habitat type within Reach 1 and appeared to be modellable based on perpendicular flow and level water surface area. In the event a randomly selected unit was determined to be unrepresentative or not modellable, the second randomly selected unit was chosen. From that starting habitat unit, transect locations were established in adjacent habitat units (heading upstream or downstream) until the requisite number of transects was placed in the specified habitat units, as described below, to create a cluster of study sites to facilitate collection of transect data.

Table 5. Number of mesohabitat units by type for each Study Reach.

Habitat Code	Mesohabitat	Total Length (ft)	Length Relative Freq.	Number	Number Relative Freq.
Reach 1					
LGR	Low-gradient Riffle	1,751	21.3%	26	34.2%
GLD	Glide	1,290	15.7%	6	7.9%
RUN	Run	2,441	29.7%	21	27.6%
LSP	Lateral Scour Pool	557	6.8%	4	5.3%
MCP	Mid-channel Pool	2,181	26.5%	19	25.0%
SUM		**8,220**	**100.0%**	**76**	**100.0%**
Reach 2					
LGR	Low-gradient Riffle	1,816	22.1%	23	38.3%
GLD	Glide	134	1.6%	1	1.7%
RUN	Run	2,157	26.2%	18	30.0%
LSP	Lateral Scour Pool	801	9.7%	4	6.7%
MCP	Mid-channel Pool	2,000	24.3%	14	23.3%
SUM		**6,908**	**100.0%**	**60**	**100.0%**

Table 6. Reach 1 sub-sections for transect selection.

Mesohabitat	Total Length (ft)	Length Relative Freq.	Numbe r	Number Relative Freq.
Sub-section A				
Low-gradient riffle	605	23%	10	37%
Glide	324	12%	2	7%
Run	620	23%	6	22%
Pool	1,101	42%	9	33%
SUM	**2,650**	**100.0%**	**27**	**100.0%**
Sub-section B				
Low-gradient riffle	709	25%	9	35%
Glide	634	22%	3	12%
Run	1,079	38%	8	31%
Pool	439	15%	6	23%
SUM	**2,861**	**100.0%**	**26**	**100.0%**
Sub-section C				
Low-gradient riffle	437	16%	7	31%
Glide	332	12%	1	4%
Run	924	34%	8	35%
Pool	1,016	38%	7	30%
SUM	**2,709**	**100.0%**	**23**	**100%**

3.3.2 Transect placement

Twelve transects were established to model three riffle, three run, three pool, and three glide habitats within Reach 1. Individual transect locations were selected in the field. Transects were placed within representative habitat types for Reach 1. For modeling purposes, individual transects were weighted to represent the proportion of each mesohabitat type (i.e., riffle, run, pool, and glide) in the reach. These proportions were calculated based on habitat unit lengths resulting from the habitat mapping data. Each habitat type was apportioned its respective length of the entire reach (e.g., riffles are 35% of the reach). To develop reach-wide estimates of habitat suitability, each transect in a habitat type was weighted equally based on the reach representation of the habitat type (e.g., each of five riffle transects would be weighted at 7% per transect if riffles represented 35% of the reach). Transect weights are shown in Table 7. Transect locations are shown in Figure 5.

Table 7. Transect weighting for San Simeon Creek instream flow study.

Habitat Type	Number of Habitat Units	Number of Transects	Reach Representation (%)[a]	Weight per Transect (%)
Pool	23	3	33	11
Riffle	26	3	21	7
Run	21	3	30	10
Glide	6	3	15	5
Total	**76**	**12**	**100**	**--**

[a] Habitat percentage, by length, and normalized to 100%.

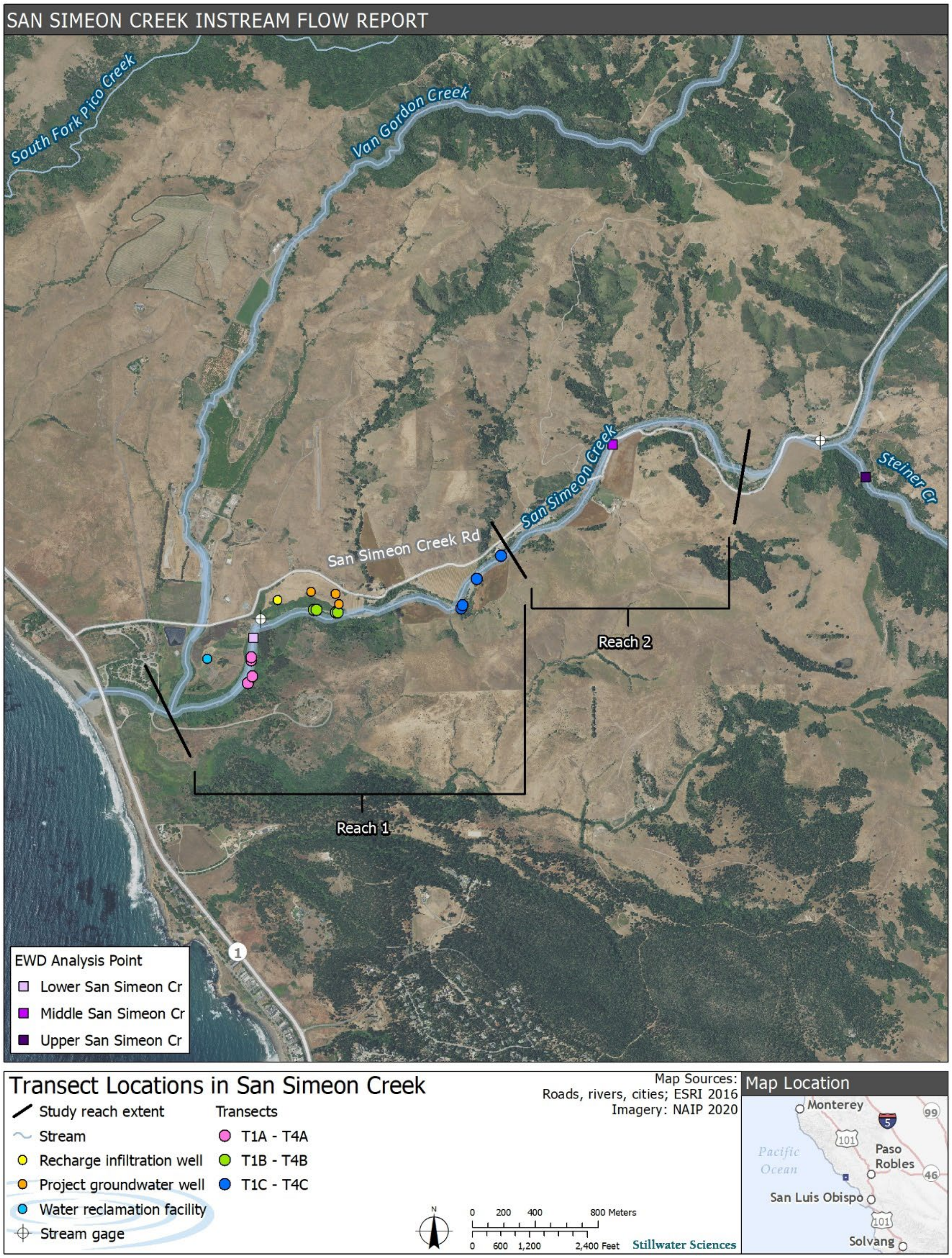


Figure 5. San Simeon Creek transect locations for one-dimensional modeling.

3.3.3 Hydraulic data collection and model development

Calibration flows were selected to allow the model to simulate habitat conditions over a range of flows from 0.2 cfs to 7.6 cfs. Three calibration flows were used to develop the 1D model. Calibration flows typically allow habitat index simulation to be extrapolated down 40% from the low flow and up 250% from the high flow. Therefore, calibration flows targeted a low of approximately 0.5 cfs and a high of approximately 3.0 cfs with a mid-flow between these two values (i.e., 1.25 cfs), which would allow the model to simulate habitat index values for flows ranging from 0.2 cfs to 7.6 cfs. A wider range of flows could have been included in the model simulations; however, this study focused on lower flows that are more likely to be influenced by CCSD's operations, which are based on the maximum capacity of CCSD's pumps (i.e., 1.43 cfs).

Water surface elevation (WSE) and stream discharge measurements were made at each site during each of the three separate calibration flow events. Depth and velocity were measured for calibration purposes at each transect during a single flow event (the "one flow" method). Data collection and recording were conducted using the standardized procedures and guidelines established in the IFIM field techniques manuals (Trihey and Wegner 1981, Milhous et al. 1984) and procedures described in CDFW (2013). The techniques for measuring discharge followed the guidelines outlined by CDFW (2020). The WSE (or stage) measurements were taken across each transect at three calibration flows (low, medium, and high).

Water depths and mean column water velocities were measured across each transect during the high calibration flow. The number of cells sampled for depth and velocity was based on a goal of retaining a minimum of 15–20 stations that would remain in-water at the low calibration flow. Additional data collected during the field surveys included water surface slope and stage-of-zero-flow (SZF).

3.3.3.1 Velocity measurements

The standard method for determining mean column velocity was a single measurement at six-tenths of the water depth in depths less than 2.5 ft, and a two-tenths and eight-tenths measurement for depths between 2.5 ft and 4.0 ft. All three points were measured where depths exceed 4.0 ft, or where the vertical velocity distribution in the water column does not follow the standard pattern (slowing toward the substrate), and one or two points would not be adequate to derive an accurate mean column velocity. For example, an irregular vertical velocity distribution often occurs behind or adjacent to boulders or downstream from velocity chutes.

3.3.3.2 Model calibration

The existing HSC developed for the Big Sur River (Holmes et al. 2014) were used for this study. The Big Sur HSC includes criteria for water depth, mean column velocity, and focal point velocity for three life stages of steelhead, including steelhead fry: (fish < 6 centimeters [cm]) and two size classes of juveniles (6–9 cm and 10–15 cm). Coordinates for HSC are provided in Appendix C.

The SEFA model, version 1.8 build 5 (Jowett et al. 2014), was used for 1D modeling during this study. Stage-discharge relationships were developed from measured discharge and stage using a SZF log/log regression formula. The SZF method requires a minimum of three sets of stage-discharge measurements and an estimate of the SZF for each transect. All transects in Reach 1 used three sets of stage-discharge measurements. The SZF estimates were based on either the thalweg depth of a transect or the thalweg depth of a downstream hydraulic control. The quality of the stage-discharge relationships was evaluated by examination of mean error and slope output from the model.

The one-flow velocity method, using a single set of velocities collected at the high calibration flow, was used for all transects for velocity calibration. This technique uses a single set of measured velocities to predict individual cell velocities over a range of flows. Simulated velocities are based on measured data and a relationship between a fixed roughness coefficient (Manning's 'n') and depth. In some cases, roughness was modified for individual cells if substantial velocity errors were noted at simulation flows. Predicted velocities were examined to detect any significant deviations and determine whether velocities change consistently with stage and total discharge.

3.3.3.3 Quality control

Considerable effort was made to maintain strict quality control throughout all aspects of field data collection. To ensure quality control in the collection of field data for the San Simeon Creek instream flow study, the following procedures and protocols were used:

1. Staff plates were established and continually monitored throughout the course of collecting data on each transect. If significant changes were observed, WSEs were re-measured following collection of transect water velocity measurements.
2. Each day prior to water velocity measurements, all electromagnetic meters were calibrated as needed. Meters were continually monitored during the daily course of data collection to ensure that they were functioning properly.
3. All transects/cross sections were located using global positioning system (GPS). An independent benchmark was established for each set of transects. This benchmark was placed in either an immovable tree, boulder, or other naturally occurring object that would not be subject to tampering, vandalism, or movement. Upon establishment of headpin and tailpin elevations, a level loop was shot to check the auto-level for measurement accuracy. Allowable error tolerances on level loops were set at 0.02 ft. This tolerance was also applicable to both headpin and tailpin measurements, unless extenuating circumstances (e.g., pins under sloped banks, shots through dense foliage) explained discrepancies and the accompanying headpin or tailpin was free of excessive error. Pins were placed adjacent to the water's edge well above the high WSE, and the transects were profiled beyond the pins to an elevation estimated to be at least 250% of the high target flow.
4. Multiple WSEs were measured across complex transects (e.g., riffle, pocket water). The more complex and uneven a transect' s water surface, the greater the number of measurement locations were established. For example, a riffle transect may require more frequent water surface measurements, while a pool transect may require only bank elevations. WSE measurements at each calibration flow were made at the same location across each transect.
5. All pin elevations and WSEs were calculated during field measurement and compared to previous measurements. Changes in stage since the previous flow measurement were calculated. Patterns of stage change were compared between transects and determined if reasonable. If any discrepancies were discovered, potential sources of error were explored and noted.
6. All data calculations were completed in the field (given adequate time and daylight), including pin elevations, WSEs, and discharges. Discharges were compared between all transects measured on the same day and site to ensure that each transect computed flow reasonably (<10 to 15% error) and accurately. Velocity data stations were evenly spaced,

except near abrupt velocity or depth breaks where they were more frequent. High velocity plumes also had more frequent sample stations to avoid excessive (>5% of total flow) station discharges. The total number of stations established across a transect retained at least 20 in-water stations at the lowest measured flow to permit accurate discharge simulation with extrapolation.

7. Digital photographs were taken of all transects from downstream, across (e.g., from head pin to tail pin) and from upstream at the three calibration flows. An attempt was made to shoot each photograph from the same location at each of the three levels of flow. These photographs provide a valuable record of the streamflow conditions (including velocity and depth), water surface levels, and channel configurations that could be used to confirm site conditions at the time of the hydraulic model calibration.

3.4 Stream Flow Analysis

Limited streamflow data exist for San Simeon Creek. Streamflow was previously monitored at two stream gages in the San Simeon Creek watershed. The Palmer Flats Gage (formerly County Gage #14) located just upstream of the Study Area near the confluence of San Simeon Creek and Steiner Creek was operated from October 1970 through September 1995. The lower San Simeon Stream Gage (Couty Gage #718, formerly County Gage #22) was established by the USGS in 1987 and then operated by the county, which continued to monitor streamflow at this location until 2003 after which point the gage only recorded stream stage level.

Stream flow analysis, including exceedance curves, was performed for San Simeon Creek based on the 1970–1995 period of record for the Palmer Flats Gage. Streamflow data from the county gage was not included in this analysis because the period of record only covered a 16-year period (1987 to 2003). Palmer Flats is located just upstream of the San Simeon Creek groundwater basin and is not affected by groundwater pumping. In addition, there are no tributary inflows between Palmer Flats and the Study Area outside the rainy season. As such, streamflow at the Palmer Flats Gage indicates the maximum potential surface flow available within the Study Area during the late spring through fall, in the absence of CCSD operations. Downstream of the Palmer Flats Gage, some amount of surface flow is naturally lost to groundwater infiltration during low-flow periods (typically from spring through fall) as San Simeon Creek flows over the groundwater basin. The rate of loss in surface flow within the Study Area is likely increased during periods when CCSD groundwater pumping occurs.

Exceedance curves graphically display the probability that a flow of a given magnitude will be exceeded at a given location. Spring flows (April through June) were assessed for evaluating juvenile steelhead migration. Exceedance curves were also generated to assess low-flow conditions during critical juvenile steelhead rearing periods including spring and summer (April through September). When applied to each season, the exceedance curves provide an estimate of the percentage of time that migration or rearing flows are equaled or exceeded. Values for San Simeon Creek at Palmer Flats were generated based on mean daily gage data covering 1970–1995.

Stream flow and channel observations were recorded during surveys conducted in the late spring/early summer (May and June) where crews delineated channel locations with intermittent and dry flows within both Study Reaches. Locations of isolated pools at least 1.0 ft deep were also recorded. Photographs and GPS coordinates were recorded at the upstream and downstream ends of intermittent and dry stream sections. Maps were created to show the channel conditions during May and June.

3.5 Juvenile Steelhead Passage Assessment

The potential influence of CCSD operations on juvenile steelhead passage was assessed using streamflow-passage thresholds previously identified for the Study Area by D.W. Alley and Associates (1992) and the daily average streamflow data from the Palmer Flats Gage (1970–1995).[2] D.W. Alley and Associates (1992) concluded that streamflow ranging from 4 to 11 cfs was required to provide juvenile fish passage. For this assessment, juvenile passage conditions were assessed for both the 4-cfs threshold and the 11-cfs threshold during the peak juvenile migration season (March through May). To estimate how CCSD groundwater pumping operations may have reduced passage duration, 2 cfs was subtracted from the streamflow values recorded at the Palmer Flats Gage to account for potential loss to groundwater infiltration between the Palmer Flats Gage and CCSD wells (based on Yates and Konyenburg 1998), and additional surface flow was subtracted based on a range of groundwater extraction rates for CCSD wells. Groundwater extraction rates from a large private well (owned by Pedotti) located between the Palmer Flats Gage and CCSD groundwater wells was also included to account for cumulative loss to groundwater extractions.

This assessment included the following assumptions:

- A total of 2.0 cfs of surface flow is lost to the groundwater basin between the Palmer Flats Gage and CCSD wells.
- The range of extraction rates for CCSD wells are from a low of 0.64 cfs, which is the upper end of CCSD's average pumping rates, and a high of 1.43 cfs, which is the maximum extraction capacity of CCSD wells.
- The estimated maximum pumping rate for the Pedotti private well is 0.42 cfs.
- One hundred percent of CCSD and private pumping during March through May results in a direct equivalent streamflow reduction. For example, if CCSD pumping occurs at a rate of 0.64 cfs, then it was assumed to result in a direct streamflow reduction of 0.64 cfs (conservatively high).

Four scenarios were included in the juvenile steelhead passage assessment for each of the two streamflow passage thresholds (i.e., 4 cfs and 11 cfs). They include:

1. A total combined pumping rate of 1.85 cfs based on the maximum CCSD pumping rate of 1.43 cfs plus private well (Pedotti) pumping rate of 0.42 cfs.
2. 1.43 cfs based on the maximum CCSD pumping rate
3. 1.06 cfs pumping rate based on the upper end of CCSD's average daily pumping rate of 0.64 cfs plus the private well (Pedotti) pumping rate of 0.42 cfs.
4. 0.64 cfs which is the upper end of the average daily pumping rate CCSD

[2] Juvenile fish passage conditions were assessed at the three most limiting riffles in the Study Area during the D.W. Alley and Associates (1992) assessment. All the critical riffles were identified downstream of the Palmer Flats Gage; therefore, flows identified at Palmer Flats likely differ to some degree from the flows at the three critical riffles. To account for this difference, this assessment subtracted potential surface flow loss that may occur between the Palmer Flats Gage and any flow loss due to CCSD operations and flow loss due to private groundwater well extractions.

3.6 San Simeon Creek Lagoon Habitat Assessment

Existing monthly water quality and stage elevation data from San Simeon Creek Lagoon (collected by the California State Parks) was evaluated to assess the relationship between surface flow and aquatic habitat conditions for steelhead and tidewater goby in San Simeon Creek Lagoon. Water quality data collected from the San Simeon Creek Lagoon were compared with water quality criteria (e.g., temperature, dissolved oxygen, and salinity) reported to be suitable for steelhead (described in Section 2.1.1), tidewater goby (described in Section 2.1.2), and CRLF (Section 2.1.3) to assess habitat conditions for special status aquatic species.

Grab samples were collected near the water surface and just above the substrate at three locations distributed throughout the lagoon, including the lower section of the lagoon (downstream of Highway 1), the middle section of the lagoon (approximately 500 ft upstream of Highway 1), and the upper section of the lagoon (just upstream of the footbridge crossing at the State Parks Campground. In addition, observations of the lagoon berm (open versus closed) were recorded during each sampling event. Samples were typically collected each month from December 2019 through July 2022 with the exception of August 2021, December 2021, May 2022, and June 2022 when no samples were collected.

3.7 California Red-legged Frog Habitat Assessment

Suitable breeding habitat for CRLF was assessed during field surveys. CRLF breeding habitat (described in Section 2.1.3) was surveyed within the Study Reach during the habitat typing surveys described under Section 3.2. Locations where suitable breeding habitat was identified were measured for maximum water depth, photographed, and flagged for follow-up measurements and observations. CRLF breeding habitat locations were surveyed during three flows concurrent with the hydraulic model field surveys ranging from approximately 0.5 cfs to approximately 3.0. Two additional surveys of the CRLF breeding locations were conducted as flows ceased and the channel became dry during May and June 2022. Maximum water depth was recorded during each survey and photographs were taken to document habitat conditions.

3.8 Van Gordon Creek

Habitat surveys were expanded to include an assessment of conditions Van Gordon Creek during June 2023 while surface flows were present. The assessment included a qualitative assessment of habitat conditions for sensitive species using visual surveys and review of previous habitat surveys in Van Gordon Creek along with a review of the expanded groundwater model (Yates 2022) to evaluate how groundwater extraction could influence surface flows in Van Gordon Creek.

4 RESULTS

4.1 Habitat Characterization

Stream habitat typing was conducted in December 2021 beginning at the upstream end of the lagoon and extending approximately 2.9 miles upstream. Two distinct reaches were identified during the habitat typing survey. Reach 1 was characterized by a wide active channel flowing through gravel and sand substrate (Figure 6), while Reach 2 had a confined channel with larger substrate (Figure 7). Stream habitat in Reach 1 was primarily composed of nearly equal amounts of pool and run habitat, followed by low-gradient riffle habitat and glide habitat (Figure 8). In Reach 2, stream habitat was primarily composed of pool habitat, followed by similar amounts of run and low-gradient riffle habitat. Substrate in Reach 1 was dominated by sand and gravel, while the dominant substrate in Reach 2 was cobble followed by gravel (Figure 8).

Figure 6. Example of habitat conditions in Reach 1 showing a wide active channel with gravel and sand substrate. December 20, 2021.

Figure 7. Example of habitat conditions in Reach 2 showing confined channel and cobble substrate. December 20, 2021.

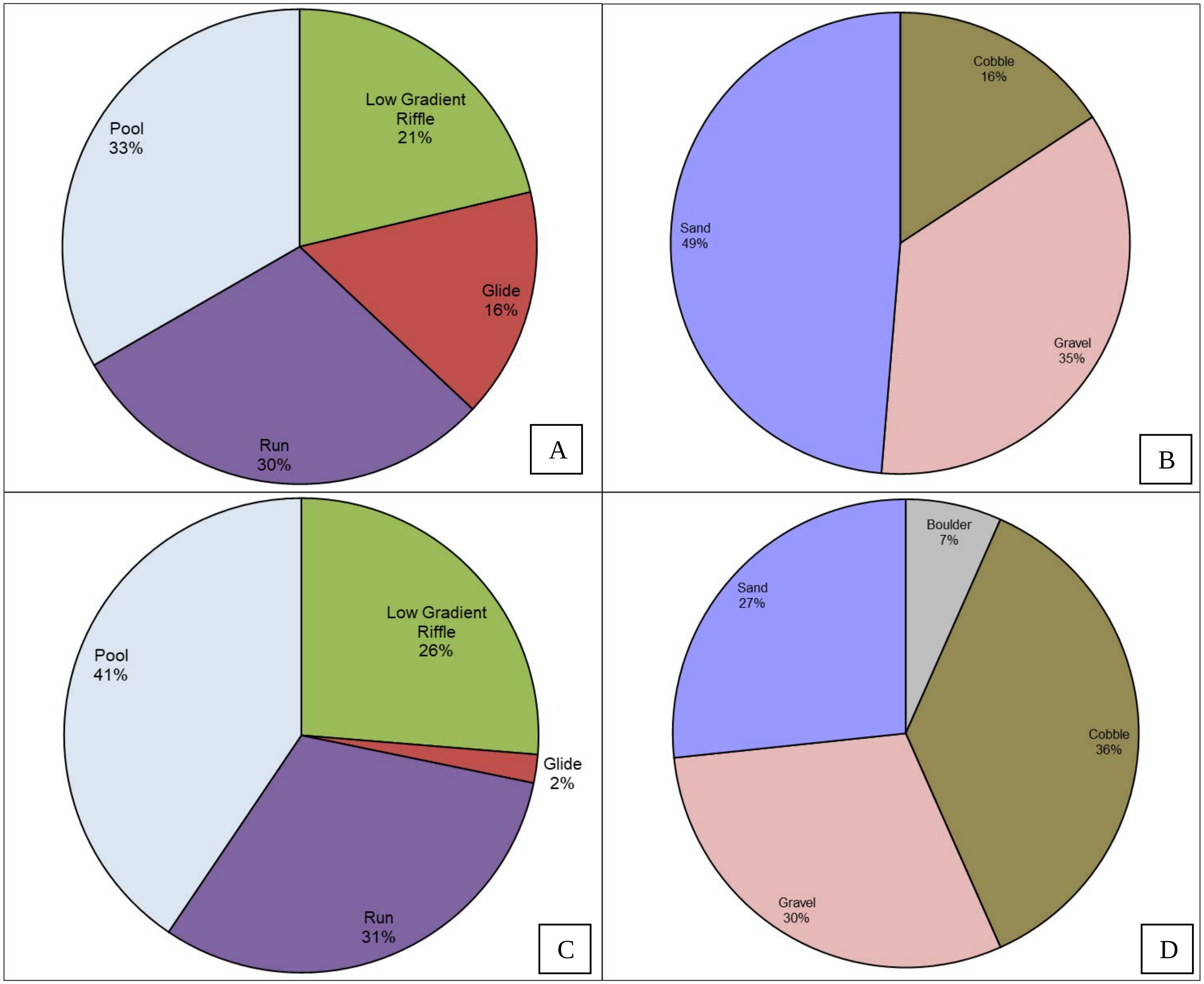


Figure 8. Habitat composition (by length) and dominant substrate in Reach 1 (A and B) and in Reach 2 (C and D).

4.2 Hydraulic Modeling

A total of 11 transects were used in development of the 1D model. The transects represent the variation in available steelhead habitat present in the Study Area (Figure 5).

4.2.1 Flow habitat relationship

Data were collected on 12 randomly selected survey transects in 2021, with three transects selected per mesohabitat type in Reach 1 of San Simeon Creek. The hydraulic calibration of 1D transects involves applying guidance standards from the literature to the model outputs to ensure the model performance meets existing standards. In situations where transect outputs did not meet the standards, the transect data were further evaluated to determine whether an error was made in the data collection or entry process, whether the stage-discharge relationship was altered between surveys by a change in the transect lateral or longitudinal profile, or whether the transect was a poor candidate for hydraulic modeling in 1D.

Based on this assessment, one survey transect had to be omitted from further analyses. Transect T4C was omitted from the modeling analysis because changes in WSE across the transect were detected at lower flows, causing poor modeling performance. The remaining 11 survey transects attained a predictive relationship for the hydraulic model. All transect locations are provided in Figure 5, with transect T4C omitted from analysis.

Results of the 1D analysis of AWS versus flow relationships for fry and juvenile steelhead rearing are presented in Figure 9 and Table 8. To facilitate comparison and analysis, the results are also presented with a normalized y-axis scale representing “percent of maximum” AWS (Figure 10). The shape of the steelhead fry curves show increasing habitat as a function of flow up until 2.4 cfs at which point habitat begins to decrease. The curves for both size classes of juvenile steelhead illustrate increasing habitat over the range of simulated flows. Flows that provide 50% of the maximum AWS include 0 cfs for steelhead fry and approximately 1 cfs for both size classes of juvenile steelhead (Figure 10 and Table 9) The analysis was based on a total of 11 transects distributed throughout the Study Reach (Table 7). Transect-specific profiles and calibration flows are shown in Appendix D; see Appendix E for modeled velocity distributions. Upstream, downstream, and cross-channel photos of all transects are presented in Appendix F.

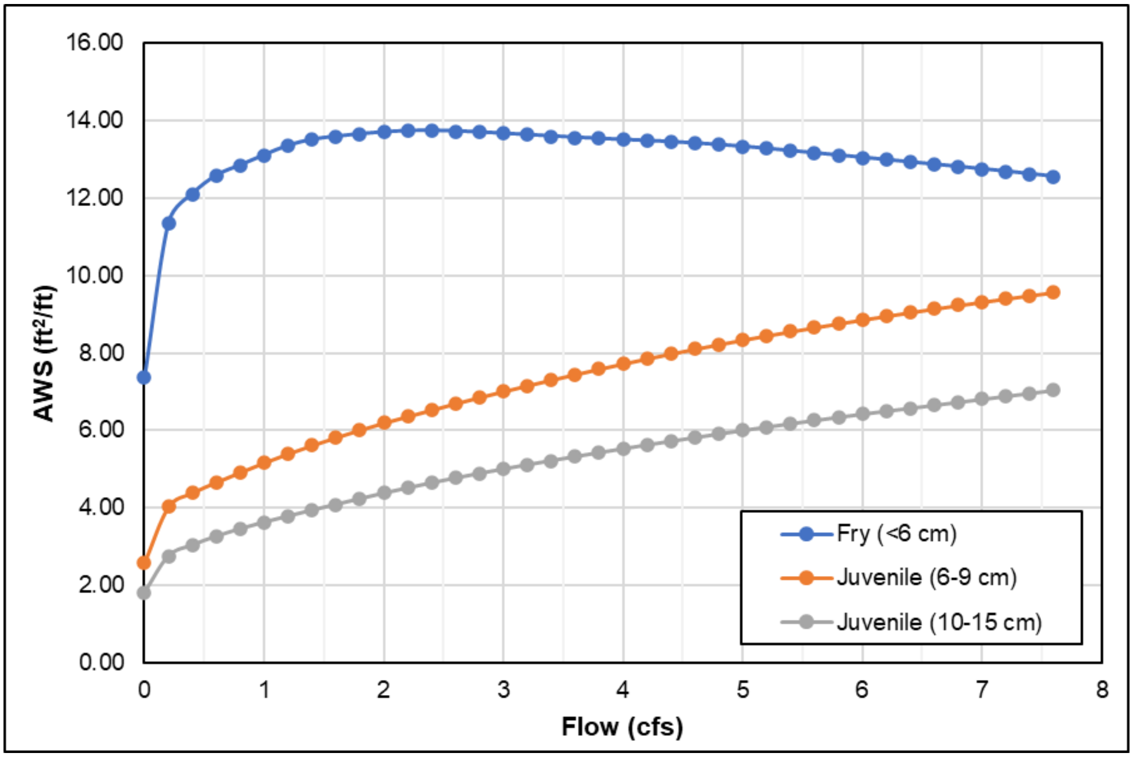


Figure 9. Flow habitat relationships (area weighted suitability) for fry and juvenile steelhead rearing in lower San Simeon Creek.

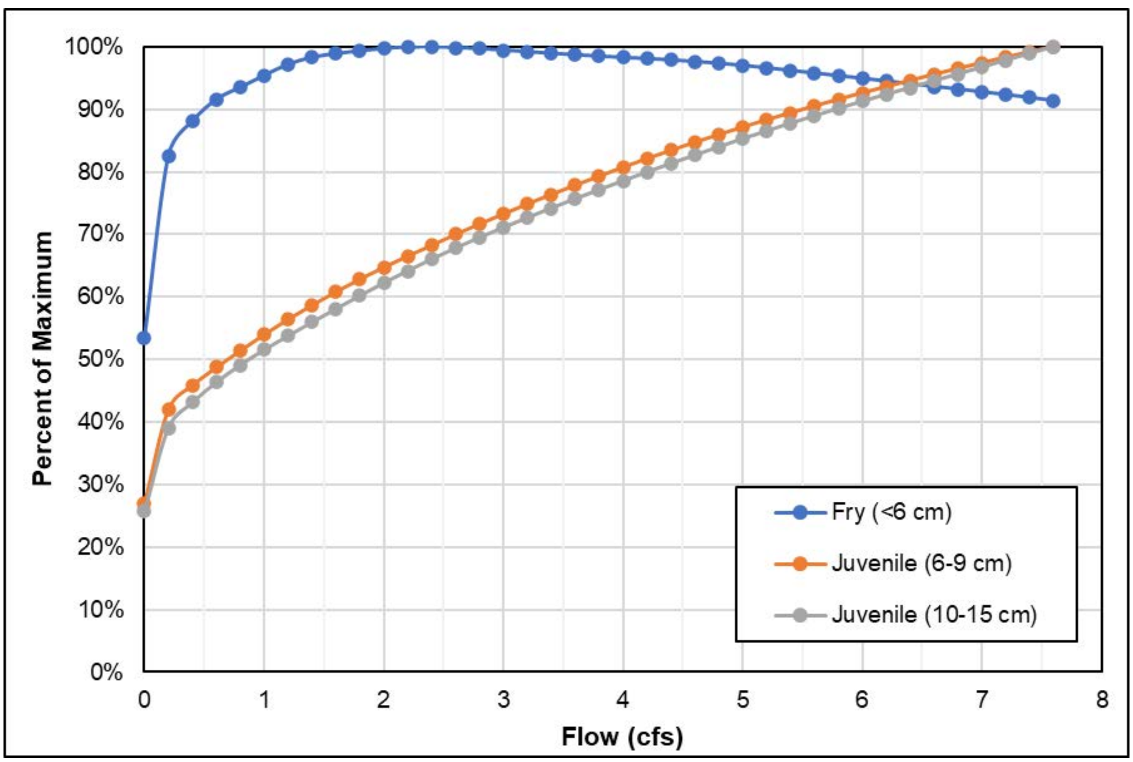


Figure 10. Percent of maximum area weighted suitability for fry and juvenile steelhead rearing in lower San Simeon Creek.

Table 8. Area weighted suitability (ft^2/ft) and percent of maximum habitat area at modeled flows (cfs) for fry, juvenile, and juvenile steelhead rearing life stages in lower San Simeon Creek. Maximum values are underlined and highlighted in yellow.

Flow (cfs)	Area Weighted Suitability (ft^2/ft)			Percent of Maximum Area Weighted Suitability		
	Fry (<6 cm)	Juvenile (6–9 cm)	Juvenile (10–15 cm)	Fry (<6 cm)	Juvenile (6–9 cm)	Juvenile (10–15 cm)
0.0	7.36	2.58	1.81	54%	27%	26%
0.2	11.36	4.03	2.75	83%	42%	39%
0.4	12.11	4.39	3.03	88%	46%	43%
0.6	12.59	4.67	3.26	92%	49%	46%
0.8	12.85	4.92	3.46	93%	51%	49%
1.0	13.11	5.17	3.63	95%	54%	52%
1.2	13.36	5.40	3.78	97%	56%	54%
1.4	13.51	5.62	3.94	98%	59%	56%
1.6	13.59	5.82	4.09	99%	61%	58%
1.8	13.66	6.01	4.24	99%	63%	60%
2.0	13.71	6.20	4.38	100%	65%	62%
2.2	13.74	6.37	4.52	100%	67%	64%
2.4	13.75	6.53	4.65	100%	68%	66%
2.6	13.73	6.70	4.77	100%	70%	68%
2.8	13.70	6.86	4.89	100%	72%	69%
3.0	13.67	7.01	5.00	99%	73%	71%
3.2	13.64	7.16	5.11	99%	75%	73%
3.4	13.60	7.31	5.22	99%	76%	74%
3.6	13.57	7.45	5.32	99%	78%	76%
3.8	13.54	7.59	5.43	98%	79%	77%
4.0	13.51	7.72	5.53	98%	81%	79%
4.2	13.48	7.86	5.63	98%	82%	80%
4.4	13.45	7.98	5.72	98%	83%	81%
4.6	13.42	8.11	5.82	98%	85%	83%
4.8	13.38	8.22	5.91	97%	86%	84%
5.0	13.33	8.34	6.00	97%	87%	85%
5.2	13.28	8.45	6.09	97%	88%	87%
5.4	13.22	8.56	6.17	96%	89%	88%
5.6	13.17	8.66	6.26	96%	91%	89%
5.8	13.11	8.76	6.34	95%	92%	90%
6.0	13.05	8.86	6.42	95%	93%	91%
6.2	12.99	8.96	6.50	95%	94%	92%
6.4	12.93	9.05	6.58	94%	95%	93%
6.6	12.87	9.14	6.65	94%	96%	95%
6.8	12.81	9.23	6.73	93%	97%	96%
7.0	12.75	9.32	6.81	93%	97%	97%
7.2	12.69	9.41	6.88	92%	98%	98%
7.4	12.63	9.49	6.96	92%	99%	99%
7.6	12.56	9.57	7.04	91%	100%	100%

Notes: cfs = cubic feet per second; cm = centimeter; ft^2/ft = square foot per foot

Table 9. Area weighted suitability (ft^2/ft) for steelhead rearing in lower San Simeon Creek.

Steelhead Life Stage	Flow for Maximum Area Weighted Suitability (cfs)	Flow for 50% of Maximum Area Weighted Suitability (cfs)
Fry	2.4	0.0
Juvenile (6–9 cm)	7.6	0.8
Juvenile (10–15 cm)	7.6	1.0

Notes: cfs = cubic feet per second; cm = centimeter; ft^2/ft = square foot per foot

The SZF rating statistics were favorable for most of the 11 transects used in the mode with the standard calibration metrics of beta exponents between 2 and 5 and percent mean errors <10% (Table 10). Coefficients greater than 5 were observed at four transects and a single transect had a mean error greater than 10%. However, based on a comparison of measured and simulated WSE, these variances would not significantly influence AWS results (Table 11). The log/log rating curves were created by fitting the line through the survey flow, thus the measured and simulated WSE are the same for the survey flow. The average difference between the calibration and simulated WSE is 0.01 ft for mid flow (Calibration 1) and 0.00 ft for low flow (Calibration 2). The greatest difference between measured and simulated WSE was 0.02 ft for middle flow and 0.01 ft for low flow.

All predicted WSEs were within the threshold in the USFWS guidelines for the Physical Habitat Simulation System, or PHABSIM, which recommends a difference of 0.1 ft or less (USFWS 1994) between surveyed and modeled WSE (Table 11). Velocities for each reach were simulated using the recommended range up to 2.5 times the highest measured flow (USGS 2001).

Table 10. Stage-of-zero-flow ratings for survey transects.

Transect# and Habitat Type	Selected Rating	Exponent	Constant (A)	SZF	R^2	Mean Error
1A glide	SZF rating	5.67	14.71	97.12	0.999	2.19
2A run	SZF rating	6.95	1,371.92	98.05	0.992	5.63
3A pool	SZF rating	2.94	25.02	98.65	0.998	2.61
4A glide	SZF rating	3.24	64.06	100.14	0.991	5.54
1B run	SZF rating	4.06	59.64	197.34	1.000	1.20
2B riffle	SZF rating	4.19	127.95	197.43	0.999	2.19
3B pool	SZF rating	3.75	35.02	199.18	0.999	2.01
4B riffle	SZF rating	6.55	13,411.81	199.87	0.976	10.15
1C riffle	SZF rating	5.91	90.52	295.16	0.995	3.98
2C run	SZF rating	4.47	47.51	295.91	1.000	0.71
3C pool	SZF rating	4.70	69.70	300.81	0.971	9.78
~~4C glide~~	~~SZF rating~~	~~2.15~~	~~7.04~~	~~301.06~~	~~0.801~~	~~28.41~~

* Transect 4C was removed from analysis because the percent mean error was >10% (indicated by strikethrough).

Table 11. Survey and calibration flow water surface elevation details for survey transects.

Transect# and Habitat Type	WSE at Calibration Flow 1 (0.52 cfs)			WSE at Calibration Flow 2 (1.54 cfs)		
	Measured	Modeled	Difference	Measured	Modeled	Difference
1A glide	97.68	97.67	0.01	97.78	97.79	0.01
2A run	98.37	98.37	0.00	98.43	98.43	0.00
3A pool	98.92	98.92	0.00	99.02	99.04	0.02
4A glide	100.37	100.37	0.00	100.44	100.46	0.02
1B run	197.65	197.65	0.00	197.74	197.75	0.01
2B riffle	197.70	197.70	0.00	197.77	197.78	0.01
3B pool	199.51	199.51	0.00	199.60	199.61	0.01
4B riffle	200.08	200.08	0.00	200.13	200.12	0.01
1C riffle	295.58	295.58	0.00	295.65	295.66	0.01
2C run	296.27	296.27	0.00	296.37	296.37	0.00
3C pool	301.17	301.16	0.01	301.23	301.25	0.02
~~4C glide1~~	~~301.41~~	~~301.36~~	~~0.05~~	~~301.43~~	~~301.55~~	~~0.12~~

Notes: cfs = cubic feet per second; WSE = water surface elevation
* Transect 4C failed the WSE standard and was removed from analysis (indicated by strikethrough).

4.3 Stream Flow Analysis

Palmer Flats is located at the upstream end of the groundwater basin and represents unimpaired (i.e., without influence of CCSD's operations) surface flows entering the Study Area. Note that flows at Palmer Flats during the spring and summer are generally expected to be higher than flows within the Study Area even under natural conditions due to the loss of surface flows to groundwater infiltration that naturally occurs where San Simeon Creek flows over the groundwater basin and the lack of tributary inflow or other contributions in this section of stream. Streamflow exceedance curves show streamflow at Palmer Flats during the spring is often below the 11-cfs and 4-cfs juvenile migration thresholds identified by D. W. Alley and Associates (1992) (Figure 11). By early summer (June–July), streamflow at Palmer Flats ceases in most years (Figure 12), and during late summer (August–September), surface flows are uncommon (Figure 13), suggesting that conditions to support juvenile steelhead over-summer rearing in the Study Area are also uncommon.

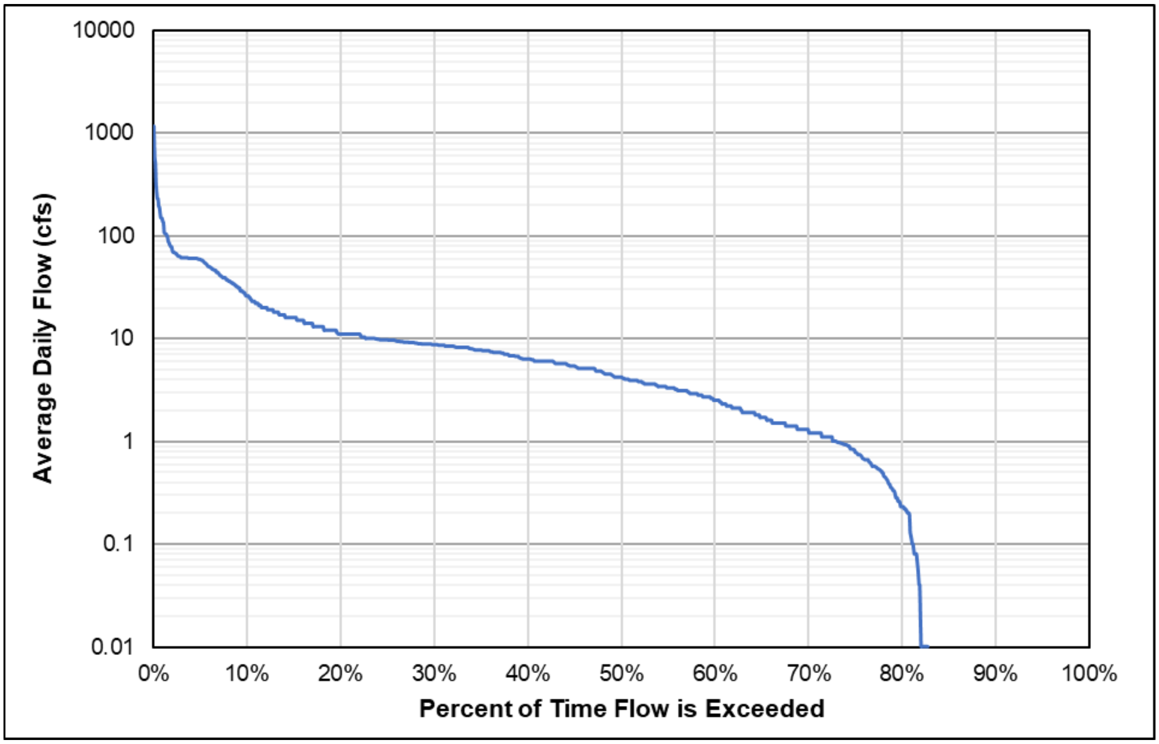


Figure 11. Palmer Flats streamflow exceedance for April and May based on flows from 1970 through 1995.

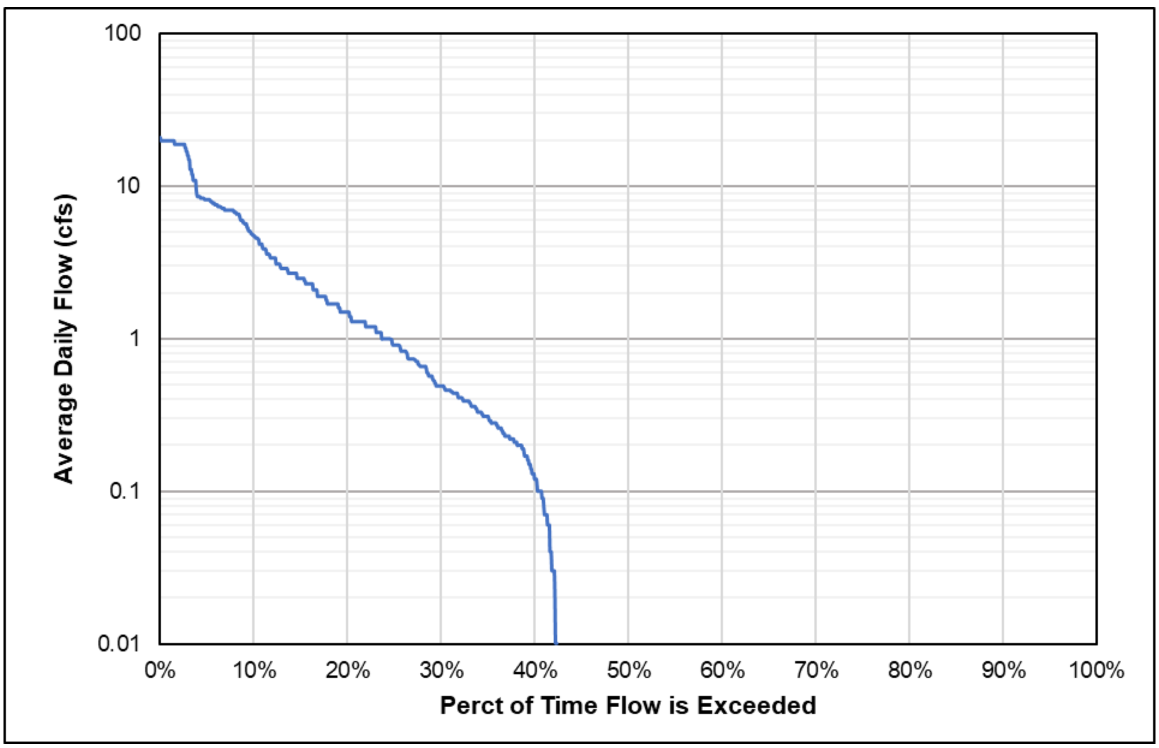


Figure 12. Palmer Flats streamflow exceedance for June and July based on flows from 1970 through 1995.

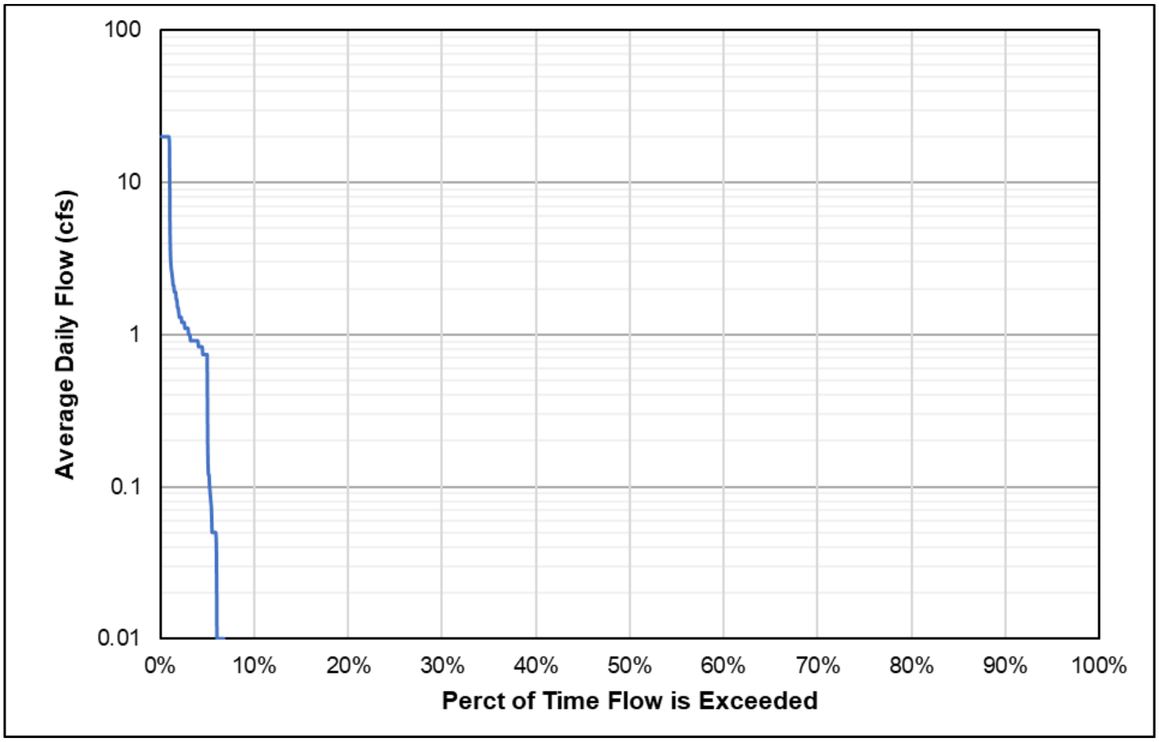
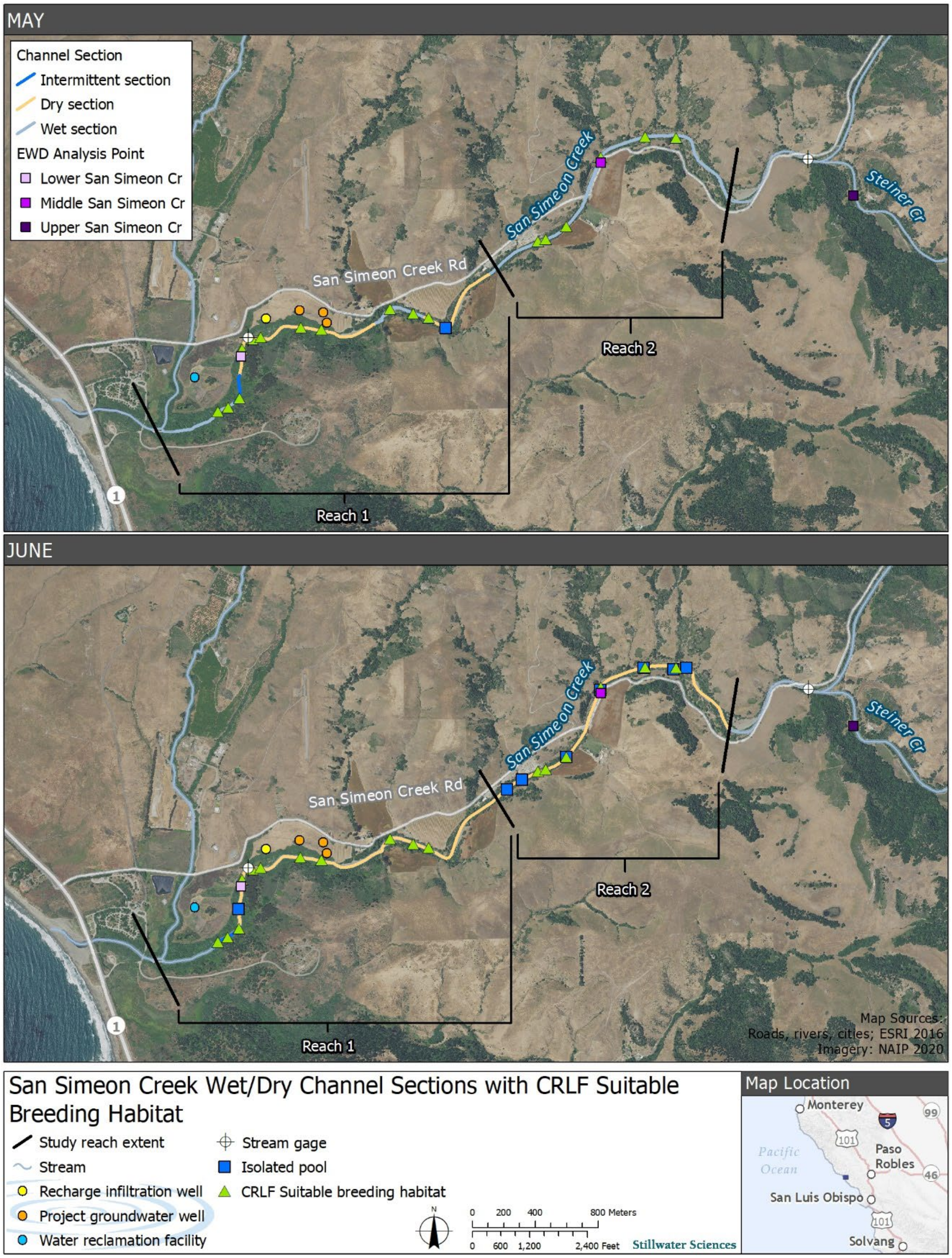


Figure 13. Palmer Flats streamflow exceedance for August and September based on flows from 1970 through 1995.

During this study, disconnected surface flows were first observed in the Study Area during April field surveys. By May 12, 2022, a large section of Reach 1 had become dry with a short section of intermittent flow and a single isolated pool, while Reach 2 remained wet throughout (Figure 14). By June 21, 2022, most of the channel within the Study Area was dry. In Reach 1, only a small section of channel upstream of the lagoon remained wet along with a single small, isolated pool (Figure 15), while nearly all of Reach 2 was dry with the exception of a few isolated pools (Figure 16).



Note: CRLF = California red-legged frog

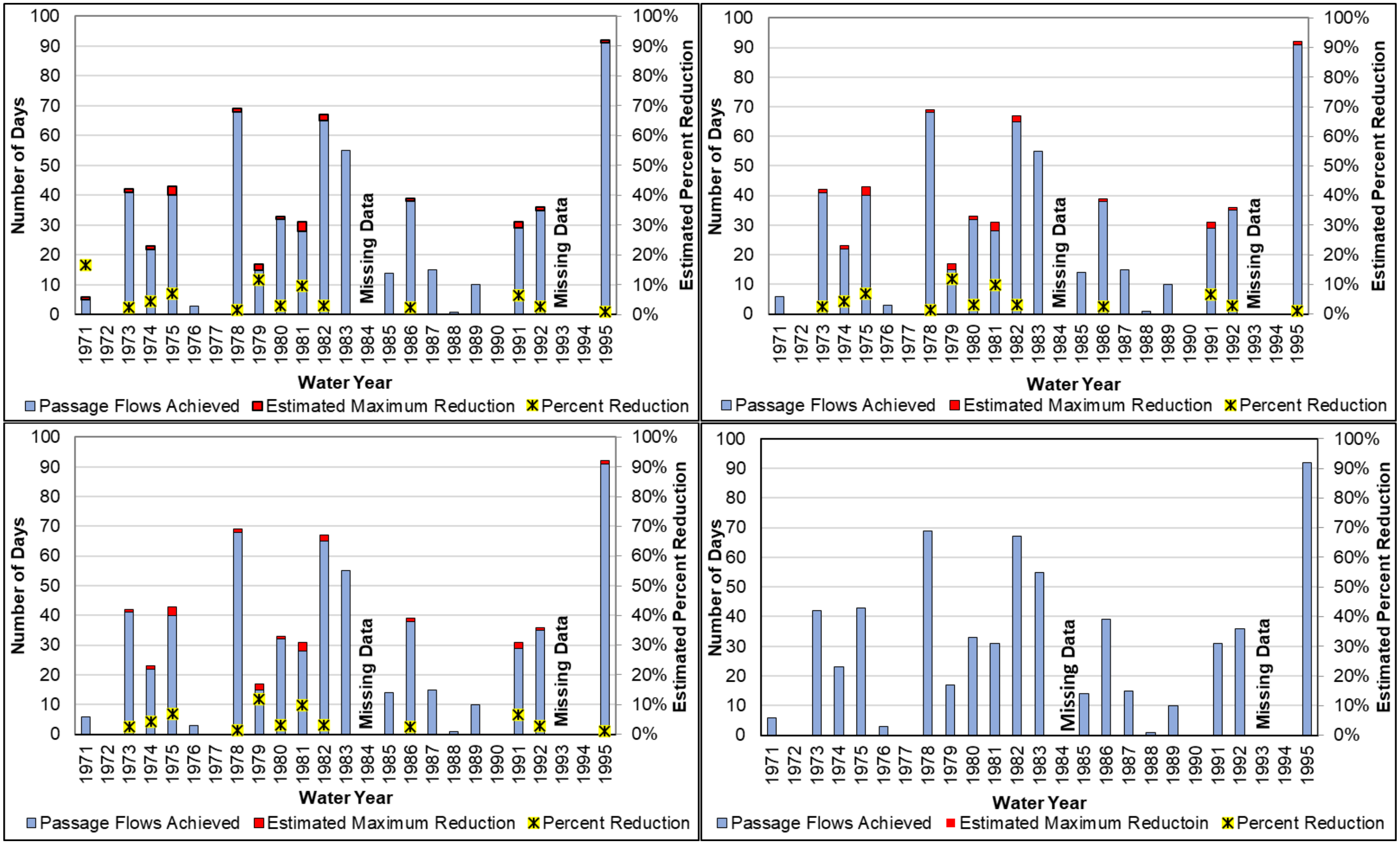
Figure 14. Dry and intermittent sections observed in San Simeon Creek during May and June 2022 with locations of isolated pools and locations were suitable California red-legged frog breeding habitat was observed during winter surveys.

Figure 15. Isolated pool habitat in Reach 1 on May 12, 2022 (top) and on June 21, 2022 (bottom).

Figure 16. Isolated pool habitat in Reach 2 on May 12, 2022 (top) and on June 21, 2022 (bottom).

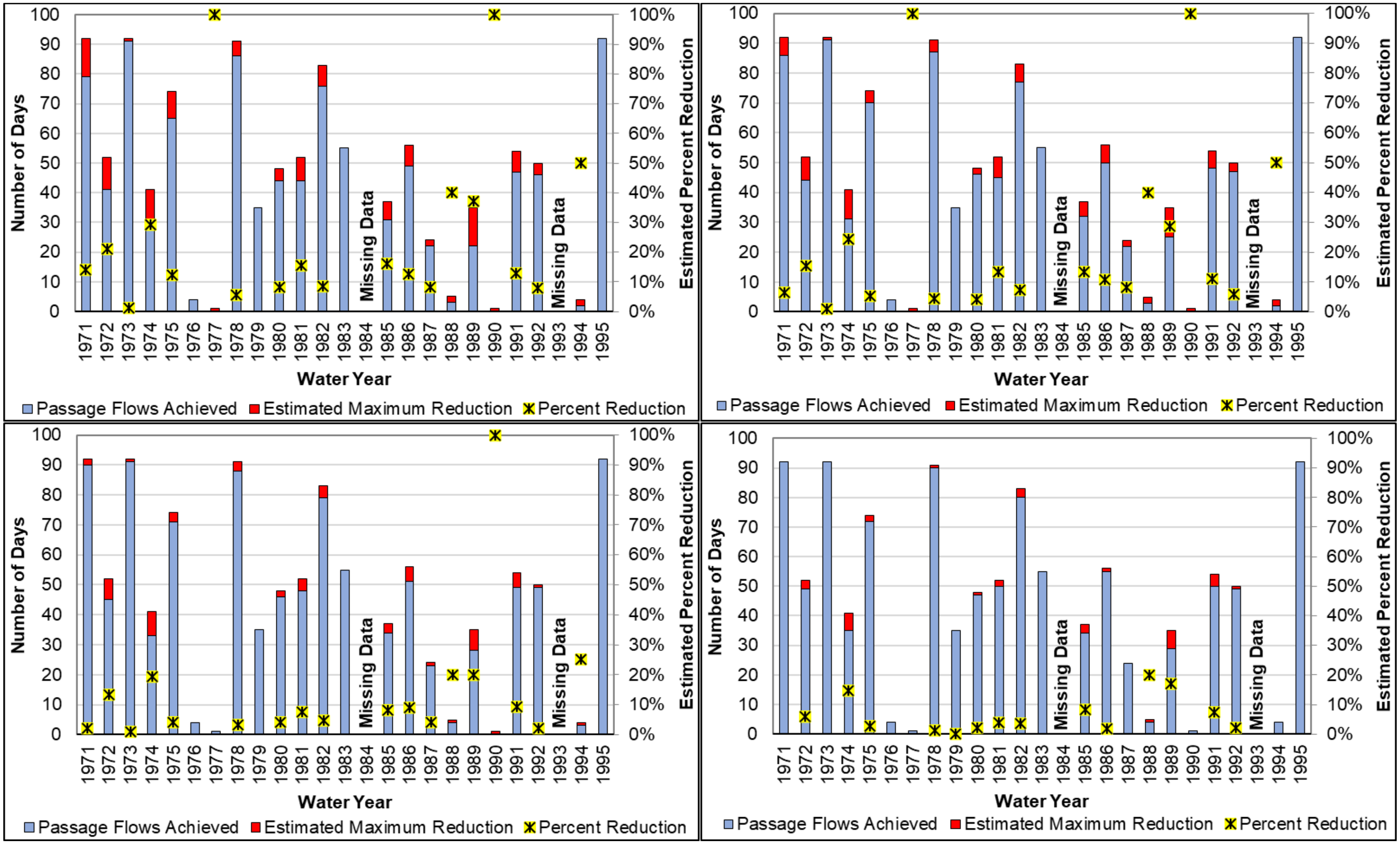
4.4 Juvenile Steelhead Passage Assessment

CCSD's groundwater pumping did not appear to have a strong influence on juvenile steelhead passage conditions during the peak migration season (March through May) under most scenarios that were assessed. During the higher juvenile fish passage threshold of 11 cfs, the analysis showed very little influence on juvenile passage duration (Figure 17) for all four scenarios assessed. At the lower passage flow threshold of 4 cfs, estimated reductions in juvenile fish passage duration were more apparent. At the maximum CCSD extraction rate, during several years, the estimated maximum reduction in passage days was greater than 10% with and without the private well pumping included. Under the average CCSD pumping scenarios, passage was less affected by pumping, and most years had less than a 10% loss of juvenile steelhead passage days (Figure 18).



Notes: CCSD = Cambria Community Services District; cfs = cubic feet per second

Figure 17. Number of days streamflow supported the 11-cfs passage threshold and the estimated maximum reduction in passage days for juvenile steelhead based on daily average flows recorded at the Palmer Flats Gage (1970–1995) during the peak juvenile steelhead migration season (March–May) under the following pumping scenarios: (A) maximum CCSD and private well pumping of 1.85 cfs, (B) maximum CCSD pumping of 1.43 cfs, (C) average CCSD pumping and maximum private well pumping of 1.06 cfs, and (D) average CCSD pumping of 0.64 cfs.



Notes: CCSD = Cambria Community Services District; cfs = cubic feet per second

Figure 18. Number of days streamflow supported the 4-cfs passage threshold and the estimated maximum reduction in passage days for juvenile steelhead based on daily average flows recorded at the Palmer Flats Gage (1970–1995) during the peak juvenile steelhead migration season (March–May) under the following pumping scenarios: (A) maximum CCSD and private well pumping of 1.85 cfs, (B) maximum CCSD pumping of 1.43 cfs, (C) average CCSD pumping and maximum private well pumping of 1.06 cfs, and (D) average CCSD pumping of 0.64 cfs.

4.5 California Red-legged Frog Habitat

Suitable breeding habitat for CRLF was abundant and widespread during the December 2021 habitat surveys conducted in Reach 1 and Reach 2 (Table 12). Most of the suitable CRLF breeding habitat was found in pool habitat that continued to meet the depth criteria for CRLF breeding even as flows decreased to almost 0 cfs. However, once flows ceased, pool habitat began to dry with only a few isolated pools remaining wet into June (Figure 14). While CRLF breeding season is typically in the winter and spring, breeding locations need to remain wetted until the tadpoles complete their metamorphosis into terrestrial forms (typically through July or August). Locations where CRLF breeding habitat remained wetted into June were limited to the downstream end of Reach 1 near the lagoon and multiple locations within Reach 2 (Figure 14). Examples of suitable CRLF breeding habitat that went dry between May and June 2022 are shown in Figure 19.

Table 12. California red-legged frog breeding habitat identified in lower San Simeon Creek during December 2021.

Reach	Habitat Unit	Avg Length (ft)	Avg Width (ft)	Area (ft^2)	Avg Depth (ft)	Max Depth (ft)	Habitat Type	Emergent Veg. Type
1	7	389	30	11,670	2.5	4.5	Off channel Pool	Willow
	9	146	23	3,358	1.0	2.4	Run	Willow
	12	91	25	2,275	1.0	2.0	MCP	Willow
	20	126	18	2,268	0.9	2.3	MCP	Willow
	26	152	18	2,736	3.0	4.5	MCP	Willow
	35	122	30	3,660	1.0	2.0	Run	Willow
	39	182	30	5,460	1.5	2.5	Run	Willow
	53	129	25	3,225	1.5	3.4	MCP	Branches
	58	177	35	6,195	1.8	2.8	Run	Willow
	61	152	30	4,560	2.5	3.6	Run	Willow
2	86	110	25	2,750	2.0	3.2	MCP	Willow
	88	270	40	10,800	2.7	4.2	MCP	Willow
	90	164	27	4,428	2.5	4.0	MCP	Willow
	112	153	50	7,650	4.0	7.5	Off channel Pool	Cattails
	122	243	30	7,290	2.8	4.5	LSP	Willow

Notes: ft = foot; ft^2 = square foot; LSP = lateral scour pool; MCP = midchannel pool

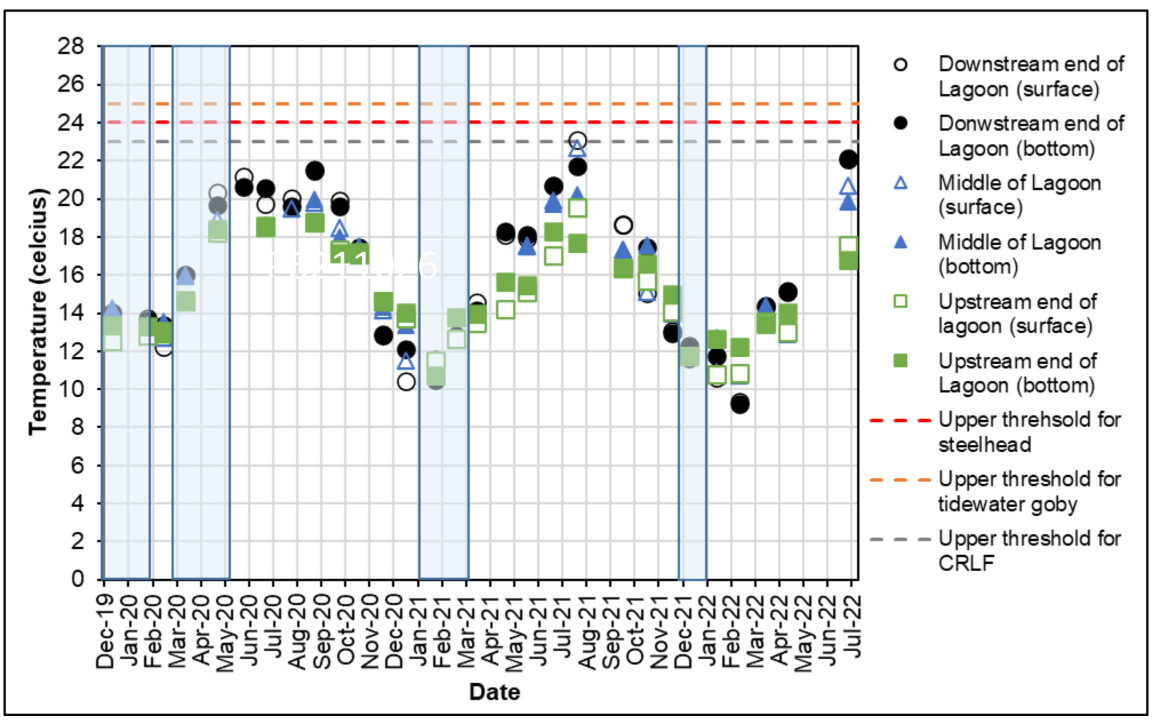
Figure 19. Locations of suitable California red-legged frog breeding habitat that remained wetted on May 12, 2022 (top left), was dry on June 27, 2022 (top right), and remained wetted throughout the survey (bottom).

4.6 San Simeon Creek Lagoon Conditions

Water quality conditions in San Simeon Creek Lagoon are generally within the suitable range for sensitive species that are likely to occur there (steelhead, tidewater goby, and CRLF) based on data collected from December 2019 through July 2022. Water temperatures were below the upper thresholds for all three species throughout the water column (Figure 20). Dissolved oxygen and salinity levels were within suitable range for all species during most of the monitoring period with a few exceptions as described below.

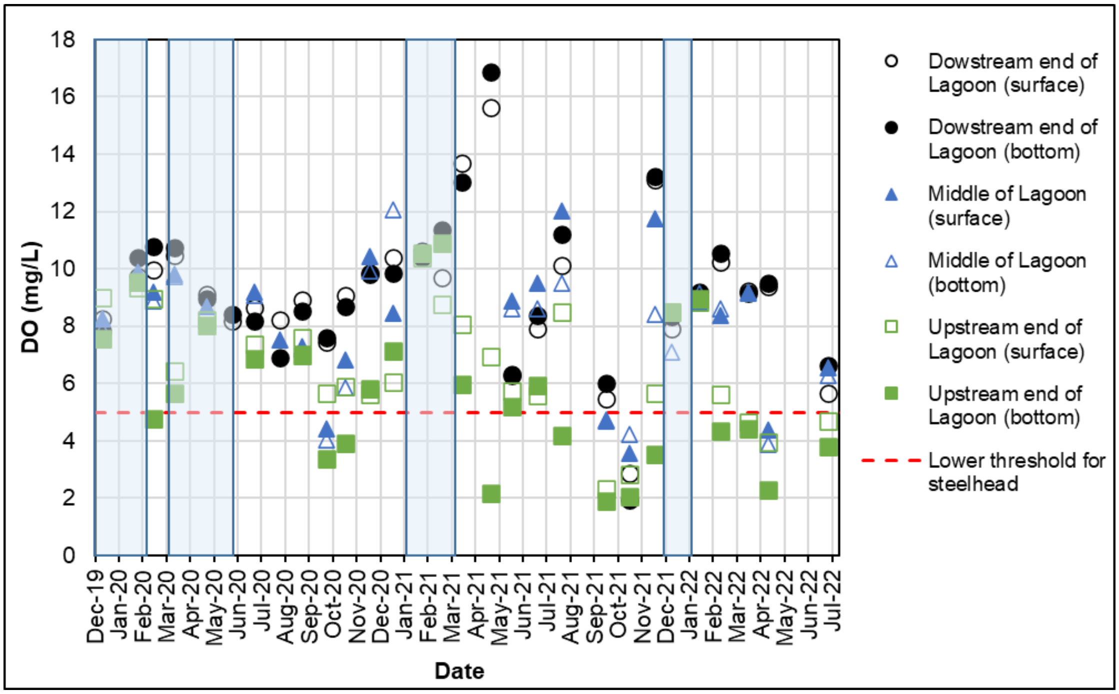
Dissolved oxygen levels were below the threshold for steelhead in at least one sample location within the lagoon a few times per year and typically during the late summer/early fall months when streamflow entering the lagoon is at its lowest (Figure 20). In nearly each event when dissolved oxygen levels dropped below the threshold for steelhead, other locations within the lagoon had higher dissolved oxygen within suitable levels for steelhead. On a single occasion in October 2021, all sample locations within the lagoon had dissolved oxygen levels below the 5.0-mg/L threshold for steelhead.

Salinity levels in San Simeon Lagoon were rarely above the threshold for any of the three species likely to occur there. The few times salinity levels did exceed the thresholds for sensitive species, it occurred during the late fall and early winter typically when the lagoon was observed to be open to the ocean (Figure 21). During each event when salinity levels were exceeded the threshold for steelhead, tidewater goby, and CRLF, other locations had lower salinity levels that were within suitable levels for these species.



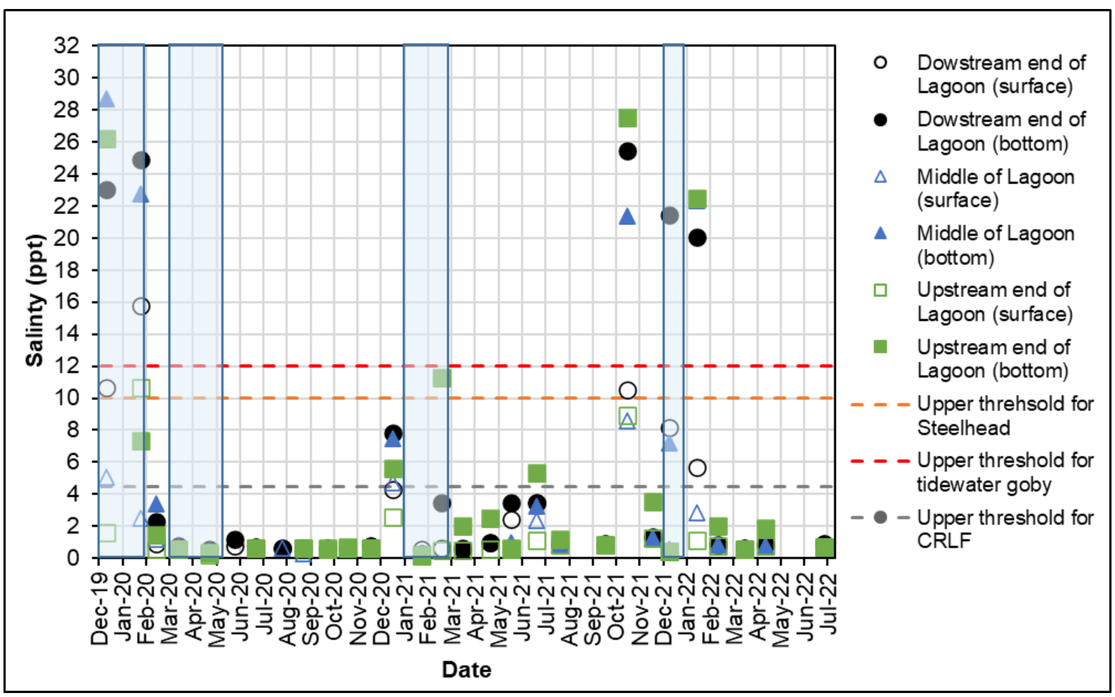
Note: Blue shading indicates periods when the lagoon was open to the ocean during sample events.

Figure 20. Monitoring results for water temperature in San Simeon Creek Lagoon from December 2019 through July 2022 with upper thresholds for steelhead, tidewater goby, and California red-legged frog.



Notes: No values reported for lower thresholds for tidewater goby, and California red-legged frog. Blue shading indicates periods when the lagoon was open to the ocean during sample events. DO = dissolved oxygen.

Figure 21. Monitoring results for dissolved oxygen levels in San Simeon Creek Lagoon from December 2019 through July 2022 with lower thresholds for steelhead.



Note: Blue shading indicates periods when the lagoon was open to the ocean during sample events.

Figure 22. Monitoring results for salinity in San Simeon Creek Lagoon from December 2019 through July 2022 with upper thresholds for steelhead.

4.7 Van Gordon Creek

A qualitative assessment of habitat conditions for sensitive species in Van Gordon Creek was conducted on June 5, 2023, following a late rainy season when surface flows were estimated to be around 0.2 cfs. The survey began at the mouth of Van Gordon Creek and extended upstream approximately 0.4 miles to the first road crossing (San Simeon Creek Road). The channel was generally highly incised, lacked instream woody debris, substrate was fine sand and silt, and lacked pool habitat (Figure 23). It appeared that conditions provide limited habitat for steelhead and CRLF due to lack of deep water (>1 ft) pools to support juvenile steelhead rearing and CRLF breeding, little to no habitat complexity (i.e., it is mostly shallow run habitat), and limited cover that provides refuge habitat for aquatic species and protection from predators. A few pools containing suitable habitat for juvenile rearing were observed over the approximately 0.4-mile section of Van Gordon Creek (Figure 24) but year-round rearing is not likely to be supported.

Figure 23. Representative habitat conditions in Van Gordon Creek observed on June 5, 2023.

Figure 24. Limited suitable steelhead rearing habitat with cover, and water > 1 ft deep observed in Van Gordon Creek, June 5, 2024.

CCSD's pumping near Van Gordon Creek (at Well 9P7) only occurs when the WRF is operational, which is limited to the dry season when surface flows are not present in lower San Simeon Creek or Van Gordon Creek. During periods when surface flows may be present in Van Gordon Creek, CCSD's pumping is restricted to CCSD well field approximately 0.80 mile upstream from Van Gordon Creek. Groundwater model simulations show limited fluctuations in the groundwater levels around the confluence of San Simeon and Van Gordon Creek during WRF operations, mainly because of the stabilizing effects of the lagoon and nearby recycled water percolation (Yates 2022). Based on the groundwater levels recorded near Van Gordon Creek (16D1 and 9P2) and groundwater model simulations, CCSD's groundwater pumping operations are not likely to influence surface flows or habitat conditions for steelhead and CRLF in Van Gordon Creek.

5 CONCLUSIONS

The lower reach of San Simeon Creek provides potential migratory and rearing habitat for steelhead in the winter and spring, and this habitat often becomes constrained during the late spring and disappears during the summer and fall when surface flows cease. Available stream flow data at Palmer Flats Gage (1970 to 1995) and County Gage #718 (1987 to 2003) indicate that most of lower San Simeon Creek within the Study Area (from the Palmer Flats Gage downstream to approximately the confluence with Van Gordon Creek) would naturally (i.e., without CCSD groundwater pumping) go dry for extended periods during the summer through fall of most years. While the section of San Simeon Creek within the Study Area often experiences extended periods when the channel is dry, results of the hydraulic modeling show that sufficient habitat is available for steelhead fry and juveniles even during very low-flow conditions (i.e., flows less than 0.5 cfs for fry and 1 cfs or above for juvenile).

In contrast to the assessment of the Palmer Flats Gage data, which indicates that lower San Simeon Creek likely goes dry for extended periods during most years even without CCSD's pumping, the modeling conducted by Boughton and Goslin (2006) predicated a high potential for juvenile steelhead summer rearing habitat throughout San Simeon Creek, including the lower reach within the Study Area. It is possible that Boughton and Goslin's modeled results reflects conditions that occurred more than 50 years ago, since available empirical data show that these conditions have not occurred for at least the last 50 years. Based on this analysis, the lowermost analysis points used in the EWD study (Stillwater Sciences 2014) should be relocated upstream of the groundwater basin to the confluence of Steiner Creek or adjusted to reflect the intermittent flow conditions in lower San Simeon Creek.

Based on CCSD's pumping capacity of 1.43 cfs and streamflow of 1 cfs required to provide juvenile steelhead rearing habitat, CCSD's pumping operations have the potential to reduce the amount and quality of juvenile steelhead rearing habitat within the Study Area at flows less than 2.5 cfs (i.e., at 2.43 cfs or less), depending on the rate of pumping that occurs. Whenever pumping reduces surface flows to less than 1 cfs, the presence of juvenile rearing habitat will be reduced, and if pumping occurs at the maximum rate (1.43 cfs) when flows are less than 1.5 cfs, rearing habitat could become dry, resulting in stranding and mortality of individuals. In contrast, when surface flows are greater than 2.5 cfs, or once streamflow decreases to 0.0 cfs (and the channel becomes dry), CCSD's operations are unlikely to substantially reduce steelhead rearing habitat. The same conclusions also apply to the operations of the private wells that are outside CCSD's management jurisdiction.

Migration conditions for steelhead within the Study Area are generally not impacted under CCSD's current operations. Adult steelhead passage, which requires high flows (21–60 cfs [D. W. Alley and Associates 1992]) associated with large precipitation events, are not likely to be influenced by CCSD's average pumping rates ranging from 0.41 cfs to 0.64 cfs, or even the maximum pumping rate of 1.43 cfs. Juvenile steelhead passage requires lower flows than adult passage (4–11 cfs based on D. W. Alley and Associates 1992), typical of the spring recession flows. Little influence on passage conditions were identified for the upper passage threshold (11 cfs) under the range of CCSD pumping operations (Figure 17); however, CCSD pumping may influence juvenile passage conditions at the lower passage threshold of 4 cfs if pumping exceeds the upper end of CCSD's average pumping rates (i.e., if pumping occurs at a rate above 0.64 cfs) (Figure 18). When streamflow within the Study Area is near 4 cfs CCSD pumping at rates greater than 0.64 cfs may lead to a reduced duration of the juvenile steelhead migration period. Because

4 cfs was identified as the lower threshold for juvenile steelhead migration, pumping is not expected to influence juvenile migration when streamflow drops below 4 cfs.

In addition to steelhead, the Study Area provides abundant suitable breeding habitat for CRLF because any isolated pool locations stay wet well after surface flows cease. When streamflow is less than 1.5 cfs, CCSD's pumping operations are likely to increase the rate at which pool habitat becomes isolated and pools dry out, leading to stranded CRLF tadpoles. Additional suitable habitat for CRLF is located in San Simeon Creek Lagoon.

Based on water temperature, dissolved oxygen, and salinity levels reported throughout most of the year, habitat conditions in San Simeon Creek Lagoon are suitable for juvenile steelhead, tidewater goby, and CRLF under current conditions. During the few events when water quality thresholds are exceeded for any of these species, other locations within the lagoon were still within the suitable range.

Key conclusions of this study follow:

- CCSD's pumping operations are not expected to influence adult steelhead migration in San Simeon Creek due to the magnitude of flow required to support adult steelhead passage.
- CCSD's pumping operations likely have little effect on juvenile downstream passage within San Simeon Creek during the migratory period. However, if CCSD's pumping operations were to exceed the recent average rates of 0.64 cfs, juvenile passage conditions may be affected particularly during the peak juvenile migration season (i.e., during April and May).
- CCSD's pumping operations that occur when flows in Reach 1 are between 1 and 2.5 cfs may lead to reduced area and quality of habitat for juvenile steelhead within the Study Area, depending on the rate of pumping.
- CCSD's pumping operations that occur after surface flows cease may affect juvenile steelhead and CRLF rearing in isolated pools by accelerating the rate at which isolated pools dry out, potentially stranding juvenile steelhead and CRLF tadpoles sooner than may otherwise occur.
- CCSD's pumping operations are not expected to impact aquatic habitat once the channel within the Study Area goes dry, which happens for extended periods of most years during the summer and fall.
- CCSD's pumping operations do not appear to impact habitat conditions within the lagoon.
- CCSD's pumping operations do not appear to impact habitat conditions for tidewater goby.

6 LONG-TERM MONITORING

Long-term monitoring is proposed to provide information about the effects of CCSD's pumping operations on sensitive aquatic species and their habitat in lower San Simeon Creek and to enable CCSD to operate in a way that minimizes impacts to these aquatic species, as detailed below.

6.1 Stream Flows

Stream flow monitoring is recommended to develop a better long-term record of streamflow within San Simeon Creek and to provide information about CCSD's operations and adaptive management practices. Continuous monitoring of streamflow should be conducted near the San

Simeon well field and upstream of the Study Area at the Palmer Flats Gage. The collection of a validated continuous flow record that includes low flows is recommended for these sites. In general terms, four general steps are required to develop an accurate continuous flow record: (1) installation of a continuous stage measuring device in accordance with standard practice (e.g., USGS 1982); (2) collection of flow data across a range of flows to develop a stage-flow relationship in accordance with standard practice (e.g., USGS 1982, Turnipseed 2010); (3) ongoing validation of the stage-flow relationship;, and (4) development of new stage-flow relationships and/or correction of stage data if channel conditions change, as needed. The stage-flow relationship is a mathematical relationship relating flow and stage, and if hydraulic conditions significantly change at the gaging site, the relationship may need to be redeveloped or the stage data may need to be adjusted. Corrections and monitoring are typically more intense at sites that require accurate lower flows or at sites that are composed of erodible beds. Common channel changes that can impact the stage-flow relationship include cross-sectional scour or deposition, changes in the distribution of riparian vegetation, or changes in downstream hydraulic controls. Annual cross-sectional surveys to document scour and deposition at the gaging sites are also recommended to assess potential channel changes.

The County of San Luis Obispo currently operates a stream gage that continuously records water levels near the San Simeon well field. However, a stage-discharge rating curve needs to be developed and validated to apply to the stage data collected at this existing gage. A continuous stage measuring device is needed at the Palmer Flats location, and the collection of additional flow data is required to develop a continuous flow record, as described above.

6.2 Isolated Pools

Monitoring of isolated pool habitat within the Study Area is recommended to assess the risk of juvenile steelhead stranding. Monitoring should be conducted using visual observations of isolated pool habitat within the Study Area to assess relative abundance of juvenile steelhead “trapped” in isolated pools. Surveys should be conducted during the spring once surface flows cease in lower San Simeon Creek. Biologists familiar with the identification of juvenile steelhead should walk the channel within the Study Area to identify locations of isolated pool habitats and visually inspect pools from the shore to estimate the number of steelhead within each pool. All observations should be reported to the CDFW for rescue and relocation consideration.

6.3 San Simeon Creek Lagoon Conditions

Pending access approval, lagoon stage and water quality conditions (temperature, dissolved oxygen, and salinity) should be monitored at the upstream and downstream ends of the lagoon during the late spring through fall. Samples should be collected monthly near the upper, middle, and lower sections of the water column.

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Appendices

Appendix A

Mean Daily Streamflow for San Simeon Creek Gages

Stream Gauge Station Information

Station Name -	Upper San Simeon
Station Number -	14
USGS Number -	N/A
USGS Start -	
USGS End -	
Latitude -	35° 36' 37"
Longitude -	121° 04' 30"
Drainage Area -	22.90
Location Description -	3 miles northeast of Hwy 1.
Remarks -	

What year(s) did USGS have control of this gage.

Location Format Example -
For: 120° 20' 05"
Type: 1202005

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1994 - SEP 1995
Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.12	54	37	61	67	13	2.4	0.19	0.0
2	0.0	0.0	0.0	0.12	46	82	61	64	12	2.3	0.12	0.0
3	0.0	0.0	0.0	70	40	293	61	63	11	2.4	0.08	0.0
4	0.0	0.0	0.0	242	37	218	61	62	11	2.3	0.07	0.0
5	0.0	0.0	0.0	317	35	423	61	60	9.6	1.8	0.10	0.0
6	0.0	0.0	0.0	124	33	221	61	58	8.9	1.8	0.12	0.0
7	0.0	0.0	0.0	259	52	158	61	57	8.3	1.7	0.09	0.0
8	0.0	0.0	0.0	256	122	144	61	55	6.0	1.6	0.05	0.0
9	0.0	0.0	0.0	265	77	573	61	54	4.8	1.7	0.05	0.0
10	0.0	0.0	0.0	578	59	1520	61	52	4.6	1.7	0.05	0.0
11	0.0	0.0	0.0	396	52	458	61	50	4.9	1.5	0.05	0.0
12	0.0	0.0	0.0	264	48	310	60	49	4.7	1.4	0.05	0.0
13	0.0	0.0	0.0	228	195	227	60	47	4.6	1.2	0.05	0.0
14	0.0	0.0	0.0	206	261	189	60	46	4.7	1.1	0.05	0.0
15	0.0	0.0	26	193	111	161	60	43	5.7	1.2	0.04	0.0
16	0.0	0.0	5.9	188	86	141	60	41	8.6	1.5	0.01	0.0
17	0.0	0.0	0.01	177	73	129	60	40	5.7	1.6	0.01	0.0
18	0.0	0.0	0.01	168	64	121	60	39	4.9	1.5	0.01	0.0
19	0.0	0.0	0.03	159	57	116	60	37	4.2	1.4	0.01	0.0
20	0.0	0.0	0.05	163	51	168	60	35	4.0	1.4	0.01	0.0
21	0.0	0.0	0.05	162	48	195	59	34	3.9	1.3	0.01	0.0
22	0.0	0.0	0.06	179	46	394	59	33	3.5	1.2	0.01	0.0
23	0.0	0.0	0.06	328	45	328	60	26	3.4	1.1	0.01	0.0
24	0.0	0.0	0.07	745	43	196	60	22	3.1	0.91	0.01	0.0
25	0.0	0.0	6.8	534	42	134	60	21	2.7	0.80	0.01	0.0
26	0.0	0.0	0.27	441	40	106	60	20	2.8	0.68	0.01	0.0
27	0.0	0.0	0.08	373	38	88	59	19	2.9	0.57	0.01	0.0
28	0.0	0.0	0.09	307	37	74	59	17	2.9	0.55	0.01	0.0
29	0.0	0.0	0.09	238	------	66	69	17	3.0	0.48	0.0	0.0
30	0.0	0.0	0.10	130	------	62	72	15	2.9	0.35	0.0	0.0
31	0.0	------	0.10	61	------	61	------	14	------	0.24	0.0	------
TOTAL	0	0	39.77	7751.2	1892	7393	1828	1257	172.3	41.68	1.29	0
MEAN	0.00	0.00	1.28	250.04	67.57	238.48	60.93	40.55	5.74	1.34	0.04	0.00
MAX	0	0	26	745	261	1520	72	67	13	2.4	0.19	0
MIN	0	0	0	0.12	33	37	59	14	2.7	0.24	0	0
AC-FT	0.0	0.0	78.9	15374.4	3752.7	14663.8	3625.8	2493.2	341.8	82.7	2.6	0.0

TOTAL = 20376 CFS MEAN = 55.83 N/A MAX = 1520 CFS
40,416 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 1030 CFS on JAN 10 2610 CFS on MAR 9
1300 CFS on JAN 24 3410 CFS on MAR 10
1440 CFS on FEB 13 1320 CFS on MAR 22

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1993 - SEP 1994

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.5	2.7	1.1	1.4	15	6.8	1.2	0.93	0.10	0.0	0.0	0.0
2	2.5	2.7	0.96	1.4	16	5.9	1.2	0.90	0.01	0.0	0.0	0.0
3	2.5	2.7	0.96	1.4	18	5.1	1.2	0.83	0.0	0.0	0.0	0.0
4	2.5	2.7	0.96	1.4	19	4.5	1.1	0.74	0.0	0.0	0.0	0.0
5	2.5	2.7	0.96	1.4	21	4.3	1.0	0.72	0.0	0.0	0.0	0.0
6	2.5	2.7	0.95	1.4	23	4.6	0.96	0.68	0.0	0.0	0.0	0.0
7	2.5	2.5	0.96	1.4	107	4.2	0.90	2.5	0.0	0.0	0.0	0.0
8	2.5	2.5	0.96	1.4	87	3.7	0.98	3.2	0.0	0.0	0.0	0.0
9	2.5	2.5	0.87	1.4	32	3.7	7.4	1.5	0.0	0.0	0.0	0.0
10	2.5	2.3	0.87	1.4	29	3.4	2.2	1.1	0.0	0.0	0.0	0.0
11	2.5	12	0.87	1.4	28	3.6	1.3	0.93	0.0	0.0	0.0	0.0
12	2.5	6.0	0.64	1.4	28	2.7	1.1	0.92	0.0	0.0	0.0	0.0
13	2.5	5.8	0.47	1.4	27	2.5	0.93	0.84	0.0	0.0	0.0	0.0
14	2.5	3.4	0.87	1.4	27	2.3	1.1	0.77	0.0	0.0	0.0	0.0
15	2.5	1.4	1.4	1.4	27	2.4	1.0	0.70	0.0	0.0	0.0	0.0
16	2.5	1.3	1.4	1.4	27	2.3	0.96	0.62	0.0	0.0	0.0	0.0
17	2.5	1.3	1.4	1.4	142	2.4	0.92	1.3	0.0	0.0	0.0	0.0
18	2.5	1.3	1.4	1.4	81	2.2	0.84	1.4	0.0	0.0	0.0	0.0
19	2.5	1.3	1.4	1.4	179	2.3	0.84	1.0	0.0	0.0	0.0	0.0
20	2.5	1.2	1.4	1.5	94	2.1	0.74	0.95	0.0	0.0	0.0	0.0
21	2.7	1.2	1.4	1.7	26	2.2	0.62	0.84	0.0	0.0	0.0	0.0
22	2.7	1.2	1.4	1.7	16	2.2	0.56	0.68	0.0	0.0	0.0	0.0
23	2.7	1.2	1.4	13	16	1.6	0.73	0.59	0.0	0.0	0.0	0.0
24	2.7	1.2	1.4	27	15	11	1.2	0.54	0.0	0.0	0.0	0.0
25	2.7	1.2	1.4	55	6.3	4.0	13	0.51	0.0	0.0	0.0	0.0
26	2.7	1.1	1.4	24	13	2.4	3.9	0.55	0.0	0.0	0.0	0.0
27	2.7	1.1	1.4	9.5	10	2.0	1.8	0.52	0.0	0.0	0.0	0.0
28	2.7	1.1	1.4	10	8.4	1.7	1.5	0.46	0.0	0.0	0.0	0.0
29	2.7	1.1	1.4	11	------	1.6	1.3	0.28	0.0	0.0	0.0	0.0
30	2.7	1.1	1.4	13	------	1.5	1.1	0.21	0.0	0.0	0.0	0.0
31	2.7	------	1.4	14	------	1.4	------	0.22	------	0.0	0.0	------
TOTAL	79.7	72.5	36.2	208	1137.7	102.6	53.58	27.93	0.11	0	0	0
MEAN	2.57	2.42	1.17	6.71	40.63	3.31	1.79	0.90	0.00	0.00	0.00	0.00
MAX	2.7	12	1.4	55	179	11	13	3.2	0.1	0	0	0
MIN	2.5	1.1	0.47	1.4	6.3	1.4	0.56	0.21	0	0	0	0
AC-FT	158.1	143.8	71.8	412.6	2256.6	203.5	106.3	55.4	0.2	0.0	0.0	0.0

TOTAL = 1718.3 CFS MEAN = 4.71 N/A MAX = 179 CFS
3,408 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 182 CFS on JAN 24 248 CFS on FEB 7
683 CFS on FEB 17 1420 CFS on FEB 19

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1992 - SEP 1993

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	1.4	0.0	116	16	**	**	**	0.0	0.0	0.0	0.0
2	0.0	0.08	0.0	89	14	**	**	**	0.0	0.0	0.0	0.0
3	0.0	0.02	0.0	48	11	**	**	**	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	36	8.5	**	**	**	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	30	12	**	**	**	0.0	0.0	0.0	0.0
6	0.0	0.0	58	214	7.0	**	**	**	0.0	0.0	0.0	0.0
7	0.0	0.0	96	359	44	**	**	0.01	0.0	0.0	0.0	0.0
8	0.0	0.0	16	173	295	**	**	0.01	0.0	0.0	0.0	0.0
9	0.0	0.0	32	117	173	**	**	0.01	0.0	0.0	0.0	0.0
10	0.0	0.0	49	370	72	**	**	0.01	0.0	0.0	0.0	0.0
11	0.0	0.0	192	102	58	**	**	0.01	0.0	0.0	0.0	0.0
12	0.0	0.0	42	187	41	**	**	0.01	0.0	0.0	0.0	0.0
13	0.0	0.0	23	652	31	**	**	0.01	0.0	0.0	0.0	0.0
14	0.0	0.0	16	451	26	**	**	0.01	0.0	0.0	0.0	0.0
15	0.0	0.0	12	543	22	**	**	0.01	0.0	0.0	0.0	0.0
16	0.0	0.0	8.2	282	20	**	**	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	20	422	22	**	**	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	22	239	101	**	**	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	12	125	106	**	**	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	7.5	177	106	**	**	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	6.7	217	69	**	**	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	6.0	229	280	**	**	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	5.7	109	436	**	**	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	5.5	78	119	**	**	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	4.5	60	**	**	**	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	3.7	46	**	**	**	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	3.2	38	**	**	**	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	181	32	**	**	**	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	200	28	------	**	**	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	79	24	------	**	**	0.0	0.0	0.0	0.0	0.0
31	0.0	------	46	20	------	**	------	0.0	------	0.0	0.0	------
TOTAL	0	1.5	1147	5613	2089.5	**	**	0.09	0	0	0	0
MEAN	0.00	0.05	37.00	181.06	87.06	**	**	0.00	0.00	0.00	0.00	0.00
MAX	0	1.4	200	652	436	**	**	0.01	0	0	0	0
MIN	0	0	0	20	7	**	**	0	0	0	0	0
AC-FT	0.0	3.0	2275.0	11133.2	4144.5	**	**	0.2	0.0	0.0	0.0	0.0

TOTAL** = 8851.1 CFS
17,556 AC-FT

MEAN** = 30.11 N/A

MAX = 652 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 1050 CFS on DEC 28
2720 CFS on JAN 13
3420 CFS on FEB 22
1210 CFS on JAN 10
1460 CFS on JAN 14

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1991 - SEP 1992

Latitude - 35° 36' 37''   **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	8.1	5.3	30	18	3.6	0.73	0.04	0.0	0.0
2	0.0	0.0	0.0	6.1	5.9	28	18	3.3	0.99	0.0	0.0	0.0
3	0.0	0.0	0.0	5.7	6.5	29	17	3.3	0.72	0.0	0.0	0.0
4	0.0	0.0	0.0	5.3	6.8	23	15	2.9	0.73	0.0	0.0	0.0
5	0.0	0.0	0.0	129	7.0	145	14	3.2	0.37	0.0	0.0	0.0
6	0.0	0.0	0.0	47	11	183	13	2.8	0.39	0.0	0.0	0.0
7	0.0	0.0	0.0	46	13	117	12	2.9	0.33	0.0	0.0	0.0
8	0.0	0.0	0.0	28	13	78	12	2.9	0.29	0.0	0.0	0.0
9	0.0	0.0	0.0	17	27	58	11	2.8	0.24	0.0	0.0	0.0
10	0.0	0.0	0.0	13	143	48	11	2.9	0.22	0.0	0.0	0.0
11	0.0	0.0	0.0	11	123	37	11	2.3	0.27	0.0	0.0	0.0
12	0.0	0.0	0.0	9.2	248	32	11	1.9	0.26	0.22	0.0	0.0
13	0.0	0.0	0.0	7.5	255	27	13	1.9	0.26	0.10	0.0	0.0
14	0.0	0.0	0.0	6.4	181	32	10	1.9	0.20	0.0	0.0	0.0
15	0.0	0.0	0.0	5.8	283	27	8.3	2.1	0.24	0.0	0.0	0.0
16	0.0	0.0	0.0	4.7	247	22	7.4	2.4	0.31	0.0	0.0	0.0
17	0.0	0.0	0.0	4.5	201	19	7.5	2.4	0.40	0.0	0.0	0.0
18	0.0	0.0	0.0	4.1	161	18	7.2	2.3	0.35	0.0	0.0	0.0
19	0.0	0.0	0.0	3.4	146	18	6.4	2.2	0.29	0.0	0.0	0.0
20	0.0	0.0	0.0	3.3	243	22	5.6	2.1	0.23	0.0	0.0	0.0
21	0.0	0.0	0.0	2.8	158	28	5.2	1.9	0.20	0.0	0.0	0.0
22	0.0	0.0	0.0	2.4	127	75	4.7	1.8	0.10	0.0	0.0	0.0
23	0.0	0.0	0.0	2.4	105	109	4.9	1.9	0.03	0.0	0.0	0.0
24	0.0	0.0	0.0	1.9	81	55	4.7	1.6	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	1.8	61	43	4.0	1.5	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	1.5	43	36	3.8	1.4	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	1.3	29	31	3.8	1.4	0.0	0.0	0.0	0.0
28	0.0	0.0	8.8	1.8	19	27	4.1	1.4	0.0	0.0	0.0	0.0
29	0.0	0.0	114	2.8	18	24	3.6	1.3	0.0	0.0	0.0	0.0
30	0.0	0.0	70	3.4	------	23	3.6	1.2	0.32	0.0	0.0	0.0
31	0.0	------	15	4.5	------	21	------	1.2	------	0.0	0.0	------
TOTAL	0	0	207.8	391.7	2967.5	1465	270.8	68.7	8.47	0.36	0	0
MEAN	0.00	0.00	6.70	12.64	102.33	47.26	9.03	2.22	0.28	0.01	0.00	0.00
MAX	0	0	114	129	283	183	18	3.6	0.99	0.22	0	0
MIN	0	0	0	1.3	5.3	18	3.6	1.2	0	0	0	0
AC-FT	0.0	0.0	412.2	776.9	5886.0	2905.8	537.1	136.3	16.8	0.7	0.0	0.0

TOTAL = 5380.3 CFS   MEAN = 14.70 N/A   MAX = 283 CFS
10,672 AC-FT   MIN = 0 CFS

MAX Instantaneour Flow - 607 CFS on FEB 12   479 CFS on FEB 15
824 CFS on MAR 5

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1990 - SEP 1991

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	0.0	105	35	4.0	0.71	0.51	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	6.3	28	4.0	0.67	0.53	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	436	23	3.8	0.66	0.45	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	1530	21	3.8	0.60	0.25	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	186	18	3.8	0.59	0.29	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	49	17	3.5	0.51	0.31	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	21	14	3.5	0.54	0.18	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	14	13	3.5	0.49	0.09	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	11	11	3.4	0.49	0.06	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	12	10	3.3	0.47	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	13	9.4	3.4	0.41	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	8.9	9.0	3.2	0.49	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	24	8.8	3.1	0.45	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	16	8.4	3.0	0.49	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	12	8.3	2.6	0.21	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	8.7	7.8	2.2	0.03	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	98	7.2	1.9	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	542	6.7	1.7	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	395	6.4	1.6	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	530	8.0	1.5	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	109	8.0	1.5	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	69	6.5	1.5	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	48	6.3	1.5	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	277	6.0	1.4	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	268	5.3	1.4	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	261	4.8	1.1	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	147	4.6	0.97	0.01	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	20	93	4.4	0.97	1.6	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	------	71	4.2	0.92	2.1	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	------	55	4.0	0.87	0.71	0.0	0.0	0.0
31	0.0	------	0.0	0.0	------	43	------	0.78	------	0.0	0.0	------
TOTAL	0	0	0	0	20	5458.9	324.1	73.71	12.23	2.67	0	0
MEAN	0.00	0.00	0.00	0.00	0.71	176.09	10.80	2.38	0.41	0.09	0.00	0.00
MAX	0	0	0	0	20	1530	35	4	2.1	0.53	0	0
MIN	0	0	0	0	0	6.3	4	0.78	0	0	0	0
AC-FT	0.0	0.0	0.0	0.0	39.7	10827.6	642.8	146.2	24.3	5.3	0.0	0.0

TOTAL = 5891.6 CFS MEAN = 16.14 N/A MAX = 1530 CFS
11,686 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 4460 CFS on MAR 4 1930 CFS on MAR 3
2930 CFS on MAR 18 2290 CFS on MAR 20

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1989 - SEP 1990

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.04	0.0	2.9	5.0	0.33	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.02	0.0	2.4	5.0	0.28	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	2.1	6.6	0.22	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	23	5.7	0.13	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	6.0	5.6	0.11	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	3.5	4.6	0.09	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	3.0	4.1	0.08	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	2.5	3.9	0.08	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	2.2	3.6	0.07	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	2.1	3.5	0.06	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	2.0	4.0	0.04	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	10	1.7	3.7	0.01	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	95	1.1	3.5	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	53	1.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	28	0.83	2.8	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	22	79	2.7	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	15	60	2.6	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	8.2	25	2.4	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	5.7	15	2.3	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	4.1	12	2.1	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	3.2	11	2.1	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	2.8	9.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	2.4	7.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	2.1	6.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	2.1	5.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	11	0.0	1.7	5.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	1.6	0.0	1.7	5.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.13	0.0	1.3	5.2	0.80	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.07	0.0	2.1	------	0.81	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.05	0.0	1.9	------	0.69	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	------	0.0	2.5	------	0.46	------	0.0	------	0.0	0.0	------
TOTAL	0	12.85	0.06	264.8	303.83	90.26	1.5	0	0	0	0	0
MEAN	0.00	0.43	0.00	8.54	10.85	2.91	0.05	0.00	0.00	0.00	0.00	0.00
MAX	0	11	0.04	95	79	6.6	0.33	0	0	0	0	0
MIN	0	0	0	0	0.83	0.46	0	0	0	0	0	0
AC-FT	0.0	25.5	0.1	525.2	602.6	179.0	3.0	0.0	0.0	0.0	0.0	0.0

TOTAL = 673.3 CFS MEAN = 1.84 N/A MAX = 95 CFS
1,335 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 634 CFS on FEB 16 292 CFS on JAN 13

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1988 - SEP 1989

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	17	3.6	2.9	12	2.1	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	11	3.4	57	10	1.9	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	9.8	3.8	24	9.7	1.4	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	8.8	21	11	8.6	0.76	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	146	12	8.4	8.0	0.64	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	49	7.4	7.3	7.6	0.51	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	31	6.0	7.1	6.7	0.67	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	22	6.8	6.4	6.2	0.82	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	18	48	5.5	5.7	1.6	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	16	21	5.5	5.5	2.1	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	13	14	13	5.2	2.2	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	11	11	9.5	4.8	2.1	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	11	9.7	7.5	4.5	2.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	10	8.9	6.5	4.1	1.8	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	8.5	7.8	6.1	4.0	1.8	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	7.9	7.3	15	3.9	1.5	0.0	0.0	0.0	0.0
17	0.0	0.0	6.4	7.1	6.4	12	3.7	1.1	0.0	0.0	0.0	0.0
18	0.0	0.0	1.7	6.5	6.1	8.6	3.4	0.97	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	6.3	5.8	7.7	3.1	0.53	0.0	0.0	0.0	0.0
20	0.0	0.0	23	6.1	5.3	7.2	3.1	0.20	0.0	0.0	0.0	0.0
21	0.0	0.0	36	5.2	4.9	6.1	2.9	0.08	0.0	0.0	0.0	0.0
22	0.0	0.0	118	4.1	4.4	6.2	2.8	0.05	0.0	0.0	0.0	0.0
23	0.0	0.0	43	8.3	3.9	5.7	2.8	0.04	0.0	0.0	0.0	0.0
24	0.0	0.0	461	9.5	3.6	65	3.1	0.02	0.0	0.0	0.0	0.0
25	0.0	0.0	68	6.5	3.5	106	4.2	0.01	0.0	0.0	0.0	0.0
26	0.0	0.0	30	5.5	3.3	54	3.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	19	4.8	3.2	30	2.8	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	14	4.8	2.8	22	2.5	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	11	4.7	------	17	2.3	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	9.4	4.3	------	15	2.2	0.0	0.0	0.0	0.0	0.0
31	0.0	------	30	4.1	------	13	------	0.0	------	0.0	0.0	------
TOTAL	0	0	870.5	477.8	244.9	568.2	148.4	26.9	0	0	0	0
MEAN	0.00	0.00	28.08	15.41	8.75	18.33	4.95	0.87	0.00	0.00	0.00	0.00
MAX	0	0	461	146	48	106	12	2.2	0	0	0	0
MIN	0	0	0	4.1	2.8	2.9	2.2	0	0	0	0	0
AC-FT	0.0	0.0	1726.6	947.7	485.8	1127.0	294.3	53.4	0.0	0.0	0.0	0.0

TOTAL = 2336.7 CFS MEAN = 6.40 N/A MAX = 461 CFS
4,635 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 2280 CFS on DEC 24 560 CFS on JAN 6
523 CFS on DEC 22

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1987 - SEP 1988

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0		15	5.7	26	1.1	1.5	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	11	5.6	11	1.1	1.3	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	9.0	5.1	7.3	1.1	1.1	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	38	4.9	6.1	1.1	0.97	0.0	0.0	0.0	0.0
5	0.0	0.0	0.08	162	4.4	5.4	0.80	0.88	0.0	0.0	0.0	0.0
6	0.0	0.0	59	41	4.2	4.9	0.62	0.92	0.0	0.0	0.0	0.0
7	0.0	0.0	15	24	4.1	5.2	0.59	1.5	0.0	0.0	0.0	0.0
8	0.0	0.0	17	18	4.1	5.0	0.44	1.6	0.0	0.0	0.0	0.0
9	0.0	0.0	11	14	3.9	4.3	0.19	1.0	0.0	0.0	0.0	0.0
10	0.0	0.0	3.9	12	3.8	3.7	0.0	0.78	0.0	0.0	0.0	0.0
11	0.0	0.0	2.2	11	3.6	3.5	0.0	0.32	0.0	0.0	0.0	0.0
12	0.0	0.0	1.4	8.2	3.5	3.2	0.0	0.17	0.0	0.0	0.0	0.0
13	0.0	0.0	1.3	6.8	3.6	3.1	0.0	0.16	0.0	0.0	0.0	0.0
14	0.0	0.0	1.1	5.8	3.6	3.2	0.84	0.11	0.0	0.0	0.0	0.0
15	0.0	0.0	0.96	5.7	3.4	3.2	1.2	0.03	0.0	0.0	0.0	0.0
16	0.0	0.0	3.3	6.9	3.4	3.4	0.66	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	3.4	236	3.1	3.4	0.44	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	1.8	60	3.1	3.5	0.34	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	1.4	31	2.9	3.2	4.4	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	1.0	21	2.6	2.9	15	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.84	17	2.6	3.1	5.4	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.77	14	2.6	2.8	2.8	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.76	12	2.5	2.7	12	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.97	10	2.4	2.3	7.9	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	1.0	9.1	2.4	1.9	4.6	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.92	8.4	2.3	1.8	3.6	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.99	7.8	3.3	1.7	2.9	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	40	7.1	7.1	1.3	2.6	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	103	6.7	52	1.4	2.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	52	6.6	------	1.5	1.7	0.0	0.0	0.0	0.0	0.0
31	0.0	------	23	6.4	------	1.2	------	0.0	------	0.0	0.0	-----
TOTAL	0	0	348.09	841.5	155.8	133.2	75.42	12.34	0	0	0	0
MEAN	0.00	0.00	11.60	27.15	5.37	4.30	2.51	0.40	0.00	0.00	0.00	0.00
MAX	0	0	103	236	52	26	15	1.6	0	0	0	0
MIN	0	0	0	5.7	2.3	1.2	0	0	0	0	0	0
AC-FT	0.0	0.0	690.4	1669.1	309.0	264.2	149.6	24.5	0.0	0.0	0.0	0.0

TOTAL = 1566.4 CFS MEAN = 4.29 N/A MAX = 236 CFS
3,107 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 666 CFS on JAN 17 259 CFS on DEC 29
523 CFS on JAN 4 323 CFS on DEC 6

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1986 - SEP 1987

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	1.1	4.4	4.8	2.5	0.38	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.89	4.2	4.4	1.8	0.07	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	1.4	4.1	4.3	1.7	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	14	1.1	4.1	4.1	1.4	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	1.6	0.79	264	4.2	1.1	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	1.0	0.60	284	4.0	0.95	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	4.9	0.31	116	3.6	0.98	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	3.2	0.28	67	3.3	1.1	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	1.8	1.7	49	3.2	1.2	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	1.2	41	40	2.8	1.2	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.97	24	37	2.5	1.2	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.83	12	35	2.6	1.3	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.62	935	61	2.4	1.2	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.60	376	43	2.2	1.2	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.62	303	43	2.1	1.2	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.49	252	30	2.1	1.4	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.33	222	21	1.9	1.4	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.35	205	12	1.7	1.4	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.37	189	9.9	1.6	1.5	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.28	180	9.1	1.5	1.4	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.14	15	26	1.4	1.5	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.01	8.5	16	1.3	1.4	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.25	7.4	13	1.5	1.4	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.38	7.1	11	1.7	1.3	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.13	6.5	9.4	1.7	1.2	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	6.1	7.9	1.6	1.2	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	5.3	7.1	1.5	1.2	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	1.9	5.1	6.6	1.6	1.1	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	1.2	------	5.8	1.5	0.90	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	1.3	------	5.3	3.7	0.78	0.0	0.0	0.0	0.0
31	0.0	------	0.0	1.3	------	4.8	------	0.61	------	0.0	0.0	------
TOTAL	0	0	0	39.77	2808.2	1250.7	76.8	39.72	0.45	0	0	0
MEAN	0.00	0.00	0.00	1.28	100.29	40.35	2.56	1.28	0.02	0.00	0.00	0.00
MAX	0	0	0	14	935	284	4.8	2.5	0.38	0	0	0
MIN	0	0	0	0	0.28	4.1	1.3	0.61	0	0	0	0
AC-FT	0.0	0.0	0.0	78.9	5569.9	2480.7	152.3	78.8	0.9	0.0	0.0	0.0

TOTAL = 4215.6 CFS MEAN = 11.55 N/A MAX = 935 CFS
8,362 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 2110 CFS on FEB 13 608 CFS on MAR 5

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon

Stream Gauge Station #14

Water Year OCT 1985 - SEP 1986

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	1.0	0.91	34	31	19	5.7	1.7	0.83	0.0	0.0
2	0.0	0.0	208	0.66	63	29	17	5.7	1.7	0.74	0.0	0.0
3	0.0	0.0	74	0.66	49	27	16	5.7	1.7	0.74	0.0	0.0
4	0.0	0.0	13	407	43	24	15	5.7	1.7	0.66	0.0	0.0
5	0.0	0.0	6.3	477	32	22	16	5.7	1.7	0.57	0.0	0.0
6	0.0	0.0	3.6	96	27	20	18	5.7	1.7	0.49	0.0	0.0
7	0.0	0.0	2.7	41	24	24	16	5.7	1.7	0.46	0.0	0.0
8	0.0	0.0	2.3	25	22	543	14	5.1	1.7	0.46	0.0	0.0
9	0.0	0.0	1.9	17	20	222	13	5.1	1.7	0.44	0.0	0.0
10	0.0	0.0	1.3	13	17	530	12	5.1	1.3	0.41	0.0	0.0
11	0.0	0.0	1.1	11	17	209	11	5.1	1.3	0.39	0.0	0.0
12	0.0	0.0	0.91	9.6	991	322	10	5.1	1.3	0.36	0.0	0.0
13	0.0	0.0	0.83	8.7	1106	239	9.6	5.1	1.3	0.33	0.0	0.0
14	0.0	0.0	0.66	10	833	160	9.6	5.1	1.3	0.31	0.0	0.0
15	0.0	0.0	0.57	13	357	707	9.6	5.1	1.3	0.28	0.0	0.0
16	0.0	0.0	0.57	8.7	241	409	9.1	5.1	1.2	0.26	0.0	0.0
17	0.0	0.0	0.57	7.2	530	214	8.7	5.1	1.1	0.23	0.0	0.0
18	0.0	0.0	0.57	7.2	940	155	8.2	5.1	1.0	0.22	0.0	0.0
19	0.0	0.0	0.66	6.7	574	110	7.7	5.1	1.1	0.21	0.0	0.0
20	0.0	0.0	0.66	6.3	214	96	8.2	4.5	1.1	0.20	0.0	0.0
21	0.0	0.0	0.66	5.4	140	70	6.7	3.9	1.0	0.19	0.0	0.0
22	0.0	0.0	0.57	5.1	104	58	6.7	3.6	1.0	0.17	0.0	0.0
23	0.0	0.0	0.57	5.1	80	49	6.7	3.3	1.0	0.0	0.0	0.0
24	0.0	0.0	0.46	4.5	65	43	6.7	3.3	1.0	0.0	0.0	0.0
25	0.0	2.0	0.44	4.5	52	35	6.3	3.3	1.0	0.0	0.0	0.0
26	0.0	0.14	0.41	4.2	48	33	6.0	3.3	1.0	0.0	0.0	0.0
27	0.0	0.0	0.39	3.9	38	29	6.0	2.7	0.91	0.0	0.0	0.0
28	0.0	0.0	0.39	3.9	34	27	6.0	2.5	0.91	0.0	0.0	0.0
29	0.0	27	0.41	3.6	-----	25	6.0	2.1	0.83	0.0	0.0	0.0
30	0.0	4.2	1.3	9.6	-----	23	6.0	1.9	0.91	0.0	0.0	0.0
31	0.0	-----	1.5	83	-----	22	-----	1.9	-----	0.0	0.0	-----
TOTAL	0	33.34	328.3	1299.4	6695	4507	310.8	137.4	38.16	8.95	0	0
MEAN	0.00	1.11	10.59	41.92	239.11	145.39	10.36	4.43	1.27	0.29	0.00	0.00
MAX	0	27	208	477	1106	707	19	5.7	1.7	0.83	0	0
MIN	0	0	0.39	0.66	17	20	6	1.9	0.83	0	0	0
AC-FT	0.0	66.1	651.2	2577.4	13279.3	8939.5	616.5	272.5	75.7	17.8	0.0	0.0

TOTAL = 13358 CFS MEAN = 36.60 N/A MAX = 1106 CFS
26,496 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 3186 CFS on FEB 12 3515 CFS on FEB 13
2850 CFS on FEB 14 1864 CFS on FEB 17
1576 CFS on FEB 19 3178 CFS on MAR 15

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1984 - SEP 1985

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	9.1	5.7	1.9	5.1	21	3.6	0.49	0.0	0.0	0.0
2	0.0	0.0	9.1	5.1	3.6	5.1	18	3.3	0.57	0.0	0.0	0.0
3	0.0	0.0	7.7	4.5	2.5	4.8	16	3.1	0.66	0.0	0.0	0.0
4	0.0	0.0	5.7	3.9	2.1	4.5	15	2.7	0.49	0.0	0.0	0.0
5	0.0	0.0	6.0	3.9	1.7	4.8	13	2.3	0.44	0.0	0.0	0.0
6	0.0	0.0	7.2	3.6	1.7	8.2	13	1.9	0.39	0.0	0.0	0.0
7	0.0	0.0	7.2	4.8	2.3	33	11	1.9	0.31	0.0	0.0	0.0
8	0.0	0.0	7.2	14	628	11	10	2.1	0.23	0.0	0.0	0.0
9	0.0	0.0	7.2	7.2	145	7.7	9.6	1.9	0.19	0.0	0.0	0.0
10	0.0	0.0	48	5.4	56	9.6	9.1	1.9	0.14	0.0	0.0	0.0
11	0.0	0.0	25	4.8	36	24	8.2	1.7	0.12	0.0	0.0	0.0
12	0.0	0.0	13	4.5	23	28	7.2	1.7	0.10	0.0	0.0	0.0
13	0.0	7.5	11	3.9	21	16	6.3	1.5	0.09	0.0	0.0	0.0
14	0.0	0.13	213	3.6	17	12	6.0	1.3	0.06	0.0	0.0	0.0
15	0.0	0.12	82	3.3	15	10	6.0	1.1	0.03	0.0	0.0	0.0
16	0.0	0.39	30	3.1	13	9.6	6.0	1.1	0.01	0.0	0.0	0.0
17	0.0	10	52	2.9	12	8.2	6.0	1.1	0.0	0.0	0.0	0.0
18	0.0	2.9	86	2.9	10	11	6.0	1.0	0.0	0.0	0.0	0.0
19	0.0	0.41	72	2.9	10	9.6	5.4	1.0	0.0	0.0	0.0	0.0
20	0.0	0.14	36	2.7	9.6	8.2	5.1	1.0	0.0	0.0	0.0	0.0
21	0.0	0.12	24	2.5	8.2	7.2	6.3	0.83	0.0	0.0	0.0	0.0
22	0.0	0.09	18	2.3	7.2	6.3	5.4	0.49	0.0	0.0	0.0	0.0
23	0.0	0.06	15	2.1	6.7	6.0	5.1	0.66	0.0	0.0	0.0	0.0
24	0.0	32	12	2.1	6.3	5.4	4.8	0.66	0.0	0.0	0.0	0.0
25	0.0	13	12	2.1	6.0	5.1	4.5	0.66	0.0	0.0	0.0	0.0
26	0.0	10	11	1.9	5.7	19	4.2	0.66	0.0	0.0	0.0	0.0
27	0.0	103	9.1	1.7	5.4	226	3.9	0.74	0.0	0.0	0.0	0.0
28	0.0	125	7.7	2.5	5.1	114	3.6	0.66	0.0	0.0	0.0	0.0
29	0.0	28	6.7	2.7	-----	51	3.6	0.57	0.0	0.0	0.0	0.0
30	0.0	14	6.7	2.1	-----	35	3.6	0.57	0.0	0.0	0.0	0.0
31	0.0	-----	6.0	1.7	-----	28	-----	0.57	-----	0.0	0.0	-----
TOTAL	0	346.86	862.6	116.4	1062	733.4	242.9	44.27	4.32	0	0	0
MEAN	0.00	11.56	27.83	3.75	37.93	23.66	8.10	1.43	0.14	0.00	0.00	0.00
MAX	0	125	213	14	628	226	21	3.6	0.66	0	0	0
MIN	0	0	5.7	1.7	1.7	4.5	3.6	0.49	0	0	0	0
AC-FT	0.0	688.0	1710.9	230.9	2106.4	1454.7	481.8	87.8	8.6	0.0	0.0	0.0

TOTAL = 3412.8 CFS MEAN = 9.35 N/A MAX = 628 CFS
6,769 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 1024 CFS on NOV 27 1480 CFS on DEC 14
2970 CFS on FEB 8

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1983 - SEP 1984

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.1	0.41	19	142	**	**	**	**	0.0	0.0	0.0	0.0
2	0.49	0.26	16	41	**	**	**	**	0.0	0.0	0.0	0.0
3	0.28	0.21	142	36	**	**	**	**	0.0	0.0	0.0	0.0
4	0.22	0.19	60	**	**	**	**	**	0.0	0.0	0.0	0.0
5	0.22	0.15	36	**	**	**	**	**	0.0	0.0	0.0	0.0
6	0.22	0.13	30	**	**	**	**	**	0.0	0.0	0.0	0.0
7	0.21	0.06	25	**	**	**	**	**	0.0	0.0	0.0	0.0
8	0.21	0.01	22	**	**	**	**	**	0.0	0.0	0.0	0.0
9	0.21	0.06	208	**	**	**	**	**	0.0	0.0	0.0	0.0
10	0.20	32	78	**	**	**	**	**	0.0	0.0	0.0	0.0
11	0.15	196	192	**	**	**	**	**	0.0	0.0	0.0	0.0
12	0.14	43	96	**	**	**	**	**	0.0	0.0	0.0	0.0
13	0.13	44	63	**	**	**	**	**	0.0	0.0	0.0	0.0
14	0.13	28	53	**	**	**	**	**	0.0	0.0	0.0	0.0
15	0.13	11	47	**	**	**	**	**	0.0	0.0	0.0	0.0
16	0.13	8.7	39	**	**	**	**	**	0.0	0.0	0.0	0.0
17	0.13	202	35	**	**	**	**	**	0.0	0.0	0.0	0.0
18	0.12	80	32	**	**	**	**	**	0.0	0.0	0.0	0.0
19	0.07	43	27	**	**	**	**	**	0.0	0.0	0.0	0.0
20	0.06	130	25	**	**	**	**	**	0.0	0.0	0.0	0.0
21	0.07	58	22	**	**	**	**	**	0.0	0.0	0.0	0.0
22	0.0	34	20	**	**	**	**	**	0.0	0.0	0.0	0.0
23	0.0	27	**	**	**	**	**	**	0.0	0.0	0.0	0.0
24	0.0	679	**	**	**	**	**	**	0.0	0.0	0.0	0.0
25	0.0	142	**	**	**	**	**	**	0.0	0.0	0.0	0.0
26	0.0	65	**	**	**	**	**	**	0.0	0.0	0.0	0.0
27	0.0	43	**	**	**	**	**	**	0.0	0.0	0.0	0.0
28	0.0	32	36	**	**	**	**	**	0.0	0.0	0.0	0.0
29	0.0	26	80	**	**	**	**	**	0.0	0.0	0.0	0.0
30	0.0	22	63	**	-----	**	**	**	0.0	0.0	0.0	0.0
31	0.26	-----	55	**	-----	**	-----	**	-----	0.0	0.0	-----
TOTAL	8.88	1947.2	1521	219	**	**	**	**	0	0	0	0
MEAN	0.29	64.91	58.50	73.00	**	**	**	**	0.00	0.00	0.00	0.00
MAX	5.1	679	208	142	**	**	**	**	0	0	0	0
MIN	0	0.01	16	36	**	**	**	**	0	0	0	0
AC-FT	17.6	3862.2	3016.9	434.4	**	**	**	**	0.0	0.0	0.0	0.0

TOTAL** = 3696.1 CFS MEAN** = 17.43 N/A MAX = 679 CFS
7,331 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 830 CFS on NOV 11 865 CFS on NOV 17
232 CFS on NOV 19 2497 CFS on NOV 24
594 CFS on DEC 3 800 CFS on DEC 9
570 CFS on DEC 11

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1982 - SEP 1983

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	104	17	27	492	86	**	**	21	20	0.0
2	0.0	0.0	40	17	27	897	78	**	**	20	20	0.0
3	0.0	0.0	22	15	16	377	68	**	**	20	20	0.0
4	0.0	0.0	15	15	12	313	63	**	**	20	20	0.0
5	0.0	0.0	11	14	10	262	58	**	**	20	20	0.0
6	0.0	0.0	8.7	13	364	217	53	**	**	20	20	0.0
7	0.0	0.0	7.7	11	573	241	49	**	**	20	20	0.0
8	0.0	0.0	5.7	10	309	174	47	**	11	20	20	0.0
9	0.0	6.1	4.5	10	44	142	44	**	11	20	20	0.0
10	0.0	2.7	3.9	9.6	43	118	41	**	12	20	20	0.0
11	0.0	0.74	3.1	8.7	24	104	40	**	13	20	20	0.0
12	0.0	0.20	2.9	8.2	421	92	39	**	13	20	20	0.0
13	0.0	0.0	2.7	7.7	155	480	36	**	11	20	20	0.0
14	0.0	0.0	2.1	6.7	168	196	33	**	16	20	**	0.0
15	0.0	0.0	5.1	6.3	122	140	32	**	15	20	**	0.0
16	0.0	0.0	4.8	6.3	25	343	20	**	16	20	**	0.0
17	0.0	0.0	5.4	6.3	17	196	29	**	17	20	**	0.0
18	0.0	0.0	4.8	51	36	226	78	**	15	19	**	0.0
19	0.0	0.0	4.2	58	15	158	80	**	17	19	**	0.0
20	0.0	0.0	4.2	14	10	244	167	**	18	19	**	0.0
21	0.0	0.0	53	11	8.2	241	193	**	18	19	**	0.0
22	0.0	0.0	920	621	6.0	355	88	**	19	19	**	0.0
23	0.0	0.0	14	202	6.0	300	108	**	19	19	**	0.0
24	0.0	3.9	76	521	5.4	319	147	**	20	19	**	0.0
25	0.0	3.9	48	122	174	226	**	**	20	19	**	0.0
26	0.0	2.9	34	297	118	179	**	**	20	19	**	0.0
27	0.0	2.7	27	538	353	182	**	**	20	19	**	0.0
28	0.0	20	22	142	299	152	**	**	20	19	**	0.0
29	0.0	387	17	163	-----	125	**	**	20	19	**	0.0
30	15	730	16	84	-----	112	**	**	19	19	**	18
31	0.83	-----	13	53	-----	98	-----	**	-----	19	0.0	-----
TOTAL	15.83	1160.1	1501.8	3058.8	3387.6	7701	1677	**	380	607	260	18
MEAN	0.51	38.67	48.45	98.67	120.99	248.42	69.88	**	16.52	19.58	18.57	0.60
MAX	15	730	920	621	573	897	193	**	20	21	20	18
MIN	0	0	2.1	6.3	5.4	92	20	**	11	19	0	0
AC-FT	31.4	2301.1	2978.8	6067.0	6719.2	15274.7	3326.3	**	753.7	1204.0	515.7	35.7

TOTAL** = 19767 CFS MEAN** = 65.02 N/A MAX = 920 CFS
39,208 AC-FT MIN = 0 CFS

MAX Instantaneour Flow -			
2467 CFS on NOV 30	1857 CFS on DEC 22		
1927 CFS on JAN 22	1983 CFS on JAN 24		
2152 CFS on JAN 26	2280 CFS on FEB 7		
1754 CFS on FEB 27	2557 CFS on MAR 2		

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1981 - SEP 1982
Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	5.7	270	21	196	229	19	5.1	1.5	0.0	0.0
2	0.0	0.0	4.5	153	18	264	135	17	5.1	1.3	0.0	0.0
3	0.0	0.0	3.6	73	16	94	228	16	4.8	1.3	0.0	0.0
4	0.0	0.0	2.9	381	14	61	150	15	4.5	1.2	0.0	0.0
5	0.0	0.0	2.5	594	11	48	100	14	4.2	1.0	0.0	0.0
6	0.0	0.0	2.1	142	9.7	39	82	14	3.9	0.91	0.0	0.0
7	0.0	0.0	1.7	76	8.7	36	65	13	3.6	0.83	0.0	0.0
8	0.0	0.0	1.3	52	8.2	35	54	13	3.4	0.83	0.0	0.0
9	0.0	0.0	1.2	38	7.3	27	48	11	3.4	0.66	0.0	0.0
10	0.0	0.0	1.3	29	11	25	517	11	3.4	0.49	0.0	0.0
11	0.0	0.0	1.2	23	7.7	53	1164	9.7	3.4	0.46	0.0	0.0
12	0.0	0.0	1.1	19	6.3	38	329	9.7	3.1	0.46	0.0	0.0
13	0.0	0.0	1.3	15	6.0	28	191	9.2	2.9	0.44	0.0	0.0
14	0.0	215	1.0	13	6.8	47	137	8.7	2.9	0.41	0.0	0.0
15	0.0	24	1.0	12	78	39	104	8.2	2.7	0.39	0.0	0.0
16	0.0	24	0.91	5.1	415	116	69	7.7	2.7	0.31	0.0	0.0
17	0.0	96	0.74	4.5	88	158	51	7.3	2.7	0.23	0.0	0.0
18	0.0	26	0.66	3.6	50	147	46	7.3	2.7	0.20	0.0	0.0
19	0.0	9.7	0.66	3.6	37	92	44	6.8	2.7	0.15	0.0	0.0
20	0.0	5.1	137	76	29	71	42	6.3	2.5	0.12	0.0	0.0
21	0.0	3.1	62	69	24	58	39	6.3	2.5	0.07	0.0	0.0
22	0.0	2.3	21	31	20	48	38	6.3	2.5	0.03	0.0	0.0
23	0.0	1.5	14	20	16	44	37	6.0	2.3	0.0	0.0	0.0
24	0.0	2.3	9.7	16	15	39	31	6.0	2.1	0.0	0.0	0.0
25	0.0	1.5	7.7	13	13	36	29	6.0	1.9	0.0	0.0	0.0
26	0.0	1.5	6.8	61	12	62	27	6.0	1.7	0.0	0.0	0.0
27	0.0	30	5.7	43	11	65	24	6.0	1.5	0.0	0.0	0.0
28	0.0	55	5.4	84	9.7	75	22	5.7	1.3	0.0	0.0	0.0
29	0.0	16	318	46	-----	138	20	6.0	1.5	0.0	0.0	0.0
30	0.0	8.7	227	32	-----	104	19	5.7	1.5	0.0	0.0	0.0
31	0.0	-----	198	26	-----	472	-----	5.7	-----	0.0	0.0	-----
TOTAL	0	521.7	1047.7	2423.8	969.4	2755	4071	289.6	88.5	13.29	0	0
MEAN	0.00	17.39	33.80	78.19	34.62	88.87	135.70	9.34	2.95	0.43	0.00	0.00
MAX	0	215	318	594	415	472	1164	19	5.1	1.5	0	0
MIN	0	0	0.66	3.6	6	25	19	5.7	1.3	0	0	0
AC-FT	0.0	1034.8	2078.0	4807.5	1922.8	5464.5	8074.7	574.4	175.5	26.4	0.0	0.0

TOTAL = 12180 CFS MEAN = 33.37 N/A MAX = 1164 CFS
24,159 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 870 CFS on DEC 31 115 CFS on JAN 20
158 CFS on JAN 26 183 CFS on JAN 28
830 CFS on MAR 1 403 CFS on MAR 29
1330 CFS on 1800 345 CFS on APR 3

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1980 - SEP 1981

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AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	14	50	19	4.2	1.1	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	10	29	17	3.9	1.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	7.7	16	16	3.9	1.0	0.0	0.0	0.0
4	0.0	0.0	1.2	0.0	6.0	93	14	3.4	0.83	0.0	0.0	0.0
5	0.0	0.0	0.03	0.0	5.1	116	12	3.4	0.74	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	4.5	52	12	3.4	0.66	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	3.9	36	11	3.4	0.66	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	5.1	27	10	3.1	0.49	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	115	21	9.7	2.9	0.41	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	42	18	9.2	2.9	0.36	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	25	16	8.7	2.7	0.33	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	18	14	8.2	2.7	0.28	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	14	14	7.7	2.7	0.21	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	11	12	7.3	2.7	0.16	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	9.7	11	6.8	2.5	0.01	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	8.7	11	6.8	2.3	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	7.3	9.2	6.3	1.9	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	5.7	15	7.3	1.9	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	5.4	369	9.7	1.9	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	4.8	106	7.3	1.7	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	3.9	502	6.3	1.5	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.02	3.9	142	6.0	1.5	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	20	3.6	78	5.4	1.3	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	1.9	3.9	55	5.4	1.3	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.74	5.1	47	5.4	1.3	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.14	4.8	47	4.8	1.3	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	136	3.6	38	4.8	1.3	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	76	6.3	30	4.2	1.3	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	207	-----	27	4.2	1.2	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	54	-----	23	3.9	1.1	0.0	0.0	0.0	0.0
31	0.0	-----	0.0	25	-----	20	-----	1.1	-----	0.0	0.0	-----
TOTAL	0	0	1.23	520.8	358	2044.2	256.4	71.7	8.24	0	0	0
MEAN	0.00	0.00	0.04	16.80	12.79	65.94	8.55	2.31	0.27	0.00	0.00	0.00
MAX	0	0	1.2	207	115	502	19	4.2	1.1	0	0	0
MIN	0	0	0	0	3.6	9.2	3.9	1.1	0	0	0	0
AC-FT	0.0	0.0	2.4	1033.0	710.1	4054.6	508.6	142.2	16.3	0.0	0.0	0.0

TOTAL = 3260.6 CFS
6,467 AC-FT

MEAN = 8.93 N/A

MAX = 502 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 925 CFS on JAN 27 765 CFS on JAN 29
1180 CFS on MAR 19 1350 CFS on MAR 21

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1979 - SEP 1980

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	73	**	69	13	5.7	1.9	0.46	0.0	0.0
2	0.0	0.0	0.0	22	**	123	12	5.1	1.9	0.49	0.0	0.0
3	0.0	0.0	0.0	12	**	317	12	4.8	1.9	0.66	0.0	0.0
4	0.0	0.0	0.0	8.2	**	135	11	4.5	1.7	0.46	0.0	0.0
5	0.0	0.0	0.0	6.0	**	296	29	4.5	1.5	0.39	0.0	0.0
6	0.0	0.0	0.0	4.8	**	235	19	4.2	1.3	0.36	0.0	0.0
7	0.0	0.0	0.0	4.2	**	137	13	3.9	1.3	0.33	0.0	0.0
8	0.0	0.0	0.0	3.6	**	114	11	3.6	1.2	0.33	0.0	0.0
9	0.0	0.0	0.0	8.2	**	94	11	4.5	1.2	0.31	0.0	0.0
10	0.0	0.0	0.0	88	**	82	9.7	8.7	1.1	0.28	0.0	0.0
11	0.0	0.0	0.0	839	**	71	9.2	5.1	1.0	0.26	0.0	0.0
12	0.0	0.0	0.0	1156	**	61	8.2	4.5	0.91	0.22	0.0	0.0
13	0.0	0.0	0.0	667	**	55	7.7	4.5	0.91	0.21	0.0	0.0
14	0.0	0.0	0.0	775	**	51	7.7	4.2	0.83	0.22	0.0	0.0
15	0.0	0.0	0.0	**	82	48	6.8	3.9	0.83	0.22	0.0	0.0
16	0.0	0.0	0.0	**	553	44	6.0	3.6	0.74	0.20	0.0	0.0
17	0.0	0.0	0.0	**	724	42	6.0	3.4	0.74	0.17	0.0	0.0
18	0.0	0.0	0.0	**	478	39	6.0	3.1	0.74	0.15	0.0	0.0
19	0.0	0.0	0.0	**	523	36	6.0	3.1	0.74	0.13	0.0	0.0
20	0.0	0.0	0.0	**	412	34	6.0	3.1	0.74	0.13	0.0	0.0
21	0.0	0.0	0.0	**	474	31	6.0	3.1	0.66	0.12	0.0	0.0
22	0.0	0.0	0.0	**	263	29	6.0	3.1	0.57	0.07	0.0	0.0
23	0.0	0.0	0.0	**	183	26	6.0	2.9	0.46	0.0	0.0	0.0
24	0.0	0.0	107	**	135	24	5.7	2.7	0.46	0.0	0.0	0.0
25	0.0	0.0	37	**	108	22	5.4	2.7	0.44	0.0	0.0	0.0
26	0.0	0.0	5.7	**	88	20	5.1	2.5	0.44	0.0	0.0	0.0
27	0.0	0.0	2.5	**	110	18	5.1	2.5	0.39	0.0	0.0	0.0
28	0.0	0.0	1.2	**	112	17	6.3	2.3	0.39	0.0	0.0	0.0
29	0.0	0.0	0.83	**	82	16	6.0	2.1	0.41	0.0	0.0	0.0
30	0.0	0.0	92	**	-----	16	5.7	2.1	0.44	0.0	0.0	0.0
31	0.0	-----	160	**	-----	14	-----	2.1	-----	0.0	0.0	-----
TOTAL	0	0	406.23	3667	4327	2316	267.63	116.1	27.85	6.17	0	0
MEAN	0.00	0.00	13.10	261.93	288.47	74.71	8.92	3.75	0.93	0.20	0.00	0.00
MAX	0	0	160	1156	724	317	29	8.7	1.9	0.66	0	0
MIN	0	0	0	3.6	82	14	5.1	2.1	0.39	0	0	0
AC-FT	0.0	0.0	805.7	7273.4	8582.5	4593.7	530.8	230.3	55.2	12.2	0.0	0.0

TOTAL** = 11134 CFS
22,084 AC-FT

MEAN** = 33.24 N/A

MAX = 1156 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 2040 CFS on JAN 11; 2110 CFS on JAN 12
3020 CFS on JAN 14; 2850 CFS on FEB 16
2480 CFS on FEB 17

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1978 - SEP 1979

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	**	**	**	**	158	**	**	9.2	2.9	0.28	0.0	0.0
2	**	**	**	**	121	**	**	8.7	2.9	0.31	0.0	0.0
3	**	**	**	**	92	**	**	9.2	2.7	0.33	0.0	0.0
4	**	**	**	**	**	**	**	8.7	2.7	0.28	0.0	0.0
5	**	**	**	**	**	**	**	8.2	2.7	0.26	0.0	0.0
6	**	**	**	**	**	**	28	8.2	2.7	0.26	0.0	0.0
7	**	**	**	**	**	**	26	**	2.5	0.22	0.0	0.0
8	**	**	**	58	**	**	24	**	2.5	0.20	0.0	0.0
9	**	**	**	102	**	**	22	**	2.3	0.17	0.0	0.0
10	**	**	**	22	**	**	20	**	1.9	0.16	0.0	0.0
11	**	**	**	20	**	**	18	**	1.5	0.14	0.0	0.0
12	**	**	**	19	**	**	16	**	1.5	0.13	0.0	0.0
13	**	**	**	18	252	**	16	**	1.5	0.07	0.0	0.0
14	**	**	**	386	269	**	15	**	1.2	0.06	0.0	0.0
15	**	**	**	372	110	**	14	**	1.0	0.10	0.0	0.0
16	**	**	**	112	119	**	13	**	1.0	0.07	0.0	0.0
17	**	**	**	78	**	**	14	5.1	0.91	0.04	0.0	0.0
18	**	**	35	80	**	**	12	5.1	0.91	0.0	0.0	0.0
19	**	**	30	**	**	**	12	5.1	0.83	0.0	0.0	0.0
20	**	**	**	**	320	**	11	5.1	0.74	0.0	0.0	0.0
21	**	**	11	**	321	**	11	5.1	0.66	0.0	0.0	0.0
22	**	**	**	**	205	**	2.9	4.8	0.49	0.0	0.0	0.0
23	**	**	**	**	185	**	10	4.5	0.49	0.0	0.0	0.0
24	**	**	**	**	**	**	10	3.9	0.23	0.0	0.0	0.0
25	**	**	**	**	**	**	10	3.6	0.23	0.0	0.0	0.0
26	**	**	**	**	**	159	13	3.6	0.41	0.0	0.0	0.0
27	**	**	**	**	**	315	16	3.6	0.39	0.0	0.0	0.0
28	**	**	**	**	**	410	11	3.4	0.36	0.0	0.0	0.0
29	**	**	**	**	-----	338	10	3.1	0.31	0.0	0.0	0.0
30	**	**	**	110	-----	123	9.7	2.9	0.28		0.0	0.0
31	**	-----	**	331	-----	**	-----	2.7	-----	0.0	0.0	-----
TOTAL	**	**	76	1708	2152	1345	364.6	113.8	40.74	3.08	0	0
MEAN	**	**	25.33	131.38	195.64	269.00	14.58	5.42	1.36	0.10	0.00	0.00
MAX	**	**	35	386	321	410	28	9.2	2.9	0.33	0	0
MIN	**	**	11	18	92	123	2.9	2.7	0.23	0	0	0
AC-FT	**	**	150.7	3387.8	4268.4	2667.8	723.2	225.7	80.8	6.1	0.0	0.0

TOTAL** = 5803.2 CFS MEAN** = 29.16 N/A MAX = 410 CFS
11,511 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 1706 CFS on JAN 14 1057 CFS on JAN 31
2046 CFS on FEB 20 930 CFS on MAR 28
1132 CFS on MAR 28 1029 CFS on MAR 29

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1977 - SEP 1978

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	43	32	41	50	23	6.0	2.3	1.2	0.83
2	0.0	0.0	0.0	93	30	142	39	21	6.0	2.1	1.2	0.91
3	0.0	0.0	0.0	145	29	256	32	20	5.7	2.1	1.2	1.1
4	0.0	0.0	0.0	188	27	532	104	19	5.7	2.1	1.1	1.9
5	0.0	0.0	0.0	543	75	338	47	16	5.4	1.9	1.1	4.5
6	0.0	0.0	0.0	291	72	174	63	16	5.1	1.9	1.1	3.1
7	0.0	0.0	0.0	117	496	121	69	15	4.8	1.9	1.0	2.7
8	0.0	0.0	0.0	76	637	96	50	14	4.5	1.9	0.91	2.5
9	0.0	0.0	0.0	404	947	150	37	13	4.2	1.9	0.91	2.3
10	0.0	0.0	0.0	271	573	108	31	13	4.2	1.9	0.91	2.1
11	0.0	0.0	0.0	130	285	86	28	12	4.2	1.7	0.91	2.1
12	0.0	0.0	0.0	92	605	73	25	12	3.9	1.7	0.0	1.9
13	0.0	0.0	0.0	211	400	61	22	11	3.9	1.7	0.91	1.9
14	0.0	0.0	0.0	982	250	55	20	11	3.9	1.5	0.91	1.7
15	0.0	0.0	0.0	549	183	48	149	11	3.6	1.5	0.91	1.7
16	0.0	0.0	0.0	1056	140	43	106	11	3.6	1.3	0.91	1.5
17	0.0	0.0	253	375	110	39	58	10	3.6	1.3	0.91	1.5
18	0.0	0.0	56	244	86	36	44	10	3.4	1.3	0.91	1.3
19	0.0	0.0	6.8	351	69	34	39	10	3.4	1.3	0.83	1.3
20	0.0	0.0	3.4	197	58	32	36	9.7	3.1	1.3	0.83	1.3
21	0.0	0.0	2.9	145	48	37	32	9.7	3.1	1.3	0.83	1.3
22	0.0	0.0	27	114	44	264	29	9.7	2.9	1.3	0.83	1.2
23	0.0	0.0	693	88	39	86	26	9.2	2.9	1.3	0.74	1.2
24	0.0	0.0	52	69	36	61	26	8.7	2.7	1.3	0.74	1.1
25	0.0	0.0	7.7	57	34	51	96	8.2	2.7	1.2	0.74	1.1
26	0.0	0.0	5.1	52	31	46	46	7.7	2.5	1.2	0.74	1.0
27	0.0	0.0	684	47	29	41	36	7.3	2.5	1.2	0.74	1.0
28	0.0	0.0	308	43	30	38	35	6.8	2.5	1.2	0.74	0.91
29	0.0	0.0	194	41	-----	38	26	6.8	2.5	1.2	0.74	0.91
30	0.0	0.0	90	38	-----	41	25	6.3	2.3	1.2	0.74	0.83
31	0.0	-----	55	36	-----	74	-----	6.0	-----	1.2	0.83	-----
TOTAL	0	0	2437.9	7088	5395	3242	1426	364.1	114.8	48.2	27.07	48.69
MEAN	0.00	0.00	78.64	228.65	192.68	104.58	47.53	11.75	3.83	1.55	0.87	1.62
MAX	0	0	693	1056	947	532	149	23	6	2.3	1.2	4.5
MIN	0	0	0	36	27	32	20	6	2.3	1.2	0	0.83
AC-FT	0.0	0.0	4835.5	14058.8	10700.8	6430.4	2828.4	722.2	227.7	95.6	53.7	96.6

TOTAL = 20192 CFS MEAN = 55.32 N/A MAX = 1056 CFS
40,050 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 2302 CFS on DEC 23 2167 CFS on DEC 27
2081 CFS on JAN 5 2647 CFS on JAN 14
4550 CFS on JAN 16 2520 CFS on FEB 7

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
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AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	3.6	0.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	88	0.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	47	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	1.3	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	1.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.91	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.83	0.0	0.91	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.74	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.66	0.0	0.39	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.57	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.36	-----	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.33	-----	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	-----	16	0.31	-----	0.0	-----	0.0	-----	0.0	0.0	-----
TOTAL	0	0	16	291.29	0.6	12.72	0	0	0	0	0	0
MEAN	0.00	0.00	0.52	9.40	0.02	0.41	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0	0	16	88	0.28	7.2	0	0	0	0	0	0
MIN	0	0	0	0.31	0	0	0	0	0	0	0	0
AC-FT	0.0	0.0	31.7	577.8	1.2	25.2	0.0	0.0	0.0	0.0	0.0	0.0

TOTAL = 320.61 CFS MEAN = 0.88 N/A MAX = 88 CFS
636 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 444 CFS on JAN 2 90 CFS on JAN 6

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
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AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	0.0	48	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	64	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	41	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	12	0.10	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	6.0	0.66	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	3.6	0.49	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	2.7	0.41	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	3.2	2.3	0.36	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	1.0	1.9	0.23	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	1.5	1.5	0.21	0.0	0.0	0.0	0.0	0.0
11	0.36	0.0	0.0	0.0	0.33	1.3	0.26	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.01	1.3	0.23	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	1.2	0.26	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	1.1	0.26	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	1.0	0.23	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	1.0	0.22	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.91	0.20	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.83	0.12	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.83	0.01	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.74	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.66	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.66	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.57	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.46	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	31	0.0	0.0	0.0	0.0	0.0	0.0	1.4
30	0.0	0.0	0.0	0.0	-----	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	-----	0.0	0.0	-----	0.0	-----	0.0	-----	0.0	0.0	-----
TOTAL	0.36	0	0	0	37.04	196.79	4.25	0	0	0	0	1.4
MEAN	0.01	0.00	0.00	0.00	1.28	6.35	0.14	0.00	0.00	0.00	0.00	0.05
MAX	0.36	0	0	0	31	64	0.66	0	0	0	0	1.4
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0.7	0.0	0.0	0.0	73.5	390.3	8.4	0.0	0.0	0.0	0.0	2.8

TOTAL = 239.84 CFS   MEAN = 0.66 N/A   MAX = 64 CFS
476 AC-FT   MIN = 0 CFS

MAX Instantaneour Flow - 275 CFS on FEB 29   254 CFS on MAR 1
188 CFS on MAR 76

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1974 - SEP 1975

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	5.7	146	14	20	9.7	3.4	1.0	0.0	0.0
2	0.0	0.0	0.0	5.1	555	13	17	9.2	3.4	0.91	0.0	0.0
3	0.0	0.0	175	4.2	122	12	16	8.7	3.1	0.91	0.0	0.0
4	0.0	0.0	106	3.9	188	12	16	8.2	3.1	0.83	0.0	0.0
5	0.0	0.0	11	3.4	74	16	56	8.2	3.1	0.74	0.0	0.0
6	0.0	0.0	4.5	3.4	30	51	31	7.7	2.9	0.66	0.0	0.0
7	0.0	0.0	2.9	3.4	19	423	23	7.7	2.9	0.57	0.0	0.0
8	0.0	0.0	2.1	4.5	154	243	20	7.7	2.7	0.46	0.0	0.0
9	0.0	0.0	1.7	3.6	412	100	16	7.7	2.7	0.41	0.0	0.0
10	0.0	0.0	1.3	2.9	309	138	14	7.3	2.5	0.36	0.0	0.0
11	0.0	0.0	1.2	2.7	140	84	14	6.8	2.5	0.31	0.0	0.0
12	0.0	0.0	1.2	2.5	84	48	12	6.3	2.5	0.28	0.0	0.0
13	0.0	0.0	1.1	2.3	194	72	12	6.3	2.3	0.33	0.0	0.0
14	0.0	0.0	1.0	2.1	121	64	11	6.0	2.3	0.39	0.0	0.0
15	0.0	0.0	1.0	1.9	76	38	11	5.7	2.3	0.44	0.0	0.0
16	0.0	0.0	1.0	1.9	59	91	15	5.7	2.3	0.44	0.0	0.0
17	0.0	0.0	0.91	1.9	47	42	11	5.4	2.3	0.39	0.0	0.0
18	0.0	0.0	0.91	1.7	41	31	11	5.4	2.3	0.36	0.0	0.0
19	0.0	0.0	0.91	1.7	36	24	9.7	5.4	2.1	0.28	0.0	0.0
20	0.0	0.0	0.83	1.5	32	20	9.2	5.1	2.1	0.23	0.0	0.0
21	0.0	0.0	0.83	1.5	27	100	8.7	4.8	1.9	0.17	0.0	0.0
22	0.0	0.0	0.91	1.5	24	267	8.2	4.5	1.9	0.12	0.0	0.0
23	0.0	0.0	1.0	1.5	23	82	7.7	4.2	1.9	0.03	0.0	0.0
24	0.0	0.0	1.0	1.5	21	57	19	4.2	1.7	0.0	0.0	0.0
25	0.0	0.0	1.0	1.5	19	69	34	3.9	1.5	0.0	0.0	0.0
26	0.0	0.0	1.0	1.5	18	46	16	3.9	1.5	0.0	0.0	0.0
27	0.0	0.0	2.6	1.5	16	36	12	3.9	1.3	0.0	0.0	0.0
28	0.0	0.0	110	1.5	16	30	11	3.6	1.3	0.0	0.0	0.0
29	0.0	0.0	37	1.5	-----	27	11	3.6	1.2	0.0	0.0	0.0
30	0.0	0.0	15	1.5	-----	23	9.7	3.6	1.1	0.0	0.0	0.0
31	0.0	-----	8.2	2.3	-----	21	-----	3.4	-----	0.0	0.0	-----
TOTAL	0	0	493.1	77.6	3003	2294	482.2	183.8	68.1	10.62	0	0
MEAN	0.00	0.00	15.91	2.50	107.25	74.00	16.07	5.93	2.27	0.34	0.00	0.00
MAX	0	0	175	5.7	555	423	56	9.7	3.4	1	0	0
MIN	0	0	0	1.5	16	12	7.7	3.4	1.1	0	0	0
AC-FT	0.0	0.0	978.0	153.9	5956.4	4550.1	956.4	364.6	135.1	21.1	0.0	0.0

TOTAL = 6612.4 CFS
13,116 AC-FT

MEAN = 18.12 N/A

MAX = 555 CFS
MIN = 0 CFS

MAX Instantaneour Flow -

795 CFS on DEC 3		1934 CFS on FEB 2		
660 CFS on FEB 8		705 CFS on FEB 8		
795 CFS on FEB 10		407 CFS on FEB 13		
1222 CFS on MAR 7		945 CFS on MAR 22		

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1973 - SEP 1974

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	340	35	9.9	1195	585	3.1	1.2	0.13	0.0	0.0
2	0.0	0.0	24	23	9.5	483	263	3.1	1.1	0.11	0.0	0.0
3	0.0	0.0	14	96	9.0	161	67	3.0	1.0	0.09	0.0	0.0
4	0.0	0.0	11	798	9.0	52	34	2.9	0.99	0.08	0.0	0.0
5	0.0	0.0	9.0	265	9.0	27	23	2.9	0.93	0.06	0.0	0.0
6	0.0	0.0	8.7	1124	8.7	19	16	2.7	0.87	0.04	0.0	0.0
7	0.0	0.0	8.1	1592	8.1	210	12	2.7	0.81	0.02	0.0	0.0
8	0.0	0.0	7.4	382	7.8	86	9.5	2.6	0.75	0.0	0.0	0.0
9	0.0	0.0	7.4	95	7.8	29	9.5	2.6	0.71	0.0	0.0	0.0
10	0.0	0.0	7.1	43	7.4	21	7.8	2.5	0.68	0.0	0.0	0.0
11	0.0	0.0	6.8	29	6.8	17	7.4	2.3	0.64	0.0	0.0	0.0
12	0.0	9.9	6.8	38	5.9	14	6.8	2.2	0.60	0.0	0.0	0.0
13	0.0	6.5	8.1	26	5.9	12	6.8	2.1	0.57	0.0	0.0	0.0
14	0.0	4.4	8.1	18	5.9	9.5	6.5	2.0	0.53	0.0	0.0	0.0
15	0.0	3.0	7.4	16	5.9	8.4	6.2	1.9	0.49	0.0	0.0	0.0
16	0.0	46	7.1	194	5.9	7.8	5.9	1.9	0.45	0.0	0.0	0.0
17	0.0	200	7.1	682	5.9	6.5	5.7	1.8	0.42	0.0	0.0	0.0
18	0.0	60	7.1	138	5.9	6.5	5.5	1.8	0.38	0.0	0.0	0.0
19	0.0	17	7.1	78	6.2	6.5	5.5	1.7	0.36	0.0	0.0	0.0
20	0.0	16	7.1	55	5.7	6.2	5.3	1.7	0.34	0.0	0.0	0.0
21	0.0	16	224	36	5.5	5.7	5.1	1.6	0.32	0.0	0.0	0.0
22	0.0	68	145	26	5.5	5.7	4.6	1.6	0.30	0.0	0.0	0.0
23	0.0	27	23	22	5.3	5.5	4.2	1.5	0.28	0.0	0.0	0.0
24	0.0	15	20	18	5.3	5.3	4.0	1.5	0.27	0.0	0.0	0.0
25	0.0	16	19	16	5.3	5.5	3.8	1.4	0.25	0.0	0.0	0.0
26	0.0	13	19	15	5.3	7.1	3.7	1.4	0.23	0.0	0.0	0.0
27	0.0	13	255	13	5.3	23	3.4	1.3	0.21	0.0	0.0	0.0
28	0.0	12	56	12	5.3	691	3.4	1.3	0.19	0.0	0.0	0.0
29	0.0	12	29	11	-----	49	3.3	1.2	0.17	0.0	0.0	0.0
30	0.0	12	24	11	-----	405	3.3	1.2	0.15	0.0	0.0	0.0
31	0.0	-----	31	10	-----	55	-----	1.2	-----	0.0	0.0	-----
TOTAL	0	566.8	1354.4	5917	189	3635.2	1127.2	62.7	16.19	0.53	0	0
MEAN	0.00	18.89	43.69	190.87	6.75	117.26	37.57	2.02	0.54	0.02	0.00	0.00
MAX	0	200	340	1592	9.9	1195	585	3.1	1.2	0.13	0	0
MIN	0	0	6.8	10	5.3	5.3	3.3	1.2	0.15	0	0	0
AC-FT	0.0	1124.2	2686.4	11736.2	374.9	7210.3	2235.8	124.4	32.1	1.1	0.0	0.0

TOTAL = 12869 CFS MEAN = 35.26 N/A MAX = 1592 CFS
25,525 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 2110 CFS on JAN 6 3414 CFS on MAR 1
2602 CFS on JAN 6 3207 CFS on MAR 1
2595 CFS on JAN 7 3071 CFS on MAR 28
2182 CFS on JAN 7

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1972 - SEP 1973

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	9.0	9.0	26	170	23	7.0	8.6	7.6	0.0	0.0
2	0.0	0.0	9.0	9.0	20	98	22	8.8	8.6	7.4	0.0	0.0
3	0.0	0.0	9.8	9.0	18	82	20	8.8	8.6	7.4	0.0	0.0
4	0.0	0.55	24	8.8	16	82	19	8.8	8.6	7.4	0.0	0.0
5	0.0	0.01	12	8.8	20	61	17	8.8	8.4	7.4	0.0	0.0
6	0.0	0.0	12	8.6	641	205	17	8.8	8.4	7.4	0.0	0.0
7	0.0	0.0	17	8.6	555	69	16	8.8	8.4	7.2	0.0	0.0
8	0.0	0.0	18	20	118	127	15	8.6	8.4	7.2	0.0	0.0
9	0.0	0.0	13	375	69	64	15	8.6	8.4	7.2	0.0	0.0
10	0.0	0.0	12	95	416	49	14	8.6	8.4	7.2	0.0	0.0
11	0.0	44	11	35	728	157	13	8.6	8.2	7.0	0.0	0.0
12	0.0	12	11	26	566	64	18	8.6	8.2	7.0	0.0	0.0
13	0.0	81	11	22	340	52	12	8.4	8.2	7.0	0.0	0.0
14	0.0	832	10	19	218	43	12	8.4	8.2	7.0	0.0	0.0
15	0.0	667	9.8	17	105	35	12	8.4	8.2	7.0	0.0	0.0
16	0.0	391	9.8	918	265	31	11	8.4	8.2	7.0	0.0	0.0
17	13	179	9.8	121	189	28	11	8.4	8.2	7.0	0.0	0.0
18	2.5	49	9.4	1437	49	26	11	8.4	8.2	7.0	0.0	0.0
19	0.0	31	9.4	121	41	95	11	8.4	8.2	7.0	0.0	0.0
20	0.0	22	9.4	49	33	234	10	8.4	8.0	7.0	0.0	0.0
21	0.0	19	9.0	32	30	244	10	8.2	8.0	7.0	0.0	0.0
22	0.0	16	9.8	23	28	103	9.8	8.2	8.0	7.0	0.0	0.0
23	0.0	15	9.4	19	26	69	9.8	8.2	7.8	6.8	0.0	0.0
24	0.0	13	9.0	16	46	53	9.4	8.8	7.8	0.0	0.0	0.0
25	0.0	12	9.0	15	30	45	9.4	8.8	7.8	0.0	0.0	0.0
26	0.0	12	9.0	13	290	39	9.4	8.8	7.8	0.0	0.0	0.0
27	0.0	11	9.0	13	933	35	9.4	8.8	7.6	0.0	0.0	0.0
28	0.0	11	9.0	12	536	31	9.0	8.8	7.6	0.0	0.0	0.0
29	0.0	9.8	9.0	54	-----	28	9.0	8.8	7.6	0.0	0.0	0.0
30	0.0	9.4	9.0	163	-----	26	9.0	8.8	7.6	0.0	0.0	0.0
31	0.0	-----	9.4	41	-----	25	-----	8.8	-----	0.0	0.0	-----
TOTAL	15.5	2436.8	337	3717.8	6352	2470	393.2	265	244.2	164.2	0	0
MEAN	0.50	81.23	10.87	119.93	226.86	79.68	13.11	8.55	8.14	5.30	0.00	0.00
MAX	13	832	24	1437	933	244	23	8.8	8.6	7.6	0	0
MIN	0	0	9	8.6	16	25	9	7	7.6	0	0	0
AC-FT	30.7	4833.2	668.4	7374.1	12599.0	4899.2	779.9	525.6	484.4	325.7	0.0	0.0

TOTAL = 16396 CFS
32,520 AC-FT

MEAN = 44.92 N/A

MAX = 1437 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 3644 CFS on JAN 16
4600 CFS on JAN 18
2086 CFS on NOV 14
2190 CFS on NOV 15
960 CFS on JAN 9
1076 CFS on JAN 30
1206 CFS on FEB 6
2269 CFS on FEB 11
1720 CFS on FEB 12
2346 CFS on FEB 27
1225 CFS on MAR 6
1225 CFS on MAR 19
1225 CFS on MAR 21

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1971 - SEP 1972

Latitude - 35° 36' 37" **Longitude - 121° 04' 30"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	20	12	12	8.2	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	18	12	12	8.2	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	16	12	12	7.9	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	16	12	12	7.9	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	15	185	12	7.6	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	14	75	11	7.6	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	14	33	11	7.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	13	25	11	7.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	13	22	11	7.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	13	19	11	6.2	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	12	17	11	8.4	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	12	16	11	8.9	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	12	16	12	9.1	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	12	15	9.6	8.6	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	12	15	9.3	8.2	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	12	16	9.3	7.9	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	12	16	9.3	7.6	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	12	14	9.3	7.3	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	11	14	9.1	7.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	11	13	9.1	6.4	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	11	13	8.9	6.2	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	114	11	13	8.9	5.8	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	158	11	13	8.9	3.1	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	249	11	13	8.9	3.4	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	394	12	13	8.9	2.8	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	272	12	12	8.9	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	432	12	12	8.6	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	139	15	12	8.6	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	45	14	12	8.6	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	30	13	-----	8.6	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	-----	24	13	-----	8.6	-----	0.0	-----	0.0	0.0	-----
TOTAL	0	0	1855.6	404.7	671.6	310.4	175.3	0	0	0	0	0
MEAN	0.00	0.00	59.86	13.05	23.16	10.01	5.84	0.00	0.00	0.00	0.00	0.00
MAX	0	0	432	20.4	185	12	9.1	0	0	0	0	0
MIN	0	0	0	11	12	8.6	0	0	0	0	0	0
AC-FT	0.0	0.0	3680.5	802.7	1332.1	615.7	347.7	0.0	0.0	0.0	0.0	0.0

TOTAL = 3417.6 CFS
6,779 AC-FT

MEAN = 9.34 N/A

MAX = 432 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 1370 CFS on DEC 25 1000 CFS on DEC 26

San Luis Obispo County
Flood Control and Water Conservation District

Upper San Simeon
Stream Gauge Station #14
Water Year OCT 1970 - SEP 1971

Latitude - 35° 36' 37'' **Longitude - 121° 04' 30''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	726	24	15	11	11	9.1	7.3	0.0	0.0	0.0
2	0.0	0.0	485	22	15	11	11	9.6	7.3	0.0	0.0	0.0
3	0.0	0.0	129	20	15	12	11	9.3	7.0	0.0	0.0	0.0
4	0.0	0.0	61	19	14	12	11	8.9	7.0	0.0	0.0	0.0
5	0.0	0.0	46	19	14	11	10	8.9	7.0	0.0	0.0	0.0
6	0.0	0.0	38	18	14	11	10	8.9	6.8	0.0	0.0	0.0
7	0.0	0.0	33	17	14	11	10	8.9	6.8	0.0	0.0	0.0
8	0.0	0.0	54	16	14	11	10	8.9	6.8	0.0	0.0	0.0
9	0.0	0.0	38	16	13	11	9.9	8.6	6.6	0.0	0.0	0.0
10	0.0	0.0	30	16	13	11	9.9	8.6	6.6	0.0	0.0	0.0
11	0.0	0.0	28	71	13	11	9.6	8.4	6.6	0.0	0.0	0.0
12	0.0	0.0	26	108	13	21	9.6	8.4	6.6	0.0	0.0	0.0
13	0.0	0.0	24	76	13	24	9.6	8.4	6.6	0.0	0.0	0.0
14	0.0	0.0	24	51	13	12	15	8.4	6.4	0.0	0.0	0.0
15	0.0	0.0	22	38	13	12	11	8.2	6.2	0.0	0.0	0.0
16	0.0	0.0	93	33	12	11	10	7.9	6.0	0.0	0.0	0.0
17	0.0	0.0	63	30	13	11	11	7.6	5.8	0.0	0.0	0.0
18	0.0	0.0	495	27	12	11	10	7.6	5.8	0.0	0.0	0.0
19	0.0	0.0	298	25	12	11	9.9	7.6	5.4	0.0	0.0	0.0
20	0.0	0.0	286	24	12	11	9.6	7.6	5.2	0.0	0.0	0.0
21	0.0	0.0	655	22	12	11	9.6	7.6	5.0	0.0	0.0	0.0
22	0.0	0.0	157	20	12	11	9.3	7.3	4.6	0.0	0.0	0.0
23	0.0	0.0	75	20	12	11	9.3	7.3	4.6	0.0	0.0	0.0
24	0.0	6.0	56	19	12	11	9.3	7.3	3.8	0.0	0.0	0.0
25	0.0	42	45	19	12	11	9.3	7.3	3.6	0.0	0.0	0.0
26	0.0	65	41	17	11	62	9.1	7.0	0.90	0.0	0.0	0.0
27	0.0	14	38	17	11	28	9.1	7.0	0.20	0.0	0.0	0.0
28	0.0	648	34	16	11	15	9.1	8.6	0.20	0.0	0.0	0.0
29	0.0	710	30	16	-----	13	9.1	8.2	0.10	0.0	0.0	0.0
30	0.0	188	27	16	-----	12	9.1	7.6	0.10	0.0	0.0	0.0
31	0.0	-----	25	16	-----	12	-----	7.6	-----	0.0	0.0	-----
TOTAL	0	1673.1	4180.7	867.3	361.4	445.9	301.4	252.6	152.9	0	0	0
MEAN	0.00	55.77	134.86	27.98	12.91	14.38	10.05	8.15	5.10	0.00	0.00	0.00
MAX	0	710	726	108	15.2	62	15	9.6	7.3	0	0	0
MIN	0	0	22.3	15.6	11	11	9.1	7	0.1	0	0	0
AC-FT	0.0	3318.5	8292.3	1720.3	716.8	884.4	597.8	501.0	303.3	0.0	0.0	0.0

TOTAL = 8235.3 CFS   MEAN = 22.56 N/A   MAX = 726 CFS
16,334 AC-FT   MIN = 0 CFS

MAX Instantaneour Flow - 1900 CFS on NOV 28   2230 CFS on NOV 29
1837 CFS on DEC 1   1303 CFS on DEC 18
2346 CFS on DEC 21

Stream Gauge Station Information

Station Name -	Lower San Simeon
Station Number -	22
USGS Number -	11142300
USGS Start -	1987
USGS End -	1989
Latitude -	35° 35' 59"
Longitude -	121° 06' 47"
Drainage Area -	26.30
Location Description -	Near Cambria, California.
Remarks -	

What year(s) did USGS have control of this gage.

Location Format Example -
For: 120° 20' 05"
Type: 1202005

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 2002 - SEP 2003
Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	23	212	50	**	**	**	**	**	**	**
2	0.0	0.0	16	108	49	**	**	**	**	**	**	**
3	0.0	0.0	11	75	49	**	**	**	**	**	**	**
4	0.0	0.0	11	59	48	**	**	**	**	**	**	**
5	0.0	0.0	4.0	50	47	**	**	**	**	**	**	**
6	0.0	0.0	2.3	47	46	**	**	**	**	**	**	**
7	0.0	0.0	0.38	77	44	**	**	**	**	**	**	**
8	0.0	0.0	0.17	329	43	**	**	**	**	**	**	**
9	0.0	0.0	0.04	175	42	**	**	**	**	**	**	**
10	0.0	0.0	0.01	114	42	**	**	**	**	**	**	**
11	0.0	0.0	0.02	102	42	**	**	**	**	**	**	**
12	0.0	0.0	0.03	71	42	**	**	**	**	**	**	**
13	0.0	0.0	0.05	58	43	**	**	**	**	**	**	**
14	0.0	0.0	0.03	48	47	**	**	**	**	**	**	**
15	0.0	0.0	0.02	43	49	**	**	**	**	**	**	**
16	0.0	572	0.01	40	51	**	**	**	**	**	**	**
17	0.0	269	0.0	40	50	**	**	**	**	**	**	**
18	0.0	60	0.0	37	50	**	**	**	**	**	**	**
19	0.0	40	0.0	30	49	**	**	**	**	**	**	**
20	0.0	36	0.0	371	49	**	**	**	**	**	**	**
21	0.0	32	0.0	160	48	**	**	**	**	**	**	**
22	0.0	31	0.0	106	49	**	**	**	**	**	**	**
23	0.0	30	0.0	93	52	**	**	**	**	**	**	**
24	0.0	29	0.0	87	54	**	**	**	**	**	**	**
25	0.0	31	7.6	69	57	**	**	**	**	**	**	**
26	0.0	28	490	57	60	**	**	**	**	**	**	**
27	0.0	26	512	56	62	**	**	**	**	**	**	**
28	0.0	28	139	57	**	**	**	**	**	**	**	**
29	0.0	30	76	55	------	**	**	**	**	**	**	**
30	0.0	26	249	54	------	**	**	**	**	**	**	**
31	0.0	------	205	52	------	**	------	**	------	**	**	------
TOTAL	0	1268	1746.7	2932	1314	**	**	**	**	**	**	**
MEAN	0.00	42.27	56.34	94.58	48.67	**	**	**	**	**	**	**
MAX	0	572	512	371	62	**	**	**	**	**	**	**
MIN	0	0	0	30	42	**	**	**	**	**	**	**
AC-FT	0.0	2515.0	3464.4	5815.5	2606.3	**	**	**	**	**	**	**

TOTAL** = 7260.7 CFS MEAN** = 48.40 N/A MAX = 572 CFS
14,401 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 2540 CFS on NOV 16 4900 CFS on DEC 26

MIN Instantaneous Flow - 2040 CFS on JAN 20

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 2001 - SEP 2002

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	155	507	0.32	0.76	14	8.8	0.22	0.0	0.0	0.0
2	0.0	0.0	30	588	0.34	0.66	14	8.5	0.0	0.0	0.0	0.0
3	0.0	0.0	21	143	0.27	0.84	13	7.4	0.0	0.0	0.0	0.0
4	0.0	0.0	18	98	0.24	1.2	11	6.5	0.0	0.0	0.0	0.0
5	0.0	0.0	15	71	0.18	1.8	11	5.6	0.0	0.0	0.0	0.0
6	0.0	0.0	14	53	0.14	12	9.3	4.3	0.0	0.0	0.0	0.0
7	0.0	0.0	13	45	0.34	62	7.9	5.5	0.0	0.0	0.0	0.0
8	0.0	0.0	12	31	0.27	23	6.2	5.8	0.0	0.0	0.0	0.0
9	0.0	0.0	11	23	0.26	15	6.6	6.1	0.0	0.0	0.0	0.0
10	0.0	0.0	10	20	0.23	11	7.3	6.0	0.0	0.0	0.0	0.0
11	0.0	0.0	10	17	0.24	10	8.0	5.4	0.0	0.0	0.0	0.0
12	0.0	0.0	32	16	0.24	11	8.0	5.6	0.0	0.0	0.0	0.0
13	0.0	93	15	14	0.24	11	8.3	5.6	0.0	0.0	0.0	0.0
14	0.0	0.04	13	12	0.25	11	8.3	5.7	0.0	0.0	0.0	0.0
15	0.0	0.0	13	11	0.75	11	8.5	5.4	0.0	0.0	0.0	0.0
16	0.0	0.0	15	8.3	6.5	12	8.4	4.4	0.0	0.0	0.0	0.0
17	0.0	0.0	13	7.3	1.2	12	8.4	3.2	0.0	0.0	0.0	0.0
18	0.0	0.0	16	7.1	0.75	15	8.5	1.6	0.0	0.0	0.0	0.0
19	0.0	0.0	130	6.9	0.77	25	8.2	0.70	0.0	0.0	0.0	0.0
20	0.0	0.0	68	5.8	1.0	16	7.5	2.1	0.0	0.0	0.0	0.0
21	0.0	0.0	76	4.8	0.95	14	6.4	6.9	0.0	0.0	0.0	0.0
22	0.0	0.0	51	4.1	0.77	12	5.3	6.3	0.0	0.0	0.0	0.0
23	0.0	0.0	37	1.6	0.81	11	5.2	6.4	0.0	0.0	0.0	0.0
24	0.0	0.02	30	0.90	1.0	31	5.8	6.5	0.0	0.0	0.0	0.0
25	0.0	111	28	0.80	1.6	21	6.5	5.8	0.0	0.0	0.0	0.0
26	0.0	8.1	24	0.57	0.78	14	7.5	4.8	0.0	0.0	0.0	0.0
27	0.0	3.9	25	0.87	0.79	13	8.6	4.0	0.0	0.0	0.0	0.0
28	0.0	94	102	0.70	1.1	12	8.9	2.5	0.0	0.0	0.0	0.0
29	0.0	24	160	0.53	------	13	8.6	1.5	0.0	0.0	0.0	0.0
30	0.0	236	160	0.37	------	13	9.0	1.2	0.0	0.0	0.0	0.0
31	0.0	------	89	0.33	------	13	------	0.54	------	0.0	0.0	------
TOTAL	0	570.06	1406	1700	22.33	429.26	254.2	150.64	0.22	0	0	0
MEAN	0.00	19.00	45.35	54.84	0.80	13.85	8.47	4.86	0.01	0.00	0.00	0.00
MAX	0	236	160	588	6.5	62	14	8.8	0.22	0	0	0
MIN	0	0	10	0.33	0.14	0.66	5.2	0.54	0	0	0	0
AC-FT	0.0	1130.7	2788.8	3371.8	44.3	851.4	504.2	298.8	0.4	0.0	0.0	0.0

TOTAL = 4532.7 CFS MEAN = 12.42 N/A MAX = 588 CFS
8,990 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 3000 CFS on JAN 2

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 2000 - SEP 2001

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	9.2	29	11	6.3	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	8.1	26	11	5.4	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	6.9	23	10	3.4	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	6.2	616	9.6	1.2	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	6.4	299	9.3	0.67	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	5.8	321	10	0.43	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	5.3	154	44	0.34	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	4.0	96	16	0.29	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	12	74	12	0.24	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	47	58	11	0.20	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	193	318	47	10	0.15	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	109	99	41	9.9	0.10	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	25	86	35	9.7	0.08	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	12	60	31	9.3	0.02	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	4.9	49	29	9.7	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	1.5	43	27	9.5	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.92	40	24	8.8	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.96	47	23	8.2	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	1.1	262	21	9.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	1.3	122	19	9.4	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	1.5	79	17	17	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	2.2	75	16	11	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	116	83	15	9.4	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	43	687	14	8.6	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	118	398	14	8.1	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	45	139	13	7.5	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	29	71	12	7.5	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	21	42	12	7.6	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	15	------	12	7.3	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	13	------	11	6.8	0.0	0.0	0.0	0.0	0.0
31	0.0	------	0.0	11	------	11	------	0.0	------	0.0	0.0	------
TOTAL	0	0	0	764.38	2810.9	2140	328.2	18.82	0	0	0	0
MEAN	0.00	0.00	0.00	24.66	100.39	69.03	10.94	0.61	0.00	0.00	0.00	0.00
MAX	0	0	0	193	687	616	44	6.3	0	0	0	0
MIN	0	0	0	0	4	11	6.8	0	0	0	0	0
AC-FT	0.0	0.0	0.0	1516.1	5575.3	4244.6	651.0	37.3	0.0	0.0	0.0	0.0

TOTAL = 6062.3 CFS
12,024 AC-FT

MEAN = 16.61 N/A

MAX = 687 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 582 CFS on JAN 11 2180 CFS on FEB 24
2600 CFS on MAR 4

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon

Stream Gauge Station #22

Water Year OCT 1999 - SEP 2000

Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	**	108	6.8	6.6	0.65	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	**	94	5.9	6.2	0.43	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	**	85	5.5	6.1	0.51	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	**	77	5.2	5.9	0.46	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	**	111	4.2	5.4	0.45	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	**	83	3.2	5.2	0.39	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	77	80	3.0	5.8	0.38	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	66	246	2.3	6.3	0.45	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	62	151	1.7	6.6	0.50	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	486	109	1.8	6.3	0.48	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	568	87	1.2	6.1	0.47	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	627	81	0.70	6.0	0.48	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	2590	69	5.3	5.6	0.54	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	1220	62	8.0	5.3	0.48	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	302	57	7.4	6.3	0.22	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	322	48	6.8	5.4	0.15	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	168	47	90	4.5	0.19	0.0	0.0	0.0
18	0.0	0.0	0.0	138	113	53	33	3.1	0.21	0.0	0.0	0.0
19	0.0	0.0	0.0	44	89	52	18	2.3	0.16	0.0	0.0	0.0
20	0.0	0.0	0.0	46	174	50	15	1.8	0.02	0.0	0.0	0.0
21	0.0	0.0	0.0	36	324	42	13	1.6	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	16	166	48	11	1.2		0.0	0.0	0.0
23	0.0	0.0	0.0	408	487	30	12	1.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	282	160	18	10	1.3	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	**	116	18	9.9	2.3	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	**	93	16	10	2.2	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	**	416	14	9.1	2.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	**	146	12	8.5	2.1	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	**	135	10	7.6	1.7	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	**	------	9.2	7.2	0.96	0.0	0.0	0.0	0.0
31	0.0	------	0.0	**	------	7.9	------	1.0	------	0.0	0.0	------
TOTAL	0	0	0	970	8907	1975.1	323.3	124.16	7.62	0	0	0
MEAN	0.00	0.00	0.00	40.42	387.26	63.71	10.78	4.01	0.26	0.00	0.00	0.00
MAX	0	0	0	408	2590	246	90	6.6	0.65	0	0	0
MIN	0	0	0	0	62	7.9	0.7	0.96	0	0	0	0
AC-FT	0.0	0.0	0.0	1924.0	17666.8	3917.6	641.3	246.3	15.1	0.0	0.0	0.0

TOTAL** = 12307 CFS MEAN** = 34.96 N/A MAX = 2590 CFS
24,411 AC-FT MIN = 0 CFS

MAX Instantaneour Flow -	1270 CFS on	JAN 23		5490 CFS on	FEB 13
	594 CFS on	FEB 21		863 CFS on	MAR 8
	1120 CFS on	FEB 10		1220 CFS on	FEB 23
	1760 CFS on	FEB 23		230 CFS on	APR 17

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1998 - SEP 1999

Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	11	0.0	45	13	23	13	2.4	0.01	0.0	0.0
2	0.0	0.0	0.79	0.0	29	12	19	13	3.2	0.0	0.0	0.0
3	0.0	0.0	0.26	0.0	24	13	17	12	4.3	0.0	0.0	0.0
4	0.0	0.0	0.28	0.0	18	12	16	12	3.5	0.0	0.0	0.0
5	0.0	0.0	0.21	0.0	15	12	24	11	4.0		0.0	0.0
6	0.0	0.0	5.5	0.0	12	13	38	11	5.0	0.0	0.0	0.0
7	0.0	0.0	0.90	0.0	497	12	22	8.5	4.4	0.0	0.0	0.0
8	0.0	0.0	0.40	0.0	335	12	23	7.5	2.6	0.0	0.0	0.0
9	0.0	0.0	0.36	0.0	600	36	20	7.3	1.9	0.0	0.0	0.0
10	0.0	0.0	0.33	0.0	158	24	18	7.6	1.6	0.0	0.0	0.0
11	0.0	0.0	0.31	0.0	93	27	286	7.3	1.4	0.0	0.0	0.0
12	0.0	0.0	0.29	0.0	67	22	90	6.8	1.1	0.0	0.0	0.0
13	0.0	0.0	0.27	0.0	51	20	55	6.3	0.95	0.0	0.0	0.0
14	0.0	0.0	0.25	0.0	40	20	46	5.8	0.76	0.0	0.0	0.0
15	0.0	0.0	0.25	0.0	31	60	35	5.5	0.68	0.0	0.0	0.0
16	0.0	0.0	0.24	0.0	26	44	30	4.6	0.75	0.0	0.0	0.0
17	0.0	0.0	0.25	0.0	23	34	28	3.5	0.83	0.0	0.0	0.0
18	0.0	0.0	0.26	0.0	19	28	24	2.9	0.86	0.0	0.0	0.0
19	0.0	0.0	0.26	50	18	157	23	2.5	1.1	0.0	0.0	0.0
20	0.0	0.0	0.26	705	17	178	21	2.8	1.3	0.0	0.0	0.0
21	0.0	0.0	0.26	85	18	292	19	2.9	1.9	0.0	0.0	0.0
22	0.0	0.0	0.29	37	16	105	16	3.9	1.1	0.0	0.0	0.0
23	0.0	0.0	0.29	79	16	150	15	4.0	0.62	0.0	0.0	0.0
24	0.0	0.0	0.27	59	16	80	15	4.9	0.50	0.0	0.0	0.0
25	0.0	0.0	0.26	35	20	436	16	5.8	0.48	0.0	0.0	0.0
26	0.0	0.0	0.27	70	17	104	16	5.5	0.37	0.0	0.0	0.0
27	0.0	0.0	0.26	53	16	65	17	5.0	0.34	0.0	0.0	0.0
28	0.0	0.0	0.23	32	14	47	16	4.5	0.30	0.0	0.0	0.0
29	0.0	0.0	0.08	25	------	40	17	4.0	0.14	0.0	0.0	0.0
30	0.0	4.5	0.03	20	------	33	14	2.4	0.08	0.0	0.0	0.0
31	0.0	----	0.0	128	------	31	------	2.3	------	0.0	0.0	------
TOTAL	0	4.5	24.91	1378	2251	2132	1019	196.1	48.46	0.01	0	0
MEAN	0.00	0.15	0.80	44.45	80.39	68.77	33.97	6.33	1.62	0.00	0.00	0.00
MAX	0	4.5	11	705	600	436	286	13	5	0.01	0	0
MIN	0	0	0	0	12	12	14	2.3	0.08	0	0	0
AC-FT	0.0	8.9	49.4	2733.2	4464.8	4228.8	2021.2	389.0	96.1	0.0	0.0	0.0

TOTAL = 7054 CFS
13,991 AC-FT

MEAN = 19.38 N/A

MAX = 705 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 2920 CFS on JAN 20
1140 CFS on FEB 7
1200 CFS on FEB 9
609 CFS on MAR 21
1510 CFS on MAR 25
853 CFS on APR 11

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon

Stream Gauge Station #22

Water Year OCT 1997 - SEP 1998

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	**	**	**	7.4	996	87	109	37	5.3	2.9	0.24	0.0
2	**	**	**	49	932	73	110	39	5.5	2.7	0.20	0.0
3	**	**	**	34	1150	66	111	36	4.2	2.7	0.16	0.0
4	**	**	**	64	389	59	113	38	1.4	2.4	0.0	0.0
5	**	**	**	40	177	63	99	215	1.2	2.8	0.0	0.0
6	**	**	**	27	524	78	78	63	1.1	2.6	0.0	0.0
7	**	**	**	23	1090	55	64	43	0.96	3.5	0.0	0.0
8	**	**	**	21	626	47	60	37	1.1	2.8	0.0	0.0
9	**	**	**	148	415	45	59	33	1.4	2.4	0.0	0.0
10	**	**	**	205	265	44	57	29	1.8	2.5	0.0	0.0
11	**	**	**	84	209	42	54	26	2.4	2.4	0.0	0.0
12	**	**	**	367	172	40	52	23	1.8	2.8	0.0	0.0
13	**	**	**	163	150	39	50	21	2.2	2.8	0.0	0.0
14	**	**	**	107	749	35	49	18	3.9	3.6	0.0	0.0
15	**	**	**	1000	290	32	47	16	5.1	3.0	0.0	0.0
16	**	**	**	263	777	31	45	14	6.0	1.6	0.0	0.0
17	**	**	**	135	440	29	43	12	5.3	1.0	0.0	0.0
18	**	**	**	101	222	27	41	10	5.2	0.84	0.0	0.0
19	**	**	**	**	565	26	40	7.8	5.7	0.51	0.0	0.0
20	**	**	**	**	238	25	39	6.2	6.0	0.43	0.0	0.0
21	**	**	**	**	552	25	37	4.1	5.5	0.37	0.0	0.0
22	**	**	15	**	395	24	35	2.1	5.2	0.56	0.0	0.0
23	**	**	12	**	355	24	34	1.4	4.6	0.63	0.0	0.0
24	**	**	11	**	222	148	35	1.2	4.8	0.47	0.0	0.0
25	**	**	9.9	**	162	52	35	1.0	3.7	0.52	0.0	0.0
26	**	**	9.1	**	129	68	36	0.92	2.5	0.39	0.0	0.0
27	**	**	8.3	**	108	74	36	0.80	2.2	0.46	0.0	0.0
28	**	**	7.9	**	97	545	37	2.4	2.4	0.34	0.0	0.0
29	**	**	7.8	**	------	45	37	4.5	2.2	0.31	0.0	0.0
30	**	**	7.6	**	------	49	37	5.0	2.6	0.31	0.0	0.0
31	**	-------	7.4	**	------	78	------	5.0	------	0.27	0.0	------
TOTAL	**	**	96	2838.4	12396	2075	1679	752.42	103.26	50.91	0.6	0
MEAN	**	**	9.60	157.69	442.71	66.94	55.97	24.27	3.44	1.64	0.02	0.00
MAX	**	**	15	1000	1150	545	113	215	6	3.6	0.24	0
MIN	**	**	7.4	7.4	97	24	34	0.8	0.96	0.27	0	0
AC-FT	**	**	190.4	5629.9	24587.1	4115.7	3330.2	1492.4	204.8	101.0	1.2	0.0

TOTAL** = 19992 CFS   MEAN** = 74.04 N/A   MAX = 1150 CFS
39,653 AC-FT   MIN = 0 CFS

MAX Instantaneour Flow - 1090 CFS on JAN 12   4660 CFS on FEB 3
4400 CFS on FEB 16   979 CFS on MAR 24
3290 CFS on JAN 15   4150 CFS on FEB 7
2860 CFS on FEB 19   1050 CFS on MAR 28

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1996 - SEP 1997
Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	25	**	28	**	**	0.78	0.0	0.0	0.0	0.0
2	0.0	0.0	23	**	24	**	**	0.74	0.0	0.0	0.0	0.0
3	0.0	0.0	22	**	**	**	**	0.68	0.0	0.0	0.0	0.0
4	0.0	0.0	21	**	**	**	**	0.34	0.0	0.0	0.0	0.0
5	0.0	0.0	45	**	**	**	**	0.25	0.0	0.0	0.0	0.0
6	0.0	0.0	35	**	**	**	**		0.0	0.0	0.0	0.0
7	0.0	0.0	26	**	**	**	**	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	26	**	**	**	**	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	593	**	**	**	**	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	1020	**	**	**	**	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	874	**	**	**	**	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	609	**	**	**	**	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	213	83	**	**	**	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	145	83	**	**	**	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	114	278	**	**	5.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.36	100	126	**	**	3.2	0.0	0.0	0.0	0.0	0.0
17	0.0	1200	103	115	**	**	2.1	0.0	0.0	0.0	0.0	0.0
18	0.0	161	93	104	**	**	2.1	0.0	0.0	0.0	0.0	0.0
19	0.0	81	82	93	**	**	4.5	0.0	0.0	0.0	0.0	0.0
20	0.0	129	**	131	**	**	4.7	0.0	0.0	0.0	0.0	0.0
21	0.0	400	**	476	**	**	3.0	0.0	0.0	0.0	0.0	0.0
22	0.0	232	**	485	**	**	3.7	0.0	0.0	0.0	0.0	0.0
23	0.0	109	**	401	**	**	2.7	0.0	0.0	0.0	0.0	0.0
24	0.0	81	**	121	**	**	1.6	0.0	0.0	0.0	0.0	0.0
25	0.0	62	**	965	**	**	2.0	0.0	0.0	0.0	0.0	0.0
26	0.0	50	**	617	**	**	0.71	0.0	0.0	0.0	0.0	0.0
27	0.0	43	**	227	**	**	0.87	0.0	0.0	0.0	0.0	0.0
28	0.0	41	**	95	**	**	1.4	0.0	0.0	0.0	0.0	0.0
29	**	39	**	59	------	**	1.8	0.0	0.0	0.0	0.0	0.0
30	**	38	**	43	------	**	1.3	0.0	0.0	0.0	0.0	0.0
31	**	------	**	36	------	**	------	0.0	------	0.0	0.0	------
TOTAL	0	2666.4	4169	4538	52	**	40.68	2.79	0	0	0	0
MEAN	0.00	88.88	219.42	238.84	26.00	**	2.54	0.09	0.00	0.00	0.00	0.00
MAX	0	1200	1020	965	28	**	5	0.78	0	0	0	0
MIN	0	0	21	36	24	**	0.71	0	0	0	0	0
AC-FT	0.0	5288.6	8269.1	9001.0	103.1	**	80.7	5.5	0.0	0.0	0.0	0.0

TOTAL** = 11469 CFS   MEAN** = 43.12 N/A   MAX = 1200 CFS
22,748 AC-FT   MIN = 0 CFS

MAX Instantaneour Flow - 2140 CFS on NOV 17   2560 CFS on DEC 10
965 CFS on JAN 25   1080 CFS on NOV 21
1950 CFS on DEC 11   1720 CFS on DEC 9
1110 CFS on DEC 12

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1995 - SEP 1996
Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	214	220	46	**	1.4	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	105	118	44	**	1.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	158	91	40	**	0.76	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	916	298	39	**	0.74	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	1030	297	39	**	0.39	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	163	127	37	**	0.41	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	119	**	36	4.8	0.50	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	95	**	37	5.6	0.63	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	77	**	37	5.0	0.41	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	63	**	36	4.7	0.19	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	53	**	35	4.9	0.12	0.0	0.0	0.0
12	0.0	0.0	0.23	0.0	46	**	34	5.0	0.28	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	39	**	34	4.7	0.34	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	33	**	33	5.0	0.37	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	28	**	33	5.3	0.27	0.0	0.0	0.0
16	0.0	0.0	0.0	132	28	**	49	8.8	0.23	0.0	0.0	0.0
17	0.0	0.0	0.0	30	25	**	49	6.5	0.25	0.0	0.0	0.0
18	0.0	0.0	0.0	43	21	**	62	5.7	0.21	0.0	0.0	0.0
19	0.0	0.0	0.0	132	1190	**	46	5.3	0.11	0.0	0.0	0.0
20	0.0	0.0	0.0	54	862	46	42	4.6	0.03	0.0	0.0	0.0
21	0.0	0.0	0.0	33	460	45	40	4.4	0.01	0.0	0.0	0.0
22	0.0	0.0	0.0	23	265	44	38	5.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	13	160	43	38	5.1	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	9.2	120	42	38	4.8	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	474	90	41	**	3.8		0.0	0.0	0.0
26	0.0	0.0	0.0	50	72	40	**	3.3	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	266	106	39	**	3.3	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	128	115	40	**	3.1	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	70	427	39	**	2.4	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	58	------	39	**	2.2	0.0	0.0	0.0	0.0
31	0.0	------	0.0	1210	------	39	------	1.6	------	0.0	0.0	------
TOTAL	0	0	0.23	2725.2	7080	1648	962	114.9	8.65	0	0	0
MEAN	0.00	0.00	0.01	87.91	244.14	91.56	40.08	4.60	0.30	0.00	0.00	0.00
MAX	0	0	0.23	1210	1190	298	62	8.8	1.4	0	0	0
MIN	0	0	0	0	21	39	33	1.6	0	0	0	0
AC-FT	0.0	0.0	0.5	5405.4	14043.0	3268.8	1908.1	227.9	17.2	0.0	0.0	0.0

TOTAL** = 12539 CFS MEAN** = 36.88 N/A MAX = 1210 CFS
24,871 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 2440 CFS on JAN 25 2240 CFS on FEB 5
1120 CFS on JAN 16 1230 CFS on JAN 27 3310 CFS on FEB 19
433 CFS on JAN 18 1210 CFS on JAN 31 1830 CFS on FEB 20
376 CFS on JAN 19 4780 CFS on FEB 4 1070 CFS on FEB 21

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1994 - SEP 1995

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	61	31	60	33	5.2	2.1	0.0	0.0
2	0.0	0.0	0.0	0.0	53	74	55	32	5.1	1.4	0.0	0.0
3	0.0	0.0	0.0	0.0	48	335	51	22	5.2	1.1	0.0	0.0
4	0.0	0.0	0.0	355	45	242	49	18	3.6	2.0	0.0	0.0
5	0.0	0.0	0.0	267	41	549	46	17	4.1	1.3	0.0	0.0
6	0.0	0.0	0.0	49	37	193	45	16	3.4	0.88	0.0	0.0
7	0.0	0.0	0.0	212	57	126	42	15	3.2	0.69	0.0	0.0
8	0.0	0.0	0.0	194	129	107	39	13	3.1	0.72	0.0	0.0
9	0.0	0.0	0.0	135	84	1050	37	13	3.3	0.54	0.0	0.0
10	0.0	0.0	0.0	915	61	4270	36	12	4.2	0.32	0.0	0.0
11	0.0	0.0	0.0	443	54	704	33	12	4.5	0.31	0.0	0.0
12	0.0	0.0	0.0	408	49	294	31	11	2.5	0.28	0.0	0.0
13	0.0	0.0	0.0	279	402	172	29	13	3.5	0.30	0.0	0.0
14	0.0	0.0	0.0	886	451	142	28	11	2.5	0.23	0.0	0.0
15	0.0	0.0	0.0	629	116	123	26	11	4.6	0.09	0.0	0.0
16	0.0	0.0	0.0	220	93	104	26	11	7.0	0.0	0.0	0.0
17	0.0	0.0	0.0	136	81	90	24	9.6	6.5	0.0	0.0	0.0
18	0.0	0.0	0.0	97	68	78	23	9.2	5.6	0.0	0.0	0.0
19	0.0	0.0	0.0	71	60	72	21	9.0	6.0	0.0	0.0	0.0
20	0.0	0.0	0.0	71	52	124	21	8.9	5.9	0.0	0.0	0.0
21	0.0	0.0	0.0	82	48	140	19	8.7	4.9	0.0	0.0	0.0
22	0.0	0.0	0.0	81	44	708	18	8.2	4.4	0.0	0.0	0.0
23	0.0	0.0	0.0	254	42	381	16	8.3	4.0	0.0	0.0	0.0
24	0.0	0.0	0.0	1220	41	179	15	8.2	2.7	0.0	0.0	0.0
25	0.0	0.0	0.0	372	39	131	14	7.6	3.5	0.0	0.0	0.0
26	0.0	0.0	0.0	168	37	107	14	7.4	3.6	0.0	0.0	0.0
27	0.0	0.0	0.0	165	35	96	13	7.0	4.5	0.0	0.0	0.0
28	0.0	0.0	0.0	151	33	87	15	6.0	4.8	0.0	0.0	0.0
29	0.0	0.0	0.0	118	------	80	41	5.5	4.8	0.0	0.0	0.0
30	0.0	0.0	0.0	92	------	72	49	4.8	3.6	0.0	0.0	0.0
31	0.0	------	0.0	71	------	65	------	4.1	------	0.0	0.0	------
TOTAL	0	0	0	8141	2361	10926	936	372.5	129.8	12.26	0	0
MEAN	0.00	0.00	0.00	262.61	84.32	352.45	31.20	12.02	4.33	0.40	0.00	0.00
MAX	0	0	0	1220	451	4270	60	33	7	2.1	0	0
MIN	0	0	0	0	33	31	13	4.1	2.5	0	0	0
AC-FT	0.0	0.0	0.0	16147.4	4683.0	21671.4	1856.5	738.8	257.5	24.3	0.0	0.0

TOTAL = 22879 CFS MEAN = 62.68 N/A MAX = 4270 CFS
45,379 AC-FT MIN = 0 CFS

MAX Instantaneour Flow -
1080 CFS on JAN 4 965 CFS on JAN 7
1770 CFS on JAN 10 1040 CFS on JAN 11
2090 CFS on JAN 14 1420 CFS on JAN 15
2750 CFS on JAN 24 3730 CFS on FEB 13
3060 CFS on FEB 14 870 CFS on MAR 3

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1993 - SEP 1994
Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	3.4	12	0.89	0.50	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	2.4	11	0.77	0.45	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	1.9	9.7	0.71	0.41	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	2.5	8.9	0.74	0.41	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	2.6	8.5	0.61	0.40	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	2.2	8.9	0.62	0.38	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	103	8.2	0.54	0.78	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	112	7.7	0.61	2.1	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	45	7.5	5.3	0.83	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	34	7.0	2.8	0.55	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	28	6.5	1.1	0.44	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	25	6.0	0.67	0.41	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	23	5.6	0.55	0.40	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	23	5.4	0.50	0.38	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	22	5.1	0.45	0.36	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	22	5.2	0.42	0.33	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	241	5.3	0.40	0.34	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	106	4.8	0.39	0.41	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	336	3.5	0.38	0.41	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	271	2.1	0.37	0.42	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	81	1.8	0.37	0.41	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.02	49	2.2	0.36	0.36	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	8.7	34	1.6	0.35	0.33	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	85	26	4.2	0.38	0.32	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	56	20	8.3	7.3	0.28	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	34	17	4.3	5.1	0.24	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	16	15	2.5	1.8	0.15	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	10	13	2.1	0.90	0.04	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	7.5	------	1.6	0.66	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	6.2	------	1.5	0.58	0.0	0.0	0.0	0.0	0.0
31	0.0	------	0.0	5.4	------	1.2	------	0.0	------	0.0	0.0	------
TOTAL	0	0	0	228.82	1661	170.2	36.62	12.84	0	0	0	0
MEAN	0.00	0.00	0.00	7.38	59.32	5.49	1.22	0.41	0.00	0.00	0.00	0.00
MAX	0	0	0	85	336	12	7.3	2.1	0	0	0	0
MIN	0	0	0	0	1.9	1.2	0.35	0	0	0	0	0
AC-FT	0.0	0.0	0.0	453.9	3294.5	337.6	72.6	25.5	0.0	0.0	0.0	0.0

TOTAL = 2109.5 CFS MEAN = 5.78 N/A MAX = 336 CFS
4,184 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 35 CFS on JAN 23 297 CFS on JAN 24
89 CFS on JAN 25 312 CFS on FEB 7
883 CFS on FEB 17 1860 CFS on FEB 19

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1992 - SEP 1993

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	148	40	75	50	10	1.2	0.0	0.0	0.0
2	0.0	0.0	0.0	124	38	76	44	10	0.71	0.0	0.0	0.0
3	0.0	0.0	0.0	76	37	67	41	10	0.81	0.0	0.0	0.0
4	0.0	0.0	0.0	62	35	59	37	12	1.9	0.0	0.0	0.0
5	0.0	0.0	0.0	56	35	52	33	9.0	6.1	0.0	0.0	0.0
6	0.0	0.0	4.5	394	32	47	32	6.0	2.8	0.0	0.0	0.0
7	0.0	0.0	32	649	31	44	29	6.1	1.8	0.0	0.0	0.0
8	0.0	0.0	33	261	192	40	26	5.7	1.3	0.0	0.0	0.0
9	0.0	0.0	47	188	294	38	24	5.1	1.1	0.0	0.0	0.0
10	0.0	0.0	44	702	133	36	21	4.4	0.64	0.0	0.0	0.0
11	0.0	0.0	333	153	106	34	21	5.2	0.46	0.0	0.0	0.0
12	0.0	0.0	77	311	82	32	19	4.2	0.50	0.0	0.0	0.0
13	0.0	0.0	49	1480	66	29	16	2.9	0.51	0.0	0.0	0.0
14	0.0	0.0	40	784	58	26	14	2.2	0.30	0.0	0.0	0.0
15	0.0	0.0	33	1120	52	24	14	1.4	0.18	0.0	0.0	0.0
16	0.0	0.0	28	517	48	24	14	0.93	0.22	0.0	0.0	0.0
17	0.0	0.0	35	830	55	27	20	1.1	0.18	0.0	0.0	0.0
18	0.0	0.0	41	455	166	25	22	1.2	0.08	0.0	0.0	0.0
19	0.0	0.0	28	228	175	22	15	1.1	0.10	0.0	0.0	0.0
20	0.0	0.0	24	279	194	22	14	1.3	0.10	0.0	0.0	0.0
21	0.0	0.0	20	411	142	21	13	1.4	0.09	0.0	0.0	0.0
22	0.0	0.0	18	410	664	18	12	1.4	0.09	0.0	0.0	0.0
23	0.0	0.0	16	174	1070	15	12	1.3	0.04	0.0	0.0	0.0
24	0.0	0.0	16	117	247	19	11	2.8	0.01	0.0	0.0	0.0
25	0.0	0.0	13	93	192	218	11	6.6	0.0	0.0	0.0	0.0
26	0.0	0.0	12	78	362	317	11	4.8	0.0	0.0	0.0	0.0
27	0.0	0.0	11	66	139	208	9.3	4.6	0.0	0.0	0.0	0.0
28	0.0	0.0	304	59	95	257	9.4	3.6	0.0	0.0	0.0	0.0
29	37	0.0	257	52	------	96	10	2.3	0.0	0.0	0.0	0.0
30	51	0.0	90	48	------	67	11	2.0	0.0	0.0	0.0	0.0
31	0.0	------	57	43	------	55	------	1.4	------	0.0	0.0	------
TOTAL	88	0	1662.5	10368	4780	2090	615.7	132.03	21.22	0	0	0
MEAN	2.84	0.00	53.63	334.45	170.71	67.42	20.52	4.26	0.71	0.00	0.00	0.00
MAX	51	0	333	1480	1070	317	50	12	6.1	0	0	0
MIN	0	0	0	43	31	15	9.3	0.93	0	0	0	0
AC-FT	174.5	0.0	3297.5	20564.6	9481.0	4145.5	1221.2	261.9	42.1	0.0	0.0	0.0

TOTAL = 19757 CFS MEAN = 54.13 N/A MAX = 1480 CFS
39,188 AC-FT MIN = 0 CFS

MAX Instantaneour Flow -					
	1300	CFS on DEC 11		1970	CFS on JAN 7
	2850	CFS on JAN 14		1610	CFS on JAN 17
	1970	CFS on DEC 28		2470	CFS on JAN 10
	2040	CFS on JAN 15		5800	CFS on FEB 22
	1980	CFS on JAN 6		5590	CFS on JAN 13

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1991 - SEP 1992
Latitude - 35° 35' 59''   **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	1.7	32	27	1.7	0.06	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	2.0	33	24	1.5	0.06	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	2.5	36	22	1.9	0.02	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	2.9	31	19	1.7	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	223	3.8	194	17	7.7	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	49	8.9	373	15	1.2	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	48	12	125	13	1.1	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	33	15	88	12	1.1	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	16	36	75	12	1.1	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	10	262	57	10	0.98	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	5.5	192	47	9.6	0.78	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	3.1	683	41	13	0.82	0.0	0.0	0.0	0.0
13	0.0	0.05	0.0	2.8	567	36	11	0.82	0.0	0.0	0.0	0.0
14	0.0	0.49	0.0	2.1	203	37	8.8	0.69	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	1.6	610	33	7.9	0.65	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	1.5	365	23	6.9	0.55	0.0	0.0	0.0	0.0
17	0.0	40	0.0	1.4	194	19	6.5	0.57	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	1.3	107	18	5.5	0.64	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.99	82	17	4.7	0.56	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.89	326	25	4.5	0.54	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.90	103	35	4.1	0.27	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.86	75	93	3.7	0.11	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.83	61	86	3.1	0.01	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.80	46	61	2.9	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.71	35	51	2.2	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.67	31	46	1.8	0.01	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.48	23	42	1.8	0.04	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.38	19	38	1.8	0.20	0.0	0.0	0.0	0.0
29	0.0	0.0	181	0.31	19	36	1.7	0.32	0.0	0.0	0.0	0.0
30	0.0	0.0	64	0.32	------	34	1.8	0.33	0.0	0.0	0.0	0.0
31	0.0	------	1.8	0.94	------	31	------	0.07	------	0.0	0.0	------
TOTAL	0	40.54	246.8	407.38	4087.8	1893	274.3	27.96	0.14	0	0	0
MEAN	0.00	1.35	7.96	13.14	140.96	61.06	9.14	0.90	0.00	0.00	0.00	0.00
MAX	0	40	181	223	683	373	27	7.7	0.06	0	0	0
MIN	0	0	0	0	1.7	17	1.7	0	0	0	0	0
AC-FT	0.0	80.4	489.5	808.0	8108.0	3754.7	544.1	55.5	0.3	0.0	0.0	0.0

TOTAL = 6977.9 CFS   MEAN = 19.07 N/A   MAX = 683 CFS
13,841 AC-FT   MIN = 0 CFS

MAX Instantaneour Flow - 783 CFS on JAN 5   1610 CFS on FEB 15
1300 CFS on FEB 14   1230 CFS on FEB 13
2360 CFS on MAR 5   752 CFS on FEB 20
2020 CFS on FEB 12

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1990 - SEP 1991

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	0.0	**	**	2.0	0.69	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	**	**	3.7	0.56	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	**	**	4.7	0.17	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	**	**	5.1	0.38	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	**	**	4.9	0.09	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	**	**	2.4	0.06	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	26	**	2.0	0.03	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	18	**	1.6	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	14	**	2.4	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	14	**	2.6	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	17	**	1.4	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	13	**	2.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	24	**	1.9	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	18	**	1.4	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	15	**	1.7	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	13	**	1.3	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	83	**	0.98	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	636	**	0.42	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	468	**	0.46	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	725	**	0.44	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	152	**	0.25	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	98	**	0.35	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	65	**	0.48	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	359	**	0.41	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	336	**	0.33	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	325	**	0.29	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	167	**	0.14	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	**	100	**	0.07	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	------	65	**	0.43	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	------	51	**	1.5	0.0	0.0	0.0	0.0
31	0.0	------	0.0	0.0	------	40	------	0.77	------	0.0	0.0	------
TOTAL	0	0	0	0	0	3842	**	48.42	1.98	0	0	0
MEAN	0.00	0.00	0.00	0.00	0.00	153.68	**	1.56	0.07	0.00	0.00	0.00
MAX	0	0	0	0	0	725	**	5.1	0.69	0	0	0
MIN	0	0	0	0	0	13	**	0.07	0	0	0	0
AC-FT	0.0	0.0	0.0	0.0	0.0	7620.5	**	96.0	3.9	0.0	0.0	0.0

TOTAL** = 3892.4 CFS MEAN** = 11.87 N/A MAX = 725 CFS
7,720 AC-FT MIN = 0 CFS

MAX Instantaneour Flow - 3360 CFS on MAR 18 2690 CFS on MAR 20
1590 CFS on MAR 24

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1989 - SEP 1990

Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	0.0	1.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	1.4	3.7	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	1.2	4.4	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	19	4.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	6.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	4.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	3.4	2.9	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	3.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	2.2	2.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	2.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.51	1.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	85	1.6	2.1	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	41	1.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	22	1.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	21	95	1.4	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	16	75	1.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	9.3	27	0.68	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	6.4	16	0.69	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	4.6	12	0.44	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	3.4	9.9	0.15	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	2.8	8.3	0.06	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	2.2	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	1.5	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	1.1	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.92	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.58	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.39	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.53	------	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.90	------	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	------	0.0	1.3	------	0.0	------	0.0	------	0.0	0.0	------
TOTAL	0	0	0	221.43	326.7	47.12	0	0	0	0	0	0
MEAN	0.00	0.00	0.00	7.14	11.67	1.52	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0	0	0	85	95	4.4	0	0	0	0	0	0
MIN	0	0	0	0	1.2	0	0	0	0	0	0	0
AC-FT	0.0	0.0	0.0	439.2	648.0	93.5	0.0	0.0	0.0	0.0	0.0	0.0

TOTAL = 595.25 CFS
1,181 AC-FT

MEAN = 1.63 N/A

MAX = 95 CFS
MIN = 0 CFS

MAX Instantaneour Flow - 1000 CFS on FEB 16 306 CFS on JAN 13
183 CFS on JAN 16

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1988 - SEP 1989

Latitude - 35° 35' 59" **Longitude - 121° 06' 47"**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	18	2.4	2.4	8.8	1.2	0.0	0.0	**	**
2	0.0	0.0	0.0	11	2.1	48	7.8	1.1	0.0	0.0	**	**
3	0.0	0.0	0.0	8.9	2.2	23	7.0	0.89	0.0	0.0	**	**
4	0.0	0.0	0.0	7.5	13	11	6.1	0.37	0.0	0.0	**	**
5	0.0	0.0	0.0	141	9.4	8.2	5.4	0.18	0.0	0.0	**	**
6	0.0	0.0	0.0	43	5.5	7.2	4.7	0.05	0.0	0.0	**	**
7	0.0	0.0	0.0	24	4.4	6.7	4.1	0.0	0.0	0.0	**	**
8	0.0	0.0	0.0	17	4.5	6.0	3.7	0.0	0.0	0.0	**	**
9	0.0	0.0	0.0	14	36	5.4	3.1	0.0	0.0	0.0	**	**
10	0.0	0.0	0.0	12	17	5.1	3.1	0.0	0.0	0.0	**	**
11	0.0	0.0	0.0	10	11	11	3.0	0.0	0.0	0.0	**	**
12	0.0	0.0	0.0	8.2	8.9	9.4	2.8	0.0	0.0	**	**	**
13	0.0	0.0	0.0	7.2	7.8	6.7	2.5	0.0	0.0	**	**	**
14	0.0	0.0	0.0	6.8	6.7	6.0	2.6	0.0	0.0	**	**	**
15	0.0	0.0	0.0	6.2	5.9	5.7	2.2	0.0	0.0	**	**	**
16	0.0	0.0	0.0	5.7	5.5	11	2.1	0.0	0.0	**	**	**
17	0.0	0.0	0.0	5.1	5.0	12	2.1	0.0	0.0	**	**	**
18	0.0	0.0	0.0	4.7	4.8	8.3	2.3	0.0	0.0	**	**	**
19	0.0	0.0	0.0	4.5	4.7	7.2	2.4	0.0	0.0	**	**	**
20	0.0	0.0	0.0	4.0	4.3	6.6	2.3	0.0	0.0	**	**	**
21	0.0	0.0	0.51	3.4	3.9	5.8	2.1	0.0	0.0	**	**	**
22	0.0	0.0	124	2.7	3.7	5.4	1.9	0.0	0.0	**	**	**
23	0.0	0.0	38	5.5	3.4	5.2	1.8	0.0	0.0	**	**	**
24	0.0	0.0	784	6.5	3.3	58	2.0	0.0	0.0	**	**	**
25	0.0	0.0	76	4.2	3.2	104	3.1	0.0	0.0	**	**	**
26	0.0	0.0	30	3.7	2.9	48	2.5	0.0	0.0	**	**	**
27	0.0	0.0	19	3.2	2.9	24	2.0	0.0	0.0	**	**	**
28	0.0	0.0	16	2.9	2.7	18	1.7	0.0	0.0	**	**	**
29	0.0	0.0	12	2.8	-----	14	1.3	0.0	0.0	**	**	**
30	0.0	0.0	11	2.6	-----	12	1.2	0.0	0.0	**	**	**
31	0.0	-----	26	2.5	-----	10	-----	0.0	-----	**	**	-----
TOTAL	0	0	1136.5	398.8	187.1	511.3	97.7	3.79	0	0	**	**
MEAN	0.00	0.00	36.66	12.86	6.68	16.49	3.26	0.12	0.00	0.00	**	**
MAX	0	0	784	141	36	104	8.8	1.2	0	0	**	**
MIN	0	0	0	2.5	2.1	2.4	1.2	0	0	0	**	**
AC-FT	0.0	0.0	2254.2	791.0	371.1	1014.1	193.8	7.5	0.0	0.0	**	**

TOTAL** = 2335.2 CFS MEAN** = 8.22 N/A MAX = 784 CFS
4,632 AC-FT MIN = 0 CFS

** INCOMPLETE RECORD, MISSING DATA FOR THIS DAY

San Luis Obispo County
Flood Control and Water Conservation District

Lower San Simeon
Stream Gauge Station #22
Water Year OCT 1987 - SEP 1988

Latitude - 35° 35' 59'' **Longitude - 121° 06' 47''**

AVERAGE DAILY DISCHARGE (CFS)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0	0.0	0.0	9.1	6.1	37	0.0	0.20	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	6.2	5.5	16	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	4.7	4.7	9.1	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	5.9	4.4	6.6	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	215	4.2	5.3	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	75	43	3.9	4.6	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	21	26	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	13	19	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	13	15	2.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.34	13	2.6	2.7	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	11	2.2	2.1	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	9.4	1.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	7.9	1.6	1.4	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	6.9	1.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	6.8	1.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.17	7.3	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	1.3	420	0.55	0.88	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.45	113	0.63	0.75	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.34	54	0.44	0.65	0.50	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.21	39	0.46	0.48	6.8	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.24	32	0.47	0.36	4.5	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.30	25	0.61	0.35	1.6	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.24	20	0.49	0.30	6.5	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.18	16	0.40	0.24	6.6	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.13	12	0.57	0.14	3.3	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.04	11	0.60	0.0	2.3	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.02	9.3	1.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	37	8.4	6.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	101	7.7	65	0.0	0.69	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	40	7.1	-----	0.0	0.43	0.0	0.0	0.0	0.0	0.0
31	0.0	-----	15	6.3	-----	0.0	-----	0.0	-----	0.0	0.0	-----
TOTAL	0	0	318.96	1187	127.72	104.25	35.82	0.2	0	0	0	0
MEAN	0.00	0.00	10.29	38.29	4.40	3.36	1.19	0.01	0.00	0.00	0.00	0.00
MAX	0	0	101	420	65	37	6.8	0.2	0	0	0	0
MIN	0	0	0	4.7	0.4	0	0	0	0	0	0	0
AC-FT	0.0	0.0	632.6	2354.4	253.3	206.8	71.0	0.4	0.0	0.0	0.0	0.0

TOTAL = 1774 CFS MEAN = 4.85 N/A MAX = 420 CFS
3,519 AC-FT MIN = 0 CFS

Appendix B

Simulated Effects of Water Reclamation Facility Operation

TODD GROUNDWATER

March 22, 2022

MEMORANDUM

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

From: Gus Yates, Senior Hydrologist

Re: Simulated Effects of Water Reclamation Facility Operation

BACKGROUND

The Water Reclamation Facility (WRF) purifies brackish groundwater extracted from the coastal part of the San Simeon Creek groundwater basin and processes it through microfiltration and reverse osmosis. After treatment, the water is injected back into the basin at a well farther up the San Simeon Creek Valley, where it augments groundwater available to three municipal wells that comprise the primary water supply for the community of Cambria. Cambria Community Services District (CCSD) constructed the WRF in 2014 under severe drought conditions, pursuant to an expedited emergency permitting procedure. At that time, the facility was called the Emergency Water Facility or Sustainable Water Facility. The locations of the WRF, extraction well, injection well, municipal wells and other hydrologic features are shown in **Figure 1**.

The WRF operated intermittently for 4 months in early 2015, 4 months at the end of 2015, and briefly at the end of 2016, injecting a total of approximately 89 AF of purified water into the basin. Health regulations required that the subsurface travel time from the injection wells to the nearest municipal supply well be at least two months. Groundwater modeling was done to identify an injection well location and injection rate that would meet that requirement.

The WRF has been idle since 2016, but CCSD is seeking to convert the emergency permit to a regular Coastal Development Permit. Although lagoon impact issues were discussed in previous environmental compliance documents (CCSD, 2016; CDM Smith, 2015), some regulatory agencies have lingering concerns that WRF operation could adversely impact habitat for several sensitive species that inhabit the lagoon and perennial pools along San Simeon Creek upstream of the lagoon (California Coastal Commission, 2016; California Department of Fish and Wildlife, 2016).

CCSD plans to operate the WRF in drought years. The 2020 urban water management plan (WSC, 2021) includes a water shortage contingency plan that defines six stages of increasing drought severity and describes associated management actions that would be taken to reduce demand and augment supply. Assuming the District obtains the regular permit to operate outside of emergencies, WRF operation is contemplated for the three most severe water shortage stages (Stages 4, 5 and 6).

The San Simeon Creek groundwater basin extends along San Simeon Creek valley from the Pacific Ocean about 5 miles upstream to Palmer Flats. The width of the alluvial deposits that comprise the basin is generally 800-1,500 feet, and the depth to bedrock along the center of the valley decreases from slightly over 100 feet at the coast to about 80 feet at Palmer Flats (Yates and Van Konynenburg, 1998). A thick sequence of fine-grained estuarine deposits separates the basin fill into upper and lower aquifers downstream of Van Gordon Creek, which enters the San Simeon Creek valley about 0.5 mile upstream of the ocean.

San Simeon Creek drains a watershed of 26 square miles. In normal years, base flow is continuously present during the winter wet season, gradually receding to zero in late spring or early summer. The dry season is defined as starting on the day flow at the upstream end of the basin (Palmer Flats) recedes to 0 cfs, and it continues until stream flow resumes the following winter (typically around December). Because percolation from San Simeon Creek supplies most of the recharge to the basin, water shortage conditions can result from an unusually long dry season or from a winter with so little stream flow that the basin is not completely refilled prior to the next dry season. Both of these conditions were incorporated into the scenario simulations.

MODEL ACTIVATION AND VERIFICATION

In 2014, CDM Smith developed a numerical groundwater flow model of the San Simeon Creek groundwater basin for the purpose of simulating subsurface travel time of water from the WRF injection well to the nearest potable supply well (CDM Smith, 2014). The investigators modified an existing model for that purpose, decreasing the grid spacing and increasing the number of layers from three to eighteen. The model was recalibrated to measured water levels for 2002-2003. A groundwater tracer study was subsequently completed (CDM Smith, 2017). It confirmed the accuracy of the modeling and recommended a maximum injection rate of 400 gallons per minute (gpm). The modeling study presented some results related to simulated lagoon water levels and ocean boundary outflow, but the primary focus was on subsurface travel time.

For the present effort, the model was shifted from one proprietary modeling software platform (GMS) to another (Groundwater Vistas). Model layering was modified slightly, and inputs were changed to simulate March 2013 through December 2014 using semi-monthly stress periods. That two-year period was a drought and was selected to ensure that the model was calibrated to be accurate for dry-year scenarios, which are the focus of CCSD water supply planning. Model calibration involved adjustments to several variables. Layer thicknesses were adjusted to prevent excessive numbers of cells from going dry during the simulations. The CDM Smith model had eighteen 5-foot-thick layers, and the upper layers tend to become unsaturated when simulated water levels decline. The MODFLOW-NWT solver simulates unsaturated flow but becomes unstable if large numbers of cells convert from saturated to unsaturated. This was particularly problematic near the upper end of the basin, which experiences large fluctuations in water levels as groundwater drains down-valley during the dry season then refills as soon as stream flow resumes. Most of the basin thickness in that region was assigned to model layer 1 to minimize unsaturation. Other variables adjusted during calibration included hydraulic conductivity, storativity and stream bed elevations.

Figure 2 shows hydrographs comparing measured and simulated groundwater levels at nine wells used for calibration. The figure also shows a hydrograph of the simulated groundwater gradient between well SS-4 and well 9P2. The generally good fit between the simulated and measured hydrographs at the nine wells was confirmed by statistical analysis of pairs of simulated and measured data points. **Figure 3** shows a scatterplot of measured versus simulated water levels for the 362 available water level measurements. The plot is clustered tightly around the 1:1 line, which represents a perfect match. The scaled root-mean-squared error was 3.6 percent, which is low and indicates acceptable model calibration.

WRF OPERATIONAL SCENARIOS

The primary objective of the modeling was to determine whether WRF operation would substantially diminish surface or groundwater inflow to the lagoon and/or lower reach of San Simeon Creek, which might have adverse biological impacts. A secondary objective was to identify the amounts of WRF operation needed under various drought conditions to meet water supply needs.

The overall WRF-groundwater system is complex, with many variables that interact. The diagram in **Figure 4** shows the components of the system. These include well 9P7 (the WRF supply well), the microfiltration component of the WRF, a lagoon discharge to San Simeon Creek that occurs while 9P7 is pumping, percolation of microfiltration backflush water at the percolation ponds, treatment of the remaining microfiltration water by reverse osmosis followed by injection at well RIW1, pumping of groundwater at CCSD's municipal wells (SS-1, SS-2 and SS-3), and percolation of treated wastewater at the ponds. Within the natural part of the system, seepage can occur in either direction between San Simeon Creek and groundwater and between the lagoon and groundwater. During the dry season, lagoon water seeps through the beach berm to reach the ocean. The basin extends offshore, and deeper layers are presumed to be in hydraulic connection with the ocean at some unknown offshore distance. Consequently, groundwater flow at the coastline can be seaward or landward, depending on the difference between onshore and offshore water levels. A change in any of the flows in this system affects all other flows.

The WRF is expensive to operate and would only be turned on in dry years when the supply of native groundwater might not be sufficient to meet CCSD water demand. CCSD plans to operate the WRF in water shortage Stages 5 and 6 and possibly in Stage 4. Those are the three most severe water shortage stages. To represent hydrologic conditions likely to be associated with those stages, the two years of the simulation period for scenario analysis represented two types of drought: a long dry season and a winter with incomplete basin recharge. These were implemented by adjusting the amount of San Simeon Creek inflow at the upstream end of the basin. **Figure 5** shows the assumed semi-monthly inflows for normal, Stage 4 and Stage 6 scenarios.

Some aspects of the model were held constant for all scenarios. These global assumptions included:

- Annual CCSD water demand in normal years is 700 AFY.
- Water shortage stages are associated with increasing amounts of water conservation. For Stage 4, conservation is assumed to decrease annual water demand by 40 percent, and for Stage 6 by 50 percent, per the water shortage contingency plan documented in the District's 2020 urban water management plan (WSC, 2021).
- The monthly distribution of water demand follows the average for 2013-2019. Monthly amounts range from 6.8 percent of the annual total in February to 10 percent in July. This reflects customer water use behavior during a drought.
- Pumping from the Santa Rosa Creek basin (located south of the San Simeon Creek basin) equals 20 percent of the CCSD water demand (after conservation) on an annual basis. The Santa Rosa pumping quota is distributed uniformly during June through October.
- Municipal wastewater percolation equals 92 percent of total CCSD water use on an annual basis and is uniform throughout the year. This was the percentage during 2014-2015, and it reflects customer water use patterns under drought conditions.
- All wastewater percolation is at Pond A (the most westerly pond).
- All water produced by WRF supply well 9P7 is processed through microfiltration.
- Microfiltration is 94.1 percent efficient. That is, 5.9 percent of the inflow is used to backflush the filters and is sent to the wastewater ponds for percolation.
- A constant flow of microfiltration product water is discharged to San Simeon Creek just upstream of the lagoon whenever well 9P7 is actively pumping. This flow could be adjusted independently of the reverse osmosis and RIW1 injection rates to prevent lagoon elevations and inflow from declining while the WRF is operating. Rates of 100-140 gpm were used in the simulations. These were assumed to be constant for each simulation, although in practice the lagoon discharge could be adjusted monthly as needed.
- Well 9P7 is assumed to have a pumping rate of 581 gpm, which was the measured discharge rate. Because the volume of WRF product water injected at well RIW1 varies by month and by scenario, the monthly hours of operation of well 9P7 also vary, and hence so does the monthly volume of lagoon discharge.

- Water produced by well 9P7 that is not used for backflushing the microfiltration filters or for lagoon discharge is processed through reverse osmosis. The reverse osmosis process has an efficiency of 92.1 percent (the remaining 7.9 percent is a brine that is trucked out of the basin for disposal). The reverse osmosis and advanced oxidation product water is injected at well RIW1.
- For a target amount of injection at well RIW1 in any semi-monthly stress period, the fraction of total time that 9P7 is pumping is imputed based on the recovery efficiencies of microfiltration and reverse osmosis. This is also the fraction of time the lagoon discharge is occurring. It is calculated based on the capacity of well 9P7 and the instantaneous lagoon discharge according to the following formula:
- $X = \dfrac{\left\{\dfrac{RIW}{RO\text{eff} \cdot MF\text{eff}}\right\}}{\left\{9P7\text{cap} - \left(\dfrac{Lag}{MF\text{eff}}\right)\right\}}$
- Where,
- X is the fraction of time 9P7 and the discharge are occurring
- RIW is the target WRF product water injection volume for the stress period (AF)
- RO_{eff} is the recovery efficiency of the reverse osmosis process (fraction)
- MF_{eff} is the recovery efficiency of the microfiltration process (fraction)
- $9P7_{cap}$ is the pumping capacity of well 9P7 if it operated continuously for the entire stress period (AF)
- Lag is the volume of lagoon discharge that would result if the discharge occurred continuously for the entire stress period (AF)
- Given a pumping capacity of 581 gpm for well 9P7, a lagoon discharge rate of 100 gpm, and the aforementioned efficiencies, the equation can be solved for X. The actual stress period volumes of 9P7 and lagoon discharge water equal their stress period capacities multiplied by X.
- 60 percent of water injected at RIW1 is available for extraction by municipal wells SS-1 and SS-2, and pumping of native groundwater is decreased by that amount. The remaining 40 percent of injected water flows joins native groundwater and flows west toward well 9P7 and the percolation pond area. This proportion was determined by prior modeling (CDM Smith, 2014).
- The lagoon discharge is to San Simeon Creek at the next-to-last stream cell before entering the lagoon (about 80 feet upstream of the lagoon).
- The lagoon has a fixed footprint.
- The “equivalent freshwater head” model assigns a constant head of 3.33 feet above the NAVD88 datum for all offshore cells in model layer 1. Lower model layers are assigned higher constant heads reflecting the greater density of seawater relative to fresh groundwater. Cells along the offshore end of the model grid in layers 10-12 are assigned a head of 3.84 feet, and cells along the offshore end of layers 14-18 are assigned a head of 5.40 feet. The density difference between seawater and fresh water can cause seawater to intrude a short distance into the onshore part of the aquifer, although in practice low onshore water levels due to pumping typically have a much larger effect.

- The principal management variable in the scenarios is the timing and amount of WRF operation. Other flexible input variables that were tested over a range of values were year type (water shortage stage) and the amounts of groundwater pumping for irrigation by neighboring well owners Pedotti and Warren. **Table 1** shows the combinations of assumptions regarding these variables for each of the scenarios.

SIMULATED EFFECTS OF WRF OPERATION

Hydrologic Conditions for Two Successive Dry Years

Each simulation covered a period of 22 months using semi-monthly stress periods. The simulations start in March with a full basin condition and continued through December of the following year. For model calibration, this period corresponded to March 2013-December 2014. Thus, the simulations covered two dry seasons. To simulate operational scenarios, different drought conditions were assumed for each dry season. The first one was long, with stream flow at Palmer Flats ceasing April 1 (for Stage 4 water shortage scenarios) or March 1 (for Stage 6) and not resuming until mid-January of the following year (see **Figure 5**). The second dry season was only moderately long (April 1 through December 15), but groundwater levels did not fully recover during the wet season between the two dry seasons. By trial and error, it was found that four semi-monthly stress periods with 5 cfs of San Simeon Creek inflow at Palmer Flats achieved partial basin refilling. These low flows mostly percolated out of the creek at the upstream end of the basin, with little surface flow reaching as far as the municipal well field. Water levels at the upstream end of the basin (represented by well 11B1) completely refilled for 2 weeks in late March before beginning the usual dry-season decline. Refilling decreased to about 40 percent of normal (based on water levels) at irrigation well 10M2, to about 35 percent of normal at the well field and roughly 10 percent of normal at well 9P7.

Operational Constraints

Constraints on WRF operation include infrastructure capacity, conditions in permits, and environmental impacts. None of the scenarios exceeded the capacity of well 9P7 or the microfiltration and reverse osmosis units. All of those operated less than full time in the scenarios. The dry season and annual groundwater production limits in CCSD's water rights permit were never exceeded. The limitation that most commonly constrained operation was the water-level gradient between well SS-4 and well 9P2 (see locations in **Figure 1**). To prevent the subsurface flow of percolated wastewater toward the well field, the water level in SS-4 should always be higher than the water level in 9P2. The existing permit for operating the percolation ponds allows temporary excursions to a reverse gradient, with SS-4 as much as -0.79 foot below 9P2. In practice, CCSD operates the system to avoid a water level difference less than +0.75 foot, and this was the criterion used in the scenarios.

The Coastal Commission has expressed concern regarding potential impacts of decreased inflow to the lagoon, although no quantitative threshold of significance has been defined.

The lagoon receives surface and subsurface inflow during the dry season. For the scenario analysis, the sum of the two inflows was tabulated for each stress period, and the minimum inflow during each dry season was identified. Lagoon inflow is affected by several variables including drought severity, irrigation pumping, municipal pumping and WRF operation. With regard to WRF operation, the effects of pumping at well 9P7 are partially or entirely offset by the lagoon discharge, a slight increase in percolation at the ponds, and injection at well RIW1.

Seawater intrusion is another potential constraint on system operation. If pumping and drought conditions cause groundwater levels near the coast to drop below 3.33 ft NAVD88 in upper model layers or 5.40 ft NAVD88 in lower model layers, groundwater flow across the coastline will shift from seaward to landward. The salinity of groundwater in the offshore part of the basin is not known, but eventually saline groundwater would begin arriving at onshore parts of the basin. Small amounts of landward groundwater flow during the dry season are not necessarily a concern if the water is flushed by large amounts of seaward flow during the wet season. Accordingly, scenario results were evaluated based on the ratio of seaward to landward flow on an annual basis and on the occurrence of relatively high amounts of landward flow.

Simulation of Normal Year Conditions

Under normal year conditions, CCSD water use was assumed to equal the full 700 AFY of demand, with no reduction by conservation. The dry season for San Simeon Creek flow was from June 1 to December 15 in both years of the simulation, and the basin refilled completely over the intervening wet season. The WRF was assumed not to operate.

This scenario was acceptable with respect to lagoon inflow and seawater intrusion but not with respect to the SS-4/9P2 gradient. Simulated water levels at key wells are shown in **Figure 6**, where they are compared with measured and simulated historical water levels for 2013-2014. The simulated CCSD water demand was greater than the demand during 2013-2014, but water levels declined more gradually during the start of the dry seasons due to generally wetter conditions. By December, however, the SS-4/9P2 gradient had dropped below the minimum target of +0.75 foot, reaching +0.17 foot in both years. The basin refilled abruptly when stream flow resumed and remained full throughout the wet season.

The brief downward spike in the the SS-4/9P2 gradient visible in December 2014 is present in the results for all scenarios. It is an artifact of model gridding, which causes the rapid rise in water levels at the onset of the winter flow season to reach well 9P7 before well SS-4 in the first time step of the final semi-weekly stress period. It is not meaningful from a water management standpoint.

Hydrographs of simulated lagoon water levels are shown in **Figure 7**, where they are compared with the results for other scenarios. For the normal year scenario, simulated lagoon levels were about 0.2-0.3 ft higher than for any other scenario during the first dry season. During the second dry season normal year water levels were very similar to those during the first dry season and 0.4-1.4 ft higher than those under the other scenarios. The other scenarios all included incomplete basin recharge over the winter, which lowers lagoon water levels substantially during the following dry season.

Water budgets for the scenarios were tabulated for two periods: March of year 1 through March of year 2, and April through December of year 2. The 13-month period for the first dry season was necessary because low stream recharge during winter caused water levels and gradients to continue declining through March of the second year. In other words, the winter months were functionally an extension of the year 1 dry season. The second budget analysis period covers a more normal April-December dry season for year 2. Key water budget inputs and results for all scenarios are listed in **Table 2**, with results for the first dry season shown in the upper table and results for the second dry season in the lower table. Scenarios may be compared within each dry season. Because of their different durations, results for the first dry season may not be directly comparable to results for the second dry season.

The minimum simulated lagoon inflow during the first and second dry seasons is shown in **Figure 8**, along with results for other scenarios. Minimum inflow during the first dry season under normal year conditions was slightly less than for historical 2013-2014 conditions, probably because the greater amount of CCSD pumping in the normal year scenario more than balanced the drier hydrologic conditions during 2013-2014. The opposite was true during the second year, when the larger amount of stream flow under normal year conditions more than offset the higher pumping.

Annual groundwater flow across the coastline is shown for all scenarios in **Figure 9**. All of the scenarios show a small amount of groundwater flow from offshore to onshore. This small, constant amount is probably an artifact of the equivalent freshwater head boundary condition in the model, which tends to create some vertical "short-circuiting" of groundwater flow from deep layers (where constant head = 5.40 ft) to shallow layers (where constant head = 3.33 ft). This effect could affect water levels and flow as far inland as the coastline. In any case, groundwater outflow in normal years exceeded groundwater inflow across the coastline by a factor of 24 to 29 in the two dry seasons, indicating an absence of significant intrusion.

Simulation of Stage 4 Water Shortage Conditions

Stage 4 water shortage conditions were simulated with and without WRF operation to test the specific effects of the WRF. Annual CCSD water demand was assumed to be reduced by 10 percent through conservation efforts. Simulated water levels at key wells with and without WRF operation are shown in **Figure 10**. Water levels under the stage 4 scenario without WRF operation were similar to historical 2013-2014 water levels during the first dry season but much lower during the second year due to the assumption of incomplete basin recovery in winter. The effect of WRF operation was to raise water levels from well 10M2 down to well 9P2 by 0.5-1 foot from the summer of year 1 through the end of year 2. The effect on the SS-4/9P2 gradient was more pronounced. WRF operation raises water levels at both wells, but it raises them more at SS-4, which is near injection well RIW1. The gradient responds immediately to WRF operation. In this scenario, operation at 10 acre-feet per month (AF/mo) increased the gradient by about 0.5 ft as long as the WRF was operating. Conversely, the gradient quickly drops by the same amount when the WRF is turned off.

Without WRF operation, the gradient declined below the minimum target in both years (to -0.60 and -0.45 ft, respectively). As described earlier, the brief downward spike in the gradient in December of year 2 is an artifact of modeling and not meaningful for water management. With WRF operation at 10-30 AF/mo, the minimums were close to the target in both years (+0.70 and +0.60 ft, respectively). Larger amounts of WRF operation would have increased the gradient even further. Because of the speed at which the gradient responds to WRF operation, WRF operation can be adjusted in real time to prevent the gradient from falling below the target.

An instantaneous lagoon discharge rate of 140 gpm was found to be necessary to prevent reductions in the minimum dry-season lagoon elevation and inflow. For example, with a discharge rate of 100 gpm, the minimum dry-season elevation was 0.01 to 0.05 ft lower than without WRF operation, and the minimum dry-season inflow was 0.05 to 0.09 AF/mo lower. With the 140 gpm discharge rate, minimum elevations were only 0.03 ft lower and minimum inflows were 0.02-0.03 cfs higher than without WRF operation (see **Figures 7 and 8**). The effect of WRF operation on the lagoon can be controlled by adjusting the lagoon discharge rate. The discharge has a larger effect on lagoon inflow than lagoon elevation. In practice, the width of the beach berm at the ocean end of the lagoon generally exerts the greatest influence on lagoon elevation.

Groundwater flow across the coastline under Stage 4 conditions was essentially the same with and without WRF operation. In both cases, the ratio of groundwater outflow to groundwater inflow was slightly smaller than in normal years, but the ratios remained above 20 (see **Figure 9**). Thus, seawater intrusion was not a concern for either scenario.

Simulation of Stage 6 Water Shortage Conditions

The difference between Stage 4 and Stage 6 hydrologic conditions is most apparent at the start of year 1, when San Simeon Creek inflow ceased a month earlier under Stage 6. This can be seen in the hydrographs for wells 10M2 and SS-2 in **Figure 11**. For both water shortage stages, stream flows in winter 2014 were assumed to be identical and insufficient to completely replenish groundwater storage. Thus, the simulations were very similar during year 2.

The amount of WRF operation was adjusted for the Stage 6 scenario so that the SS-4/9P2 gradient remained almost continuously above the target minimum of +0.75 foot. To avoid excessive WRF operation, the amounts of water injected at RIW1 were varied from month to month, as they could be under real-time operation. By trial and error, it was found that WRF operation at 15-30 AF/mo was needed from August of year 1 through April of year 2, with the highest rates occurring in December-January. WRF operation at 15-40 AF/mo was also needed in year 2, with the highest rates occurring in November-December. Over the course of the two years, WRF injection for Stage 6 was less than 10 percent greater than for

Stage 4 because of greater assumed water conservation and because the principal hydrologic difference was one additional month of dry season in year 1.

Stage 6 drought conditions were slightly worse than Stage 4 conditions with respect to the lagoon and ocean boundary flow. Assuming WRF operation in both cases, the minimum simulated lagoon elevation was 0.05-0.06 ft lower for Stage 6 (see **Table 2**). The minimum simulated lagoon inflow was 0.04-0.06 cfs lower and annual groundwater outflow across the coastline was 10-102 AF (2-10 percent) lower. However, simulated groundwater inflow was the same.

Simulations of Increased Irrigation Pumping

Two farming operations use groundwater from the San Simeon Creek basin, and in both cases potential future groundwater use is greater than recent historical use. Jon Pedotti farms numerous fields along the basin from just upstream of the well field to Palmer Flats. His supply wells include several of the wells used for water level monitoring: 11B1, 10A1, 10M2 and others (see **Figure 1** for locations). In the late 1980s, all of his fields were planted every year and were irrigated primarily by sprinkler or furrow methods, resulting in estimated groundwater pumping of 264 AFY (Yates and Van Konynenburg, 1998). Irrigation was converted almost entirely to drip by the early 2000s, and Mr. Pedotti presently plants only about half of his total acreage each year (Pedotti, 2021). His annual groundwater pumping in recent years is estimated to be approximately 130 AFY. At full production, it would be about 260 AFY.

Clyde Warren irrigates land in and near Van Gordon Creek from well 9P4, which is located 86 feet north of well 9P7 in the percolation pond area. Pumping from well 9P4 is metered and recorded by CCSD. His cropping has been small in recent years, and pumping averaged only 14.5 AFY during 2012-2018. However, pursuant to an agreement with CCSD reached in 2006, he is entitled to pump 183.5 AFY.

Because of the well locations, increased groundwater pumping by the two farming operations was expected to have different effects on water levels, the SS-4/9P7 gradient, lagoon inflow and ocean boundary flow. Accordingly, increased pumping was simulated separately for each farming operation.

Increased Pedotti Pumping

For this scenario, the Stage 4 + WRF scenario was modified by increasing Pedotti pumping from 130 to 260 AFY in year 1 and year 2. The irrigation season was assumed to remain the same (June through October). The timing of irrigation pumping does not substantially affect simulation results as long as it all occurs during the dry season. WRF operation was adjusted iteratively to maintain the SS-4/9P2 gradient above +0.75 foot.

Simulated water levels at key wells are shown in **Figure 12**, where they are compared with the earlier Stage 4 + WRF scenario results. The largest effect shown is at well 10M2, which is a Pedotti irrigation well. Water levels were 4-5 ft lower due to the increased irrigation pumping. The effect extended all the way down the basin but decreased in magnitude to about 1 foot at well 16D1 near the lagoon. WRF operation had to be increased substantially above the amount needed for the Stage 4 + WRF scenario to prevent the SS-4/9P2 gradient from dropping below +0.75. WRF operation was required continuously from April of year 1 through December of year 2 at rates 5-15 AF/mo greater than the rates for corresponding months of the Stage 4 + WRF scenario. Over the course of the two years, WRF production was 1.4 times greater than for the Stage 4 + WRF scenario without the increased Pedotti pumping (see **Table 2**).

This simulation included a lagoon discharge of 100 gpm, and the minimum simulated lagoon elevations were 0.13-0.17 foot lower than for the scenario without increased Pedotti pumping (see **Figure 7**). Minimum simulated lagoon inflow was reduced by 0.08-0.16 cfs. A higher rate of lagoon discharge could potentially eliminate the decreased inflow but might not fully offset the decrease in lagoon elevation. Seaward flow of groundwater across the ocean boundary in year 1 was similar to the flows for the Stage 4 + WRF and Stage 6 + WRF scenarios, but outflow was lower in inflow was higher in year 2 (see **Figure 9** and **Table 2**). Groundwater outflow was 12-17 times greater than inflow, compared to 18-29 times greater for the earlier scenarios. Seawater intrusion is a potential concern with increased Pedotti pumping.

Increased Warren Pumping

To simulate increased irrigation pumping by Clyde Warren, the Stage 4 + WRF scenario was modified to increase irrigation pumping at well 9P4 from 15 AFY to 183.5 AFY during both dry seasons. The timing of irrigation pumping was assumed to remain the same. This scenario was simulated with and without WRF operation, to determine the extent to which WRF operation compounds or counteracts the effects of Warren pumping. The assumed lagoon discharge rate was 100 gpm whenever 9P7 was operating. WRF operation was increased only as much as was needed to maintain the SS-4/9P2 gradient at or above the target minimum of +0.75 foot. Total WRF injection over the two years was similar to the total for the Stage 4 + WRF scenario.

Simulated groundwater levels for increased Warren pumping with and without WRF operation are shown in **Figure 13**. WRF operation was able to increase the minimum SS-4/9P2 gradient from +0.09 to +0.62 foot in year 1 and from +0.12 to +0.88 foot in year 2. Additional WRF operation could have achieved even larger increases. Simulated lagoon levels were the lowest of any of the simulations, continuously 0.5-1.0 ft below the Stage 4 + WRF and Stage 6 + WRF levels (see **Figure 7**). The lower lagoon elevations were caused by the large amount of irrigation pumping at well 9P4 and its location relatively close to the lagoon. In this pair of simulations, adding WRF operation did not change the minimum lagoon water level during year 1 but lowered it by 0.04 ft in year 2. This could be largely or completely offset by increasing the rate of lagoon discharge during August-September of year 2.

With Warren pumping, the minimum lagoon elevations and inflows occurred in August of both years, during the peak of the irrigation season. Minimum lagoon inflow in year 1 (with or without WRF operation) was about the same as for the Stage 4 + WRF scenario. In year 2, however, it was only about half as much (again, with or without WRF operation). The potential for seawater intrusion was also the highest of any of the scenarios. Without WRF operation, groundwater outflow at the coastline was only about 16 times greater than groundwater inflow in year 1 and about 10 times greater in year 2. The ratios were slightly smaller with WRF operation (see **Table 2** and **Figure 9**).

Figure 14 compares water levels and groundwater flow directions in shallow and deep parts of the basin in November of year 2 with WRF operation and maximum Warren irrigation pumping. The upper plot shows contours of groundwater elevation in model layer 1 (top layer) using a contour interval of 0.2 foot. The pumping depression around wells 9P2 and 9P7 due to Warren and WRF pumping is visible as closed contours. The water table mound beneath Pond A also appears as a closed contour, about midway between the wells and the lagoon. The contours bend toward the lagoon and lower end of San Simeon Creek, indicating groundwater discharge into those water bodies even at the end of the dry season in year 2. Note that the base map in the figure overstates the length of the lagoon; it does not extend above the road crossing. Farther upstream, injection at well RIW1 produces a water-level plateau in the upstream direction (toward the municipal wells) and a steep gradient in the downstream direction, toward well 9P7.

In contrast, the water level gradient in model layer 16 near the bottom of the basin is landward from the offshore ocean boundary (lower plot in **Figure 14**). Groundwater elevation decreases from 5.0 ft NAVD88 offshore (the freshwater equivalent of sea level) to 4.6 ft at well 9P7, which is the low point for water levels in that model layer. The landward gradient is very small, but it produces the small increase in landward groundwater flow evident in the water balance.

WRF is capable of achieving an acceptable SS-4/9P7 gradient in the presence of maximum Warren pumping, but it cannot prevent lagoon impacts and increased risk of seawater intrusion associated with that pumping.

CONCLUSIONS

Conclusions that can be drawn from model calibration and the scenario simulations include the following:

- The reactivated model is calibrated to measured water levels during 2013-2014 with reasonable accuracy.
- Eight weeks of 5 cfs of San Simeon Creek inflow at Palmer Flats during the wet season only partially refills the basin. Increasing 2-4 of those weeks to 10 cfs refills it.
- The occurrence of two successive years as dry as the two years in the simulation is very unlikely. Although the two dry seasons were intended to be evaluated independently, the limited stream recharge between them had the effect of

prolonging some effects of the first dry season until March of year 2. Thus, the simulations represent extreme drought conditions with respect to stream flow.

- The amount of WRF injection can be adjusted to exactly meet the target minimum SS-4/9P7 gradient. The gradient responds very quickly to starting or stopping WRF operation. This would allow the amount of WRF injection to be adjusted in real time during a dry season to keep the gradient above the minimum.
- The lagoon discharge can similarly be adjusted independently of the reverse osmosis and RIW1 injection volumes to achieve target lagoon elevations and inflows. Simulation results demonstrated that a lagoon discharge rate of 100 gpm proved to be too small to prevent slight declines in minimum dry season lagoon elevation and inflow for the Stage 4 and Stage 6 simulations, relative to the corresponding simulations without WRF operation. This is probably because the original estimate of 100 gpm assumed a continuous discharge at that rate, whereas the simulations indicated that the WRF supply well (9P7) would need to operate much less than full time to supply the necessary injection at well RIW1. When the simulations were repeated with lagoon discharge rates of 120-140 gpm, simulated minimum dry-season lagoon levels and inflow were approximately the same as in the simulations without WRF operation. The discharge has a stronger effect on lagoon inflow than lagoon elevation.
- WRF operation can compensate for failure to achieve water conservation goals at each water shortage stage. It would supply the needed make-up water and keep groundwater conditions within constraints related to the SS-4/9P2 gradient, lagoon inflow and seawater intrusion. This could offer CCSD customers a choice between cutting back even further on water use or paying for expensive WRF water.
- In the Stage 4 + WRF and Stage 6 + WRF scenarios, it was possible to meet all three criteria for acceptability by adjusting the WRF injection volumes and lagoon discharge volumes on a semi-monthly basis. The SS-4/9P2 gradient remained above +0.75 foot almost continuously, lagoon levels and inflow were not reduced, and seawater intrusion did not occur.
- Groundwater flow in upper model layers near the coast was consistently toward the lagoon and ocean in all scenarios, even at the end of the dry season. In scenarios with maximum irrigation pumping (Pedotti or Warren), groundwater flow in deep model layers became landward in the summer of year 1 and remained landward until December of year 2. The gradients were small, but the condition persisted for 16 months. That condition could potentially cause seawater intrusion.
- The amounts of WRF injection required to prevent the SS-4/9P2 gradient from dropping below +0.75 ft ranged from 145 to 220 AF for the first dry season, and 145 to 235 AF for the second dry season, depending on the scenario. The highest amounts were in the scenario with increased Pedotti irrigation pumping.

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Table 1. Summary of Scenario Input Values

Scenario Description	Water Shortage Stage	WRF Activated	Pedotti Irrigation	Warren Irrigation	Mitigation Discharge (gpm)
Normal Year	None		Recent historical	Recent historical	0
Stage 4	4		Recent historical	Recent historical	0
Stage 4 + WRF	4	✓	Recent historical	Recent historical	120
Stage 6 + WRF	6	✓	Recent historical	Recent historical	120
Stage 4 + WRF + Full Pedotti Irrigation	4	✓	Full	Recent historical	100
Stage 4 + Maximum Warren Irrigation	4		Recent historical	Maximum	0
Stage 4 + WRF + Maximum Warren Irrigation	4	✓	Recent historical	Maximum	100

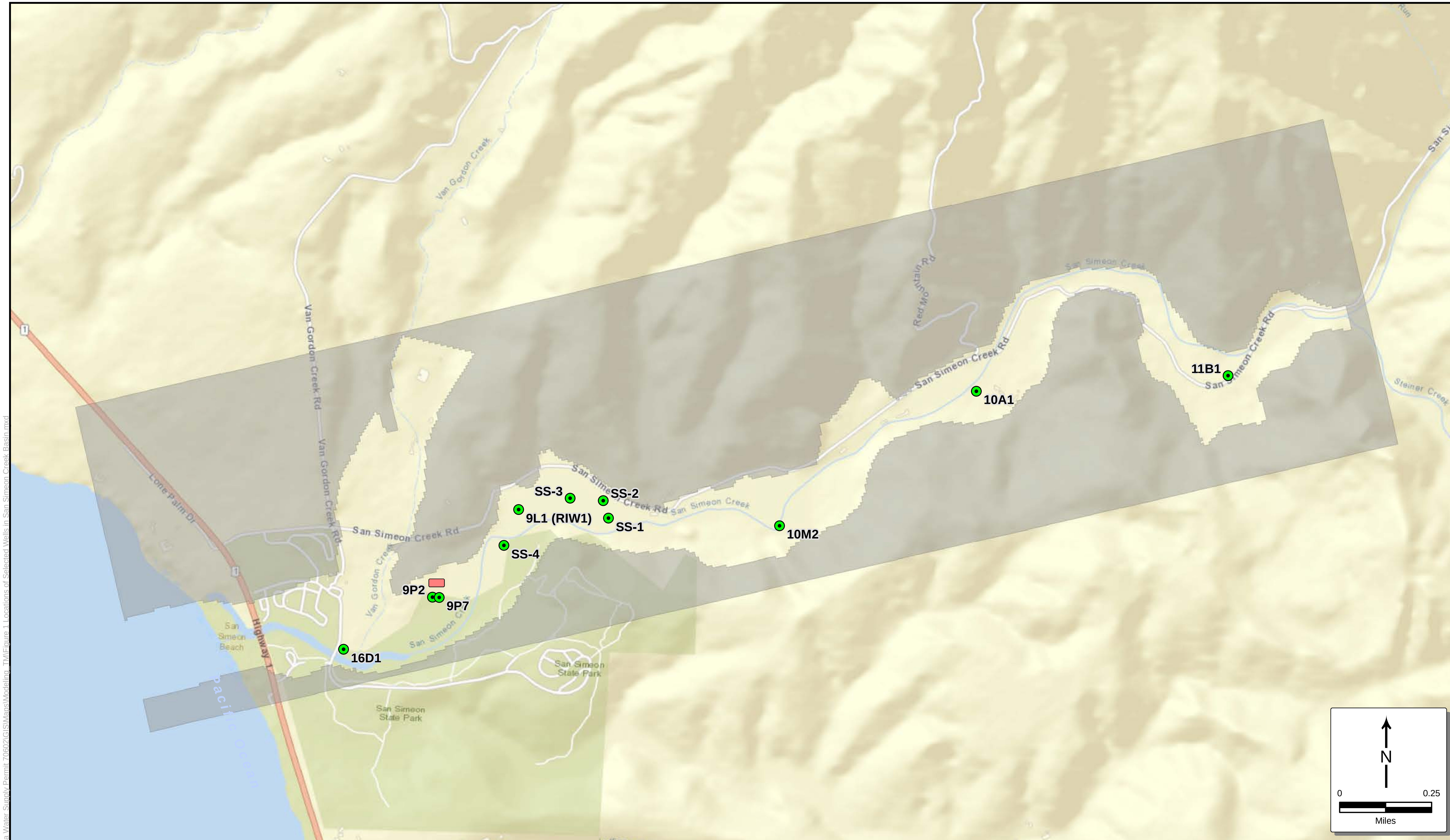
Table 2. Water Balance Results for Scenarios

March of Year 1 through March of Year 2

Scenario Description	Year Type	CCSD Water Demand after Conservation (AFY)	Date Flow Ceases at Palmer Flats	Date Flow Resumes at Palmer Flats	San Simeon Well Field Groundwater Pumping (AF)	Pond Percolation (AF)		WRF Supply Well 9P7 Pumping (AF)	RIW1 Injection (AF)	Lagoon Discharge (AF)	Pedotti Irrigation Pumping (AF)	Warren Irrigation Pumping (AF)	Minimum SS-4 to 9P2 Water Level Difference (feet)	Minimum Lagoon Elevation		Minimum Dry-Season Inflow to Lagoon (cfs)				Groundwater Flow Across Coastline (AF)	
						Municipal Wastewater	Microfiltra-tion Backflush							Month	Elevation (feet NAVD88)	Month	Creek	Ground-water	Total	To Offshore	From Offshore
Historical 2013-2014	2013-2014	753	May 29	Feb 28	740	563	0	0	0	0	99	15	+0.23	OCT 2013	4.35	MAR 2014	0.58	0.34	0.92	1,157	48
Normal	Normal	753	Jun 1	Dec 16	613	697	0	0	0	0	130	15	+0.17	DEC 2013	4.6	DEC 2013	0.45	0.38	0.83	1,497	51
Stage 4, no WRF	Stage 4	678	Apr 1	Jan 1	552	628	0	0	0	0	130	15	-0.60	MAR 2014	4.17	FEB 2014	0.21	0.29	0.50	1,040	47
Stage 4 + WRF	Stage 4	678	Apr 1	Jan 1	552	628	14	229	150	52	130	15	+.79	MAR 2014	4.14	MAR 2014	0.31	0.22	0.53	1,023	51
Stage 6 + WRF	Stage 6	602	Mar 1	Jan 16	490	558	17	276	188	56	130	15	+0.81	MAR 2014	4.08	FEB 2014	0.27	0.22	0.49	921	51
Stage 4 + WRF + Pedotti	Stage 4	678	Apr 1	Jan 1	552	628	18	312	220	55	260	15	+0.72	MAR 2014	4.01	FEB 2014	0.25	0.2	0.45	942	55
Stage 4 + Warren	Stage 4	678	Apr 1	Jan 1	552	628	0	0	0	0	130	183	-0.68	AUG 2013	4.12	AUG 2013	0.17	0.35	0.52	855	52
Stage 4 + WRF + Warren	Stage 4	678	Apr 1	Jan 1	552	628	12	206	145	36	130	183	+0.63	AUG 2013	4.12	AUG 2013	0.17	0.35	0.52	845	58

April 2014 through December of Year 2

Scenario Description	Year Type	CCSD Water Demand after Conservation (AFY)	Date Flow Ceases at Palmer Flats	Date Flow Resumes at Palmer Flats	San Simeon Well Field Groundwater Pumping (AF)	Pond Percolation (AF)		WRF Supply Well 9P7 Pumping (AF)	RIW1 Injection (AF)	Lagoon Discharge (AF)	Pedotti Irrigation Pumping (AF)	Warren Irrigation Pumping (AF)	Minimum SS-4 to 9P2 Water Level Difference (feet)	Minimum Lagoon Elevation		Minimum Dry-Season Inflow to Lagoon (cfs)				Groundwater Flow Across Coastline (AF)	
						Municipal Wastewater	Microfiltra-tion Backflush							Month	Elevation (feet NAVD88)	Month	Creek	Ground-water	Total	To Offshore	From Offshore
Historical 2013-2014	2013-2014	543	April 27	Dec 5	541	317	0	0	0	0	112	27	+0.52	NOV 2014	4.43	SEP 2014	0.3	0.4	0.7	838	36
Normal	Normal	543	Jun 1	Dec 16	403	483	0	0	0	0	130	15	+0.17	DEC 2014	4.64	DEC 2014	0.44	0.38	0.82	947	40
Stage 4, no WRF	Stage 4	489	Apr 1	Dec 16	363	435	0	0	0	0	130	15	-0.45	DEC 2014	4.26	DEC 2014	0.21	0.36	0.57	522	21
Stage 4 + WRF	Stage 4	489	Apr 1	Dec 16	363	435	15	252	165	58	130	15	+0.93	DEC 2014	4.23	DEC 2014	0.33	0.26	0.59	511	24
Stage 6 + WRF	Stage 6	435	Apr 1	Dec 16	323	386	12	214	145	44	130	15	+0.61	DEC 2014	4.18	DEC 2014	0.32	0.21	0.53	491	25
Stage 4 + WRF + Pedotti	Stage 4	489	Apr 1	Dec 16	363	435	20	336	235	59	260	15	+0.81	DEC 2014	4.06	DEC 2014	0.25	0.18	0.43	421	34
Stage 4 + Warren	Stage 4	489	Apr 1	Dec 16	363	435	0	0	0	0	130	183	-0.62	SEP 2014	3.86	AUG 2014	0.05	0.23	0.28	380	40
Stage 4 + WRF + Warren	Stage 4	489	Apr 1	Dec 16	363	435	14	241	170	43	130	183	+0.92	SEP 2014	3.82	AUG 2014	0.10	0.19	0.29	361	46

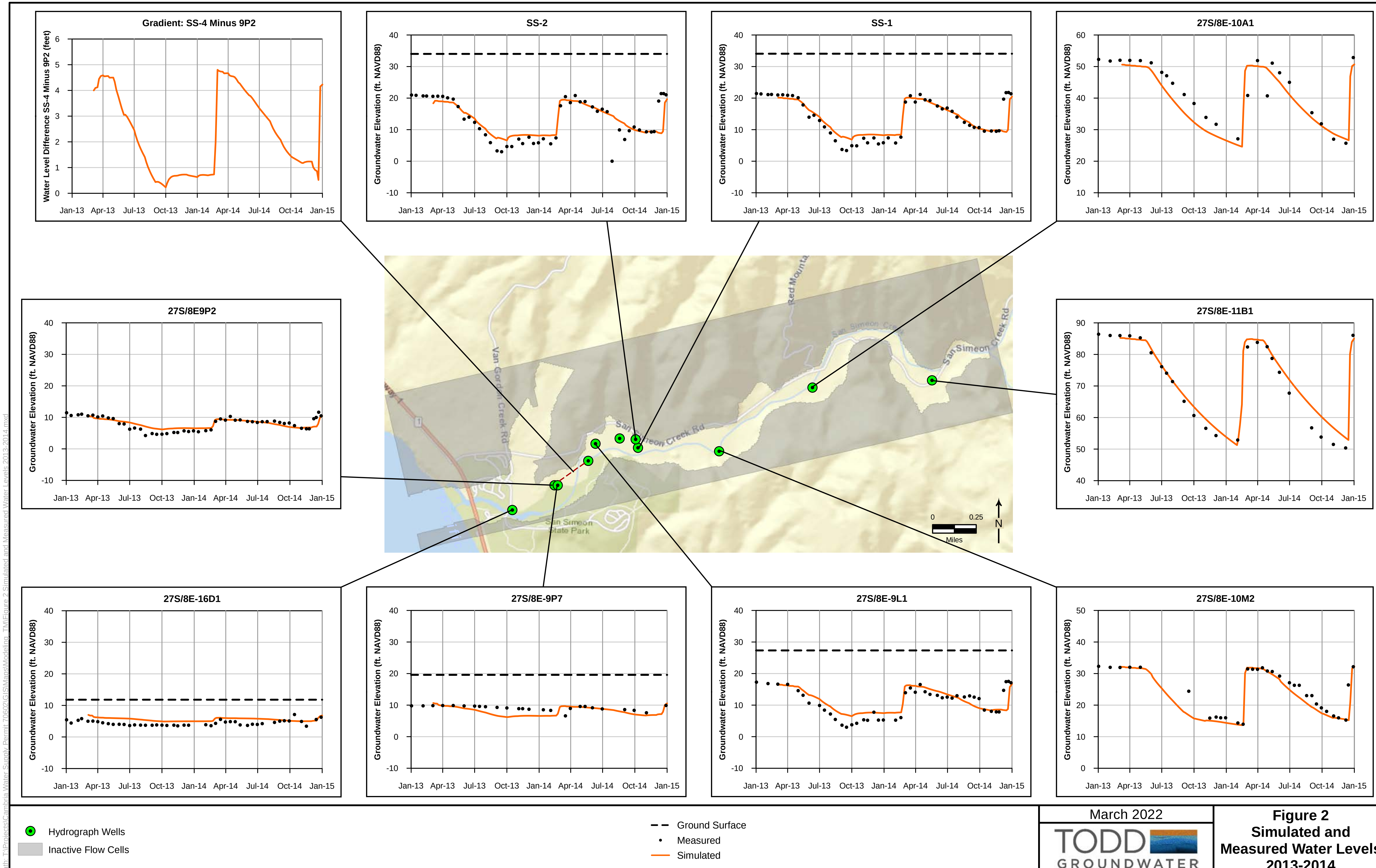


Hydrograph Wells
Water Reclamation Facility
Inactive Flow Cells

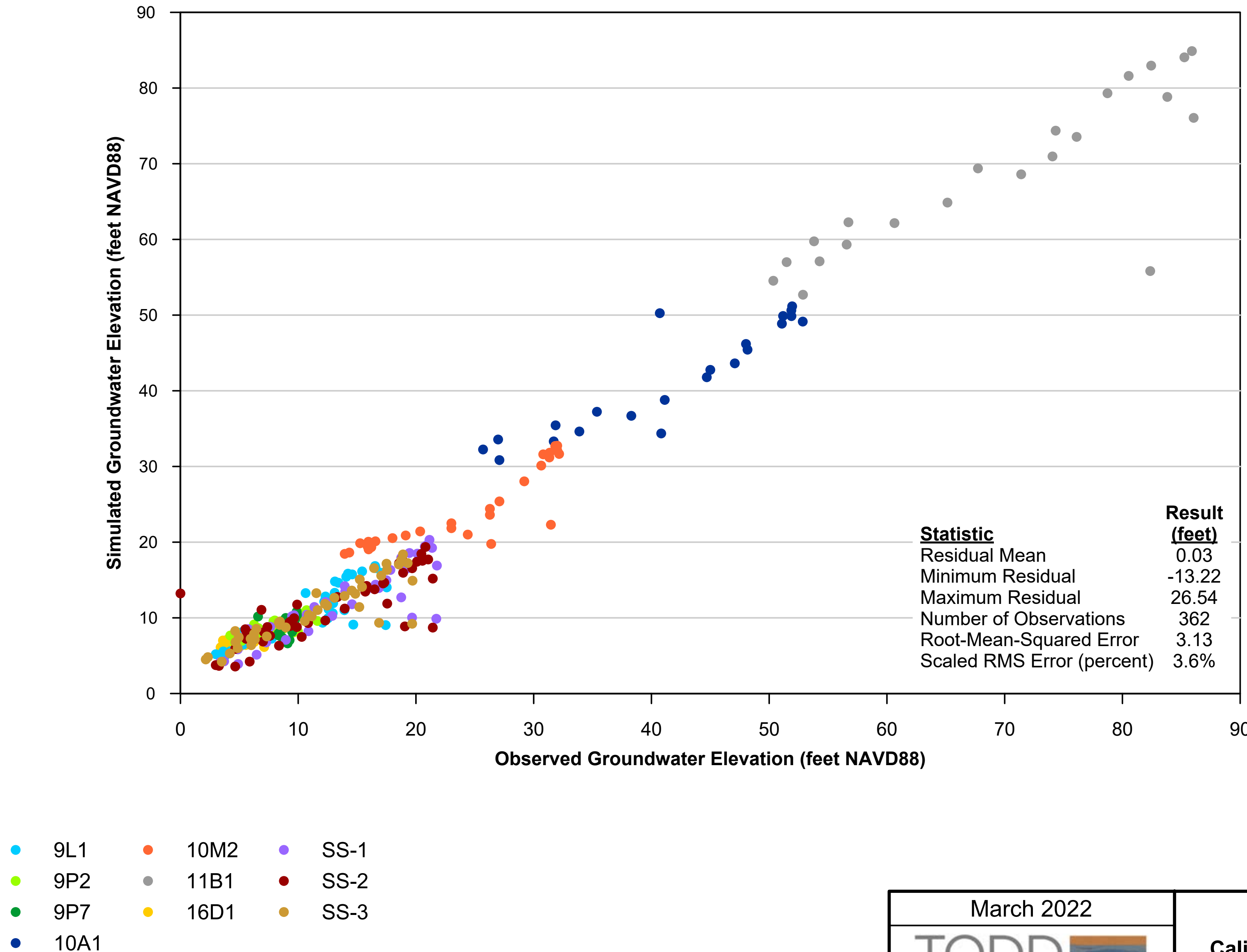
March 2022

TODD GROUNDWATER

Figure 1
Locations of Selected Wells in San Simeon Creek Basin



Gradient: SS-4 Minus 9P2
Water Level Difference SS-4 Minus 9P2 (feet)
SS-2
SS-1
27S/8E-10A1
27S/8E9P2
27S/8E-11B1
27S/8E-16D1
27S/8E-9P7
27S/8E-9L1
27S/8E-10M2
Groundwater Elevation (ft. NAVD88)
Jan-13
Apr-13
Jul-13
Oct-13
Jan-14
Apr-14
Jul-14
Oct-14
Jan-15
San Simeon Creek Rd
Van Gordon Creek Rd
Red Mountain
San Simeon Creek
San Simeon State Park
0
0.25
Miles
N
Hydrograph Wells
Inactive Flow Cells
Ground Surface
Measured
Simulated
March 2022
TODD GROUNDWATER
Figure 2
Simulated and Measured Water Levels 2013-2014



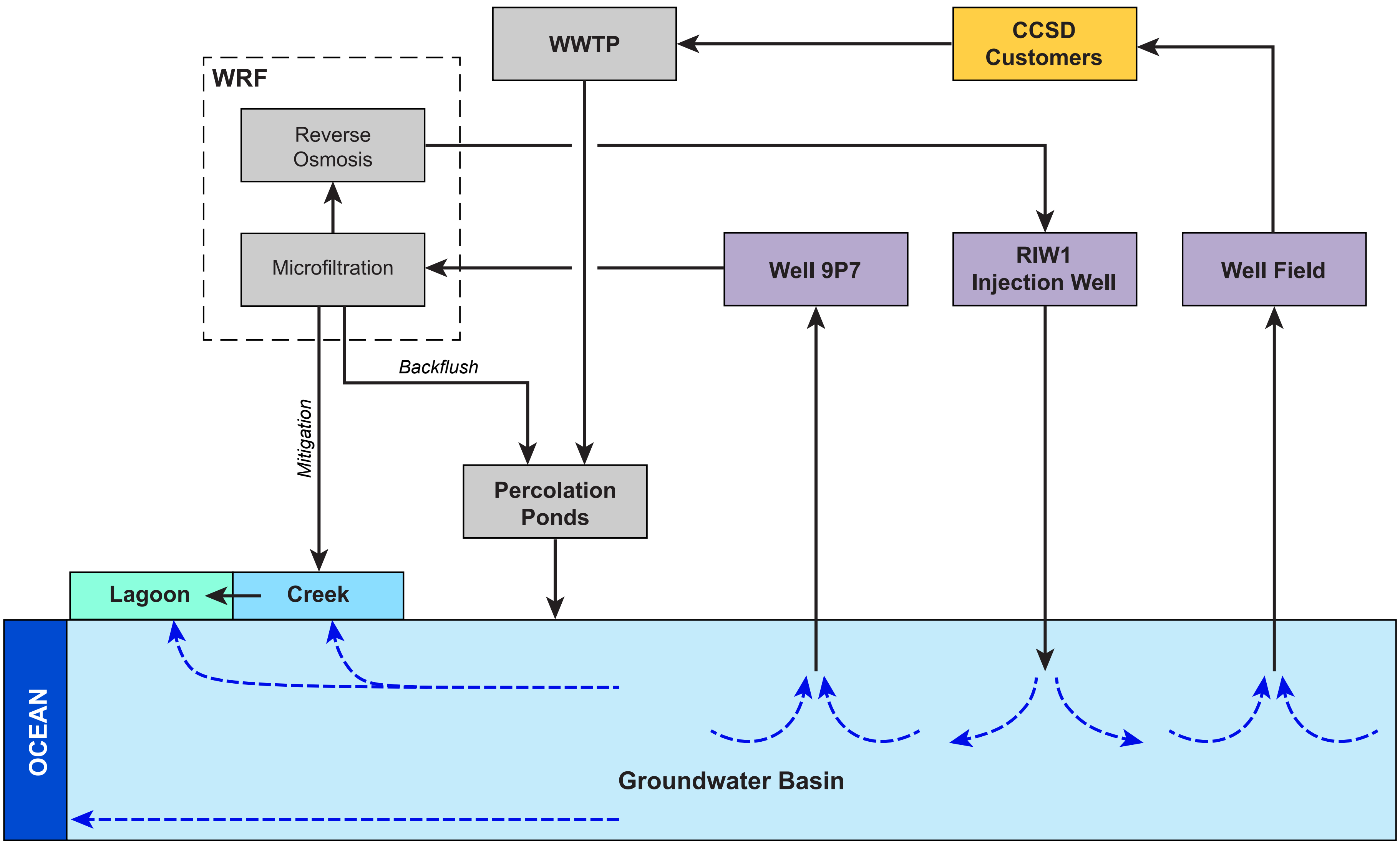
Data Source: T:\Projects\Cambria Water Supply Permit 70602\Model\Water_Levels\Target_results_Run017.xlsx Target_results_Run017

Path: T:\Projects\Cambria Water Supply Permit 70602\GRAPHICS\Figure 3 Calibration Residuals Plot and Statistics.gpj

March 2022

TODD GROUNDWATER

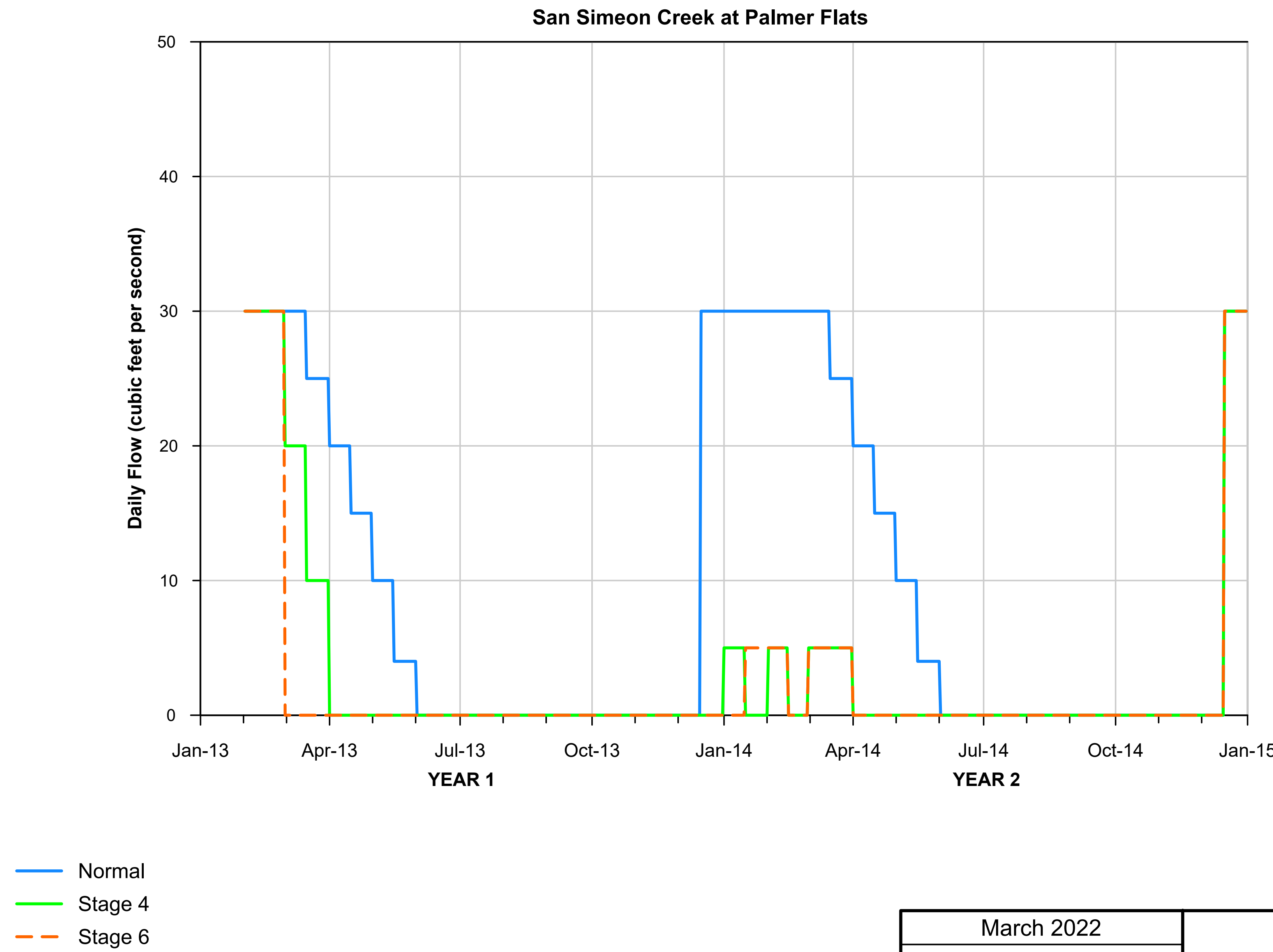
Figure 3
Calibration Residuals Plot and Statistics



March 2022

TODD GROUNDWATER

Figure 4
Diagram of WRF and Groundwater System

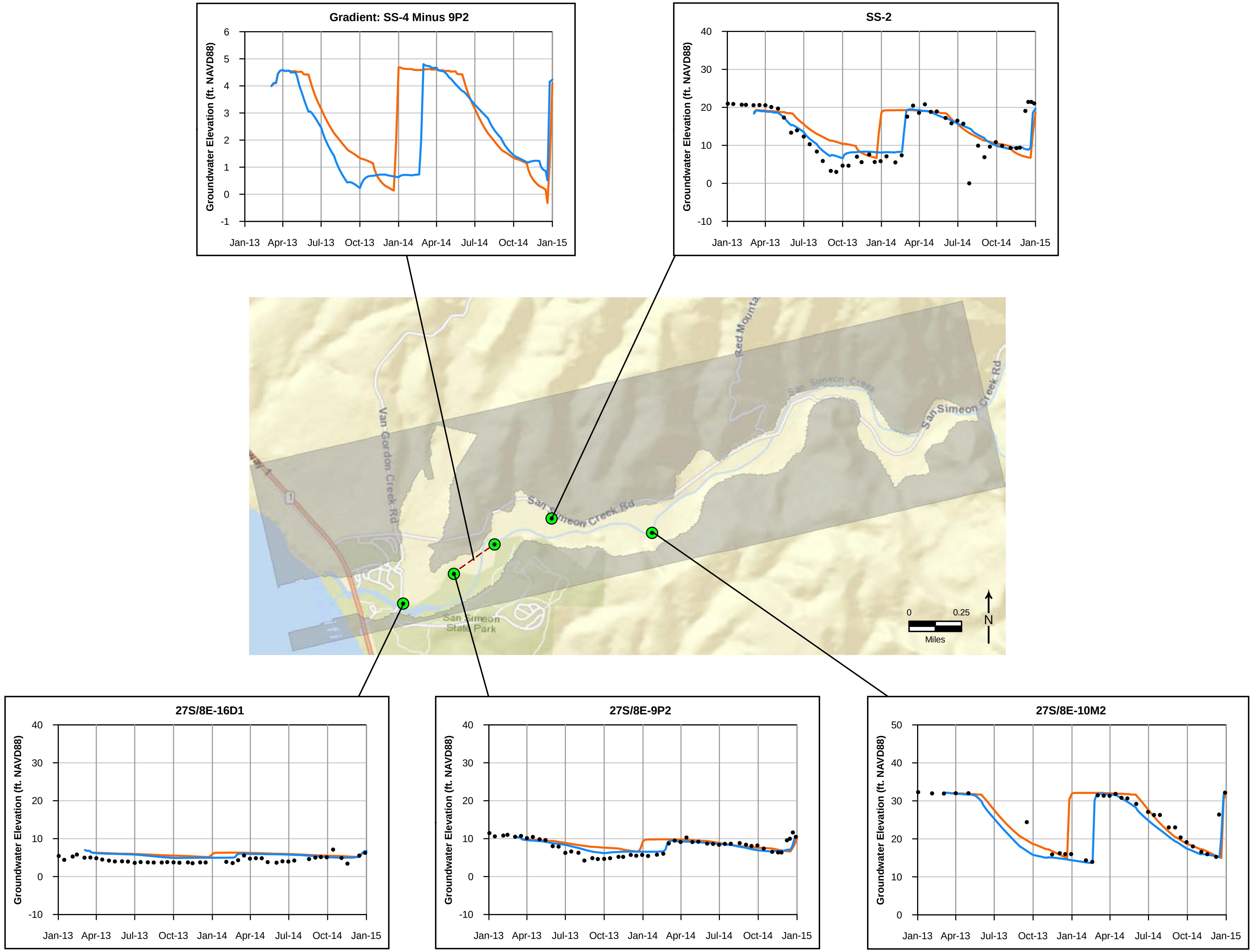


Data Source: T:\Projects\Cambria Water Supply Permit 70602\Model\SFR2\SFRprepIn_flow.xlsx SFRprepIn_flow

March 2022

TODD GROUNDWATER

Figure 5
San Simeon Creek Inflow for Scenarios



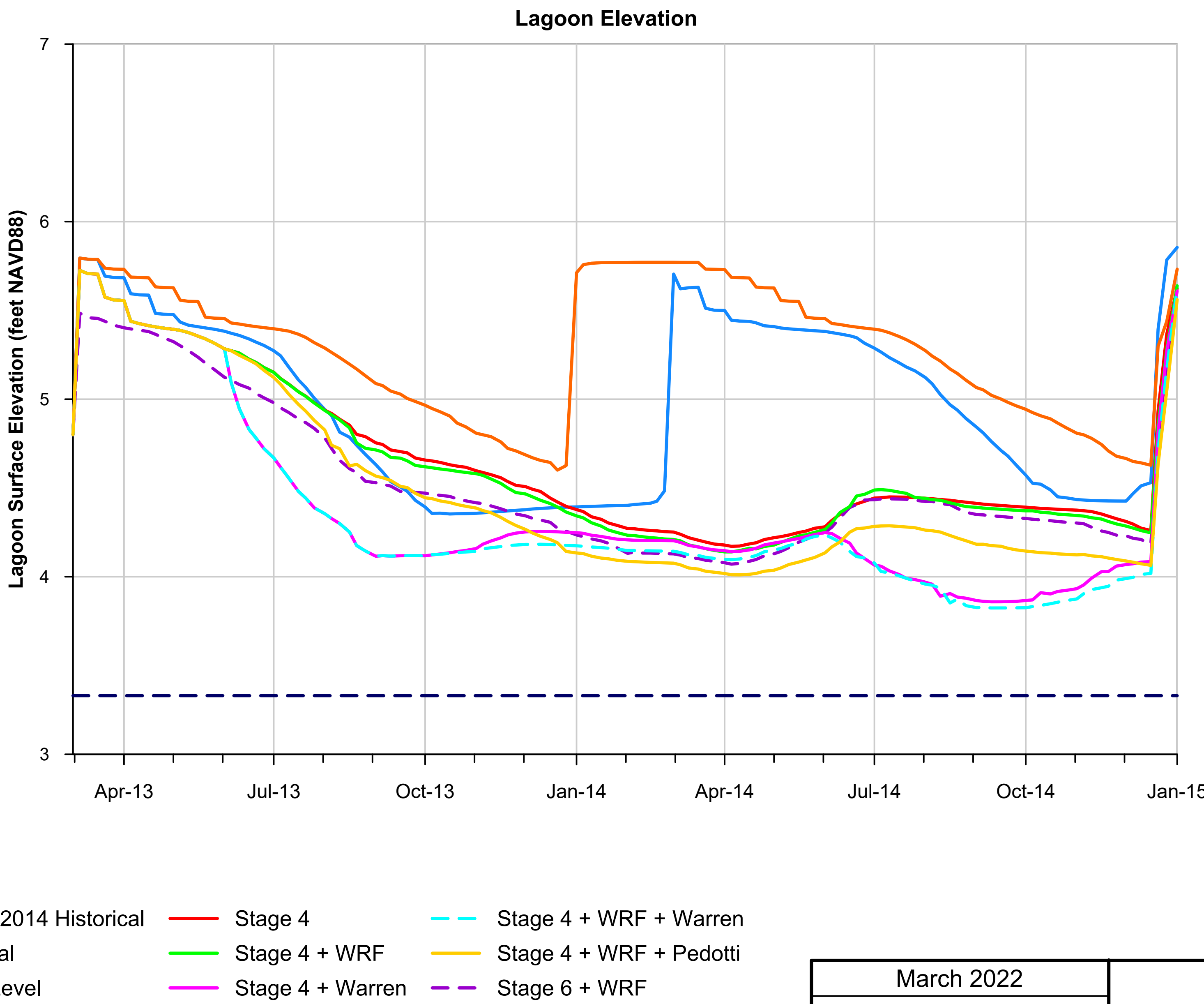
Hydrograph Wells
Inactive Flow Cells

• Measured 2013-2014
Simulated 2013-2014
Normal Year

March 2022

TODD GROUNDWATER

Figure 6
Simulated Well Hydrographs - Historical and Normal Year



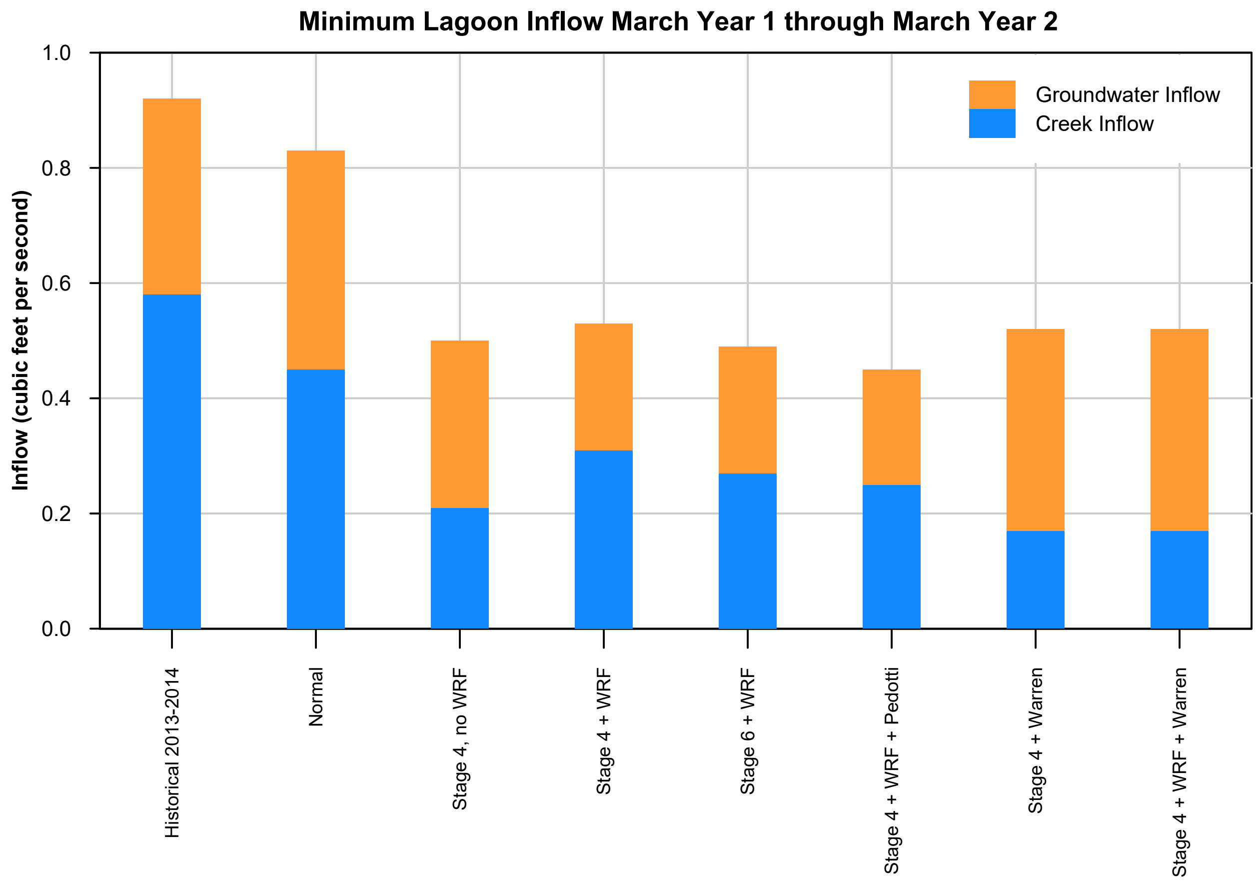
Data Source: T:\Projects\Cambria Water Supply Permit 70602\Model\GWV\SSCR2_gage_lak.xlsx Graph - all

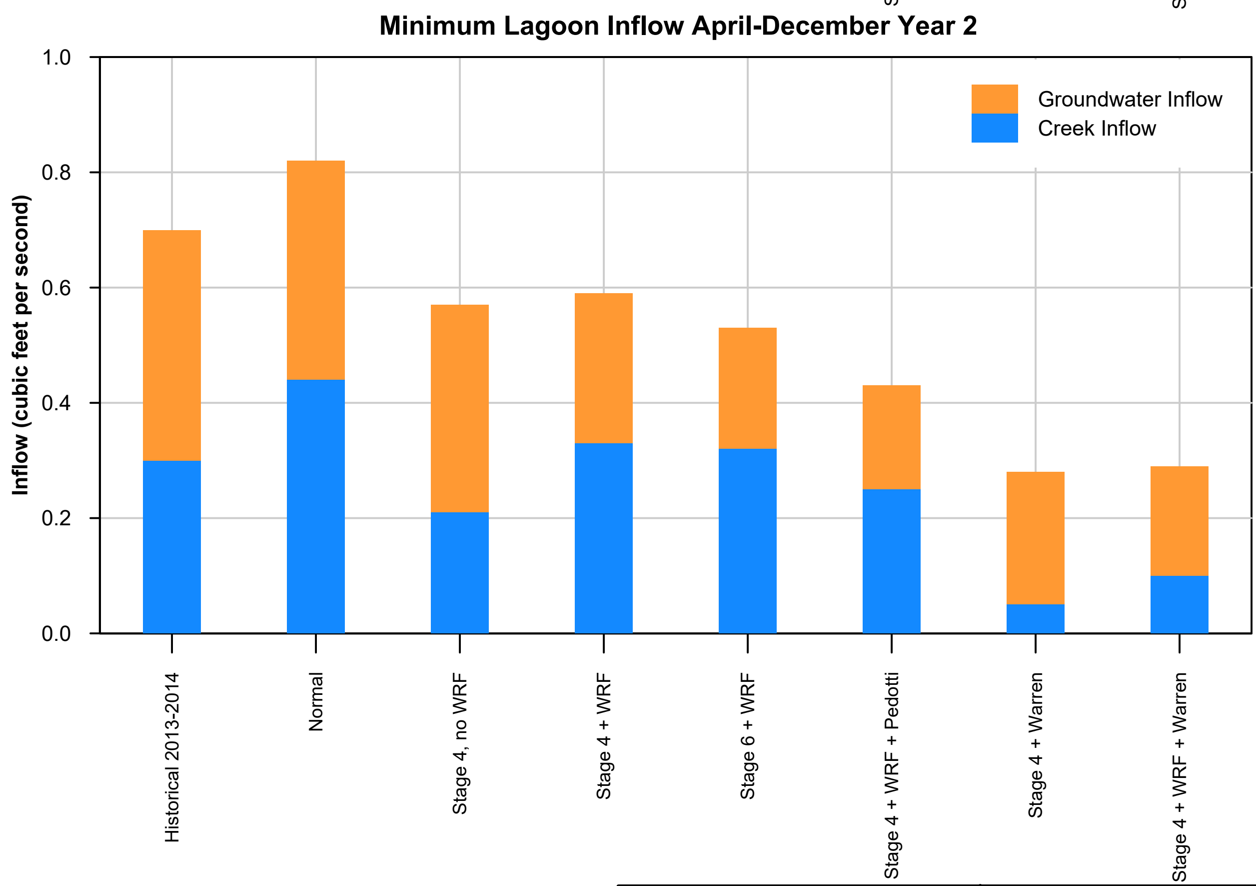
Path: T:\Projects\Cambria Water Supply Permit 70602\GRAPHICS\Figure 7 Simulated Lagoon Elevation.gpj

March 2022

TODD GROUNDWATER

Figure 7
Simulated Lagoon Elevation





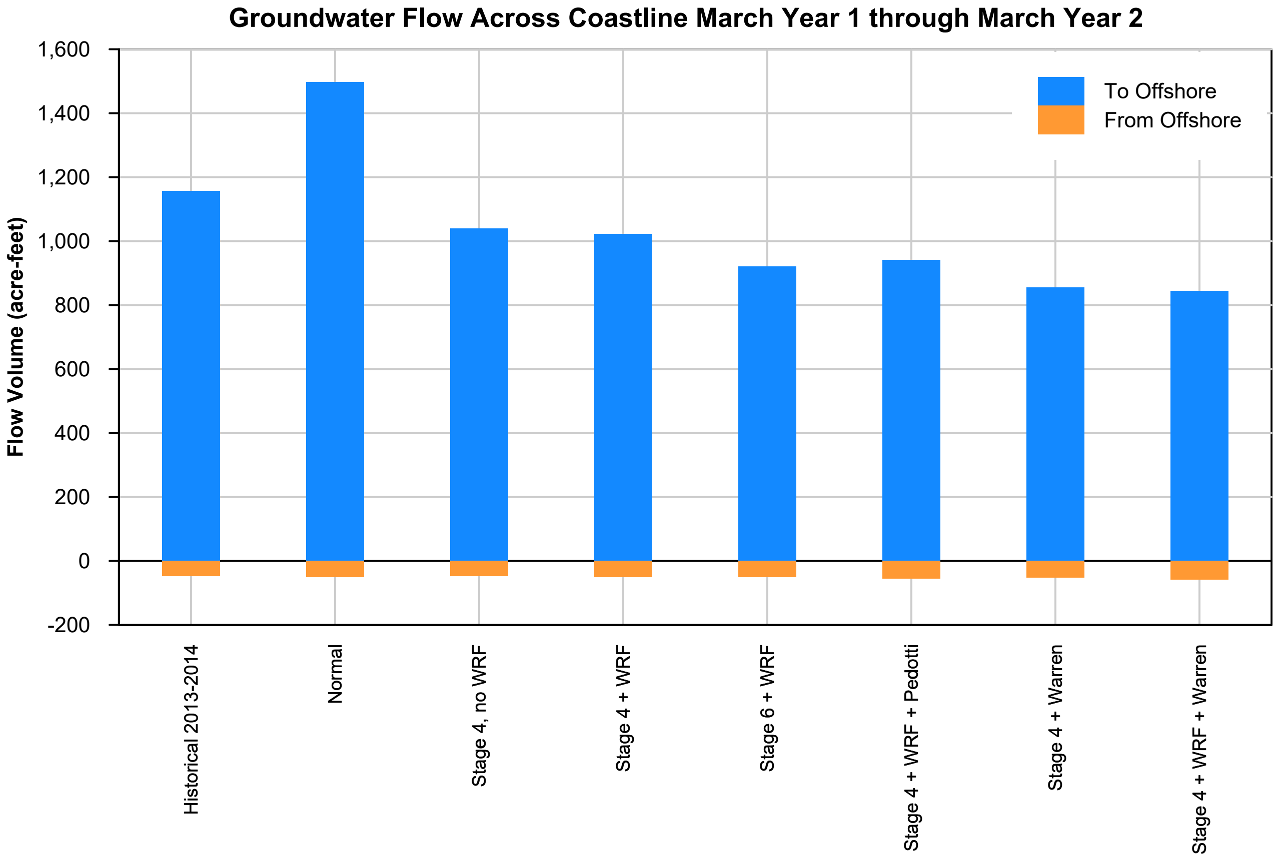
Data:
T:\Projects\Cambria Water Supply Permit 70602\Model_Modeling_log_CCSD.xlsx Scenarios

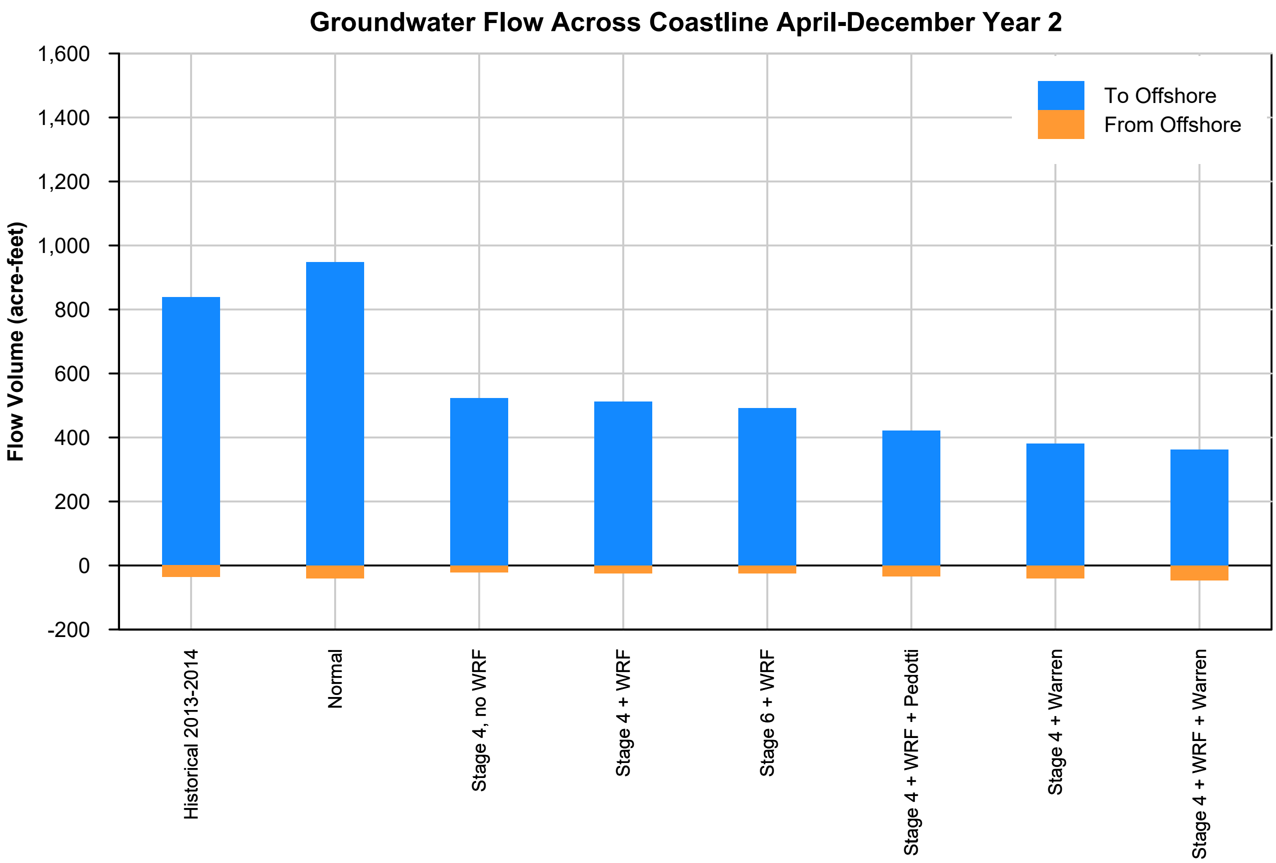
Path: T:\Projects\Cambria Water Supply Permit 70602\GRAPHICS\Figure 8 Minimum Dry Season Lagoon Inflow.gpj

March 2022

TODD GROUNDWATER

Figure 8
Minimum Dry Season Lagoon Inflow





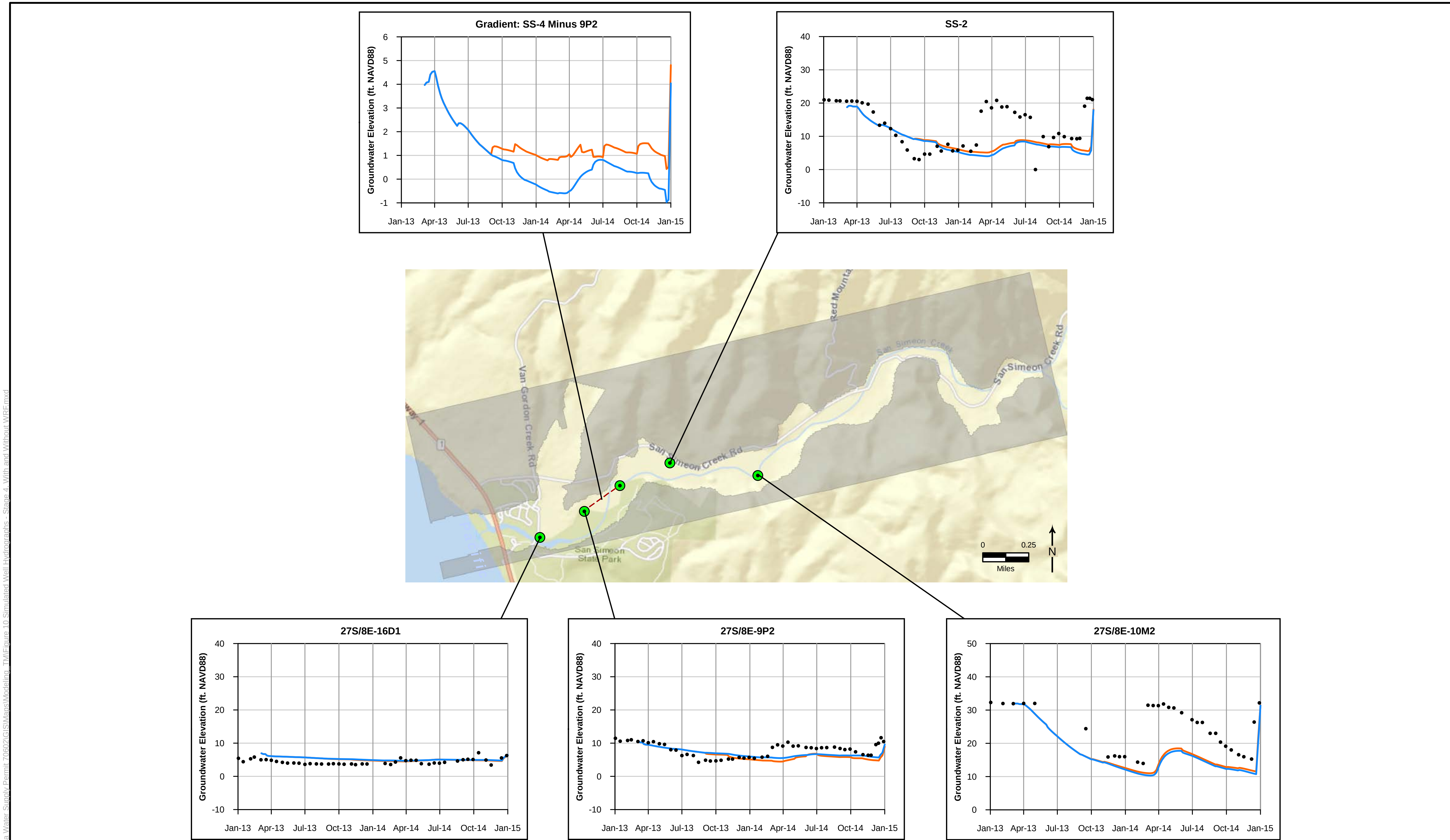
Data:
T:\Projects\Cambria Water Supply Permit 70602\Model_Modeling_log_CCSD.xlsx Scenarios

March 2022

TODD GROUNDWATER

Figure 9
Groundwater Flow Across Coastline

Path: T:\Projects\Cambria Water Supply Permit 70602\GRAPHICS\Figure 8 Minimum Dry Season Lagoon Inflow.gpj



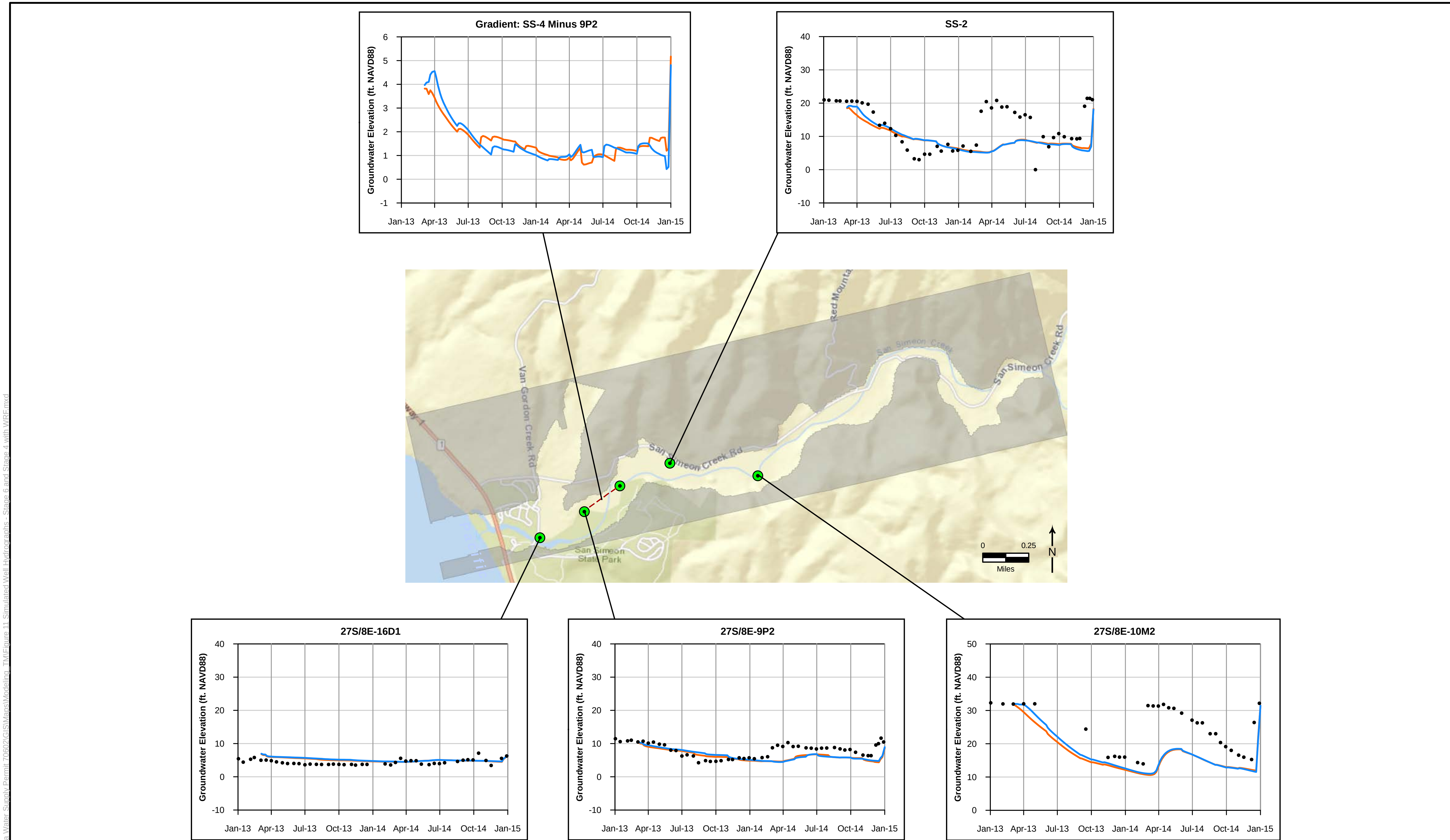
Hydrograph Wells
Inactive Flow Cells

Measured 2013-2014
Stage 4
Stage 4 + WRF

March 2022

TODD GROUNDWATER

Figure 10
Simulated Well Hydrographs - Stage 4 With and Without WRF



Hydrograph Wells

Inactive Flow Cells

• Measured 2013-2014

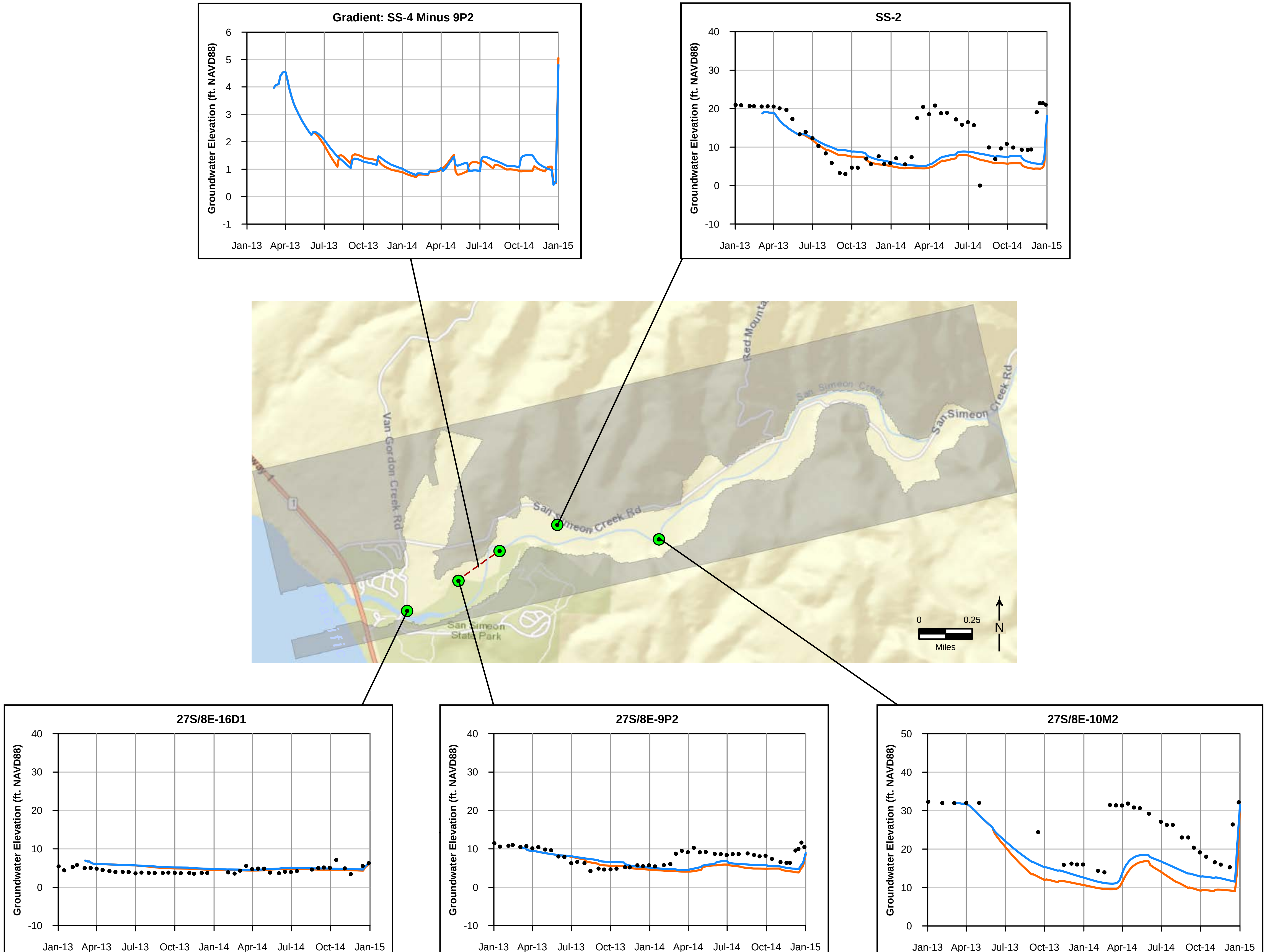
Stage 4 + WRF

Stage 6 + WRF

March 2022

TODD GROUNDWATER

Figure 11
Simulated Well Hydrographs - Stage 6 and Stage 4 with WRF



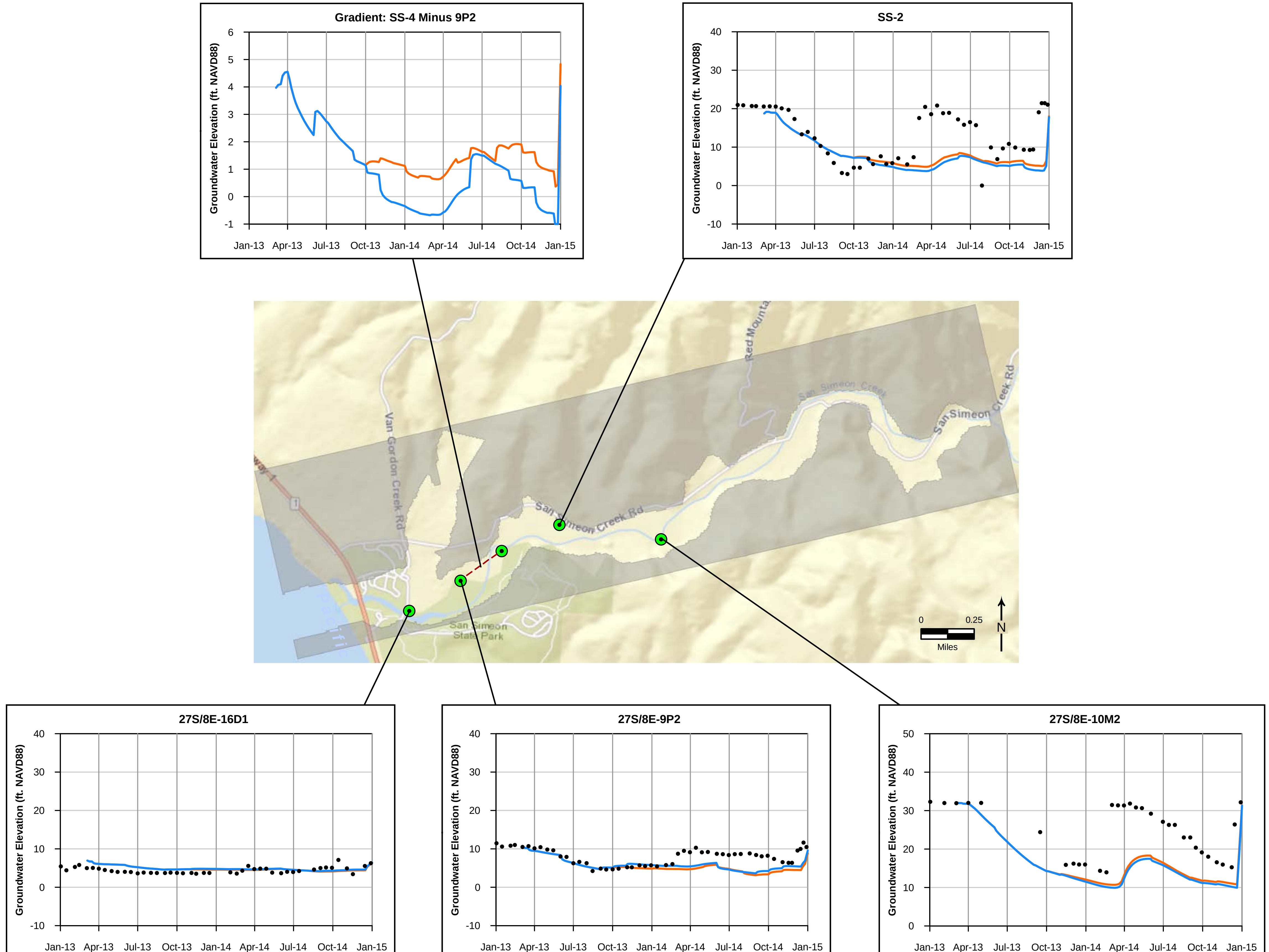
Hydrograph Wells
Inactive Flow Cells

Measured 2013-2014
Stage 4 + WRF
Stage 4 + WRF + Pedotti

March 2022

TODD GROUNDWATER

Figure 12
Simulated Well Hydrographs - Stage 4 with Increased Pedotti Pumping



Hydrograph Wells

Inactive Flow Cells

• Measured 2013-2014

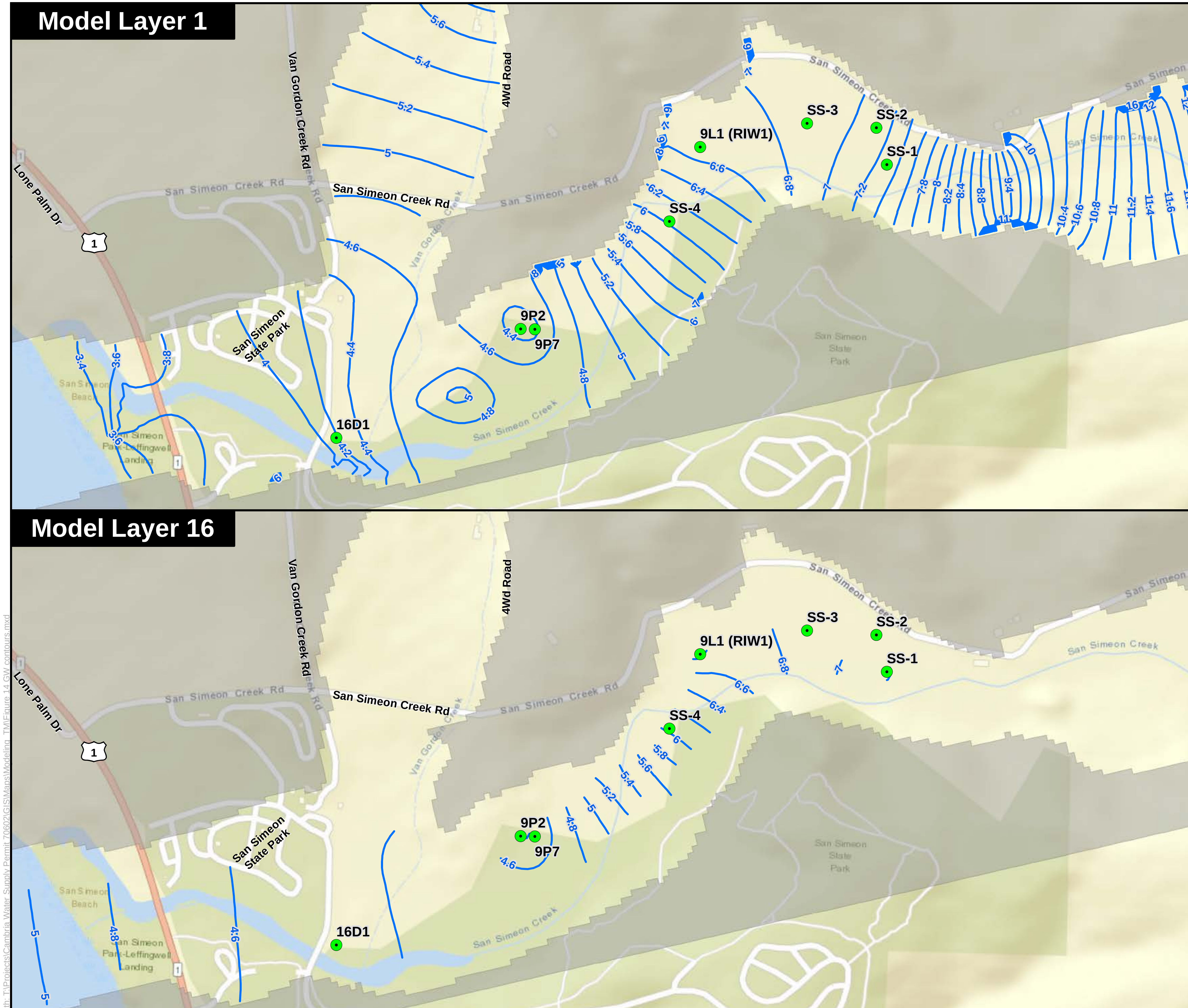
Stage 4 + Warren

Stage 4 + WRF + Warren

March 2022

TODD GROUNDWATER

Figure 13
Simulated Well Hydrographs - Stage 4 with Increased Warren Pumping



Scenario: Stage 4 + WRF + Warren
November of Year 2

- Hydrograph Wells
- Groundwater Elevation (feet NAVD88)
- Inactive Flow Cells

N

0 500
Feet

March 2022

TODD GROUNDWATER

Figure 14
Simulated Groundwater Elevations in Shallow and Deep Layers

Appendix C

Habitat Suitability Criteria

Table C-1. Habitat suitability criteria for steelhead fry (<6 cm) developed for the Big Sur River (Holmes et al. 2014).

Depth (ft)	Suitability	Velocity (ft/s)	Suitability	Depth (ft)	Suitability	Velocity (ft/s)	Suitability
0.00	0.00	0.00	0.89	1.48	0.31	1.41	0.17
0.04	0.00	0.04	0.92	1.52	0.30	1.44	0.15
0.08	0.69	0.07	0.95	1.56	0.28	1.48	0.14
0.11	0.74	0.11	0.97	1.60	0.26	1.52	0.13
0.15	0.78	0.14	0.99	1.63	0.24	1.55	0.12
0.19	0.83	0.18	1.00	1.67	0.23	1.59	0.11
0.23	0.86	0.22	1.00	1.71	0.21	1.62	0.10
0.27	0.90	0.25	1.00	1.75	0.20	1.66	0.09
0.30	0.93	0.29	0.99	1.79	0.18	1.70	0.09
0.34	0.95	0.32	0.98	1.82	0.17	1.73	0.08
0.38	0.97	0.36	0.96	1.86	0.16	1.77	0.07
0.42	0.99	0.40	0.94	1.90	0.15	1.80	0.07
0.46	1.00	0.43	0.91	1.94	0.14	1.84	0.06
0.49	1.00	0.47	0.88	1.98	0.13	1.88	0.05
0.53	1.00	0.51	0.85	2.01	0.12	1.91	0.05
0.57	0.99	0.54	0.82	2.05	0.11	1.95	0.05
0.61	0.98	0.58	0.78	2.09	0.10	1.99	0.04
0.65	0.96	0.61	0.74	2.13	0.09	2.02	0.04
0.68	0.94	0.65	0.71	2.17	0.09	2.06	0.03
0.72	0.91	0.69	0.67	2.20	0.08	2.09	0.03
0.76	0.88	0.72	0.63	2.24	0.07	2.13	0.03
0.80	0.85	0.76	0.60	2.28	0.07	2.17	0.02
0.84	0.82	0.79	0.56	2.32	0.06	2.20	0.02
0.87	0.79	0.83	0.52	2.36	0.06	2.24	0.02
0.91	0.75	0.87	0.49	2.39	0.05	2.27	0.02
0.95	0.72	0.90	0.46	2.43	0.05	2.31	0.02
0.99	0.68	0.94	0.43	2.47	0.04	2.35	0.01
1.03	0.65	0.97	0.40	2.51	0.04	2.38	0.01
1.06	0.61	1.01	0.37	2.55	0.04	2.42	0.01
1.10	0.58	1.05	0.35	2.58	0.03	2.45	0.01
1.14	0.55	1.08	0.32	2.62	0.03	2.49	0.01
1.18	0.51	1.12	0.30	2.66	0.03	2.53	0.01
1.22	0.49	1.16	0.28	2.70	0.03	2.56	0.01
1.25	0.46	1.19	0.26	2.74	0.02	2.60	0.01
1.29	0.43	1.23	0.24	2.77	0.02	2.64	0.01
1.33	0.40	1.26	0.22	2.81	0.02	2.67	0.01
1.37	0.38	1.30	0.21	2.85	0.02	2.71	0.00
1.41	0.36	1.34	0.19	2.89	0.02	2.74	0.00
1.44	0.34	1.37	0.18	2.93	0.02	2.78	0.00

Depth (ft)	Suitability	Velocity (ft/s)	Suitability
2.96	0.02	2.82	0.00
3.00	0.01	2.85	0.00
3.04	0.01	2.89	0.00
3.08	0.01	2.92	0.00
3.12	0.01	2.96	0.00
3.15	0.01	3.00	0.00
3.19	0.01	3.03	0.00
3.23	0.01	3.07	0.00
3.27	0.01	3.10	0.00
3.31	0.01	3.14	0.00
3.34	0.01	3.18	0.00
3.38	0.01	3.21	0.00
3.42	0.01	3.25	0.00
3.46	0.01	3.29	0.00
3.50	0.01	3.32	0.00
3.53	0.01	3.36	0.00
3.57	0.01	3.39	0.00
3.61	0.01	3.43	0.00
3.65	0.01	3.47	0.00
3.69	0.01	3.50	0.00
3.72	0.01	3.54	0.00
3.76	0.01	3.57	0.00
3.80	0.01	3.61	0.00
3.81	0.00		

Table C-2. Habitat suitability criteria for steelhead juveniles (6–9 cm and 10–15 cm) developed for the Big Sur River (Holmes et al. 2014).

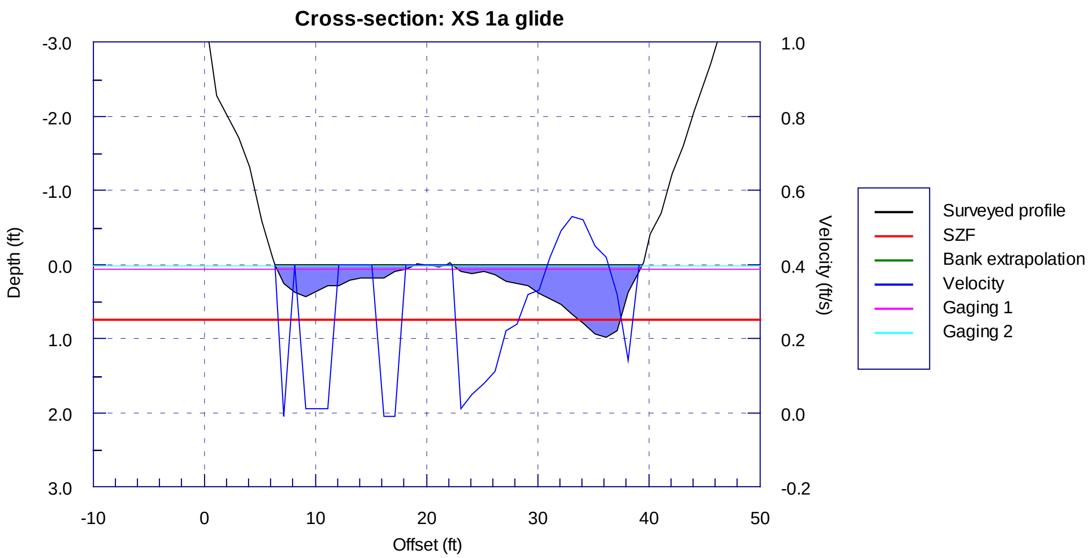
Steelhead Juvenile 6–9 cm				Steelhead Juvenile 10–15 cm			
Depth (ft)	Suitability	Velocity (ft/s)	Suitability	Depth (ft)	Suitability	Velocity (ft/s)	Suitability
0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.48
0.05	0.00	0.05	0.53	0.05	0.00	0.05	0.53
0.10	0.00	0.11	0.57	0.10	0.00	0.11	0.57
0.14	0.00	0.16	0.61	0.15	0.00	0.16	0.61
0.19	0.00	0.21	0.65	0.20	0.00	0.21	0.65
0.24	0.00	0.27	0.70	0.24	0.00	0.27	0.70
0.29	0.00	0.32	0.74	0.29	0.00	0.32	0.74
0.33	0.38	0.38	0.77	0.34	0.00	0.38	0.77
0.38	0.43	0.43	0.81	0.39	0.00	0.43	0.81
0.43	0.47	0.48	0.84	0.44	0.00	0.48	0.84
0.47	0.52	0.54	0.88	0.49	0.00	0.54	0.88
0.52	0.56	0.59	0.90	0.54	0.00	0.59	0.90
0.57	0.61	0.64	0.93	0.59	0.40	0.64	0.93
0.62	0.65	0.70	0.95	0.62	0.46	0.70	0.95
0.67	0.70	0.75	0.97	0.67	0.51	0.75	0.97
0.71	0.74	0.80	0.98	0.71	0.55	0.80	0.98
0.76	0.78	0.86	0.99	0.76	0.60	0.86	0.99
0.81	0.82	0.91	1.00	0.81	0.64	0.91	1.00
0.85	0.86	0.96	1.00	0.85	0.68	0.96	1.00
0.90	0.89	1.00	1.00	0.90	0.73	1.00	1.00
0.95	0.92	1.05	1.00	0.95	0.77	1.05	1.00
1.00	0.94	1.10	1.00	1.00	0.80	1.10	1.00
1.04	0.96	1.15	1.00	1.04	0.84	1.15	1.00
1.09	0.98	1.21	1.00	1.09	0.87	1.21	1.00
1.14	0.99	1.26	1.00	1.14	0.90	1.26	1.00
1.19	1.00	1.31	1.00	1.19	0.93	1.31	1.00
1.24	1.00	1.36	1.00	1.24	0.95	1.36	1.00
1.25	1.00	1.41	1.00	1.28	0.97	1.41	1.00
1.29	1.00	1.47	1.00	1.33	0.98	1.47	1.00
1.33	1.00	1.52	0.99	1.38	0.99	1.52	0.99
1.38	1.00	1.57	0.98	1.43	1.00	1.57	0.98
1.42	1.00	1.62	0.97	1.47	1.00	1.62	0.97
1.46	1.00	1.68	0.95	1.52	1.00	1.68	0.95
1.50	1.00	1.73	0.94	1.57	1.00	1.73	0.94
1.55	0.99	1.78	0.92	1.62	1.00	1.78	0.92
1.59	0.99	1.83	0.89	1.67	1.00	1.83	0.89
1.63	0.98	1.89	0.87	1.72	0.99	1.89	0.87
1.68	0.96	1.94	0.84	1.76	0.98	1.94	0.84

Steelhead Juvenile 6–9 cm				Steelhead Juvenile 10–15 cm			
Depth (ft)	**Suitability**	**Velocity (ft/s)**	**Suitability**	**Depth (ft)**	**Suitability**	**Velocity (ft/s)**	**Suitability**
1.72	0.94	1.99	0.81	1.81	0.97	1.99	0.81
1.76	0.92	2.04	0.78	1.86	0.95	2.04	0.78
1.81	0.90	2.10	0.74	1.91	0.93	2.10	0.74
1.85	0.88	2.15	0.71	1.96	0.91	2.15	0.71
1.89	0.85	2.20	0.68	2.01	0.89	2.20	0.68
1.93	0.82	2.25	0.64	2.06	0.86	2.25	0.64
1.98	0.79	2.31	0.61	2.11	0.83	2.31	0.61
2.02	0.76	2.36	0.57	2.16	0.80	2.36	0.57
2.06	0.72	2.41	0.54	2.21	0.77	2.41	0.54
2.11	0.69	2.46	0.50	2.25	0.74	2.46	0.50
2.15	0.66	2.52	0.47	2.30	0.71	2.52	0.47
2.19	0.63	2.57	0.44	2.35	0.68	2.57	0.44
2.24	0.60	2.62	0.41	2.40	0.65	2.62	0.41
2.28	0.57	2.67	0.38	2.45	0.62	2.67	0.38
2.32	0.54	2.72	0.35	2.50	0.58	2.72	0.35
2.36	0.51	2.78	0.32	2.55	0.55	2.78	0.32
2.41	0.48	2.83	0.30	2.60	0.52	2.83	0.30
2.45	0.46	2.88	0.27	2.65	0.50	2.88	0.27
2.49	0.43	2.93	0.25	2.70	0.47	2.93	0.25
2.54	0.41	2.99	0.23	2.74	0.44	2.99	0.23
2.58	0.39	3.04	0.21	2.79	0.42	3.04	0.21
2.62	0.37	3.09	0.19	2.84	0.39	3.09	0.19
2.67	0.36	3.14	0.17	2.89	0.37	3.14	0.17
2.71	0.34	3.20	0.16	2.94	0.35	3.20	0.16
2.75	0.33	3.25	0.14	2.99	0.33	3.25	0.14
2.79	0.32	3.30	0.13	3.04	0.31	3.30	0.13
2.84	0.31	3.35	0.12	3.09	0.30	3.35	0.12
2.88	0.30	3.41	0.11	3.14	0.28	3.41	0.11
2.92	0.29	3.46	0.10	3.19	0.27	3.46	0.10
2.97	0.28	3.51	0.09	3.23	0.25	3.51	0.09
3.01	0.27	3.56	0.08	3.28	0.24	3.56	0.08
3.05	0.26	3.62	0.07	3.33	0.23	3.62	0.07
3.10	0.26	3.67	0.06	3.38	0.21	3.67	0.06
3.14	0.25	3.72	0.06	3.43	0.20	3.72	0.06
3.18	0.25	3.77	0.05	3.48	0.19	3.77	0.05
3.22	0.24	3.83	0.05	3.53	0.18	3.83	0.05
3.27	0.23	3.88	0.04	3.58	0.17	3.88	0.04
3.31	0.23	3.93	0.04	3.63	0.16	3.93	0.04
3.35	0.22	3.98	0.03	3.68	0.15	3.98	0.03
3.40	0.22	4.03	0.03	3.72	0.14	4.03	0.03

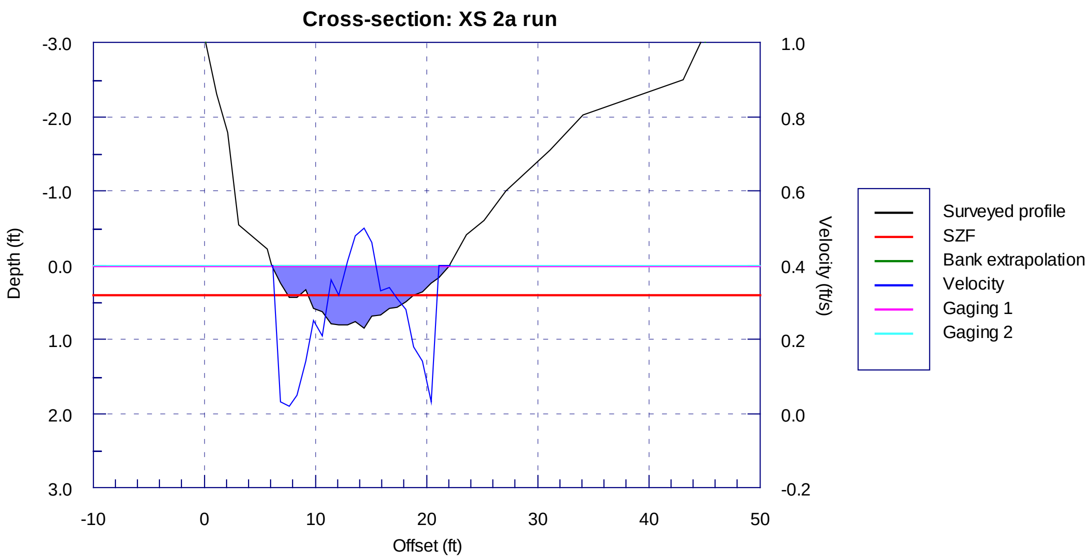
Steelhead Juvenile 6–9 cm				Steelhead Juvenile 10–15 cm			
Depth (ft)	Suitability	Velocity (ft/s)	Suitability	Depth (ft)	Suitability	Velocity (ft/s)	Suitability
3.44	0.21	4.09	0.03	3.77	0.13	4.09	0.03
3.48	0.21	4.14	0.02	3.82	0.13	4.14	0.02
3.53	0.21	4.19	0.02	3.87	0.12	4.19	0.02
3.57	0.20	4.24	0.02	3.92	0.11	4.24	0.02
3.61	0.20	4.30	0.02	3.97	0.10	4.30	0.02
3.65	0.19	4.35	0.02	4.02	0.10	4.35	0.02
3.70	0.18	4.40	0.02	4.07	0.09	4.40	0.02
3.74	0.18	4.45	0.01	4.12	0.08	4.45	0.01
3.78	0.17	4.51	0.01	4.17	0.08	4.51	0.01
3.83	0.17	4.56	0.01	4.21	0.07	4.56	0.01
3.87	0.16	4.61	0.01	4.26	0.06	4.61	0.01
3.91	0.15	4.66	0.01	4.31	0.06	4.66	0.01
3.96	0.15	4.72	0.01	4.36	0.05	4.72	0.01
4.00	0.14	4.77	0.01	4.41	0.05	4.77	0.01
4.04	0.13	4.82	0.01	4.46	0.05	4.82	0.01
4.08	0.13	4.87	0.01	4.51	0.04	4.87	0.01
4.13	0.12	4.93	0.01	4.56	0.04	4.93	0.01
4.17	0.11	4.98	0.01	4.61	0.03	4.98	0.01
4.21	0.11	5.03	0.01	4.66	0.03	5.03	0.01
4.26	0.10	5.08	0.01	4.70	0.03	5.08	0.01
4.30	0.09	5.14	0.01	4.75	0.02	5.14	0.01
		5.19	0.01	4.80	0.02	5.19	0.01
		5.24	0.01	4.85	0.02	5.24	0.01
		5.25	0.00	4.90	0.02	5.25	0.00

Appendix D

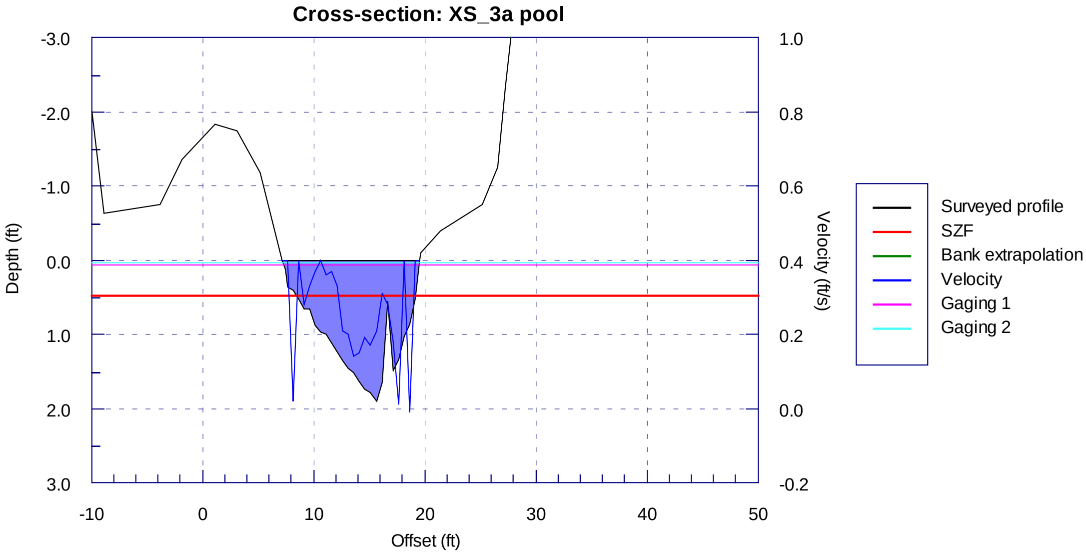
Transect Profiles Showing Calibration Flows

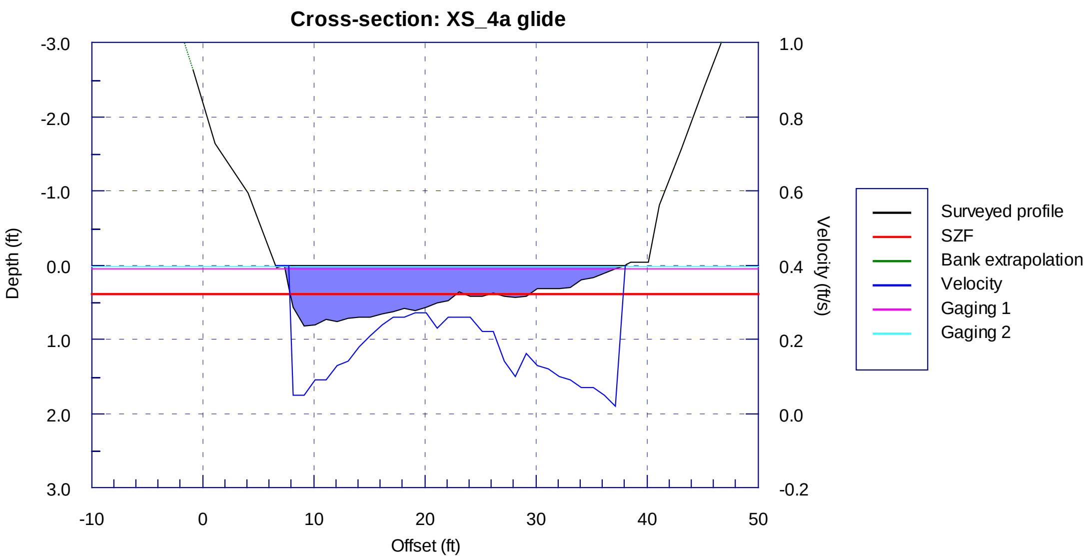


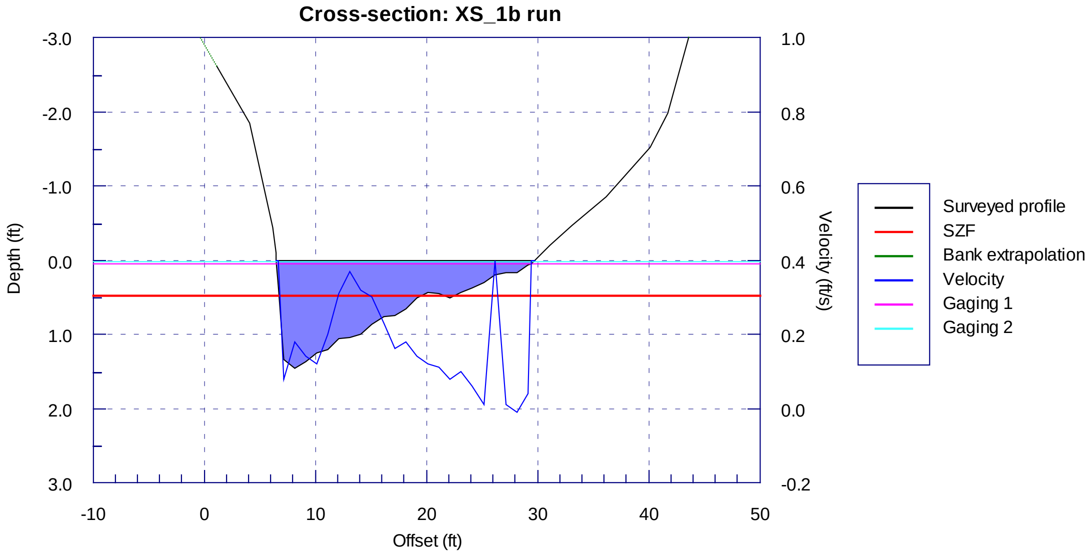
Cross-section: XS 1a glide
Depth (ft)
Velocity (ft/s)
Offset (ft)
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-10
0
10
20
30
40
50
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

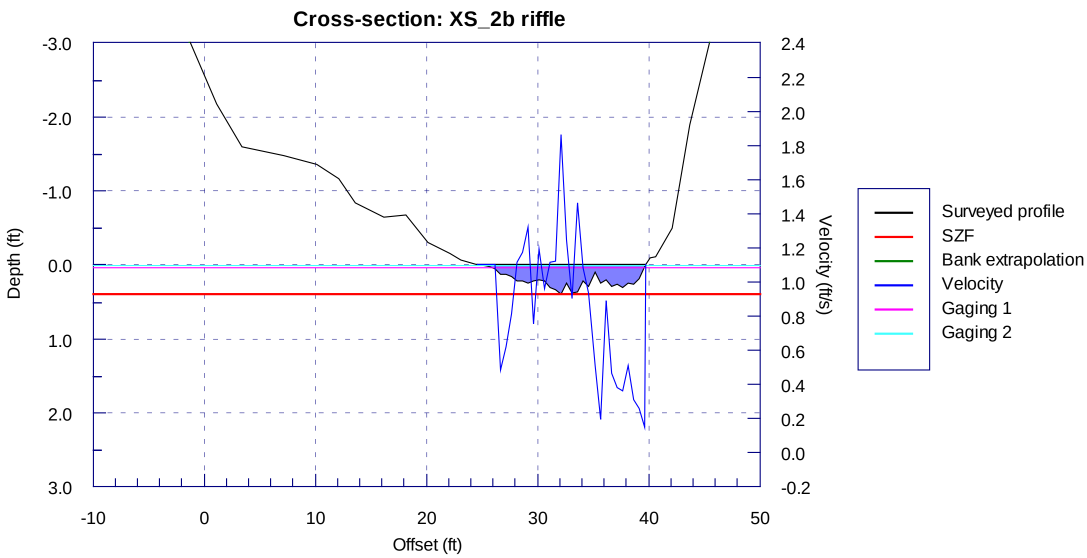


Cross-section: XS 2a run
Depth (ft)
Velocity (ft/s)
Offset (ft)
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-10
0
10
20
30
40
50
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

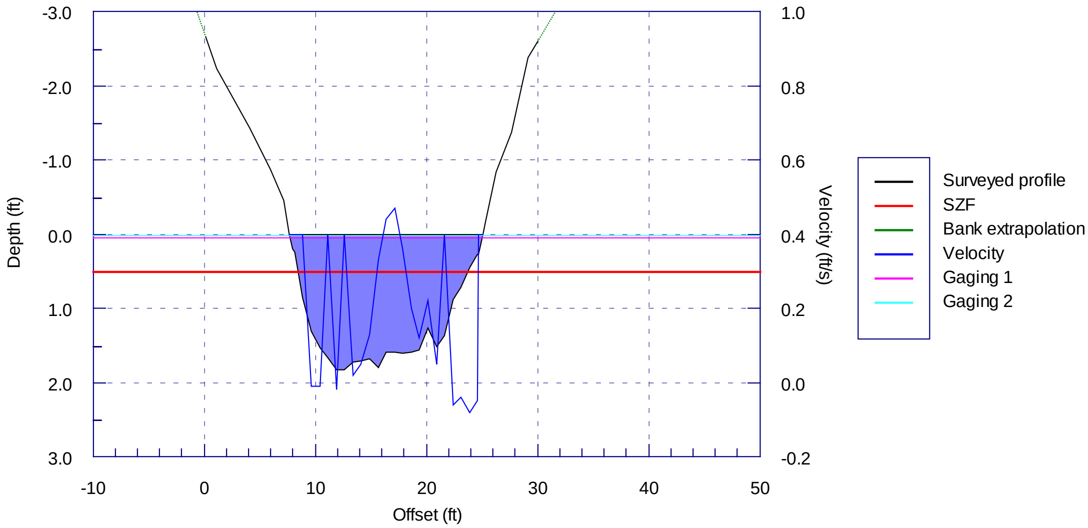

Cross-section: XS_3a pool
Depth (ft)
Velocity (ft/s)
Offset (ft)
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-10
0
10
20
30
40
50
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2


Cross-section: XS_4a glide
Depth (ft)
Velocity (ft/s)
Offset (ft)
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-10
0
10
20
30
40
50
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

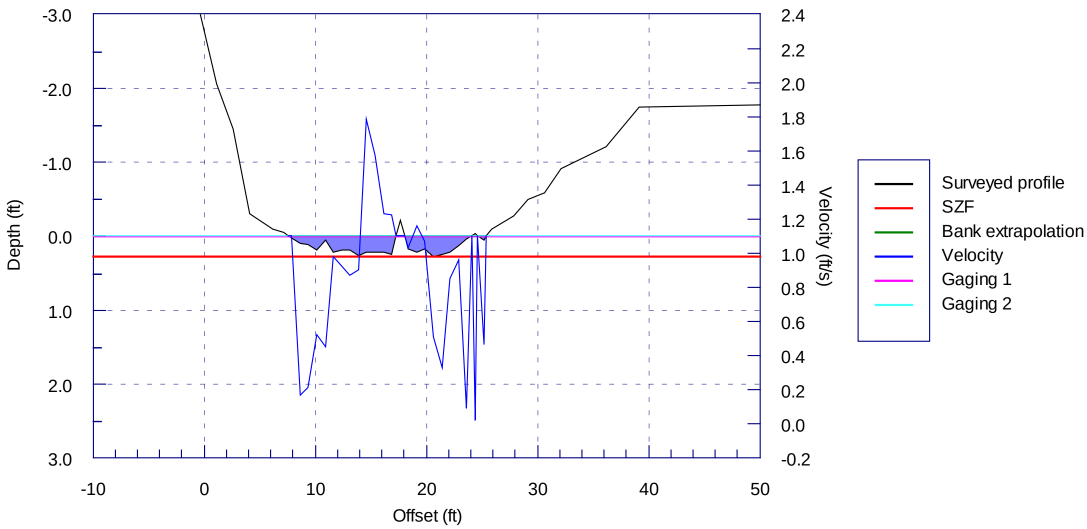

Cross-section: XS_1b run
Depth (ft)
Velocity (ft/s)
Offset (ft)
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-10
0
10
20
30
40
50
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

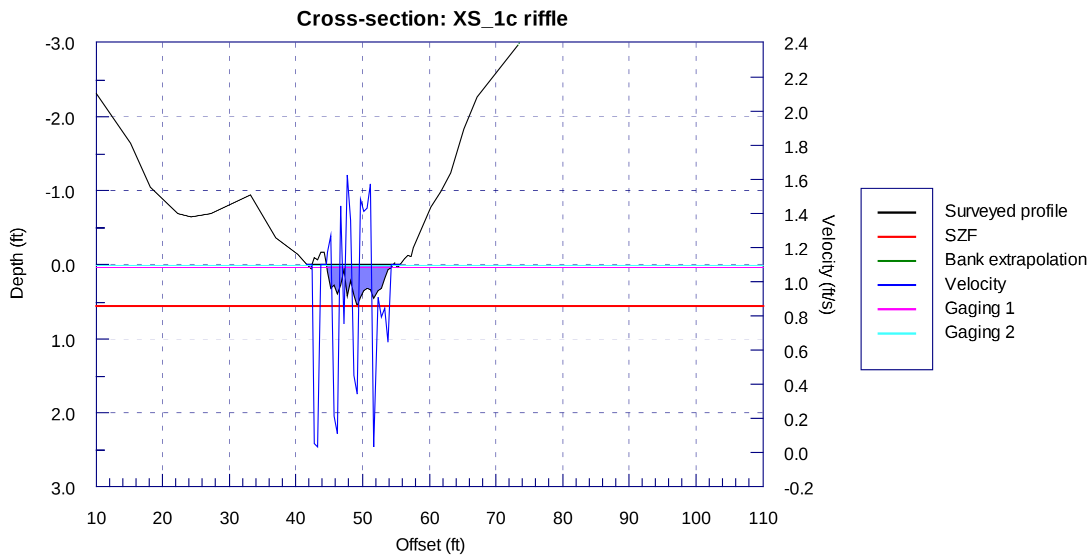

Cross-section: XS_2b riffle
Depth (ft)
Velocity (ft/s)
Offset (ft)
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-10
0
10
20
30
40
50
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

Cross-section: XS_3b pool

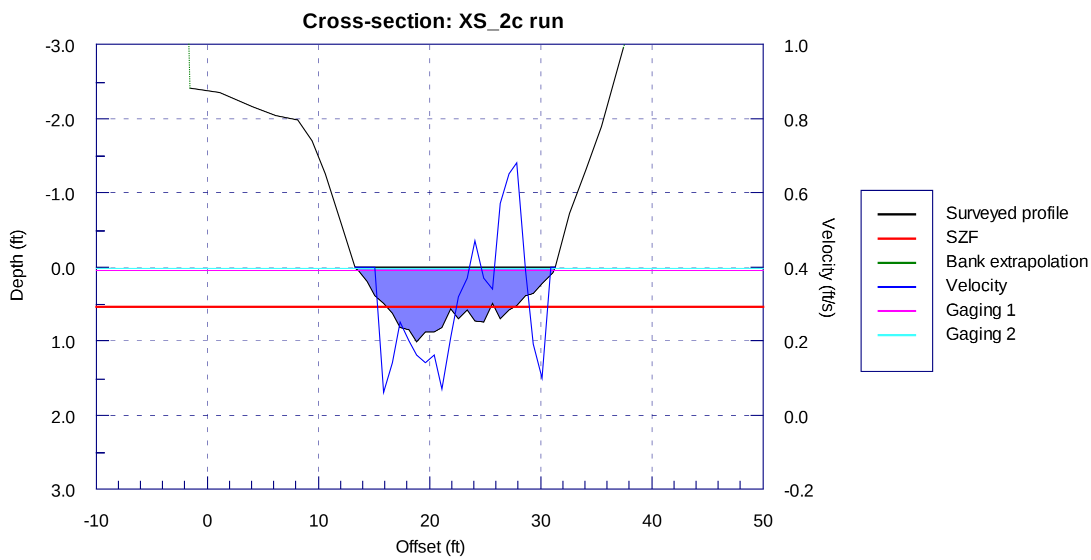


Cross-section: XS_4b riffle

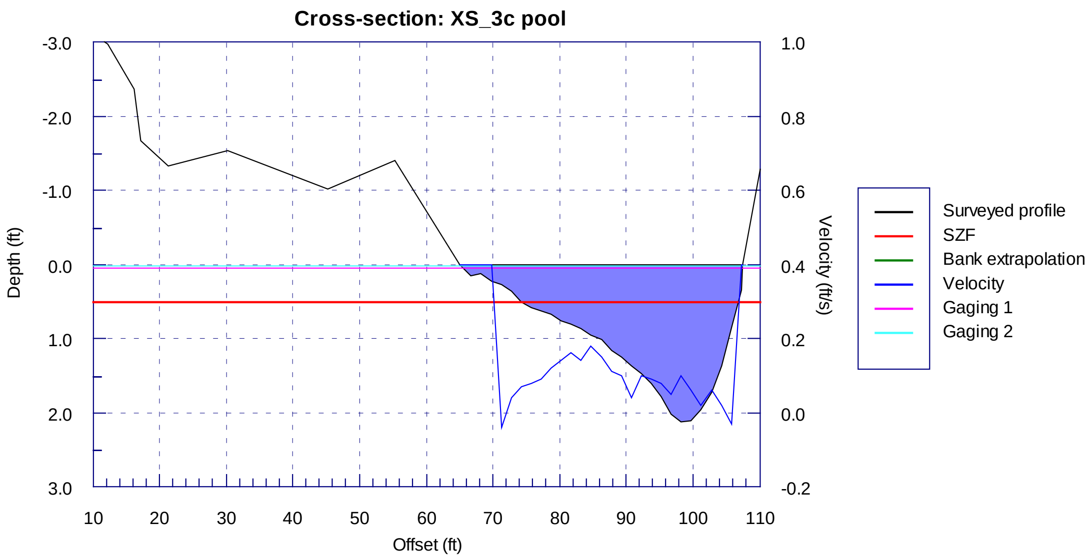




Cross-section: XS_1c riffle
Depth (ft)
Velocity (ft/s)
Offset (ft)
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

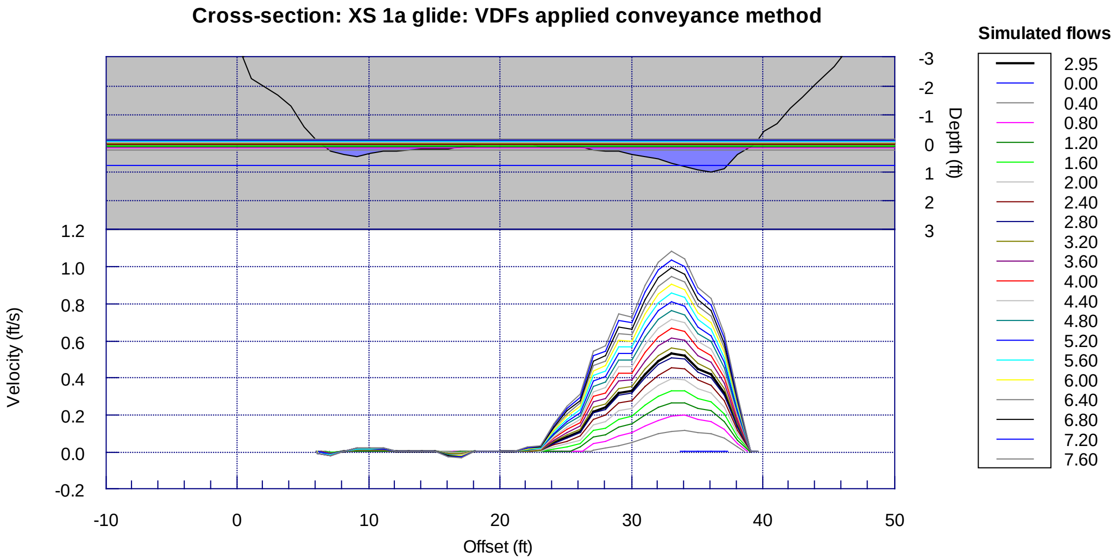


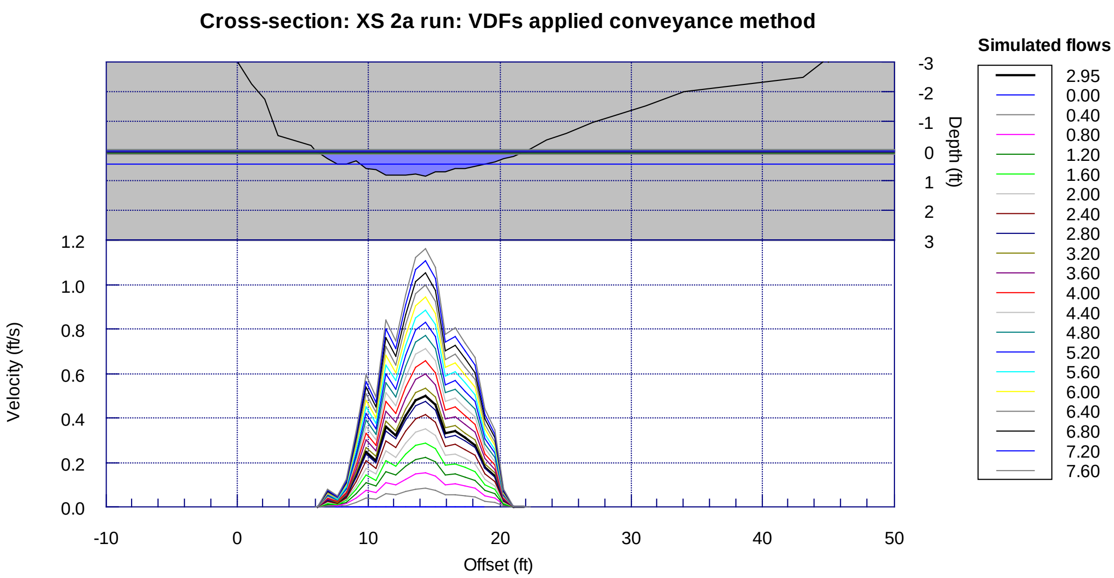
Cross-section: XS_2c run
Depth (ft)
Velocity (ft/s)
Offset (ft)
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

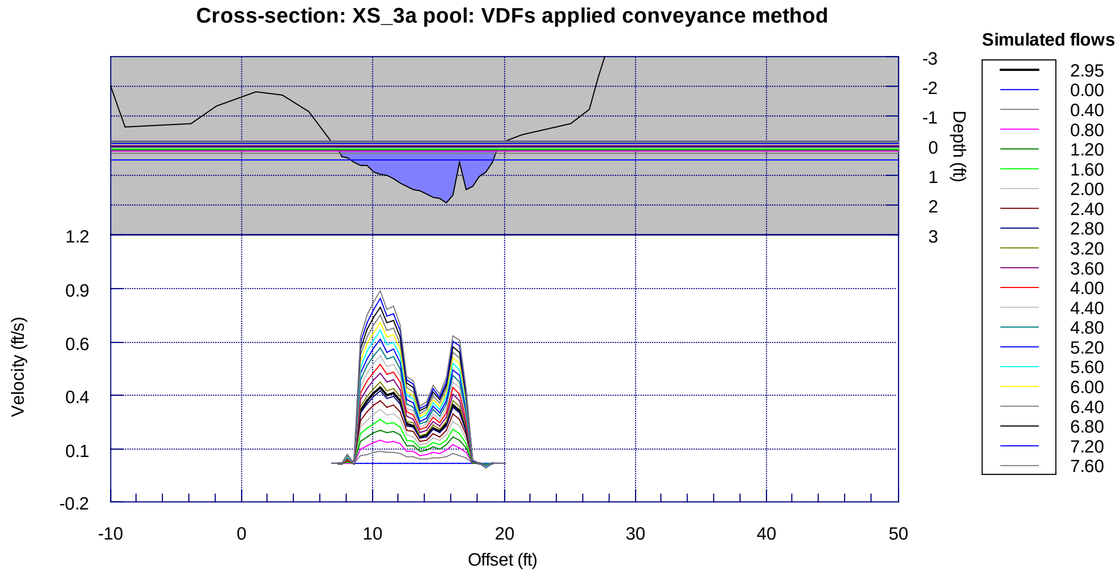

Cross-section: XS_3c pool
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
Depth (ft)
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
Velocity (ft/s)
10
20
30
40
50
60
70
80
90
100
110
Offset (ft)
Surveyed profile
SZF
Bank extrapolation
Velocity
Gaging 1
Gaging 2

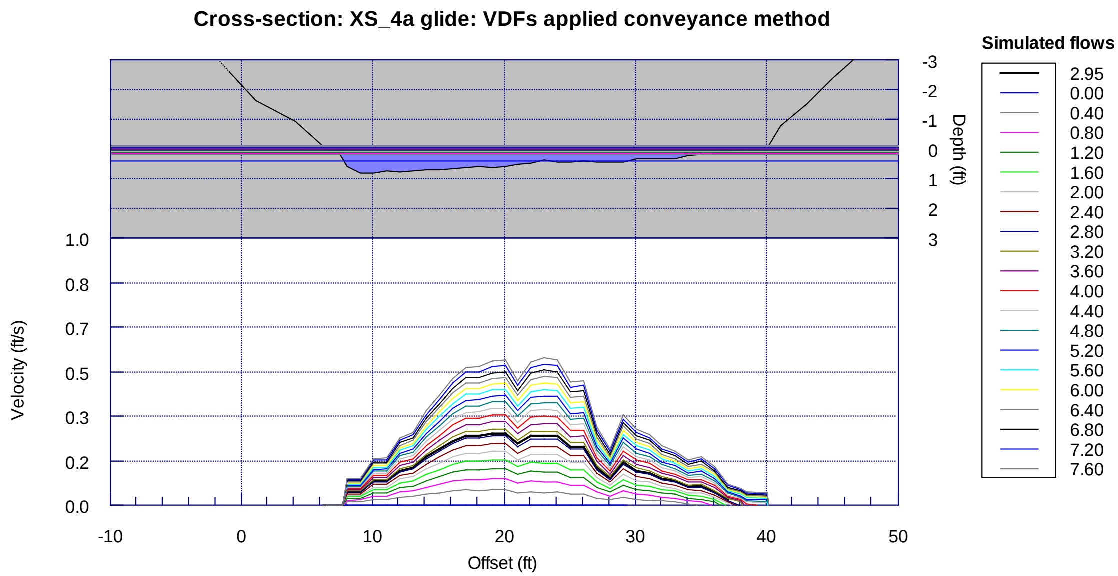
Appendix E

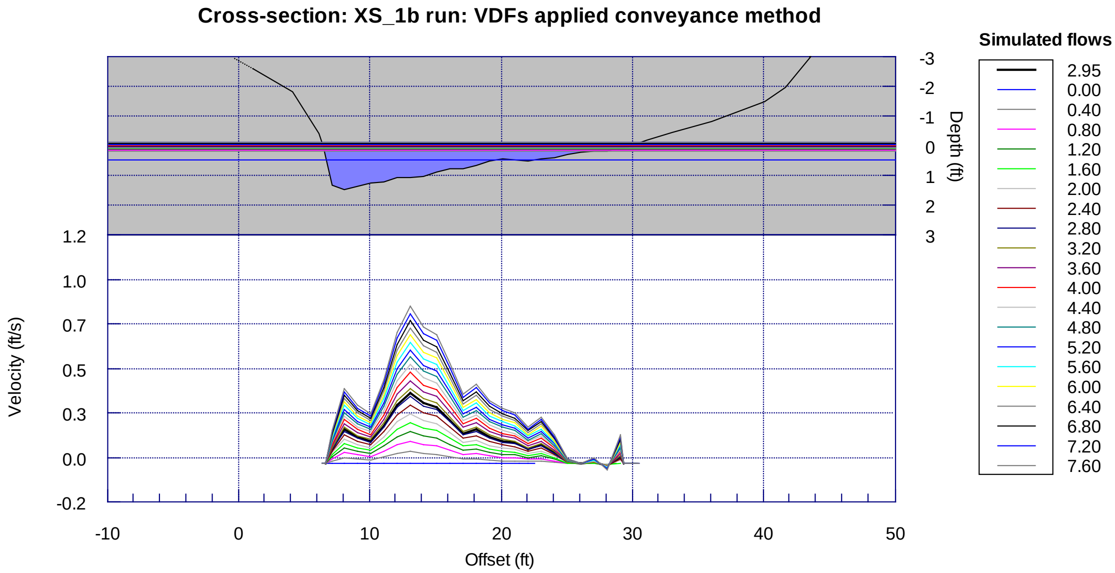
Transect Velocity Distributions

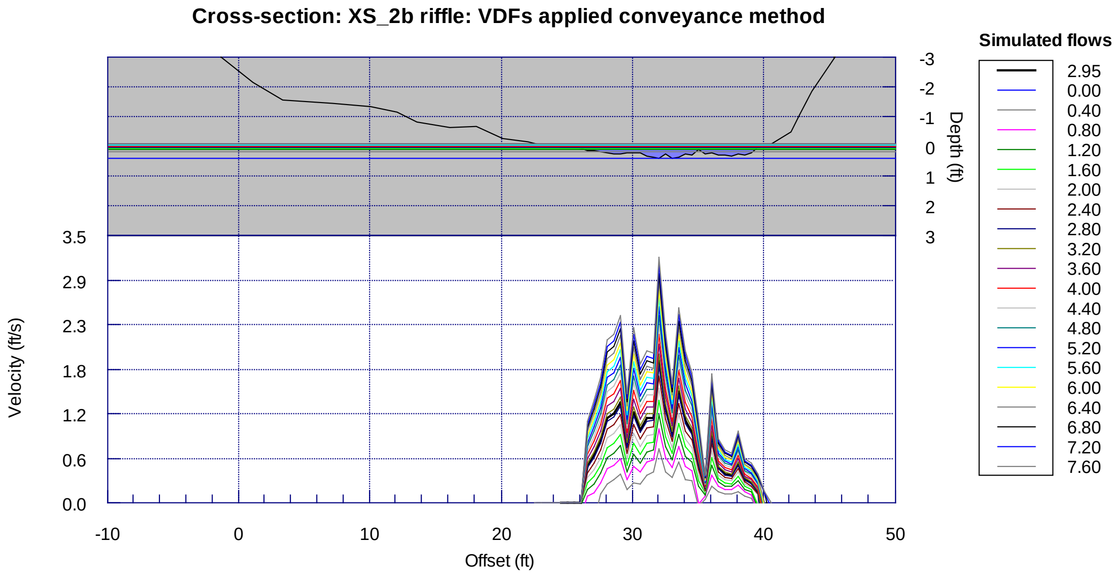

Cross-section: XS 1a glide: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
Velocity (ft/s)
Offset (ft)


Cross-section: XS 2a run: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
Velocity (ft/s)
Offset (ft)

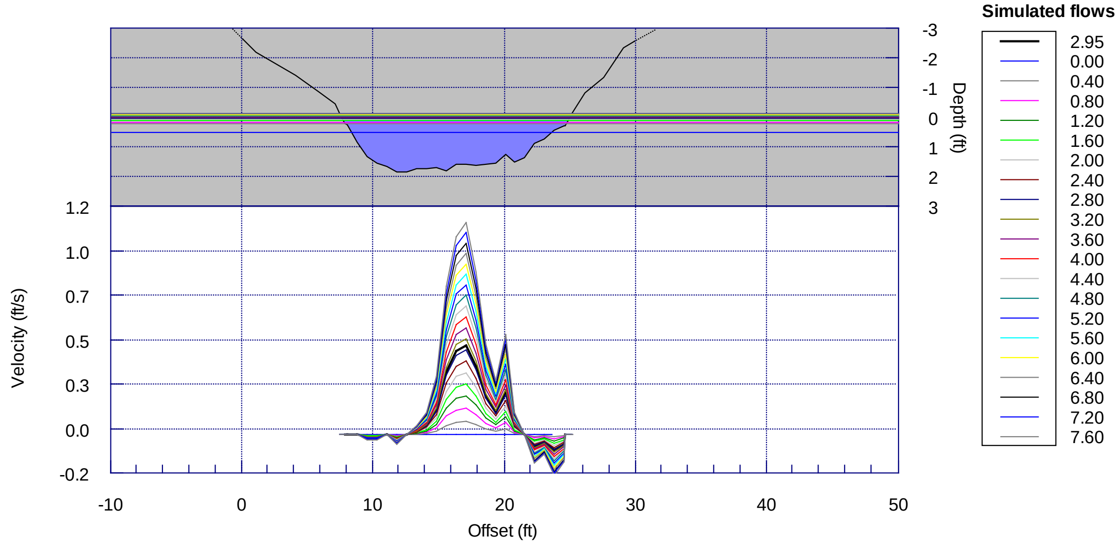

Cross-section: XS_3a pool: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
Velocity (ft/s)
Offset (ft)


Cross-section: XS_4a glide: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
Velocity (ft/s)
Offset (ft)

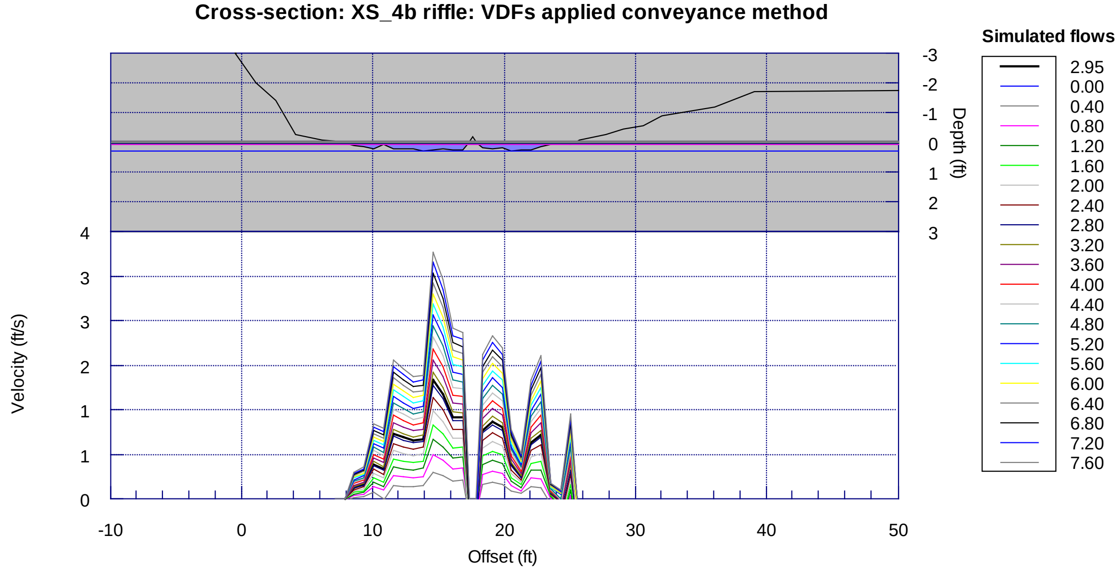

Cross-section: XS_1b run: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
-3
-2
-1
0
1
2
3
Velocity (ft/s)
1.2
1.0
0.7
0.5
0.3
0.0
-0.2
Offset (ft)
-10
0
10
20
30
40
50


Cross-section: XS_2b riffle: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
-3
-2
-1
0
1
2
3
Velocity (ft/s)
3.5
2.9
2.3
1.8
1.2
0.6
0.0
Offset (ft)
-10
0
10
20
30
40
50

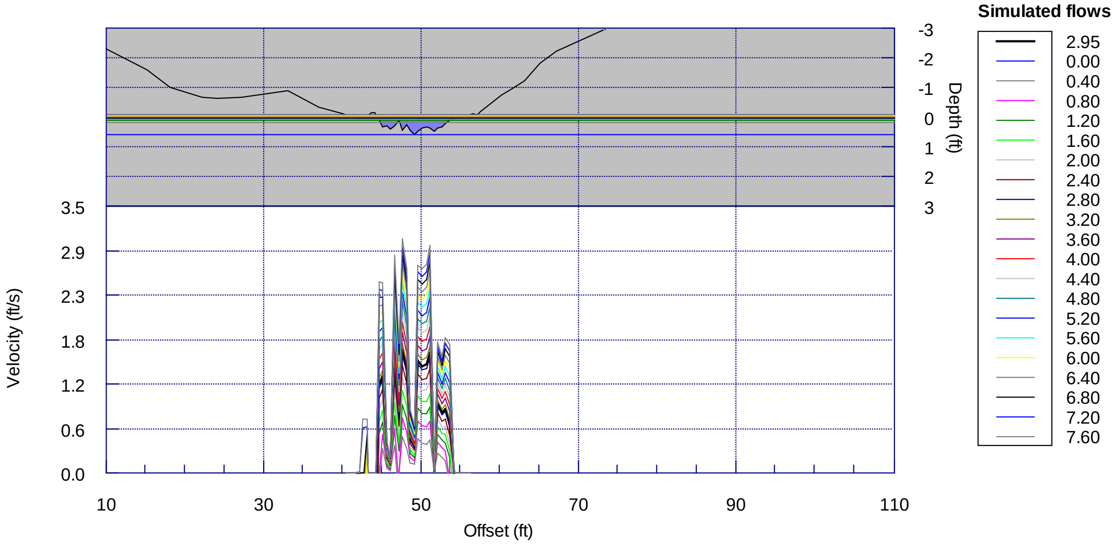
Cross-section: XS_3b pool: VDFs applied conveyance method



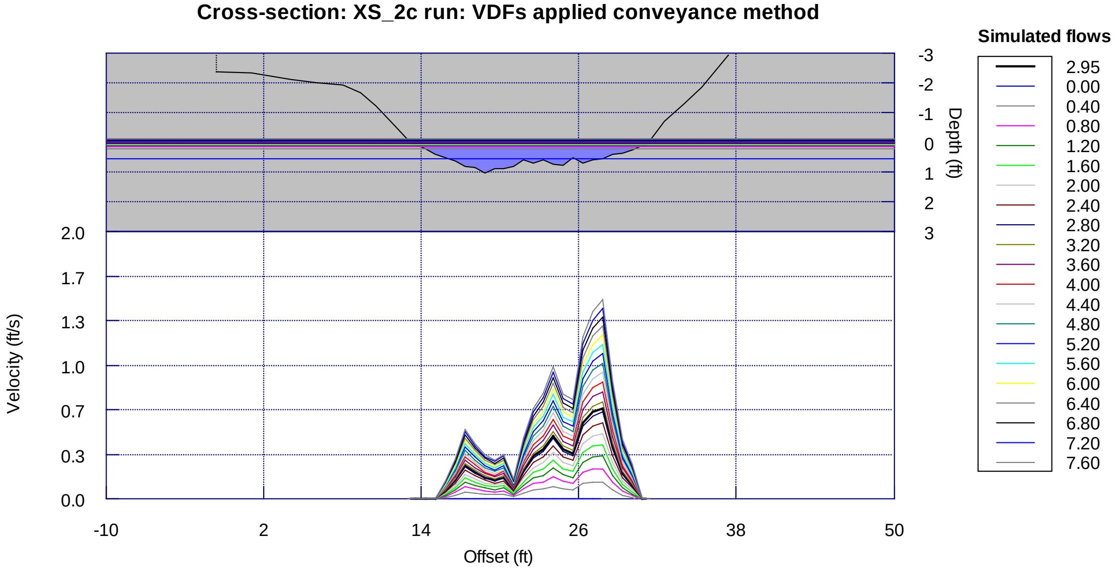
Cross-section: XS_4b riffle: VDFs applied conveyance method

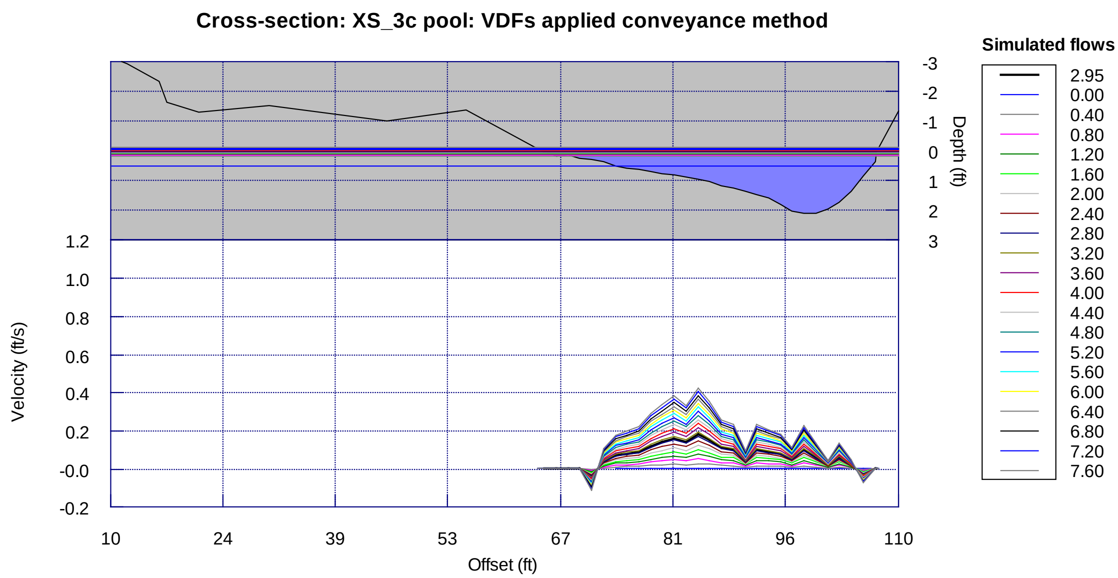


Cross-section: XS_1c riffle: VDFs applied conveyance method



Cross-section: XS_2c run: VDFs applied conveyance method




Cross-section: XS_3c pool: VDFs applied conveyance method
Simulated flows
2.95
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20
7.60
Depth (ft)
-3
-2
-1
0
1
2
3
Velocity (ft/s)
1.2
1.0
0.8
0.6
0.4
0.2
-0.0
-0.2
10
24
39
53
67
81
96
110
Offset (ft)

Appendix F

Transect Photographs

Figure F-1. Transect 1A looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and < 0.10 cfs (d).

Figure F-2. Transect 2A looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

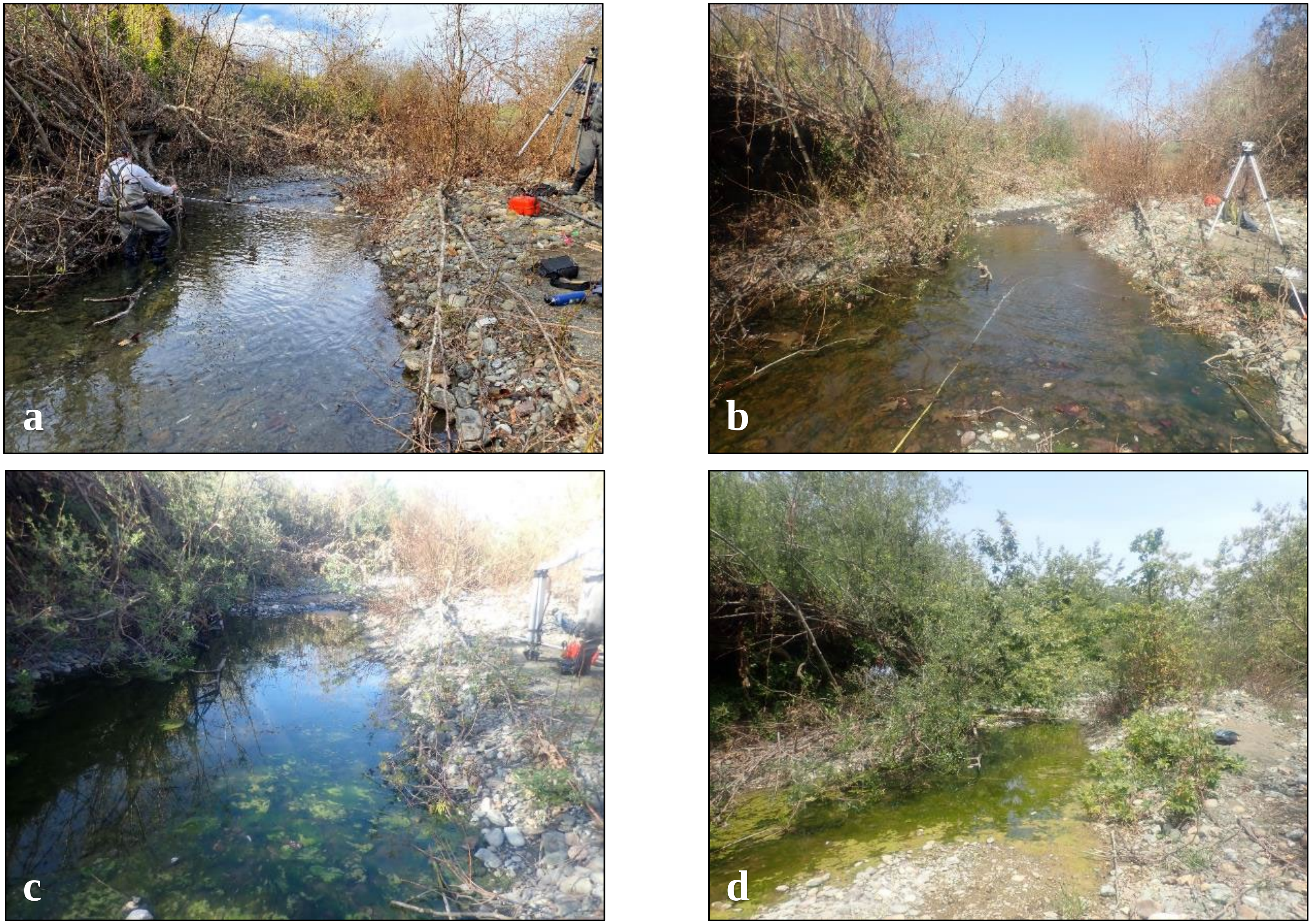


Figure F-3. Transect 3A looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and < 0.10 cfs (d).

Figure F-4. Transect 4A looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

Figure F-5. Transect 1B looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

Figure F-6. Transect 2B looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

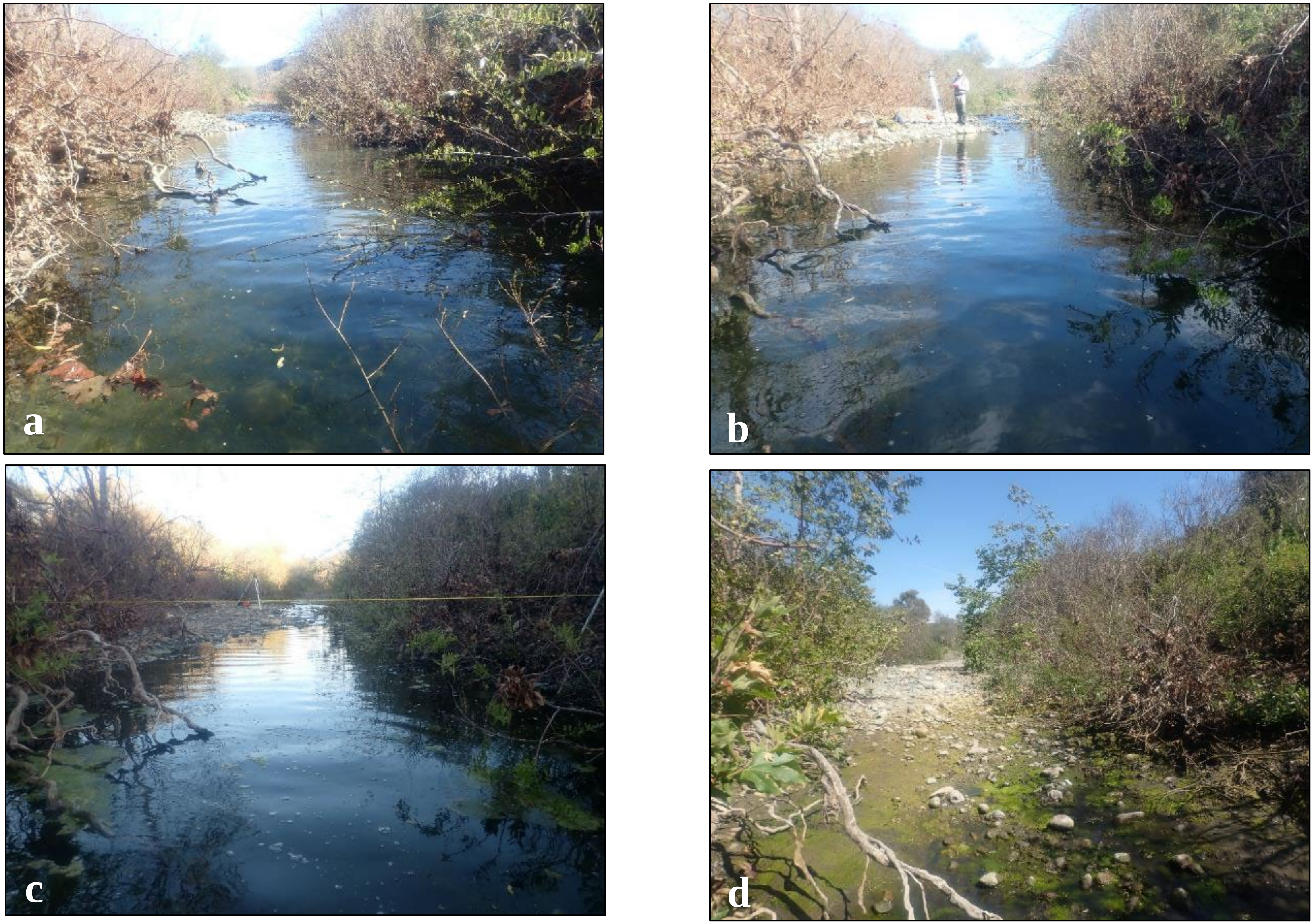


Figure F-7. Transect 3B looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

Figure F-8. Transect 4B looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

Figure F-9. Transect 1C looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

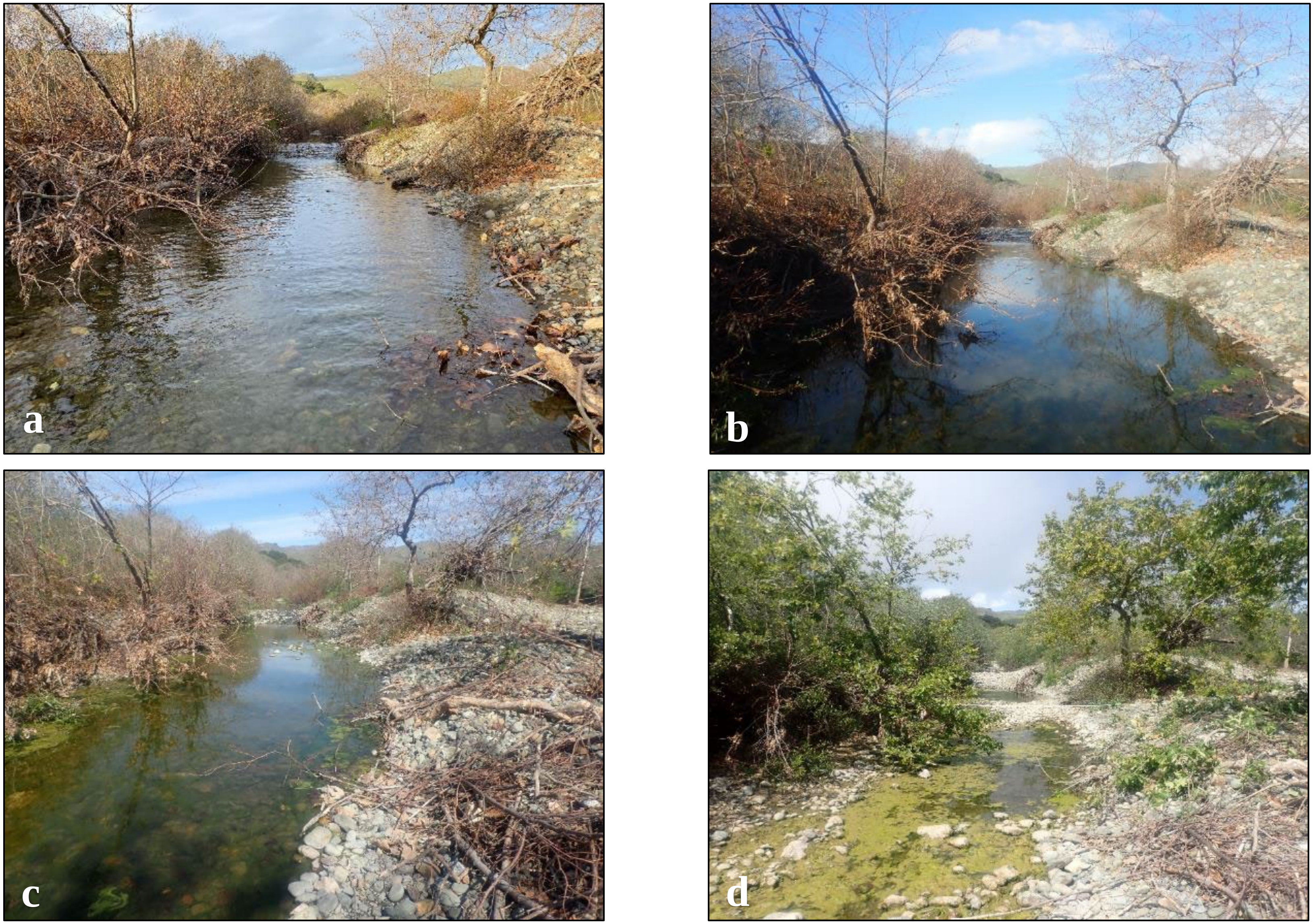


Figure F-10. Transect 2C looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and 0.00 cfs (d).

Figure F-11. Transect 3C looking upstream at 2.95 cfs (a), 1.46 cfs (b), 0.52 cfs (c), and < 0.10 cfs (d).

Figure F-12. Transect 4C looking upstream at 2.95 cfs (a), 1.46 cfs (b) and 0.52 cfs (c).

Attachment 1

Recommendations Memo

Stillwater Sciences
895 Napa Ave., Suite B-3, Morro Bay, CA 93442
phone 805-570-7499

TECHNICAL MEMORANDUM

DATE:	August 21, 2024
TO:	James Green Cambria, Community Services District
FROM:	Stillwater Sciences
SUBJECT:	Recommendations for the Cambria Community Services District's Operations in the San Simeon Creek Basin

1 INTRODUCTION

The Cambria Community Services District (CCSD) contracted with Stillwater Sciences to conduct an instream flow study of lower San Simeon Creek (Task 1; Stillwater Sciences 2024) and Todd Groundwater to conduct groundwater modeling of the same area assessed for the instream flow study (Task 2; Todd Groundwater 2022). The goal of the instream flow study was to determine the amount of surface flow needed to support aquatic species, while the goal of the groundwater modeling study was to assess the influence of operating the Water Reclamation Facility (WRF) on groundwater conditions and effects on riparian and wetland habitat or surrounding agricultural activities under a range of scenarios. Results from both studies will be used to inform CCSD operations in the San Simeon Creek basin and to inform the Adaptive Management Plan for San Simeon Creek. This technical memorandum focuses on the analysis of surface flow conditions as they relate to special-status aquatic species and provides recommendations for CCSD's operations to be protective of sensitive species, including monitoring to help refine operational conditions and implementing measures to protect aquatic species. Recommendations for operation of the WRF and associated monitoring are provided in a separate guidance manual for use of Cambria Community Services District's water reclamation facility memorandum (Todd Groundwater 2023) because the WRF operates only when surface flows have ceased, so it does not influence surface flows that provide habitat for aquatic species.

Habitat conditions in lower San Simeon Creek—the lower 2.9 miles where the creek flow over the groundwater basin and streamflow is most likely to be influenced by CCSD's groundwater pumping—were assessed for their suitability for special-status aquatic species. Three sensitive species are known to occur in lower San Simeon Creek: steelhead (*Oncorhynchus mykiss*), tidewater goby (*Eucyclogobius newberryi*), and California Red-legged frog (CRLF; *Rana draytoni*). The Instream Flow Assessment used multiple methods to evaluate the potential influence of CCSD operations on sensitive aquatic species in lower San Simeon Creek as summarized in the following sections. Results from the Instream Flow Assessment were used to develop recommendations for CCSD operations to be protective of sensitive aquatic species in lower San Simeon Creek. Additional monitoring is also recommended to continue to direct CCSD operations to be protective of sensitive aquatic species.

2 ONE-DIMENSIONAL MODELING OF LOWER SAN SIMEON CREEK

The Incremental Flow Instream Flow Methodology (IFIM) was used to develop a 1D model to determine the relationship between streamflow and steelhead habitat in lower San Simeon Creek, while habitat conditions for CRLF and tidewater goby were assessed using qualitative habitat evaluations, as described in Section 4.

The 1D model simulated habitat conditions for steelhead at flows ranging from 0 cubic feet per second (cfs) to 7.6 cfs. Habitat conditions for flows greater than 7.6 cfs were not included in model simulations because flows of this magnitude are not expected to be influenced by (1) CCSD's groundwater pumping operations (which have a maximum rate of 1.43 cfs) and (2) flows greater than 7.6 result from heavy precipitation events that occur when water demand is low and groundwater pumping is limited. Results from 1D modeling indicate that during a streamflow of 1.0 cfs and greater, habitat conditions support juvenile steelhead rearing. Reductions in flow when streamflow is at 1.0 cfs or less leads to a reduction in the quantity and quality of habitat for juvenile steelhead in lower San Simeon Creek. Streamflow of 1.0 cfs and greater is also expected to support CRLF breeding and rearing habitat conditions.

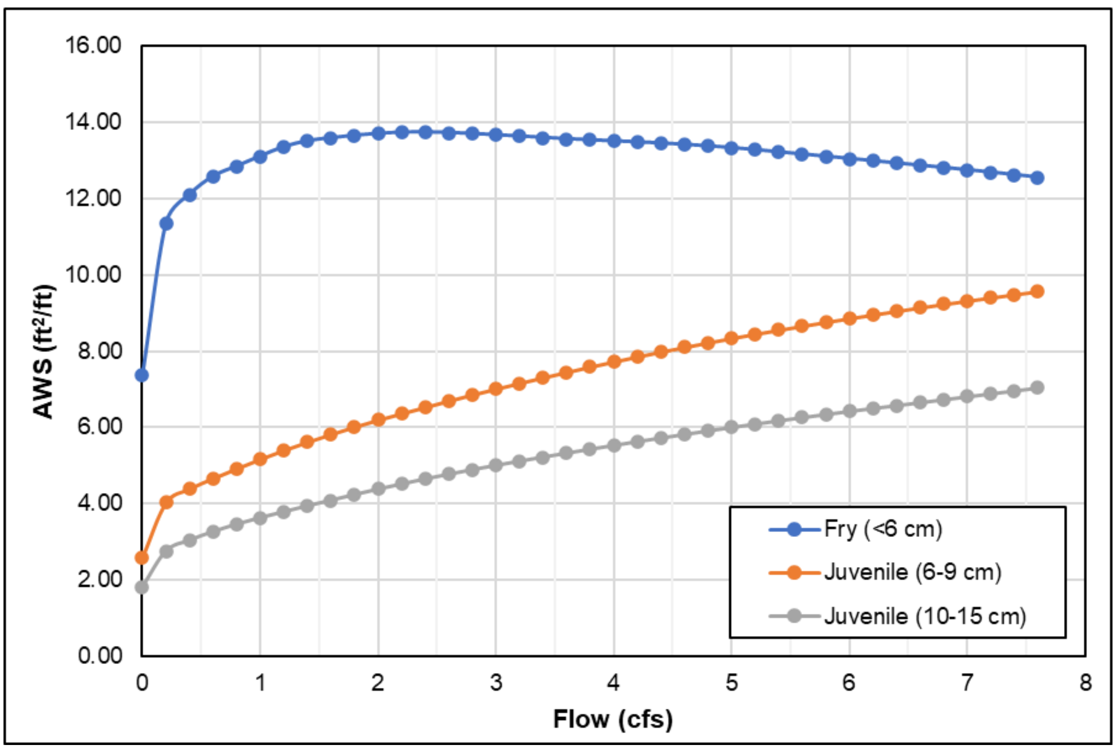


Figure 1. Flow habitat relationships (area weighted suitability) for fry and juvenile steelhead rearing in lower San Simeon Creek.

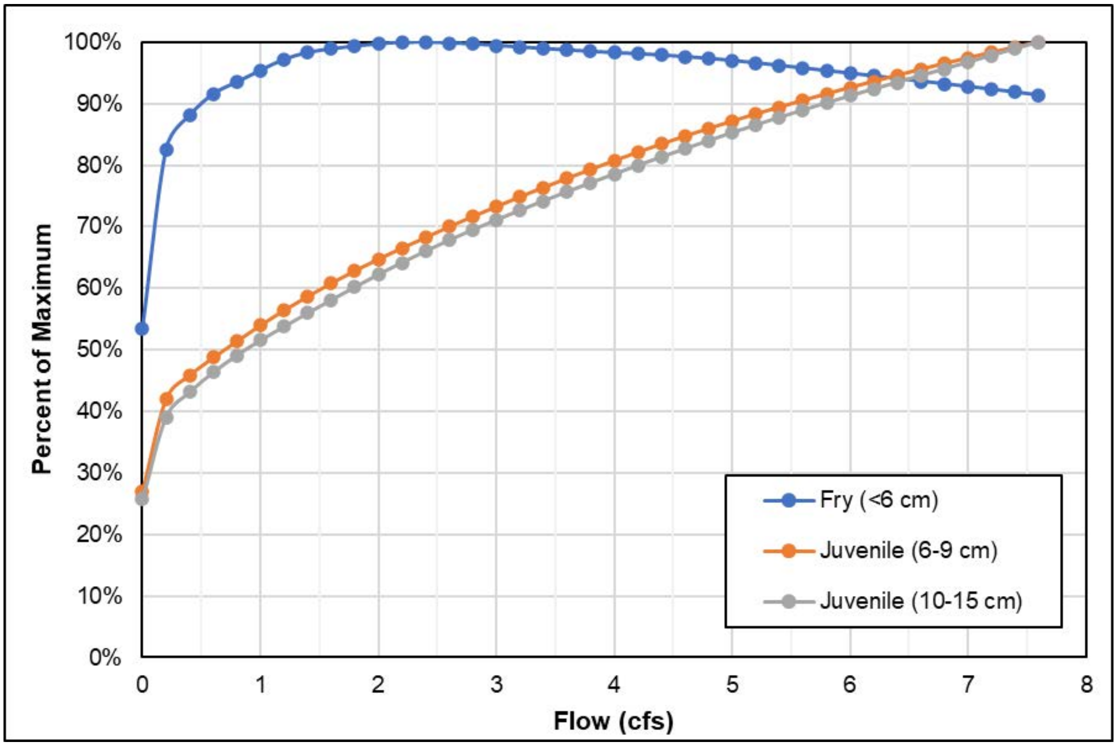
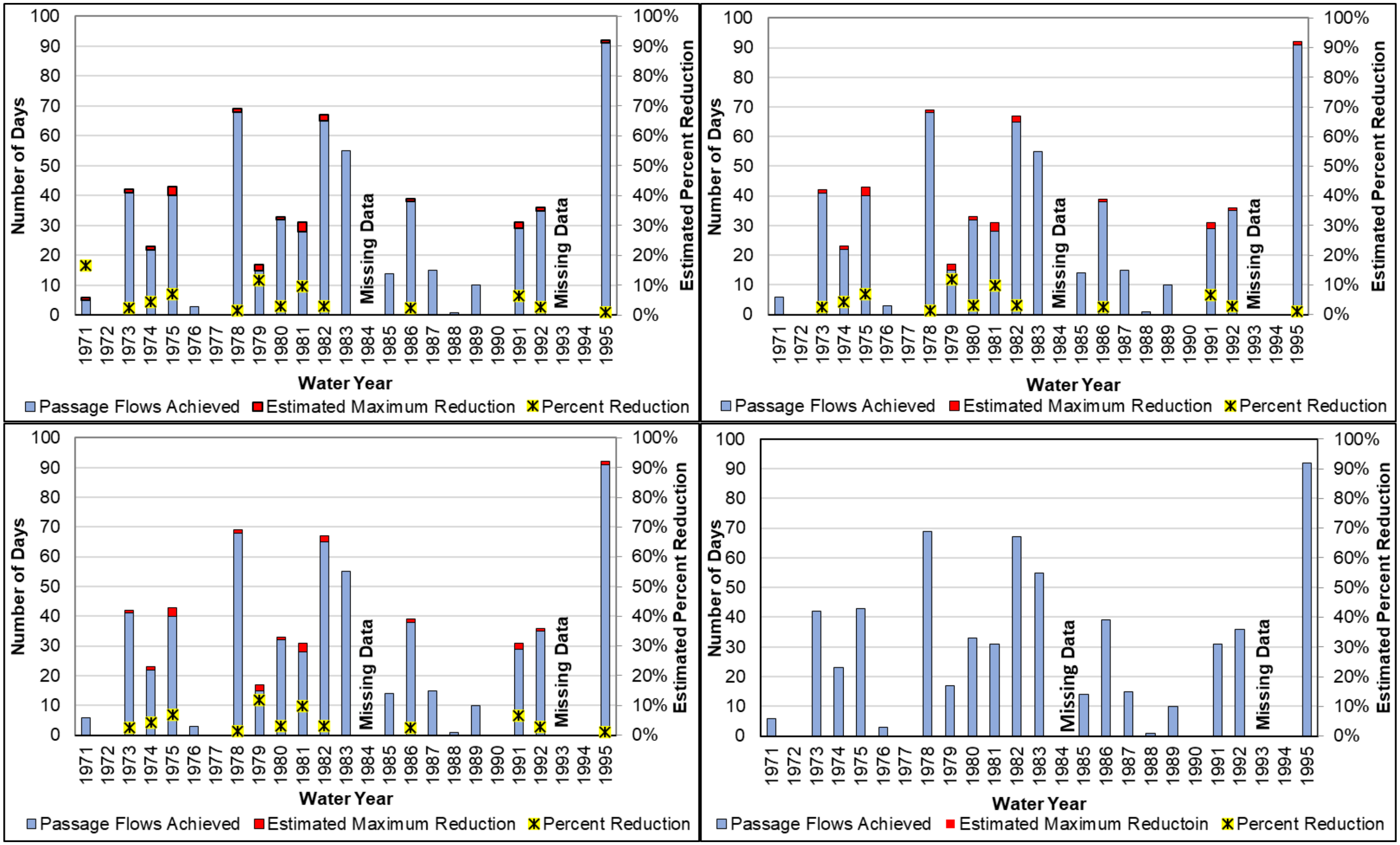


Figure 2. Percent of maximum area weighted suitability for fry and juvenile steelhead rearing in lower San Simeon Creek.

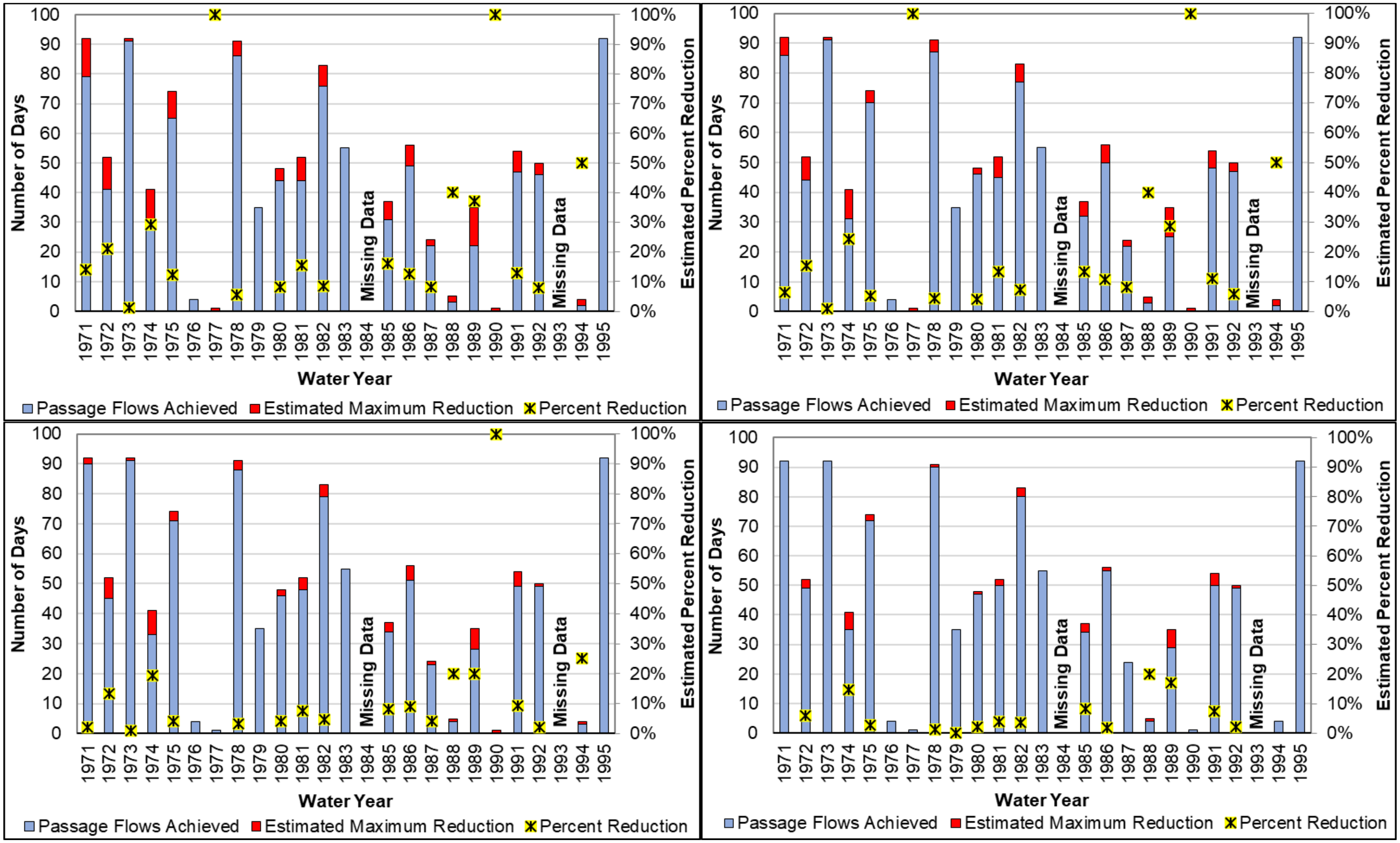
3 STEELHEAD PASSAGE ASSESSMENT

Steelhead passage conditions in lower San Simeon Creek were assessed based on review of previous studies that identified passage flows, available streamflow data, and CCSD's pumping information. Adult steelhead passage requires high flows, ranging from 21 to 60 cfs (D. W. Alley and Associates 1992). These high flows are associated with large precipitation events and are not likely to be influenced by CCSD's maximum pumping rate of 1.43 cfs. Juvenile steelhead passage requires lower flows than adult passage and ranges from 4 to 11 cfs (D. W. Alley and Associates 1992). These lower flows are typical of the spring recession flows in San Simeon Creek. Migration conditions for steelhead in lower San Simeon Creek are generally supported under CCSD's current operations; however, if CCSD's pumping rate were to exceed 0.64 cfs (which is CCSD's current average rate for spring), CCSD's operations have the potential to reduce juvenile steelhead migration during the lower juvenile passage flow threshold of 4 cfs (Figure 3 and Figure 4).



Notes: CCSD = Cambria Community Services District; cfs = cubic feet per second

Figure 3. Number of days streamflow supported the 11-cfs passage threshold and the estimated maximum reduction in passage days for juvenile steelhead based on daily average flows recorded at the Palmer Flats Gage (1971–1995) during the peak juvenile steelhead migration season (March–May) under the following pumping scenarios: (A) maximum CCSD and private well pumping of 1.85 cfs, (B) maximum CCSD pumping of 1.43 cfs, (C) average CCSD pumping and maximum private well pumping of 1.02 cfs, and (D) average CCSD pumping of 0.64 cfs.



Notes: CCSD = Cambria Community Services District; cfs = cubic feet per second

Figure 4. Number of days streamflow supported the 4-cfs passage threshold and the estimated maximum reduction in passage days for juvenile steelhead based on daily average flows recorded at the Palmer Flats Gage (1971–1995) during the peak juvenile steelhead migration season (March–May) and the following pumping scenarios: (A) maximum CCSD and private well pumping of 1.85 cfs, (B) maximum CCSD pumping of 1.43 cfs, (C) average CCSD pumping and maximum private well pumping of 1.02 cfs, and (D) average CCSD pumping of 0.64 cfs.

4 CALIFORNIA-RED LEGGED FROG AND LAGOON HABITAT

Habitat suitable for CRLF breeding was identified throughout lower San Simeon Creek and surveyed over a range streamflow conditions to determine flows that would maintain breeding habitat. Suitable CRLF breeding habitat was generally found in pools that continued to provide such habitat even as flows decreased to almost 0 cfs. However, once streamflow ceases, CRLF habitat becomes limited to a few isolated pools in lower San Simeon Creek and in San Simeon Creek Lagoon. When streamflow is low (less than about 1.0 cfs), CCSD's pumping is likely to increase the rate at which pool habitat becomes isolated and the rate at which pools dry out, leading to stranded CRLF tadpoles. Additional suitable habitat for CRLF is located in San Simeon Creek Lagoon.

5 LAGOON HABITAT FOR SENSITIVE SPECIES

Existing monthly water quality and stage elevation data for San SimeonCreek Lagoon (collected by the California State Parks) for the period from December 2019 through July 2022 were evaluated to assess the relationship between surface flow and aquatic habitat conditions in the lagoon. Data collected from San Simeon Creek Lagoon were compared to water quality criteria (e.g., temperature, dissolved oxygen, and salinity) reported to be suitable for steelhead, tidewater goby, and CRLF to assess habitat conditions for special-status aquatic species. Habitat conditions in San Simeon Creek Lagoon are suitable for juvenile steelhead, tidewater goby, and CRLF under current conditions based on water temperature, dissolved oxygen, and salinity levels reported for most of the year. During the few instances when water quality thresholds were exceeded for any of these species, other locations in the lagoon were still within the suitable range.

6 RECOMMENDATIONS

The following actions are recommended to protect aquatic resources and inform CCSD's ongoing and future operations in lower San Simeon Creek.

6.1 Operations Management

To be protective of aquatic resources in lower San Simeon Creek, Stillwater Sciences recommends that CCSD adjust groundwater pumping operations during sensitive streamflow levels identified in the instream flow study. Sensitive streamflow levels that support rearing habitat for steelhead range from greater than 0.0 cfs up to 1.0 cfs, and streamflow of 4.0 cfs are sensitive for juvenile steelhead passage. Flows that support adult steelhead passage do not appear to be sensitive to CCSD's operations because they require high-magnitude, rain-driven flow events (i.e., > 20 cfs). Sensitive streamflow for CRLF would be protected under the same range of conditions required to protect steelhead. Flows to support tidewater goby were not identified during this study because tidewater goby habitat is primarily found in San Simeon Creek Lagoon where effects from CCSD's pumping operations do not appear to be impacting habitat conditions.

To be protective of sensitive aquatic species, Stillwater Sciences recommends the following:

1. CCSD should not pump groundwater when streamflow is between 0 and 1 cfs.

2. When streamflow is between 1.0 and 2.5 cfs, the CCSD's pumping rate should be calculated based on the minimum of the 1.0-cfs threshold for protecting juvenile steelhead rearing. For example, if the streamflow is 1.5 cfs, then CCSD's pumping rate should not exceed 0.5 cfs to protect the 1.0-cfs threshold for juvenile steelhead rearing.
3. CCSD's pumping rates should not exceed 0.64 cfs during the spring when streamflow ranges between 4.0 and 5.5 cfs to protect juvenile migration. When flows are above approximately 5.5 cfs, CCSD's pumping is not expected to affect aquatic habitat because CCSD's maximum pumping rate is 1.43 cfs, and no pumping restrictions are recommended.
4. When surface flows cease (0 cfs), CCSD's pumping is not expected to affect aquatic habitat, and no pumping restrictions are recommended.

Table 1. Summary of recommendations for the Cambria Community Services District's pumping operations to minimize potential effects on sensitive aquatic species based on streamflow and season.

Streamflow (cfs)	Months	Pumping Restrictions	Basis for Restrictions
>5.0	Year-round	No restrictions	NA[1]
4.0 to 5.0	March through June	Pumping rate should not exceed 0.64 cfs	Support juvenile migration
2.5 to 4.0	Year-round	No restrictions	NA[1]
1.0 to 2.5	Year-round	Pumping rate should not exceed amount of streamflow greater than 1.0 cfs (i.e., if streamflow is 1.5 cfs, pumping should not exceed 0.5 cfs)	Protect juvenile steelhead rearing, CRLF breeding and tadpole rearing
0.0 to 1.0	Year-round	No pumping to occur during this range of flows	Protect juvenile steelhead rearing, CRLF breeding and tadpole rearing
<0.0	Year-round	No restrictions[2]	NA[1]

Notes: cfs = cubic feet per second; CRLF = California red-legged frog; NA = not applicable

[1] No resources were identified as being sensitive to CCSD's pumping operations within this range of streamflow.

6.2 Long-term Monitoring

Monitoring in association with the preceding operational recommendations will be important for directing and informing CCSD's groundwater pumping operations. Stillwater Sciences recommends long-term monitoring of streamflow, fish stranding, and lagoon water quality as described below.

6.2.1 Stream flows

Streamflow monitoring is recommended to develop a better long-term record of flows in San Simeon Creek and to inform CCSD's operations and adaptive management practices. Continuous monitoring of streamflow should be conducted near the San Simeon well field and near the upstream end of the groundwater basin at the Palmer Flats gage location. The County of San Luis Obispo currently operates a stream gage near the San Simeon well field that continuously records water levels. However, a stage-discharge rating curve needs to be developed and validated to apply to the stage data collected at this existing gage in order to convert stage-level recordings to streamflow. A continuous stage measuring device is recommended at the Palmer Flats gage location, and additional flow data collection is required to develop a continuous flow record as described above.

6.2.2 Fish stranding

Monitoring of isolated pools is recommended in lower Simeon Creek to assess the risk of juvenile steelhead stranding. Stillwater Sciences recommends visual observations of isolated pool habitat to assess relative abundance of juvenile steelhead "trapped" in isolated pools. Monitoring surveys should be conducted during the spring once surface flows decrease to less than 1 cfs near CCSD's well field and recur as flows continue to drop and pools become intermittent. Biologists familiar with the identification of juvenile steelhead should walk the channel to identify locations of isolated pool habitats and visually inspect pools from the shore to estimate the number of steelhead within each pool. All observations of potential stranding will be reported to the California Department of Fish and Game (CDFW) for relocation consideration.

CCSD will work closely with CDFW with CDFW taking the lead for relocating stranded fish (Z. Crumb, CDFW, pers. comm., January 15, 2024). Relocation details will be determined based on site-specific conditions that can change between years but is expected to include backpack electrofishing to capture steelhead and relocation to San Simeon Creek Lagoon.

6.2.3 San Simeon Creek Lagoon water quality

Stillwater Sciences also recommends monitoring San Simeon Creek Lagoon stage levels and water quality conditions (temperature, dissolved oxygen, and salinity) at the upstream and downstream ends of the lagoon during the late spring through fall. Water quality measurements should be collected throughout the water column (i.e., upper, lower and middle) at each monitoring location on a monthly basis and evaluated in relation to flows within lower Simeon Creek.

6.3 Annual Reporting

Finally, Stillwater Sciences recommends that CCSD annually summarize the results from the long-term monitoring in a report provided to the Technical Advisory Committee. The report should include the following information to assist in ongoing evaluation of CCSD operations in the San Simoen Creek basin:

1. CCSD pumping operations in relation to streamflow near the county gage, especially for streamflow ranges between 0 and 2.5 cfs and 4.0 to 5.5 cfs, including the number of days and the rate of extraction;
2. The number of days that pumping reduced juvenile steelhead migration flows less than 4 cfs;
3. Summary of fish stranding observations and whether fish relocation occurred; and
4. Summary of San Simeon Creek Lagoon water quality monitoring results.

7 REFERENCES

D.W. Alley and Associates. 1992. Passage requirements for steelhead on San Simeon Creek, San Luis Obispo County, California. 1991. Prepared by Donald W. Alley for the Cambria Community Services District, Cambria, California.

Stillwater Sciences 2024. San Simeon Creek instream flows assessment. Final Report. Prepared by Stillwater Sciences, Morro Bay, California for Cambria Community Services District, Cambria, California.

Todd Groundwater. 2022. Simulated effects of sustainable water facility operation. Prepared by Todd Groundwater Inc., Alameda, California for Cambria Community Services District, Cambria, California.

Todd Groundwater. 2023. Guidance manual for use of Cambria Community Services District's water reclamation facility. Prepared by Todd Groundwater Inc., Alameda, California for Cambria Community Services District, Cambria, California.

Attachment 2

Operational Guidance Manual for WRF

TODD GROUNDWATER

December 11, 2023

MEMORANDUM

To: James Green, Cambria Community Services District

From: Gus Yates, Senior Hydrologist

Re: **Guidance Manual for Use of Cambria Community Services District's Water Reclamation Facility**

BACKGROUND

Cambria Community Services District (District) constructed an indirect potable reuse facility near its wastewater percolation ponds in the San Simeon Creek groundwater basin in 2014. The facility was permitted on an emergency basis to address water supply shortages during the drought that was then occurring. The plant was operated sporadically during 2014-2016 and has remained idle since then. The facility is now known as the Water Reclamation Facility (WRF), and the District expects to use it during future droughts, if needed. This guidance manual presents systematic decision rules for when and how much to operate the WRF, including when to turn it on, how to adjust the production rate on a weekly or biweekly basis, and when to turn it off. It also describes a monitoring program that should be implemented before and during WRF operation to detect and mitigate any impacts to pools in San Simeon Creek or to its terminal lagoon.

WHEN TO TURN ON WRF

Criteria for when to turn on the WRF in any given year emerged from simulations of WRF operation under various drought and water shortage conditions using a groundwater flow model of the San Simeon Creek groundwater basin (Todd Groundwater, 2022). There are several constraints on the amount of water that the WRF can produce. The limitation that most commonly constrained operation in the simulations was the water-level gradient between well SS-4 and well 9P2 (see locations in **Figure 1**). To prevent the subsurface flow of percolated wastewater toward the well field, the water level in SS-4 should always be higher than the water level in 9P2. The existing permit for operating the percolation ponds allows temporary excursions to a reverse gradient, with SS-4 as much as 0.79 foot below 9P2 (a gradient of -0.79 foot). In practice, CCSD operates the system to avoid a water level difference less than +0.75 foot (that is, SS-4 water level at least 0.75 foot higher than 9P2 water level), and this was the criterion used in the scenarios. Other constraints including the capacity of the supply well (well 9P7), the microfiltration and reverse osmosis capacities, water rights and environmental impacts proved not to be limiting.

The SS-4/9P2 gradient typically declines during the dry season as pumping from the well field gradually lowers water levels near SS-4. The simulations demonstrated that relatively uniform WRF operation could be achieved by turning on the WRF before the gradient fell to less than +0.75 foot. In scenarios where San Simeon Creek flow dropped to near zero at the beginning of April, the WRF needed to start operating in early September. When creek flow approached zero at the beginning of March, the WRF needed to start operating in early August. The minimum gradient occurred later (November or December).

In general, WRF operation will be needed in years when the dry season starts early. The dry season for this purpose is defined as the date when San Simeon Creek flow at Palmer Flats falls below 2 cfs, which is the estimated amount of creek percolation between Palmer Flats and the well field. If the dry season starts early, groundwater levels in the lower San Simeon Creek basin should be checked regularly and trends projected out to the likely end of the dry season to determine whether WRF operation will be needed. The specific steps for implementing this process are as follows:

1. Measure or estimate stream flow at Palmer Flats weekly from March 1 to May 1. Determine the date when flow drops below 2 cfs, which is the start of the dry season. If that date occurs before May 1, continue with the remaining steps.
2. Plot the average water level at the District's three San Simeon production wells on a dry-season hydrograph like the one shown in **Figure 1**, which the District prepares every year. If the curve for the current year is in the bottom third of the range of curves as of August 1, plan to turn on the WRF by mid-August or the beginning of September.

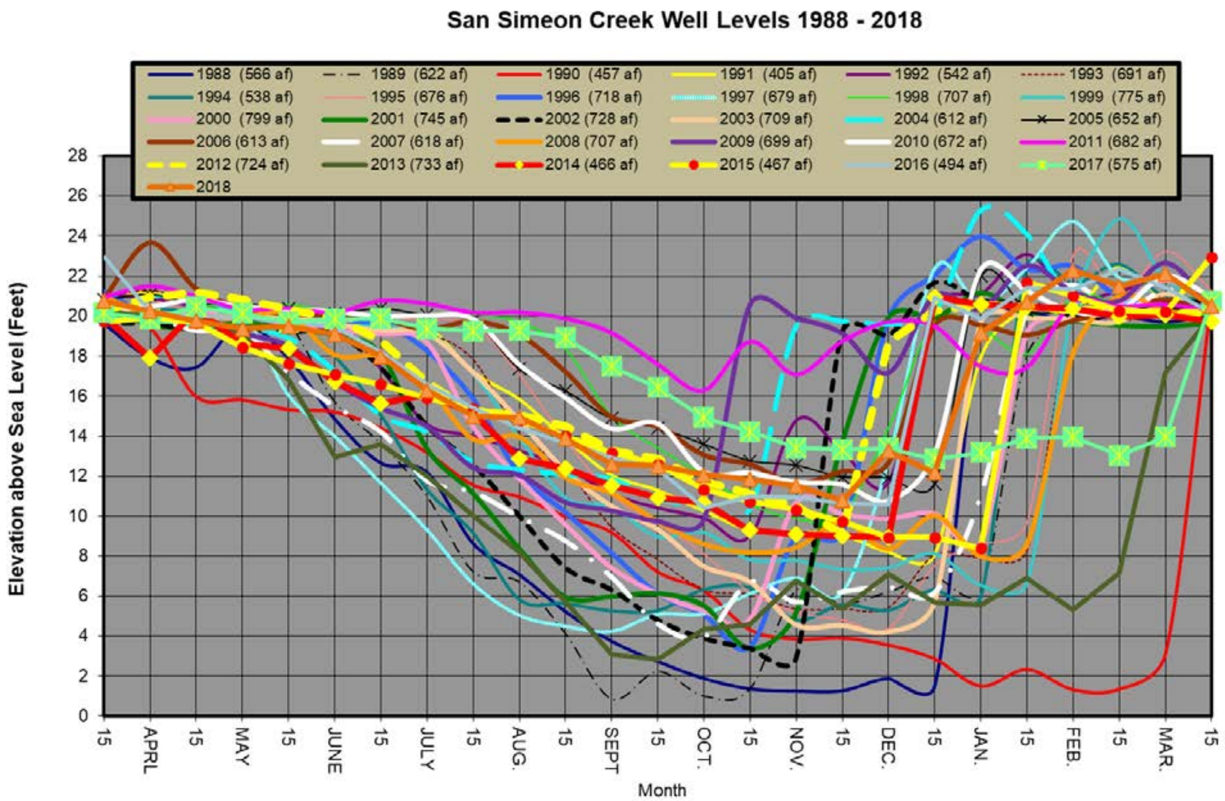


Figure 1. Historical San Simeon Creek Groundwater Levels during the Dry Season, 1988-2018

3. A second and more important criterion is a similar plot of the SS-4/9P2 gradient. Calculate the difference in groundwater elevation between SS-4 and 9P2 (SS-4 minus 9P2) and plot it as a dry-season hydrograph. The District has not historically done this, but an example using simulation results is shown in **Figure 2**. The water-level difference was declining rapidly during April-August of the first year of the simulation (labeled as 2013) and would clearly fall below +0.75 foot before mid-December. In the “Stage 4” scenario, the difference continued to decline to -0.6 by March of the second year. In the “Stage 4 + WRF” scenario, the WRF was turned on at the beginning of September in the first year of the simulation, and the WRF flow was adjusted to maintain a water level difference greater than +0.75 foot.

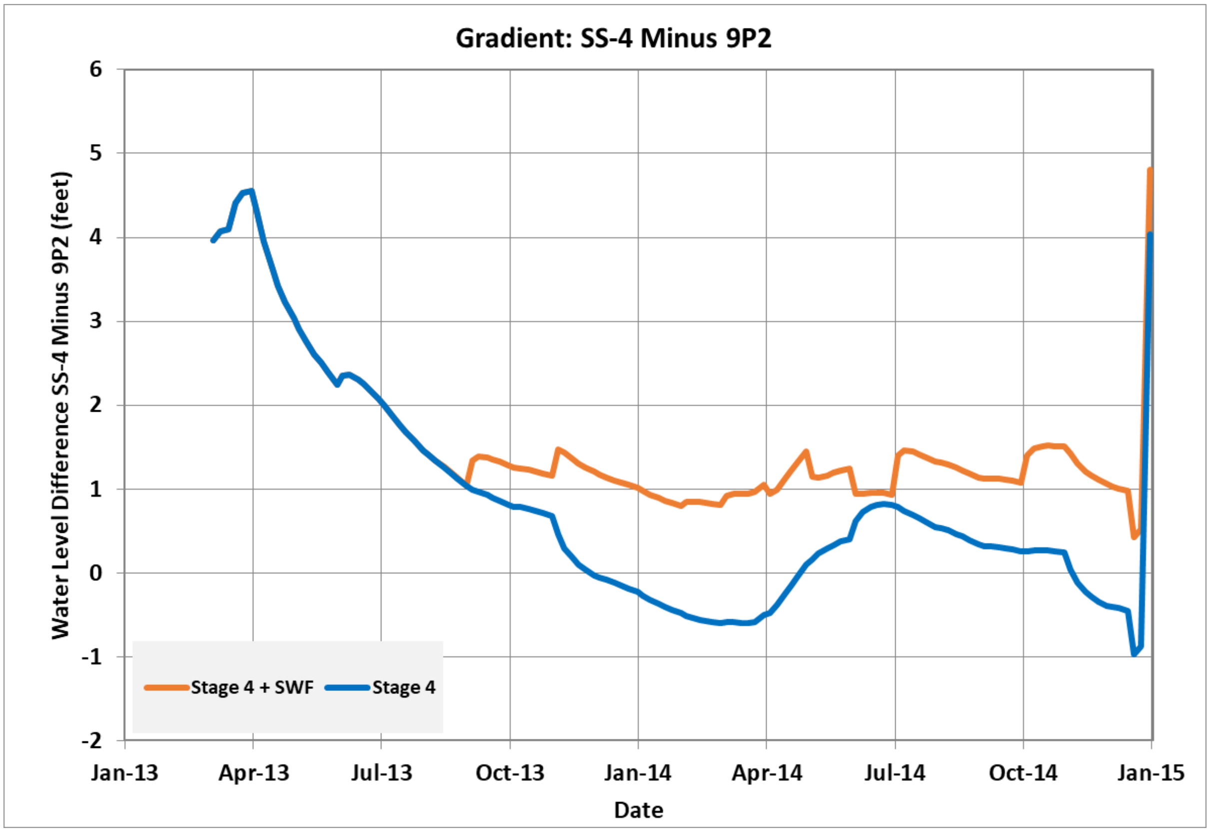


Figure 2. Hydrograph of Simulated SS-4/9P2 Water Level Difference for Two Scenarios

SELECTING WRF FLOW RATE

Well 9P7 is the supply well for the WRF, and it is not designed for variable output. The amount of WRF flow over a week or month is adjusted by changing the percent of time that 9P7 and the microfiltration (MF) and reverse osmosis (RO) treatment trains are operating. This would typically be the number of hours per day and/or days per week that the facility operates.

In a series of scenarios covering Stage 4 and Stage 6 water shortage conditions with and without concurrent increases in pumping by nearby agricultural users, it was found that WRF production rates of 10-35 AF/mo were needed to maintain the SS-4/9P2 gradient above +0.75 foot. This production rate is the volume injected at the injection well. Working backwards through the RO efficiency (92.1%) and microfiltration efficiency (94.5%) and allowing for the lagoon mitigation discharge (100 gpm of microfiltration water), the amount of pumping at the WRF supply well (well 9P7) can be calculated, as shown in **Table 1** below.

Table 1. Well 9P7 Pumping to Supply Target Injection Volume

Recycled Water Injection Well (AF/mo)	9P7 WRF Supply Well Production		
	AF/mo	Equivalent gpm	Percent of Time Operating
10	26.6	198	34%
15	31.4	234	40%
20	37.2	277	48%
25	42.9	319	55%
30	48.7	363	62%
35	54.5	406	70%

The SS-4/9P2 gradient responded fairly quickly to changes in WRF production rate in the simulations. Effects could be seen within 2 weeks, which was the time interval used in the simulations. If the gradient accidentally falls below the target of +0.75 foot, an increase of 5-10 AF/mo of WRF production will likely put it back above +0.75 foot within 2-4 weeks.

Adjustments to WRF production should be made every 2 weeks until the facility is turned off.

WHEN TO TURN OFF WRF

WRF operation is no longer needed when stream flow in San Simeon Creek resumes. Typically, a major storm in early winter (November-January) will initiate substantial flow that replenishes the groundwater basin within a few weeks. In dry winters, there may be periods when the SS-4/9P2 gradient stays slightly above +0.75 foot without WRF operation then falls back below a few weeks later. In that case, the WRF can be turned on and off at low rates to continue meeting the target gradient until a larger stream flow event arrives.

MONITORING BEFORE AND DURING WRF OPERATION

One concern with operating the WRF is that pumping from its supply well might lower the water level in the lagoon or in perennial pools in San Simeon Creek just upstream of the lagoon. The mitigation discharge is designed to ensure that impacts do not occur, but monitoring is recommended for confirmation.

Data Collection

Monitoring should begin before the WRF starts operating because the detection of impacts relies on analysis of trends. In any year when WRF operation is expected, monitoring should start about 2 months in advance. Most of the monitoring focuses on water levels. However, other variables that can affect water levels also need to be monitored so that the cause of a change in water level trend can be correctly identified. This leads to the following steps:

1. Contact San Simeon Basin agricultural pumpers (Jon Pedotti and Clyde Warren) to find out their irrigation plans for the remainder of the dry season. Above-average irrigation by those growers tends to hasten the date when the WRF needs to be turned on and may cause independent, additional impacts on water levels and flow in the creek and lagoon.
2. Contact the Central Coast Wetlands Group to find out whether their monitoring of stage in San Simeon Creek lagoon is still active and will continue through the anticipated WRF operational period. CCWG is located in Moss Landing. The contact person is Kevin O'Connor, Program Manager. (831) 771-4495 (office). E-mail: koconnor@mlml.calstate.edu
3. Start the monitoring program detailed in **Table 2**. The table lists the variables to be monitored and the monitoring frequency for the periods leading up to and during WRF operation.

The "continuous" measurements recommended in the table are assumed to use a pressure transducer with data logger, such as the HOBO© Water Level Loggers currently deployed in the four piezometers near the percolation ponds. Measurements of beach berm width at the ocean end of the lagoon are recommended because the width of the berm can gradually increase during the dry season, and it affects lagoon level and outflow. Those measurements can best be obtained from drone aerial photography.

Table 2. Monitoring Program Locations, Variables and Measurement Frequencies

Start Date for Monitoring Phase	Starting at Least 2 Months Before WRF Operation[1]	SS-4 to 9P2 Gradient Will Decline to 0.75 ft within 3 Weeks	Comments
WRF Status	**Off**	**On**	
Water Levels			
16D1	Biweekly	Weekly	To compare with historical record as means of detecting impact.
MW4	Continuous	Continuous	This well near 16D1 may be tidally influenced. Continuous measurements by data logger are needed to detect tidal fluctuations so they can be subtracted from the measurement record to reveal any 9P7 pumping drawdown.
SS-3, SS-4, 9P2	Continuous	Continuous	SS-3 will be idle when WRF is injecting, so it will have relatively reliable water levels. All of these wells will be influenced by nearby pumping well on/off cycles, so continuous HOBO records will be more accurate. SS-4 and 9P2 define the gradient that is the primary criterion for WRF operation.
Four piezometers in percolation area	Continuous	Continuous	Continuous recording with loggers when WRF turns on will confirm the spread of drawdown from 9P7 and whether it reaches San Simeon Creek.
San Simeon Creek pools (e.g. Van Gordon and red-legged)	Biweekly	Weekly	Install staff plates in the pools at the start of monitoring. Remove prior to the next high flow season.
Lagoon	Continuous	Continuous	Obtain data from Central Coast Wetlands Group, or deploy a separate water level data logger.
Flows			
Pumping at SS-1, SS-2 and SS-3	Weekly	Weekly	Many of these flows have hourly and daily variations that would be attenuated to average rates by the time any effects reached the creek or lagoon. Evaluation of more frequent pumping subtotals is not necessary.
Warren pumping	Weekly	Weekly	Weekly volume is sufficiently frequent. Well is metered.
Pumping at 9P7	Weekly	Hourly to Weekly	When the WRF is first turned on, monitor the pumping rate at 9P7 hourly for the first 12 hours, and at the beginning, middle and end of each operational cycle for the next week. This is to support aquifer test analysis in conjunction with piezometer water levels. Thereafter, weekly pumping subtotals are sufficient.
Wastewater percolation	Weekly	Weekly	Weekly volume is sufficiently frequent. Record which pond receives the water.
WRF lagoon discharge	n.a.	Weekly	Weekly volume and instantaneous rate when operating.
San Simeon Creek at campground bridge (or nearby upper end of lagoon)	Biweekly	Weekly	Instantaneous flow, in cubic feet per second. Inflow may consist of a barely visible trickle entering ponded conditions in the lagoon. Measurement by pygmy meter would not likely be feasible. An alternative such as salt dilution may be needed.
Other			
Drone air photos of beach berm	Montly	Monthly	Preferably taken at similar tide levels. Altitude of drone needs to be high enough to include fixed objects (such as outcrops, Highway 1) that can be used to georeference and overlay successive photos.

Notes:
[1] WRF operation can be anticipated to start around September 1 in years when the dry season starts before May 1 or when a Stage 4, 5 or 6 Water Shortage Condition has been declared.

Routine Data Analysis

The general approach to detecting impacts on creek and lagoon water levels and flows is to plot time series of those variables to identify departures from normal seasonal trends that commence after the WRF is turned on. Comparison with time series plots of other variables will indicate whether WRF operation caused the change in water levels and flows. Step by step instructions are as follows:

1. Create time series graphs of all monitored variables so that trends and changes in trends can be seen. Update the graphs with new data as they are obtained. If there appears to be a new or increased downward trend in the water level at well 16D1, in creek pool water levels or in stream flow entering the top of the lagoon, continue to step 2.

2. Download and plot the continuous water level data from well MW4 to confirm whether the trend is also present in that well (if it's a real trend, it should be). Otherwise, the apparent trend at 16D1 and the pools could be an artifact of tidal noise in the weekly measurements.

3. Compare the 16D1 water level hydrograph with the historical range of water levels at that well, which is shown in **Figure 3**. For more exact comparison, dates and elevations defining the line that bounds the lower end of the historical range are listed in **Table 3**. For context, there has been a long-term declining trend in 16D1 water levels since about 2002 correlated with and probably caused by decreased percolation volumes at the nearby wastewater percolation ponds (Todd Groundwater, 2019). Thus, low water levels specifically associated with the period of WRF operation are more diagnostic than low water levels in general.

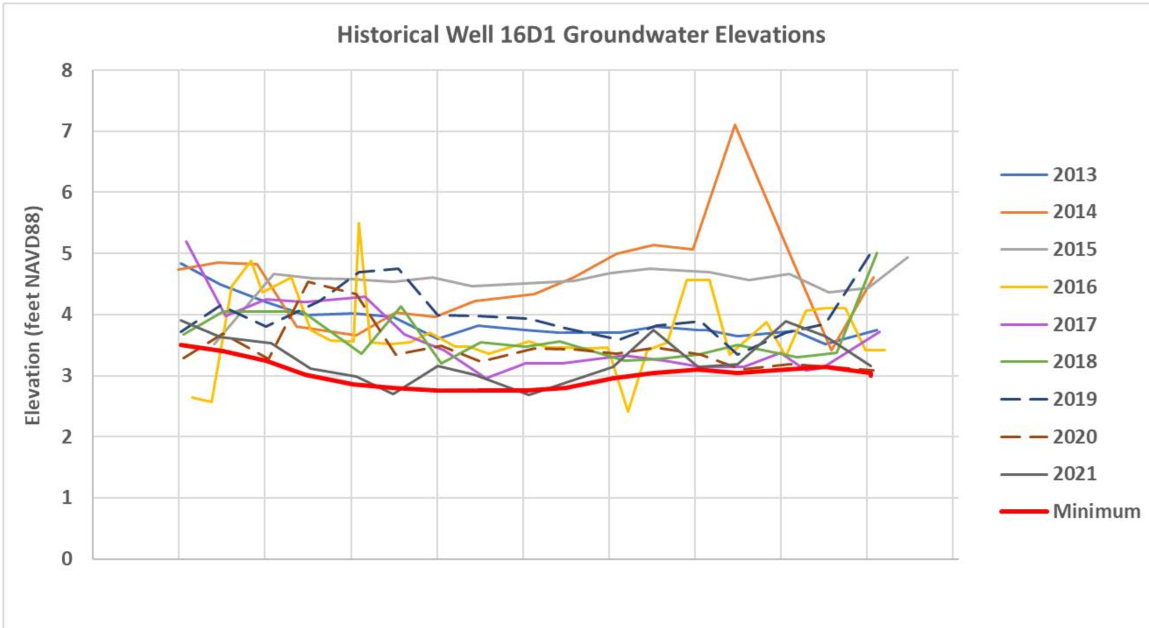


Figure 3. Historical Dry Season Water Levels at Well 16D1

Table 3. Historical Minimum Dry-Season Water Levels at Well 16D1

Date	Julian Day	Elevation (ft NAVD88)
Apr 1	91	3.50
Apr 15	106	3.40
May 1	121	3.25
My 15	135	3.02
Jun 1	152	2.85
Jun 15	166	2.80
Jul 1	182	2.75
Jul 15	196	2.75
Aug 1	213	2.75
Aug 15	227	2.80
Sep 1	244	2.95
Sep 15	258	3.05
Oct 1	274	3.10
Oct 15	288	3.05
Nov 1	305	3.10
Nov 15	319	3.15
Dec 1	335	3.05
Dec 15	335	3.00

4. Compare the creek pool water level hydrographs with hydrographs from previous years to assess whether current declines appear unusual. Biological monitoring reports from prior years have shown relatively stable pool depths during the dry season, as illustrated by the hydrographs for the Van Gordon and Red Legged pools during 2017 in **Figure 4**. The temporary upward spikes in water levels in August, October and December coincided with spikes in lagoon level and probably resulted from wave overwash at the beach berm.

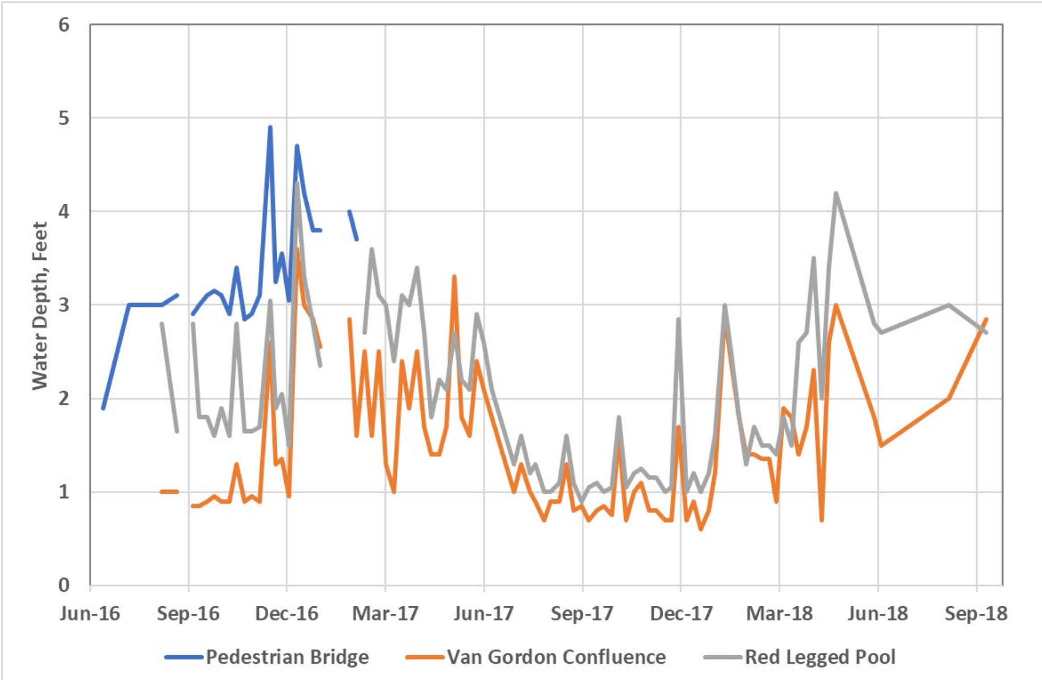


Figure 4. Water Levels in San Simeon Creek Pools, 2016-2018

5. If the changes in trends in well 16D1, well MW4, creek pool levels and lagoon inflow appear real, compare those hydrographs with the time series plots for variables that could cause a change in water levels:
    a. Wastewater percolation volumes
    b. 9P7 pumping
    c. Warren pumping
    d. Beach berm width
    e. SS-4 to 9P2 gradient
    f. CCSD well field pumping
    g. Piezometer water levels (rate of radial spread of drawdown around 9P7)

    The features to look for are a significant change in magnitude of any of those variables that occurred shortly before the observed decline in MW4 water level, such as an increase in pumping at 9P7, 9P4 (Warren) or the CCSD well field, a decrease in beach berm width, a change in the wastewater percolation location, or a decrease in the SS-4 to 9P2 gradient.

6. If it appears that accelerated decline in water levels and/or inflow at the top end of the lagoon may be caused by WRF operation, increase the lagoon discharge rate by an amount approximately equal to the reduction in lagoon inflow.

7. Repeat steps 1-6 again every 2 weeks and adjust lagoon discharge as needed.

8. Monitoring may be discontinued when stream flow resumes in winter and WRF operation ceases.
9. In subsequent years of WRF operation, monitoring is not needed as long as groundwater conditions at the time WRF is turned on are similar to those during the initial year. Aquifer characteristics and stream-aquifer interaction do not change over time. New monitoring would be needed only if operating conditions are significantly different than during the first year, such as substantial increases in WRF production, CCSD well field pumping, agricultural pumping or decreases in wastewater percolation.

Additional Analysis for First Year of WRF Operation

After the first month of WRF operation, the 9P7 pumping data and water-level data for the percolation pond piezometers should be analyzed to quantify the magnitude and spread of drawdown around that well. By applying the Theis Equation for drawdown around a pumping well, the arrival time of drawdown at creek pools and the upper end of the lagoon can be calculated. The extent to which wastewater percolation in Pond A blocks the spread of drawdown in that direction can also be calculated. Finally, the percent of 9P7 pumping derived from storage depletion versus stream flow depletion can be estimated. All of these calculations reveal whether 9P7 pumping is impacting pools in the creek or the lagoon.

This analysis does not need to be repeated in future years unless WRF operation is significantly greater in terms of pumping rate or duration.

REFERENCES CITED

Todd Groundwater. March 22, 2022. Simulated effects of water reclamation facility operation. Technical memorandum prepared for Cambria Community Services District, Cambria, CA.

Attachment 3

Summary of Responses to Comments on the Draft San Simeon Creek Instream Flows Assessment Report

Table 3-1. Responses to comments received on the Draft San Simeon Creek Instream Flow Study.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
1	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	The draft report notes that project pumping under certain conditions is likely to reduce habitat quality and quantity. It describes these reductions as fairly minimal–e.g., a two-day reduction in the suitable period for juvenile steelhead migration – however, it appears that the project could result in greater adverse effects if some additional project-related or streamflow characteristics were included in the analysis. These include 1) the range of expected project extraction rates; 2) effects of nearby well extractions; and 3) no analysis of the effects of delayed streamflow "rebound."	The final San Simeon Instream Flows Assessment report was revised to include expanded analyses of juvenile fish passage conditions under the following pumping rates: 1. A total combined pumping rate of 1.85 cubic feet per second (cfs) based on the maximum Cambria Community Services District (CCSD) pumping rate of 1.43 cfs plus the Pedotti private well pumping rate of 0.42 cfs; 2. 1.43-cfs pumping rate based on the maximum CCSD pumping rate; 3. 1.06-cfs pumping rate based on the upper end of CCSD's average daily pumping rate of 0.64 cfs plus the Pedotti private well pumping rate of 0.42 cfs; and 4. 0.64-cfs pumping rates, which is the upper end of the average daily CCSD pumping rate. The private groundwater pumps in the lower end of the study reach are downstream of the well field and are not expected to influence passage conditions because of their location in watershed, and is supported by the results groundwater modeling (Yates 2022); therefore, the extraction from these pumps is not included in the assessment. Part 3 of this comment inquires whether groundwater depletion by CCSD pumping during the dry season increases stream percolation losses when flow first resumes the following winter and thereby delays the start of the passage opportunity for migrating adult steelhead. Based on multiple flow measurements

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
			collected during a large storm event that initiated flow in San Simeon Creek on December 23–26, 1988, percolation losses along the creek at the start of the flow event were approximately 25 cfs and decreased to 2.2 cfs by December 27, 1988. The decrease in percolation over the 4-day period suggests that groundwater levels in the basin recovered within four days following the onset of surface flows during this event. The minimum flow required for adult up-migration has been estimated to be 67.5 cfs based on surveys of several riffles along the creek (D.W. Alley & Associates 1992). Because of the high magnitude of flows required for adult migration in lower San Simeon Creek, and the rate of surface loss during the onset of surface flow, groundwater "rebound" is not expected to have a significant effect on adult migration conditions.
2	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	It is not clear what pumping rate(s) served as the basis for the analysis. The draft report mentions that the CCSD expects an average extraction rate of 0.6 cfs, though it also mentions that pumping could occur at rates ranging from 0.41 to 1.43 cfs. It is not clear whether the analysis evaluated the expected effects from just the average extraction rate or from the full range of extraction rates. It is also not clear how these different extraction rates could result in different effects depending on their timing and streamflow conditions at the time of extraction – e.g., a high extraction rate in summer when streamflow and aquifer levels are declining versus that same rate during winter high flows. We recommend the analysis be modified to address these issues.	The final San Simeon Instream Flows Assessment report was revised to include additional analysis of juvenile fish passage conditions over an expanded range of extraction rates including the maximum CCSD extraction rate of 1.43 cfs, as described in the previous comment. In addition to the juvenile steelhead passage assessment, the study also evaluated the potential impacts to juvenile steelhead rearing habitat from CCSD's operations. An Incremental Flow Instream Flow Methodology (IFIM) was used along with a one-dimensional (1D) model developed for the Study Reach to identify flows that are critical for supporting juvenile steelhead rearing in the Study Area. Based on the results of the model, 1.0 cfs was identified as the critical flow. To be protective of the 1.0-cfs flow, Stillwater Sciences assumed maximum district pump

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
			rates (1.43 cfs) could relate to direct surface flow loss (e.g., CCSD groundwater pumping of 1.43 cfs = direct loss of surface flow of 1.43 cfs) and concluded that CCSD pumping could affect habitat conditions for juvenile rearing steelhead when stream flows are at 2.5 cfs (2.5 cfs = 1.0 cfs flow for juvenile rearing plus 1.43 cfs maximum pumping rate rounded up to nearest 0.1 cfs). The assessment includes pumping at the maximum rate and the flow threshold is for any time of year, capturing pumping at the highest extraction rate during the summer, as well as during the winter, spring, and fall.
3	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	The report (at page 10) notes that the CCSD operates three groundwater wells along Lower San Simeon Creek and provides their expected extraction rates. It also notes that there are several agricultural wells in the area, though it does not describe how or whether their effects were evaluated in the study. Of particular importance is Well 9P2, which is less than 100 feet from one of the CCSD wells and is operated in part through an agreement between CCSD and a nearby property owner. Well 9P2 can extract at up to 275 gallons per minute, which is roughly the same rate at the CCSD's average 0.6 cfs rate. When Well 9P2 is operating concurrently with nearby CCSD wells, it appears likely that there would be cumulative adverse effects on streamflow and that the combined operations could increase those adverse effects substantially. We recommend that the report be modified to incorporate allowable extractions from Well 9P2 into the analysis.	The expanded groundwater modeling effort conducted by Gus Yates in 2022 indicates that groundwater levels in this location appear to be stabilized by the Simeon Creek Lagoon connection to the groundwater basin. Furthermore, the report focuses on the effect of CCSD operations, but it does not provide recommendations for the groundwater extraction by private wells, which are not under CCSD's control.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
4	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	The report describes some of the streamflow drawdowns expected from the facility's groundwater extraction, but it doesn't identify the effects associated with delayed streamflow "rebound" from facility pumping. That is, it describes the "front end" of the effects when extraction reduces streamflows but doesn't evaluate the "back end" additional recovery time it would take for the late summer/autumn lower aquifer levels to increase sufficiently to allow for renewed streamflows.	Surface flow rebound following the dry season is discussed above under comment #1.
5	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	Streamflow data and expected flow rates: The report's Section 3.3.3 notes that flow rates were based on data collected from two locations between 1972 and 2001 and that the models were calibrated based on those rates. It is not clear why the report didn't use more recent data – for example, a 2014 CCSD report used stream gauge data from up through 2013 (see CDM Smith, San Simeon Creek Basin Groundwater Modeling Report, May 2014). It's also not clear how applicable the 1972-2001 data may be to expected future conditions in the San Simeon Basin – e.g., more extreme precipitation events due to climate change. It would be useful for the report to either incorporate more recent stream gauge data or provide the reasoning for why it isn't being used. It would also be helpful to identify predicted changes in precipitation and describe how those would affect San Simeon's streamflow and habitat values. This may be particularly important, given the report's apparent acknowledgement (on page 42) that older data may not adequately reflect current watershed conditions.	The final San Simeon Instream Flows Assessment report was revised to clarify that the best available data on streamflow was used to prepare the report. The Palmer Flats gage (formerly County Gage #14) located at the upstream end of the Study Area only covered the period from October 1970 through September 1995, after which point the gage was discontinued. A gage near the CCSD well field (County Gage #718, formerly County Gage #22) was operated from October 1987 through February 2003, after which San Luis Obispo County ceased maintaining the rating curve and the gage only recorded stage levels. The final report includes a recommendation to monitor streamflow to help understand future flow conditions in the watershed as they may relate to climate change and CCSD's pumping operations.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
6	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	Section 3.5 describes three assumptions used in the assessment of juvenile steelhead migration. One of them – that CCSD pumping occurs at 0.6 cfs during the April-May migration season – does not appear adequate to fully characterize the project's potential effects. We recommend the report be modified to apply the full range of expected extraction rates to the analysis.	The analysis for juvenile steelhead migration was expanded to include four extraction scenarios as follows: (1) the upper end of the average daily pumping rate of 0.60 cfs by CCSD; (2) the upper end of the average daily pumping rate of 0.60 cfs by CCSD plus the estimated maximum pumping rate of 0.42 cfs by the Pedotti private well for a total of 1.02 cfs; (3) the maximum extraction capacity of 1.43 cfs by CCSD; and (4) the maximum extraction capacity of 1.43 cfs by CCSD plus the estimated maximum pumping rate of 0.42 cfs by the Pedotti private well for a total of 1.86 cfs.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
7	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	Section 4 notes that field surveys to conduct stream habitat typing were conducted between December 2021 and July 2022, with the report's flow analyses then applied to the identified habitat types – e.g., riffles, pools, etc. The seven-month survey period omits late summer, which may not be of concern during times when streamflow is non-existent, but it also omits the return of streamflow in autumn, which could be an important period for adult steelhead upstream migration as well as steelhead incubation. This omission, along with the concern above about the potential delay in streamflow "rebound," may result in the report underestimating the project's effects on steelhead.	Habitat surveys and IFIM surveys were conducted over a range of targeted stream flows. The targeted flows were selected to assess conditions when surface flows that are most likely to be influenced by CCSD operations were present to calibrate the model to simulate habitat conditions over a wide range of flows. Additional surveys targeting different seasons would not change the model results because the model uses physical habitat features (e.g. cross-section topography and channel gradient), which are not affected by seasonal changes in flow. Model simulations included conditions with flows ranging from 0 cfs to 7.6 cfs, when CCSD operations are likely to have the greatest effect on aquatic habitat. The potential delay in surface flow rebound is discussed above under comment #1.
8	Tom Luster/ California Coastal Commission (Jan. 23, 2023)	The report's Section 6 suggests the CCSD conduct long-term stream flow monitoring at and near the CCSD's well field to better characterize flows. We recommend the report describe whether any of these monitoring efforts are occurring (or when they are scheduled to occur) and identify how any data collected from these monitoring efforts will be used to further calibrate the modeling conducted to date or to "ground truth" current modeling results.	Section 6, *Long-term Monitoring*, of the final San Simeon Instream Flows Assessment report was revised to clarify that Stillwater Sciences recommends long-term monitoring to provide information about the effects of CCSD's pumping operations on sensitive aquatic species and their habitat in lower San Simeon Creek and to enable CCSD to operate in a way that minimizes impacts to these aquatic species because no such monitoring is currently being conducted. The System for Environmental Flow Analysis (SEFA) model used for the IFIM component of the instream flow study allowed Stillwater Sciences to determine that under flows between 0 and 2.5 cfs, habitat conditions are most sensitive to CCSD pumping activities. The SEFA model was fully calibrated using standardized methods. Long-term flow monitoring will enable CCSD to determine when sensitive flows (i.e., flows

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
			between 0 and 2.5 cfs) are occurring in real time and use that information to manage operations to be protect steelhead.
9	Tom Luster/ California Coastal Commission (Mar. 6, 2023)	Re: location of project components in sensitive habitat - underpinning our evaluation is the ongoing and unresolved nonconformity of having project elements (and former project elements, such as the evaporation basin) located within ESHA. We are about to get to Year 9 of the project being located in sensitive habitat without mitigation and without a determination about feasible alternative locations.	This comment is outside the scope of the instream flow study.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
10	Schani Siong/ SLO County (Mar. 2, 2023)	The County agrees that it would be a good idea to broaden the scope of the analysis to show a range of pumping within all seasons to analyze the potential impacts during those different scenarios. The study mentions that higher reduction of suitable migration days for juvenile steelhead may occur if pumping rates are above the daily average rate of 0.6 cfs assumed for the analysis. The analysis should include information that would account for worst case scenario (highest 1.43 cfs pumping rate) to fully understand the full extent of impacts. *If there is desire not to incur additional impacts beyond analyzed thresholds in this IFS– provide information on how operation will avoid doing so*.	The analysis of juvenile steelhead migration was expanded to include four extraction scenarios: (1) the upper end of the average daily pumping rate of 0.60 cfs by CCSD; (2) the upper end of the average daily pumping rate of 0.60 cfs by CCSD plus the estimated maximum pumping rate 0.42 cfs by the Pedotti private well for a total of 1.02 cfs; (3) the maximum extraction capacity of 1.43 cfs by CCSD; and (4) the maximum extraction capacity of 1.43 cfs by CCSD plus the estimated maximum pumping rate of 0.42 cfs by the Pedotti private well for a total of 1.86 cfs. The maximum pumping rate of 1.43 by CCSD plus the estimated maximum pumping rate of 0.42 cfs by the Pedotti private well may lead to a reduction in juvenile passage days at the 4-cfs threshold; however, CCSD's pumping at the daily average rate of 0.60 cfs shows very little effect on juvenile passage conditions.
11	Schani Siong/ SLO County (Mar. 2, 2023)	As part of the CDP review, the County must make required LCP findings for SRA and ESHA that CCSD have identified mitigation measures to lessen impacts to sensitive resources and species to maximum extent. For example, CCSD have been advised to incorporate a rescue and relocation protocol as part of the project. At what point would the rescue and relocation protocol be initiated? What does that look like and who are the responsible entities? Avoidance and minimization measures should be detailed out for identified impact, duration of impact, and responsible parties should be developed as part of the AMP.	Detailed recommendations are provided in separate technical memoranda that include avoidance and minimization measures along with annual reporting to the Technical Advisory Committee to evaluate the effectiveness of avoidance and minimization measures. Fish rescue and relocation efforts were discussed with California Department of Fish and Wildlife (CDFW) Regional Biologist Zach Crumb, who indicated that CDFW would lead any fish rescue and relocation efforts.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
12	Schani Siong/ SLO County (Mar. 2, 2023)	SRA Findings: e. Required findings: Any land use permit application within a Sensitive Resource Area shall be approved only where the Review Authority can make the following required findings: (1) The development will not create significant adverse effects on the natural features of the site or vicinity that were the basis for the Sensitive Resource Area designation, and will preserve and protect such features through the site design. (2) Natural features and topography have been considered in the design and siting of all proposed physical improvements. (3) Any proposed clearing of topsoil, trees, or other features is the minimum necessary to achieve safe and convenient access and siting of proposed structures, and will not create significant adverse effects on the identified sensitive resource. (4) The soil and subsoil conditions are suitable for any proposed excavation; site preparation and drainage improvements have been designed to prevent soil erosion, and sedimentation of streams through undue surface runoff.	This comment is outside the scope of the instream flow study.
13	Schani Siong/ SLO County (Mar. 2, 2023)	ESHA Findings: b. Required findings: Approval of a land use permit for a project within or adjacent to an Environmentally Sensitive Habitat shall not occur unless the applicable review body first finds that: (1) There will be no significant negative impact on the identified sensitive habitat and the proposed use will be consistent with the biological continuance of the habitat.	This comment is outside the scope of the instream flow study.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
		(2) The proposed use will not significantly disrupt the habitat.	
14	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	It might be helpful to readers to understand that the CCSD commenced its San Simeon diversions in 1979, that no supplemental water from Santa Rosa Creek was needed until 1984 and that in 1984, 1985, and 1986, Santa Rosa Creek underflow had to be used to supplement San Simeon supply (McClelland Engineers 1987).	It is not clear how this historical operation is relevant to current management. CCSD's water rights allow up to 370 acre-feet of dry-season extraction from the San Simeon River basin and up to 155 acre-feet from the Santa Rosa Basin, and CCSD operates within these limits.
15	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Is the intent of the report to provide an instream flow assessment that evaluates impacts of the WRF facility during Stage 3 droughts only, the operation of the WRF across a range of water year types, or the operation of all CCSD pumping activities across a range of water year types?	The intent of the San Simeon Instream Flows Assessment is to assess the effects of CCSD operations on aquatic habitat in lower San Simoen Creek, identify sensitive flows for aquatic species, and develop long-term monitoring to inform CCSD operations and allow CCSD to operate in a way that minimizes impacts to sensitive aquatic species.
16	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	In Study Goals and Objectives (Section 2.3, page 11), the following statement is made, “The analysis focuses on drought periods when the WRF would likely be operated and when potential ecological impacts would be most severe.” It is unclear if this refers to Task 1 (instream flow assessment) or Task 2. Based on language used throughout the study and in the conclusions, it seems the instream flow assessment is intended to cover all CCSD operations including existing operations. If this is the case, then an expanded instream flow assessment is needed– for example to inform the potential impact CCSD	The has been revised to clarify that the statement about analysis being focused on drought years is referring to Task 2 (Groundwater Modeling). The instream flow study covered under Task 1 applies to all CCSD operations in San Simeon Creek basin because it identifies streamflows that are protective of aquatic species in lower San Simeon Creek. The report specifies that a streamflow of 1.0 cfs is required to provide juvenile steelhead rearing habitat based on the instream flow study and incorporates the range of CCSD extraction rates that have a maximum capacity of 1.43 cfs to a protective flow

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		operations has on habitat in lower San Simeon Creek in wetter years.	level of 2.5 cfs (approximately 1.0 cfs plus 1.43 cfs) These results are independent of water year types.
17	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	CCSD operations, and their potential impacts to aquatic habitats, began in 1979. Section 2.2 (Operations Information) only presents CCSD operational data starting in 2012. The operations summary does not provide an overview of CCSD operation since 1979, nor how operations or their impacts have changed over time, nor the potential impact of existing operations on flow data utilized in the study.	The final San Simeon Instream Flows Assessment report includes CCSD operational data from the last 10 years to provide a representative summary of CCSD operations in the watershed. Historical operations and changes in operations over time were not the focus of the study, rather Stillwater Sciences assessed (1) the range of CCSD groundwater extraction rates from the lower average pumping rate of 0.41 cfs to the maximum pumping rate of 1.43 cfs and (2) how that range of extraction would affect aquatic habitat over a range of surface flows in the study area. All available streamflow data were used to evaluate the frequency of specific surface flows in the Study Area, but the key flows (i.e., 1.0 cfs) identified in the study remain static for informing CCSD operations to be protective of steelhead rearing conditions.
18	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	The cumulative impact from existing water uses including historical CCSD operations and impacts of senior water rights upstream of CCSD should be acknowledged and integrated into the report.	Impacts from the Pedotti private well were included in the assessment of impacts to juvenile migration conditions. The Warren pumps are downstream of well field and not expected to influence passage based on location in watershed and groundwater modeling (Yates 2022). The recommendation of

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
			establishing and maintaining a stream flow gage at the location of the county gage, which currently only records stage, is included in the report to inform future CCSD operations. Streamflow data at this location would capture any influence on surface flows from the Warren wells.
19	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	If there is sufficient data, flow statistics and conclusions about flow patterns could be made distinct for two different periods in San Simeon Creek. a. Stream flows before 1979 (the first year CCSD began diverting from the Creek) b. Stream flows from 1979 onward (active period of CCSD diversions)	There are not sufficient flow data to identify flow patterns between pre-CCSD operations and post-CCSD operations. The San Simeon Gage only covers from 1987–2003, which is after CCSD operations began, and although some data from the Palmer Flats Gage (1971–1995) provide some data; the data are for only 8 years before and 15 after 1979 and are limited for this type of comparison. In addition, the Palmer Flats Gage is located at the upstream end of the groundwater basin and is less likely to provide representative information about CCSD pumping operations.
20	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	If this is not possible, the historical operations and their potential impacts on flow data should be acknowledged.	The final San Simeon Instream Flows Assessment report primarily relies on data from the Palmer Flats Gage. As discussed in the final report, this gage is located at the upstream end of the groundwater basin and thus is not likely to see a strong influence from CCSD pumping operations.
21	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Given the importance of historical flow data, all flow collection methods need to be explained, and flow data (including rating curves) should be published as an appendix if not publicly available elsewhere (in which case references are needed).	Mean daily flow data for each stream gage were used to characterize flow conditions for the final San Simeon Instream Flows Assessment Report. These data have been included as an appendix to the final report. Additional detailed flow data for the watershed could not be located.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
22	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 4. While it is true that San Simeon is flashy like other streams, this does not mean that the extent of temporal and spatial intermittent trends is natural. Rather as stated in Yates & Konyenburg (1998) flows in this reach have been impacted by existing land and water management practices. Please acknowledge and edit language throughout the report as appropriate.	This statement has revised in the final San Simeon Instream Flows Assessment report to acknowledge that groundwater pumping (municipal and agricultural) likely increases the extent and frequency of intermittent flows above natural levels.
23	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 4, last sentence that lower San Simeon is dry “to the Lagoon” is vague, please be specific.	The final San Simeon Instream Flows Assessment report was revised to clarify that the dry section of San Simeon Creek often extends to just downstream of Van Gordon Creek.
24	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 19, Section 3.3.3. Paragraph 2. More information about the rating curves and sampling intervals at Palmer Flats and Gage #718 is needed.	See response to comment 21.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
25	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 21, Section 3.4, Paragraph 1. “Palmer Flats is located just upstream of the San Simeon Creek groundwater basin and is not affected by groundwater pumping.” Please cite data or a report for this. Regardless of groundwater basin delineation, data from wells 27S/8E-10G1 and 10G2 appear to show seasonal declines that would be consistent with pumping influence (Yates & Konyenburg 1998)2. Subsequent statements about how Palmer Flats represents the maximum potential surface flow is thus also called into question by this data. This also applies to Section 4.3 Paragraph 1.	This comment questions whether the Palmer Flats Gage was in fact upstream of the influence of groundwater pumping. The gage was located at the San Simeon Creek Road Bridge 600 feet downstream of the confluence with Steiner Creek. That location is near the upstream end of the groundwater basin and 1,390 feet upstream of the nearest water supply well (Pedotti irrigation well 27S/8E-11C1). Previous reports going back to Yates and Van Konynenburg (1998) have considered the Palmer Flats gaged flows to represent surface inflow to the basin, and that assumption was reasonable for most purposes. Geologic maps show alluvium extending about 1 mile farther up San Simeon Creek and Steiner Creek (for example, Dibblee and Minch 2007). Although the alluvium is narrower and, undoubtedly shallower upstream of the gage, it would still be capable of conveying water via the subsurface. Natural stream percolation would likely be relatively high upstream of the gage because sediments at the apex of alluvial fans tend to be relatively coarse. There could be additional percolation upstream of the gage caused by pumping at 11C1 during April–May, but it is probably negligible for several reasons. First, the irrigation season does not usually get underway until April, and when the well starts pumping, most of the water comes from storage as the cone of depression expands outward. It would take days to weeks to extend as far as the gage location. Second, well 11C1 is only about 100 feet from the channel of San Simeon Creek. When flow is present in the creek, any percolation induced by pumping would be along the reach closest to the well. When it was drilled in 1977, the well was tested at 250 gallons per minute,

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
			which equals 0.57 cfs. Channel percolation between the gage and the well (and an equal distance downstream) could supply most or all of that flow rate.
26	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 30, Section 4.3, Paragraph 1. "Note that flows at Palmer Flats during the spring and summer are generally expected to be higher than flows within the Study Area…" It should also be acknowledged that good passage conditions at Palmer Flats do not always result in passage conditions in the lower reaches.	The description of the methods used for juvenile steelhead passage assessment provided in Section 3.5 of the final San Simeon Instream Flows Assessment report was revised to clarify Stillwater Science's approach and to acknowledge that fish passage conditions at Palmer Flats are not necessarily the same as passage conditions.
27	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 42, Section 5, Paragraph 3. This paragraph should explain why the creek's intermittency in the lower reaches should cause the EWD analysis points to be moved upstream near Steiner Creek. Is the lower reach unsuitable for EWD analysis because of natural conditions or because of human impacts or both?	The lower reach is unsuitable for an analysis of Environmental Water Demand (EWD) because it is naturally intermittent and EWD analysis was intended for locations with perennial flows.
28	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 42, Section 5, Paragraph 3. Is "natural groundwater losses" the correct term here? The cause of natural groundwater loss is natural subsurface drainage out to sea. The rest of groundwater losses are not natural and are caused by pumping water out for human uses. This sentence should include an acknowledgement of the fact that some proportion of groundwater losses are also anthropogenic.	The final San Simeon Instream Flows Assessment report was revised to address this comment. The sentence no longer uses the phase "natural groundwater losses," and has been revised as follows: "…the lowermost analysis points used in the EWD study (Stillwater Sciences 2014) should be relocated upstream of the groundwater basin to the confluence of Steiner Creek or adjusted to reflect the intermittent flow conditions in lower San Simeon Creek.

Comment #	Commenter Name/Affiliation (Date)	Comment	Response
29	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 42, Section 5, Paragraph 5. "CCSD pumping operations have the potential to reduce the amount and quality of juvenile steelhead rearing habitat within the Study Area at flows less than 2.5 cfs" Please specify at what point(s) along the creek this 2.5 cfs threshold is relevant. When flow is 2.5 cfs at Palmer Flats?	This threshold is relevant throughout the entire length of Reach 1 of the Study Area where 1D modeling surveys were conducted. The location of the current county gage would serve as the best indicator for these flows; however, that gage only records stage elevation and lacks a current stage discharge rating curve to convert measurements to flow. The final San Simeon Instream Flows Assessment Report includes a recommendation for developing and maintaining a rating curve for the county gage to inform CCSD operations to be protective of steelhead.
30	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 42 first sentence: "The lower reach of San Simeon Creek in the absence of CCSD pumping operations potentially provides migratory and rearing habitat for steelhead in the winter and spring and is typically dry during the summer and fall. This reach would only provide steelhead rearing habitat during the dry season infrequently" Please indicate the specific reach that is dry under existing land and water management conditions – from Palmer to the footbridge? In all water year types? For example, this sentence might read "Limited data is available to assess natural flow conditions in San Simeon Creek. However, based on the geology and similar watersheds, some portion of lower San Simeon Creek was likely historically intermittent. Under existing land and water management practices, the lower reach of San Simeon Creek typically provides migratory and rearing habitat for steelhead in the winter and spring and it dries out in the summer and fall from Palmer Flats to one mile upstream of the lagoon."	Section 5, *Conclusions*, of the final San Simeon Instream Flows Assessment report was revised to clarify which section of lower San Simeon goes dry and how that conclusion was formed. The text was revised as follows: "The lower reach of San Simeon Creek provides potential migratory and rearing habitat for steelhead in the winter and spring, and this habitat often becomes constrained during the late spring and disappears during the summer and fall when surface flows cease. Available stream flow data at Palmer Flats Gage (1970 to 1995) and County Gage #718 (1987 to 2003) indicate that most of lower San Simeon Creek within the Study Area (from the Palmer Flats Gage downstream to approximately the confluence with Van Gordon Creek) would naturally (i.e., without CCSD groundwater pumping) go dry for extended periods during the summer through fall of most years."

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31	Steph Wald and Tim Delany/ Creek Lands Conservation (Mar. 17, 2023)	Page 43, Section 6.1, Paragraph 1: The recommendation to collect additional flow data at Palmer Flats is good, but the comment above (Page 21, Section 3.4) about the non-influence of groundwater pumping at this location suggests that going somewhat further upstream (perhaps on both Steiner and upper San Simeon) could be a better way to monitor inflows to the groundwater basin. There is a water right in the vicinity of Palmer Flats that could influence surface water levels at this site when water is being pumped. Reported flow rate for the well associated with this water right is 300 gpm (0.67 cfs).	The Palmer Flats Gage was located at the San Simeon Creek Road Bridge 600 feet downstream of the confluence with Steiner Creek. That location is near the upstream end of the groundwater basin. Previous reports going back to Yates and Van Konynenburg (1998) have considered the gaged flows to represent surface inflow to the basin. Continuing to reoccupy the former gage site will allow the data to continue on the historical record and allow the analysis of long-term trends.
32	Clyde Warren/ Landowner (Mar. 6, 2023)	The report on page 10 only mentions that my irrigation well (formally the Molinari well) has an annual use of 183.5 acre feet. It does not mention the pumping rate of 275 gpm and not less than 105 psi at the meter which is located at my property line. See attachment.	The final San Simeon Instream Flows Assessment report was revised to specify the pumping rate for this well is 0.61 cfs (275 gallons per minute).
33	Clyde Warren/ Landowner (Apr. 2023)	This letter includes multiple comments focused on effects of CCSD pumping on Private wells operated by C. Warren that pump near Van Gordon Creek and how CCSD operations might affect private water rights.	These comments are addressed in a separate memo titled *Responses to Clyde Warren Comment Letter*, which is now provided as an attachment to the final San Simeon Instream Flow Assessment report.

Attachment 4

Responses to Clyde Warren Comment Letter

TODD
GROUNDWATER

August 22, 2024

MEMORANDUM

To: James Green, Cambria Community Services District

From: Gus Yates, PG, CHG, Senior Hydrologist

Re: Water Reclamation Facility: Responses to Clyde Warren Comment Letter Dated April 4, 2023

I have reviewed the comment letter and associated files Mr. Warren submitted to Cambria Community Services District (District) on April 4, 2023 outlining his concerns regarding potential impacts of the District's Water Reclamation Facility (WRF) on his supply wells. The locations of his wells and relevant nearby wells are shown in **Figure 1**. I have investigated his assertions and completed additional analysis to evaluate their merits. For discussion purposes, I have grouped his comments into three issues, each of which is discussed below.

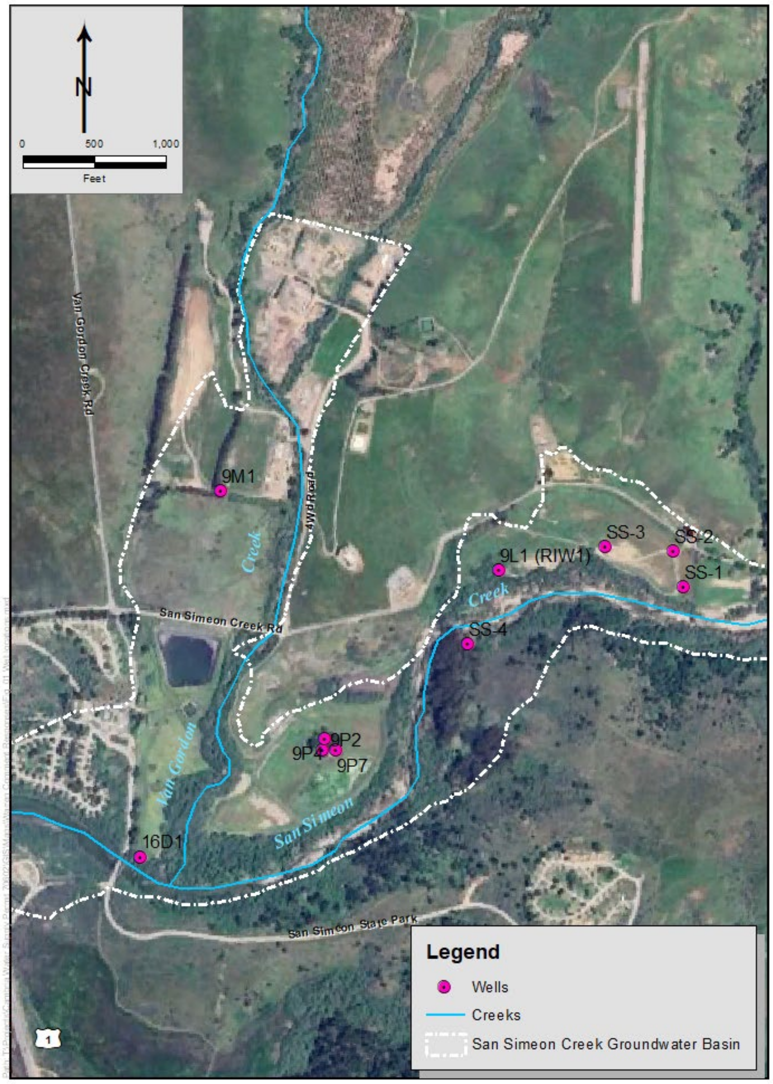

Figure 1. Locations of Wells

Issue 1: 9P7 Pumping Impacts on Van Gordon Creek Wells

Mr. Warren cited material in my January 23, 2020 memorandum to the District. That memorandum interpreted older CDM Smith modeling results. It pointed to the need for improved modeling, which led to my work in 2021-2022 that included model improvements, recalibration and simulation of WRF operational scenarios. I documented the more recent modeling in a memorandum to the District dated March 22, 2022.

A major difference between the CDM Smith modeling and the more recent modeling is that the CDM Smith modeling assumed much more WRF operation than would actually be needed. Sensitivity analysis with the new model showed that the water-level gradient between wells SS-4 and 9P2 dictated whether and how much WRF production would be needed in a given month. In the absence of WRF operation, the gradient gradually shifts from down-valley (forward gradient) to up-valley (reverse). The District operates facilities to avoid reverse gradients. Modeling showed that WRF operation rapidly establishes a forward gradient. Thus, average WRF flows could be adjusted semi-monthly (the model stress period) to closely match the target gradient. This led to the 9P7 pumping rates for various scenarios shown toward the bottom of the graph in **Figure 2**. Well 9P7 is the supply well for the WRF. For all of the scenarios, semi-monthly pumping rates are less than half the rates assumed in the CDM Smith modeling (the lone curve near the top of the graph).

The CDM Smith modeling and my more recent modeling both assumed a longer duration of WRF operation than is likely to occur. The CDM Smith model assumed the WRF would operate continuously with zero San Simeon Creek flow in winter. This is unrealistically conservative because it implicitly assumed two exceptionally dry years in a row. My more recent modeling similarly assumed two exceedingly dry years in a row, but they were evaluated separately. This allowed two types of dry year to be evaluated in a single simulation, but the probability of two such years in a row is on the order of one year out of 360 years (Yates and Van Konynenburg, 1998). A more realistic estimate of a year with heavy WRF operation would assume the plant is turned on around mid-summer in a year when the dry season started exceptionally early. It would continue operating at the rate needed to maintain the target gradient between SS-4 and 9P2 until San Simeon Creek stream flow resumes, which is commonly in December, sometimes in January and rarely as late as February.

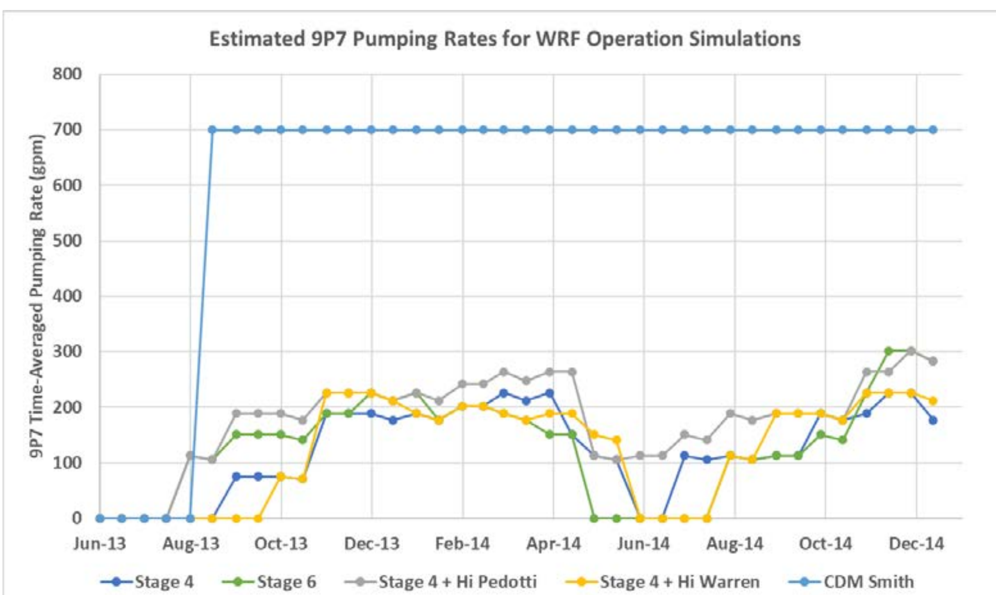

Figure 2. Estimated 9P7 Pumping Rates

My recent modeling also assumed an annual District water demand of 700 AFY, which included an increment of growth relative to current demand. Annual water use during 2015-2020 averaged 503 AFY. The scenarios have not been repeated with this smaller water demand, but the result would be smaller semi-monthly WRF production and a slightly shorter WRF operational season. The effects of pumping at well 9P7 would also be proportionally smaller.

Most of the issues raised by Mr. Warren regarding pumping impacts on water levels can be answered by inspection of historical water-level data for wells 9M1 and 9P2, which have been monitored by the District for many years. **Figure 3** shows hydrographs of groundwater elevations measured in those two wells from 2004-2019.

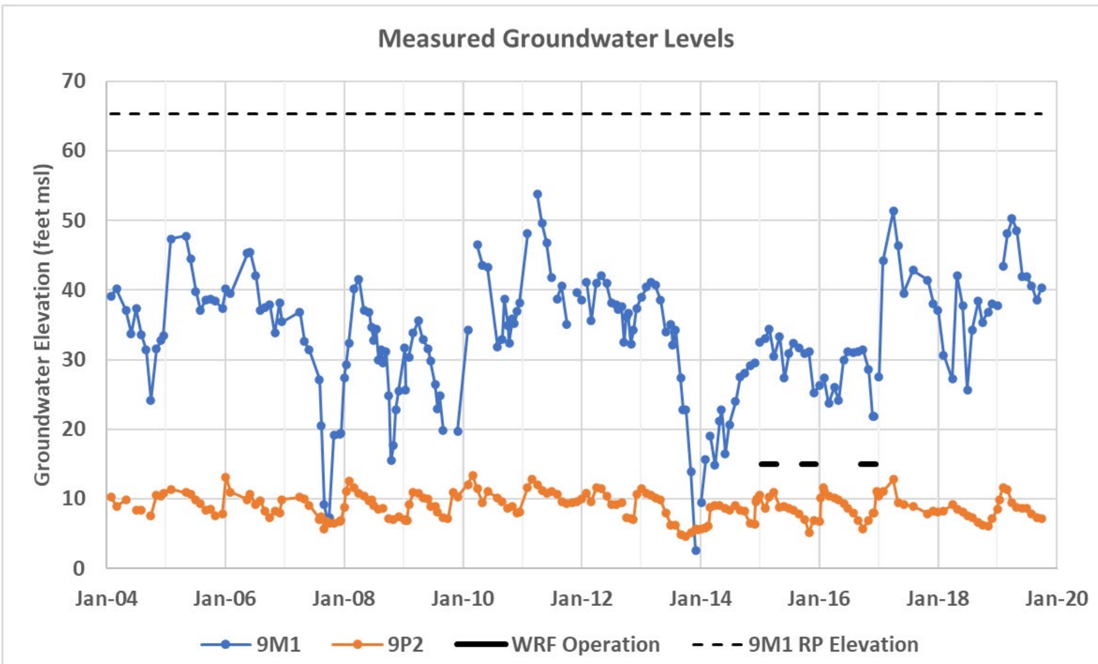

Figure 3. Groundwater Levels in Wells 9M1 and 9P2

Water levels in well 9P2 remained within a narrow range (6-13 ft msl) because of the stabilizing effects of nearby recycled water percolation and the lagoon. Also, there has not been much pumping at nearby wells 9P7 (WRF supply well) and 9P4 (Warren's irrigation well). In contrast, 9M1 water levels fluctuated much more widely: 15-54 ft msl in typical years and plunging as low as 3 ft msl in drought years. These variations are obviously not caused by pumping for the WRF, which would have to also lower 9P2 water levels if it were having an impact on the much more distant well 9M1.

The 9P2 hydrograph demonstrates that fluctuations in water levels in the San Simeon Creek basin near Van Gordon Creek are not the cause of the large water-level fluctuations observed in the Van Gordon area. In fact, in December 2013 the 9M1 water level was **lower** than the 9P2 water level. At that time, one could argue that Van Gordon drawdown was impacting 9P2 water levels, not the other way around.

The large water level fluctuations at 9M1 are likely due to local irrigation pumping and variations in recharge in the Van Gordon Creek area. Warren irrigation has been small since 1995, based on Google Earth historical aerial imagery that shows little active irrigation on his lands on the Van Gordon Creek valley floor. So pumping at 9M1 or Warren's other nearby wells probably did not contribute substantially to the observed water level fluctuations. However, a much larger stress would be pumping to irrigate the 56 acres of avocado orchard immediately upstream of Warren's property (visible in Figure 1). I completed a daily soil moisture budget simulation of the orchard during 2004-2021, which produced an estimate of 131 AFY of irrigation pumping.[1] That is a large stress on that relatively small corner of the basin. The irrigation pumping contributes to dry-season water-level declines every year. The exceptionally large dry-season water level declines in 2007 and 2013 probably resulted from below-average recharge during the preceding winter. Recharge correlates with precipitation and stream flow, which vary much more widely from year to year than evapotranspiration and irrigation do. Annual irrigation demand does go up if the summer is hot or the dry season is long, but as a percent of normal, the variations are small compared to variations in precipitation and stream flow.

Figure 2 also shows that water levels in well 9M1 drop as low as the 12.5 ft msl elevation shown in the CDM Smith figure cited by Mr. Warren even in the absence of WRF operation, such as in 2007 and 2013. Thus, the assumption that the low water levels resulted from 9P7 pumping is incorrect. The relevant question is how much **additional** drawdown at 9M1 did 9P7 pumping contribute? The drawdown impact at 9M1 would necessarily be smaller than at nearby wells in the San Simeon Basin (such as 9P2 and 16D1) because drawdown decreases with distance from a pumping well.

My modeling of scenarios in 2021-2022 showed that WRF operation would lower water levels at 9P2 by only 2 ft by the end of the dry season, as shown in **Figure 4** for the drought stage 4 + WRF scenario. At well 16D1 water levels would be lower by less than 1 foot. The effect of WRF operation on water levels at 9M1 would certainly be less than 1 foot, not the 23.13 ft asserted in the comment letter. The 0.5-2 ft of drawdown caused by 9P7 pumping at 9P2 and 16D1 at the end of the dry season would not appreciably increase the southward gradient at Well 9M1, which is located 2,000-2,500 ft away.

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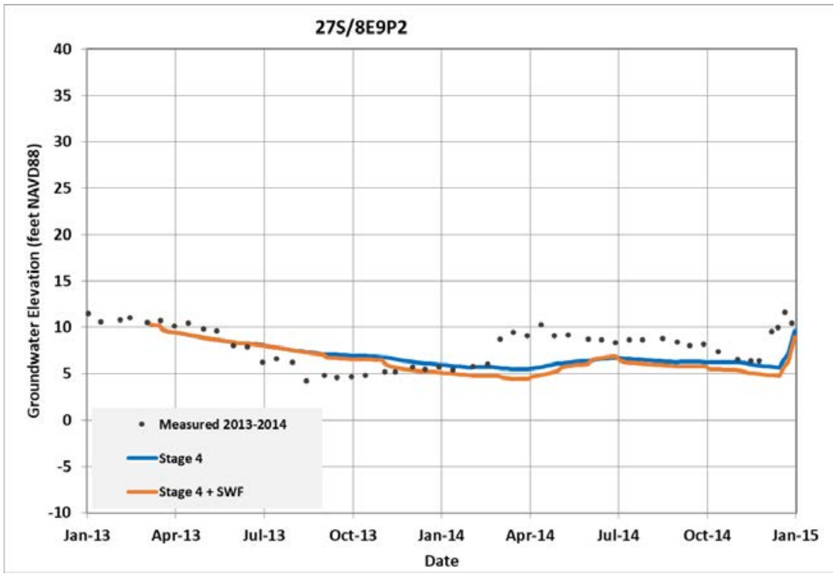
[1] Daily rainfall and reference ET for Cambria from ClimateEngine.org; available water capacity = 0.13; root depth = 10 ft; crop coefficient = 0.7 in all months; irrigation deep percolation = 10% of applied water.



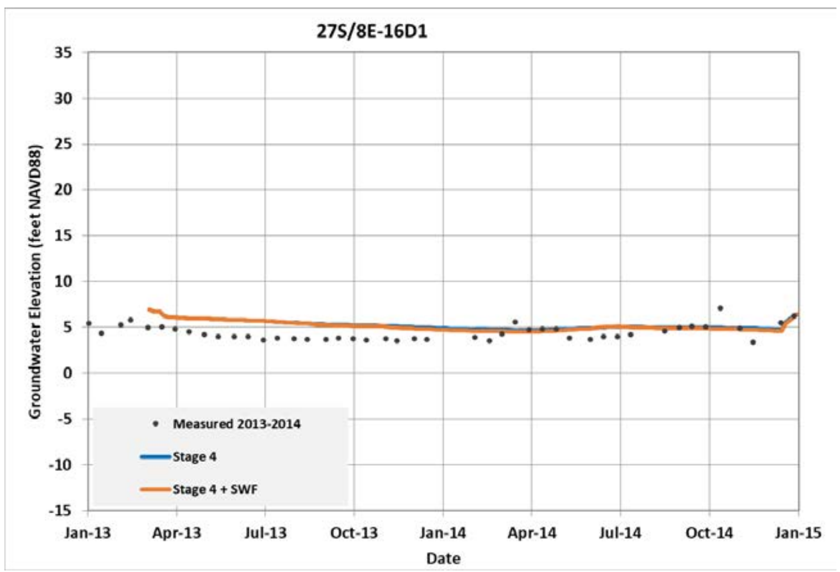


Figure 4. Simulated Water Levels at Wells 9P2 and 16D1 during WRF Operation

Issue 2: 9P7 Pumping Impacts on 9P4

Well 9P4 is an irrigation well owned by Mr. Warren and located in the District's recycled water percolation area less than 100 ft from WRF supply well 9P7. Well 9P2 is a similar distance from 9P7 and is the well with the long history of measured water levels shown in Figure 3. The periods of pumping at well 9P7 during 2015-2016 are indicated by the horizontal black bars in Figure 3. There was no concurrent decline in water levels at 9P2, just the usual seasonal pattern of cyclic fluctuations. The amounts of 9P7 pumping in 2015-2016 were smaller than would occur in a year of heavy WRF operation, but if 9P7 impacted water levels at 9P2, some evidence of drawdown should have been visible and wasn't.

Model simulations also indicated that pumping at 9P7 during WRF operation would not cause substantial drawdown at 9P2 and by extension at 9P4, which is a similar distance from 9P7. The hydrographs in Figure 4 shows the simulated effects of more sustained WRF operation compared to the same simulation without WRF operation. Over the course of two consecutive very dry years, 9P2 water levels with WRF operation were at most 2 ft lower than without WRF operation. Thus, the fear that 9P2 water levels would be drastically lowered by WRF operation or that Warren's nearby supply well 9P4 would lose capacity appear to be unfounded.

The comment letter also mentioned that WRF operation could impact groundwater quality at Warren's irrigation well 9P4. No mechanism was suggested for how water quality would be impacted. The treatment plant does not add chemicals to the basin. Salts that are extracted by reverse osmosis treatment will be trucked out of the basin. The advance treated recycled water injected for the WRF project at well RIW1 near the District's well field is of higher quality than groundwater presently extracted by Warren's well 9P4.

Issue 3: Water Rights

The District has three primary responses to the water rights issues raised in letters from Mr. Warren and his attorney.

First, as confirmed in the March 22, 2022, report prepared by Todd Groundwater, the WRF extracts, treats and reinjects wastewater that was percolated by the District, and the annual volume of wastewater percolation equals 92% of the volume extracted at the District's well field (Todd Groundwater, 2022, p. 4). The WRF simply moves highly-treated percolated wastewater to a location in the aquifer that is accessible to the District's municipal wells. The District holds exclusive rights to this developed water supply (Water Code section 1210). The central premise of the WRF project is the percolation and recharge of the District's treated wastewater and subsequent recovery thereof. Mr. Warren has no claim of water rights regarding this source of supply.

Second, and as referenced in correspondence from Mr. Warren and his attorney, the District and Mr. Warren have a Settlement Agreement that governs their relationship with regard to these matters. The District abides by the terms of the agreement and will continue to do so. The Settlement Agreement has clear terms for dispute resolution, and Mr. Warren may avail himself of those processes if warranted. The Settlement Agreement was executed in 2006 and has successfully and amicably governed relations between Mr. Warren and the District since that time.

Third, the District disputes Mr. Warren's claims and assumptions that the District pumps Van Gordon Creek surface water (via subterranean stream flow). Unlike the San Simeon aquifer, there has been no court/regulatory determination that the the District is pumping from the subterranean streamflow associated with Van Gordon Creek. In fact, there is evidence indicating the groundwater flow direction in the vicinity of the WRF supply well (9P7) runs is perpendicular to the direction of Van Gordon Creek, thus nullifying a key element for finding the existence of a subterranean stream. Water level data from well

9M1 in Van Gordon Creek Valley and groundwater modeling both show that the groundwater gradient and flow direction in Van Gordon Creek Valley are parallel to Van Gordon Creek and perpendicular to San Simeon Creek. Thus, groundwater from the Van Gordon Creek Valley enters San Simeon Creek Valley from the side and is not part of the subterranean stream associated with San Simeon Creek. There is no evidence that the WRF project is pumping from a subterranean stream associated with Van Gordon Creek or that the project will interfere in any way with Mr. Warren's claimed Van Gordon Creek surface water rights.

References Cited

Todd Groundwater. March 2022. Simulated effects of water reclamation facility operation. Prepared for Cambria Community Services District, Cambria CA.

Yates, E.B. and K.M. Van Konynenburg. 1998. Hydrogeology, water quality, water budgets and simulated responses to hydrologic changes in Santa Rosa and San Simeon Creek groundwater basins, San Luis Obispo County, California. Water Resources Investigations Report 98-4061. U.S. Geological Survey, Sacramento, CA.

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Board of Directors

AGENDA NO. **5.B**

FROM: Matthew McElhenie, General Manager
Jim Green, Utilities Department Manager

Meeting Date: October 10, 2024

Subject: Receive, Review and File the Watershed Sanitary Survey

FISCAL IMPACT:
There is no fiscal impact associated with this item.

DISCUSSION:
The Watershed Sanitary Survey is an assessment of the San Simeon and Santa Rosa Creek watersheds to identify and assess possible impacts on drinking water quality. The objective of this comprehensive survey is to provide an updated description of the District's source water system, describe existing environmental conditions in the watersheds, identify existing and potential future sources of contamination in the watersheds, provide a water quality and watershed condition assessment, and describe watershed control and management practices. These recommendations for watershed management practices include proactive stewardship and the importance of monitoring, educational outreach to raise awareness, and the encouragement of sustainable practices. These practices will be utilized in the District's ongoing vigilance in maintaining and enhancing the natural resources in the San Simeon and Santa Rosa Creek watersheds.

The State Water Resources Control Board Division of Drinking Water requires a Watershed Sanitary Survey Update every five years. This update brings the CCSD into regulatory compliance with regard to source water assessments. The final version of the Watershed Sanitary Survey prepared by Confluence Engineering is attached.

It is recommended that the Board of Directors receive and file the completed Watershed Sanitary Survey.

ATTACHMENTS:
1. Watershed Sanitary Survey

Draft 2024 Watershed Sanitary Survey Update

Cambria Community Services District

September 9th, 2024

Prepared by

Acknowledgements

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List of Acronyms and Abbreviations

AWTP	Advanced Water Treatment Plant
CCAMP	Central Coast Ambient Monitoring Program
CCR	Consumer Confidence Report
CCRWQCB	Central Coast Regional Water Quality Control Board
CCSD	Cambria Community Services District
D/DBP	Disinfectants/Disinfection By-Products
DDW	Division of Drinking Water
DWSAP	Drinking Water Source Assessment and Protection
EPA	Environmental Protection Agency
EWS	Emergency Water Supply
GWUDI	Ground Water Under Direct Influence
MCL	Maximum Contaminant Level
MF	Microfiltration
MLE	Modified Ludzak-Ettinger
MTBE	Methyl tert-butyl ether
NTU	Nephelometric Turbidity Unit
PCI/L	Picocuries per Liter
PEIR	Plan Environmental Impact Report
SLO	San Luis Obispo
SMCL	Secondary Maximum Contaminant Level
SRC	Santa Rosa Creek
SSC	San Simeon Creek
SST	Sustainable Solutions Turnkey
SWRCB	State Water Resources Control Board
SWTR	Surface Water Treatment Rule
TCR	Total Coliform Rule
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
US-LTRCD	Upper Salinas-Las Tables Resources Conservation District
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VFD	Variable Frequency Drive
WMP	Watershed Management Plan
WRF	Water Reclamation Facility
WSS	Watershed Sanitary Survey
WWTP	Wastewater Treatment Plant

Introduction

Located on the Central Coast of California, near Santa Rosa Creek in the northwest corner of San Luis Obispo County, Cambria Community Services District (District) provides drinking water, wastewater, fire protection, lighting, refuse, parks, recreation, and open space services to the community of Cambria with a population of approximately 6,000 residents. The transient population of second homeowners and tourists increases Cambria's population by roughly 35% on weekends, which equates to a 50,000-100,000 gpd increase in consumption each day. The District's service area spans approximately 3,200 acres. The District's potable water is obtained from groundwater wells located in two coastal aquifers: San Simeon Valley and Santa Rosa Valley Groundwater Basins. The District operates a D2 distribution system and a T3 treatment system.

The District's water system operates under its Domestic Water Supply Permit #04-06-14P-006 issued by the Division of Drinking Water (DDW) on August 15th, 2014. This permit requires the District to conduct a quinquennial sanitary survey of the Santa Rosa and San Simeon Creek Watersheds whenever surface water is within 150 feet of active groundwater wells. Several of the District's wells are classified as groundwater under the direct influence of surface water (GWUDI) due to their close proximity to Santa Rosa and San Simeon Creeks. The Permit includes the following language:

> *The CCSD shall conduct a sanitary survey of the Santa Rosa and San Simeon Creek Watersheds every five years if the wells are used when surface water is within 150 feet of the wells. A report of the survey shall be submitted to the Drinking Water Field Operations Branch not later than 60 days following completion of the survey. The survey and report shall include physical and hydrogeological description of the watershed, a summary of source water quality monitoring data, a description of activities and sources of contamination, a description of any significant changes that have occurred since the last survey which could affect the quality of the source water, a description of watershed control and management practices, an evaluation of the system's ability to meet requirements of the SWTR and recommendations for corrective actions.*

This report serves as an update to the 2015 Watershed Sanitary Survey. The objectives of this sanitary survey update are to:

- Provide a summary of the recommendations of previous sanitary surveys
- Provide a description of the District's water source system
- Provide a description of existing environmental conditions in the watersheds
- Identify existing and future potential sources of contamination in the watersheds
- Provide a water quality and watershed condition assessment
- Provide a description of existing watershed control and management practices
- Provide recommendations for watershed management practices to protect surface water quality within the watershed

Section 1. Summary of Past Sanitary Surveys

1.1 Initial Watershed Sanitary Survey

"Initial WSS" as used in this document refers to the *San Simeon and Santa Rosa Creeks Watershed Sanitary Survey* prepared in 1996 by North Coast Engineering, Inc. for the District. The report follows the recommendations provided by the Watershed Sanitary Survey Guidance Manual (December 1993) prepared by the California/Nevada Section of the American Water Works Association.

This Initial WSS stated that the San Simeon Creek (SSC) and Santa Rosa Creek (SRC) Watersheds exhibit distinct characteristics and land-use patterns. The SSC watershed spans approximately 20,550 acres, while the SRC watershed covers 29,876 acres. The Santa Rosa Creek Watershed is split into two sub-watersheds, the Perry Creek Sub-Watershed and the Santa Rosa Creek Sub-Watershed. This report will discuss details from both sub-watersheds under one name, the Santa Rosa Creek Watershed, unless specifically indicated otherwise. Notably, the Initial WSS discussed the District's Wastewater Treatment Plant's (WWTP) significant upgrades following regulatory orders.

The Initial WSS identified areas in the Santa Rosa Creek Watershed near Cambria vulnerable to potential contamination from urban runoff, especially in areas where oil, grease, and gasoline are present, such as transportation corridors like highways and parking lots. Agricultural activities near the creeks include pesticide and herbicide use, though impacts on water quality have not been significant based on initial surveys. Wildlife presence includes diverse species such as beavers, deer, and bears. Recreational activities primarily occur in the San Simeon Creek Watershed and are centered around campgrounds that manage wastewater through various systems. Geologic hazards such as landslides and earthquake risks are monitored, and flood protection measures are in place for critical infrastructure like wells. Overall, the watersheds are subject to ongoing management efforts to maintain water quality standards and mitigate potential sources of contamination as they continue to evolve. The Initial WSS concluded that agricultural runoff, wastewater disposal ponds, and livestock grazing were the most significant potential contaminant sources. Table 1 provides details on each watershed from San Luis Obispo County's Watershed Snapshots as a supplementary description to the Initial WSS details.

Table 1. San Simeon and Santa Rosa Creek Watershed Overview

Land Characteristics	San Simeon Creek Watershed	Santa Rosa Creek Watershed
Jurisdictions and Local Communities	County of San Luis Obispo Town of San Simeon	County of San Luis Obispo Cambria Community Services District Town of Harmony
Planning Areas	North Coast Planning Area	Adelaida, North Coast, Estero Planning Areas
Potential Growth Areas	Hearst Corporation Property North Coast Planning Area San Simeon Village Pine Resort Area	North Coast Planning Area Cambria Community Services District
Facilities Present	Cambria Community Services District Well Sites	Cambria Community Services District Wastewater Treatment Plant District Well Sites
Commercial Uses	Cambria Rock Rancho San Simeon Pit Arroyo Del Oso Pit Recreation and Tourism Agriculture	Cambria Pit Bianchi Quarry Land Red Rock Pit Tourism and Recreation Agriculture

1.2 2015 Update of Initial Watershed Sanitary Survey

An update of the Initial WSS was prepared in 2015 by Water Systems Consulting Inc. using existing reports, maps, and other documents provided by the District; as well as interviews conducted with relevant agencies and staff of the District. Material from the 2015 WSS update and the Initial WSS are referenced throughout the 2024 WSS Update. Sections such as watershed characteristics, supply system, and contaminant sources have not changed significantly since 2015.

1.2.1 Status of Initial WSS Recommendations

Initial WSS recommendations included increased water quality sampling, increased assessment of raw groundwater, and a flood mitigation measure requiring the relocation of an SS well to the SRC watershed. The 2015 WSS update reported on upgrades made by the District based on the recommendations in the Initial WSS. Below is a summary on the status of each recommendation:

1.2.1.1 Water Quality Sampling

The District collects and reports the required drinking water samples such as coliform, nitrate, sulfate, Na, etc. The District also routinely monitors treated water for constituents that are associated with raw water quality and/or treatment and distribution such as lead, copper, and disinfection by-products (DBPs). These results are reported to DDW and appear in water quality reports such as the Consumer Confidence Report (CCR).

The watersheds have joined the Central Coast Ambient Monitoring Program (CCAMP), a regional water quality monitoring and assessment program by the Central Coast Regional Water Quality Control Board. Through this program, water quality information is gathered, evaluated, and shared to support decisionmakers and the public in maintaining, restoring, and enhancing water quality in the Central Coast Region. CCAMP conducts sampling in the San Simeon Creek and Santa Rosa Creek Watersheds.

Surface water samples are not collected during low flow conditions, such as noncontinuous flow for a minimum of 100 feet, nonflowing pools disconnected by dry ground, and/or no water. The Santa Rosa and San Simeon Creeks typically have low flow conditions from July to December.

Water quality of the effluent discharged at the District's WWTP percolation ponds is also monitored.

1.2.1.1 Raw Groundwater Sampling

The District collects and reports raw water bacteriological samples from their San Simeon and Santa Rosa wells as required under the Total Coliform Rule (TCR) and submitted the required samples for bacterial analysis.

1.2.1.1 Flood Mitigation

The Initial WSS suggested relocating a San Simeon well to the Santa Rosa Watershed to reduce flood risk, due the well being within the flood 100-year flood plain. Instead of relocation, SS1 was raised 3 feet and additional levee provisions were added around the San Simeon well field to reduce flood risk. Additionally, a new well (SR4) was built in the Santa Rosa Creek Watershed.

1.2.2 2015 WSS Updated Recommendations

The following section provides recommendations from the 2015 WSS. The purpose of these recommendations is to prevent the transport of contaminants throughout the watershed surface water bodies. These recommendations are also meant to improve watershed monitoring to increase detection of potential contaminants and their sources.

1.2.2.1 Watershed Monitoring

Watershed monitoring for potential contaminants is a critical aspect of watershed management plans. Monitoring can help identify potential contaminants, sources of those contaminants, and help determine appropriate mitigation measures as contaminants are identified. Additional monitoring recommendations have been described in the Santa Rosa Creek Watershed Management Plan (WMP). This recommendation described continuous yearly sampling to assess risks to water quality and aquatic species, determine pollutant sources, and best management practices. Enhanced water quality monitoring was also recommended during the implementation of the Emergency Water Supply project.

1.2.2.2 Education

Within the Santa Rosa Creek Watershed, property owners have become proactive in protecting watershed resources by implementing best management practices. Educational programs in the watershed have included water quality monitoring snapshot days, beach and creek cleanups, installation of educational signs, as well as several other programs summarized in the Santa Rosa Creek WMP. There is an opportunity to implement additional strategies within the watersheds to help reduce point and non-point source contamination in the watershed. In addition to the District, local organizations such as Greenspace, Friends of Fiscalini Ranch Preserve, and the Cambria Forest Committee should continue their educational efforts.

1.2.2.3 Containment and Pollution Prevention

Continued watershed monitoring and educational programs are recommended to prevent chemical contamination. Increased monitoring will help identify spills and contaminants and will help better contain their spread within the watersheds/aquifers.

1.3 Status of 2015 WSS Recommendations

The 2015 WSS Update recommended that the District implement additional Watershed Monitoring programs, such as those described in the Santa Rosa Creek WMP, and similar to already existing ones like the Central Coast Ambient Monitoring Program (CCAMP). Greenspace Cambria, a local non-profit land trust has implemented techniques used by the Monterey Bay Sanctuary Citizen Watershed Monitoring Network to sample from the SRC Watershed. Additionally, the continuous CCAMP monitoring samples have consistently provided surface water quality data which are summarized for both watersheds in Section 3.2 of this report.

Another recommendation included improving and continuing educational efforts to inform the public about how to best protect their watershed resources. Local organizations such as Greenspace have continued their efforts in education with programs such as the Greenspace Nature Club, Resiliency and Watershed Education, Speaker Series', and Environmental Education in Local Schools. The Environmental Education program was originally an initiative with only Santa Lucia Middle School, but has expanded to include elementary and high school students. Greenspace is developing programs to educate these students on the local watershed ecosystems and how to best conserve these watershed environments. Another local organization, Friends of Fiscalini Ranch Preserve has also made efforts to educate the public with their nature walks and Middle School Forest Field Guide Project.

The following sections provide an update on the information presented in the Initial and 2015 WSS. This update was prepared by Confluence Engineering Solutions with materials provided by the District and other sources listed in Section 7.

Section 2. Watershed Characteristics

2.1 Water Sources and Treatment Facilities

Cambria relies solely on groundwater from their five wells for drinking water. The wells are drilled into the San Simeon Valley and Santa Rosa Valley Groundwater Basins. These basins are narrow and shallow which results in low supply during the middle and late periods of the dry season and rapid recharge during wet season rainfall periods. The District's primary wells are San Simeon wells SS1, SS2, and SS3 located in the San Simeon Valley Groundwater Basin. The SR3 and SR4 supplementary wells are located in the Santa Rosa Valley Groundwater Basin and supplement San Simeon Valley Groundwater Basin pumping during the dry season. The locations of the District's groundwater wells are shown in Figure 1.

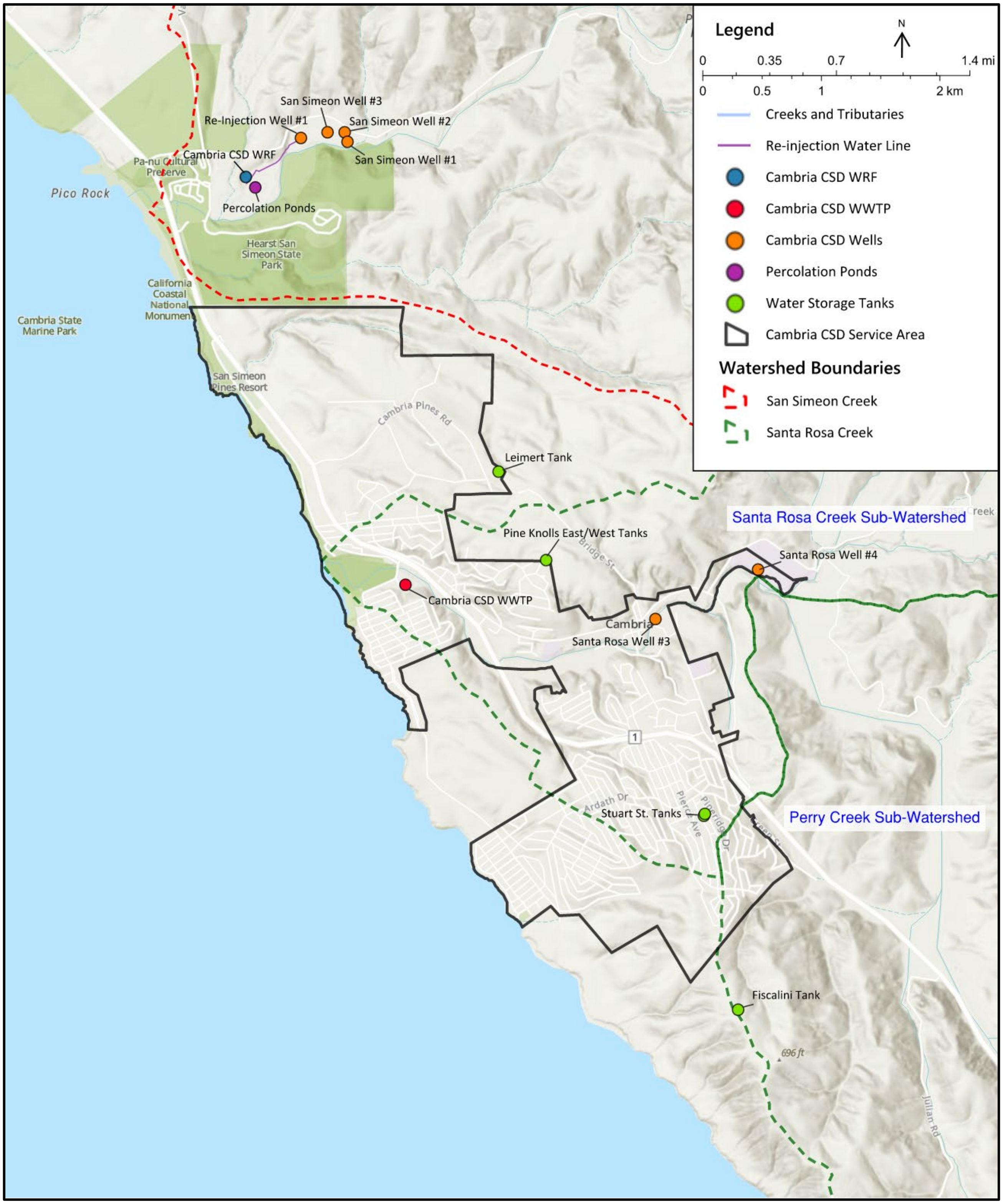

Figure 1. Map of District Water Supply System

Perry Creek flows into Santa Rosa Creek upstream from the District's facilities located in the Santa Rosa Valley Groundwater Basin. Additionally, the groundwater in the Perry Creek Sub-Watershed is part of the Santa Rosa Valley Groundwater Basin. The contaminations or hazards present in the Perry Creek Sub-Watershed could affect the District's facilities contained in the basin. The Perry Creek and Santa Rosa Creek Sub-Watersheds make up the Santa Rosa Creek Watershed and are collectively referred to as such, unless specifically indicated otherwise in this report.

The District is currently licensed to pump 799 AFY from the San Simeon Valley Groundwater Basin wells and 218 AFY from the Santa Rosa Valley Groundwater Basin wells. The District solely relies on the San Simeon Well Field during the wet season (November-April). As water levels decline in the San Simeon Valley Groundwater Basin throughout the dry season (May-October), the District relies on the Santa Rosa Valley Groundwater Basin wells, specifically SR4. The District avoids excessive pumping in the San Simeon Valley Groundwater Basin, to avoid adverse impacts, such as saltwater intrusion, which can take several concurrent wet years to restore. See well specifications below in Table 2.

Table 2. Well Specifications

Well	Basin	Year Built	Typical Operation Flow Rate (GPM)	Well Depth (ft)	Depth to Perforations (ft)	Annular Seal Depth (ft)
SS1	San Simeon Valley	1978	400	110	30-105	30
SS2	San Simeon Valley	1978	385	80	30-75	30
SS3	San Simeon Valley	1978	400	112	32	32
SR3	Santa Rosa Valley	1963	350	116	56	40
SR4	Santa Rosa Valley	2000	400	130	80	50

The wells in San Simeon Valley Groundwater Basin provide higher quality water than the Santa Rosa Valley Basin wells and are the primary water sources for the District. SS2 and SS3 are preferred over SS1 since they are greater than 150 feet away from San Simeon Creek and not subject to the SWTR monitoring requirements. SS1 is periodically within 150 feet of the creek depending on flow in the creek and is therefore not operated during the high flow periods. Additional filtering would allow the District to operate SS1 when creek flow is within 150 feet of the well and remain in compliance with the SWTR. San Simeon Valley Groundwater Basin wells are chlorinated at a common location near SS3.

There are two active wells that the District operates for drinking water in the Santa Rosa Valley Groundwater Basin: SR3 and SR4. In 2000, wells SR1 and SR3 were temporarily put into standby due to the discovery of a Methyl tert-butyl ether (MTBE) contamination plume. The District reallocated resources to an emergency well project to build SR4, due to their inability to operate wells SR1 and SR3 due to the presence of MTBE contamination from leaking underground fuel tank(s). Construction on Well SR4 was completed by the District in 2001 and is located up gradient from the MTBE plume. The MTBE plume had subsequently undergone remediation and at the time of the latest Domestic Water Supply Permit application to DDW (2014), the plume was deemed stable by the District. The cleanup case was subsequently closed by the SWRCB in 2018. Following exceptional drought conditions and emergency water shortage in 2014, the District restored operation of SR3 and converted SR1 to a standby well. The restoration of SR3 allowed the District to access deeper aquifer water that could not be pumped by SR4. This restoration also included the instillation of a new submersible well pump and rebuilding an iron and manganese removal filter plant, which had been inoperable since 2000.

Treatment facilities located at SR3 and SR4 provide iron and manganese removal, filtration, and disinfection. The facility at SR3 includes a Filtronics process with a capacity of 600 gpm. Coagulant and chlorine contact time requirements are met during this treatment process. SR4 has a Pureflow treatment system sized to treat 600 gpm. The SR4 treatment facility consists of ferric chloride addition, inline mixing, pressure filtration, and chlorine contact piping. The SR4 treatment facility has been improved with a SCADA upgrade, which gives real-time alerts and notifications when processing parameters are nearing non-compliance levels. The District can also alter disinfection dosage and start up or shut down the SR4 facility remotely.

2.2 Wastewater and Recycled Water Treatment Facilities

The District owns and operates their own wastewater treatment plant (WWTP) and disposes of treated WWTP effluent through evaporation/percolation ponds. Biosolids from the WWTP are dewatered and hauled off to a disposal site located in Kern County. The WWTP is currently undergoing upgrades that are described in greater detail in Section 5.3.

The District owns an Indirect Potable Reuse (IPR) water recycling facility, called the Water Reclamation Facility (WRF), formerly known as the Advanced Water Treatment Plant (AWTP). The WRF : source water is pumped from Well 9P7 and is a blend of native basin groundwater (San Simeon Creek underflow), deep aquifer brackish water (diluted seawater that occurs from the subterranean dispersion of salts from a deeper saltwater wedge into an overlying freshwater interface zone) and percolated secondary effluent from the CCSD’s wastewater treatment plant (WWTP). Effluent from WWTP is discharged onto percolation ponds, where it enters the shallow aquifer. The WRF treats the source water from 9P7using Membrane Filtration (MF), Reverse Osmosis (RO), and Ultraviolet/Advanced Oxidation (UV/AOP) processes to treat wastewater for re-injection into the San Simeon Valley Groundwater Basin at a different location. The treatment process begins with MF, which removes fine particles from the source water. Next, RO removes salt and other complex organic matter. The water then undergoes an advanced oxidation process where UV light and hydrogen peroxide are used to remove trace organic compounds that are not fully removed by the RO membranes. Finally, post-treatment stabilizes the water to prevent corrosion of the conveyance pipeline and pumping equipment. The WRF is located downgradient of the San Simeon Well Field and extracts from and injects into the San Simeon Valley Groundwater Basin. During WRF operation, the District is required to monitor raw water coliforms weekly at Extraction Well 9P7, which provides the source water for the WRF. Well 9P7 is used to extract water below the percolation ponds and deliver to the WRF when in operation. The water extracted through 9P7 is a blend of native basin groundwater (San Simeon Creek underflow), deep aquifer brackish water (diluted seawater that occurs from the subterranean dispersion of salts from a deeper saltwater wedge into an overlying freshwater interface zone) and percolated secondary effluent from the CCSD’s wastewater treatment plant (WWTP). The locations of the WWTP, WRF, and the evaporation/percolation disposal ponds are shown in Figure 1. An overhead view of the WRF facilities is shown in Figure 2.

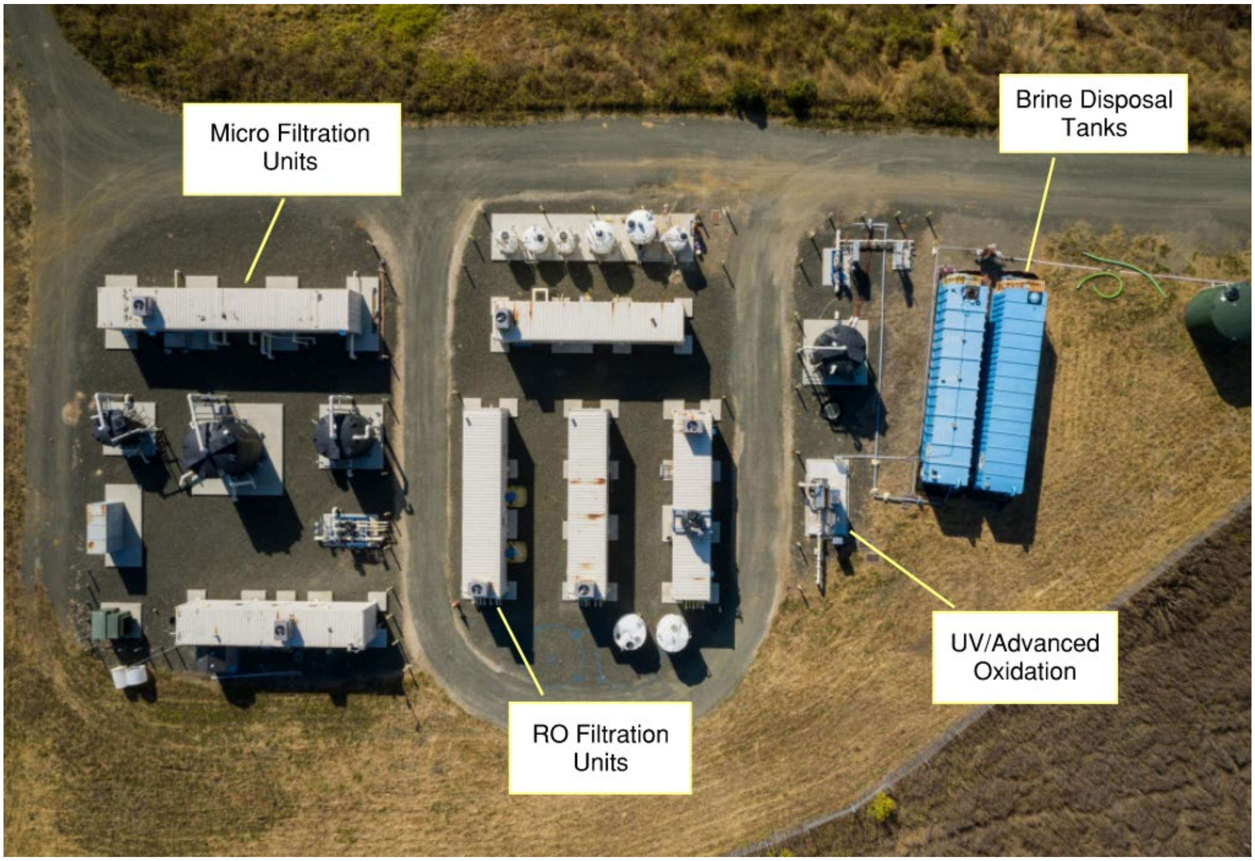

Figure 2. WRF Facilities Overhead

The District installed the WRF in 2015 under an emergency permit. Under the District's current WRF permit, the facility can only be operated under emergency conditions to recharge the San Simeon Valley Groundwater Basin. Since emergency status had been lifted at the time of the WRF's completion, the District has not yet run the facility for long periods of time and lacks operational data. The District is currently in the process of obtaining the necessary permits to allow the use of the WRF for regular operations outside of emergency conditions. These permits would allow the WRF to operate on a 24/7 basis for up to 6 months per year. This would allow the District to produce around 700,000 gpd of advanced purified recycled water for re-injection into the San Simeon Valley Groundwater Basin. The injected water would then travel through the basin for at least 60 days prior to reaching SS1 and SS2 for extraction, as required by the DDW regulations for IPR. Additionally, around 144,000 gpd of treated and de-chlorinated advanced purified recycled water would be discharged into San Simeon Creek to maintain and enhance water quality in the San Simeon Creek Lagoon during the dry season. In total, the WRF is capable of producing up to 844,000 gpd of product water of varying quality and 155,000 gpd of wastewater in the form of reverse osmosis concentrate and membrane filtrate backwash under regular operating conditions.

2.3 Land Use and Population

2.3.1 Land Use

Land use in both the Santa Rosa and San Simeon Creek Watersheds has not changed significantly since the last WSS Update. In the SSC watershed, most of the land use is for agricultural purposes including grazing and farmland. Urban land has not increased since the last survey and is not anticipated to increase significantly in the near future. In the Santa Rosa Creek and Perry Creek Sub-Watersheds (collectively the SRC watershed), agriculture is also the largest land use. Agricultural practices in the SRC Watershed range from cattle ranching to crop cultivation, consisting primarily of permanent crops (Valencia oranges, apples, avocados, grapes), rotational crops (squash, tomatoes, sugar peas, Brussel sprouts, cabbage, fava beans), and field crops (grains for hay, oat hay). There is a slightly higher percentage of urban and built-up residential land in the SRC Watershed as a large part of the community of Cambria is located in the watershed.

The quantity of each land use type in the San Simeon Creek Watershed, and the Santa Rosa Creek and Perry Creek Sub-Watersheds are summarized in Table 3 and Table 4. The data was gathered from the San Luis Obispo (SLO) County Open Data Portal, Official Land Use Category Designations, last updated on April 12th, 2024. The existing land uses are shown in Figure 3 and Figure 4.

Table 3. San Simeon Creek Watershed Land Use

Land Use Category	Acres	Percent of Watershed
Agriculture (Grazing and Farmland)	19,099	92.94%
Recreation	438	2.13%
Rural Lands	1,012	4.93%
Total	**20,550**	100%

Table 4. Santa Rosa Creek Watershed Land Use

Santa Rosa Creek Sub-Watershed Land Use		
Land Use Category	**Acres**	**Percent of Watershed**
Agriculture	13,114	84.50%
Commercial	109	0.71%
Public Facilities	108	0.70%
Residential: Low Density	40	0.26%
Residential: Multi-Family	81	0.52%
Residential: Single Family	627	4.04%
Rural Lands	1,195	7.70%
Recreation	66	0.42%
Open Space	180	1.16%
Total	**15,521**	100%

Perry Creek Sub-Watershed Land Use		
Land Use Category	**Acres**	**Percent of Watershed**
Agriculture	14,226	99.10%
Commercial	3	0.02%
Public Facilities	8	0.06%
Residential: Multi-Family	4	0.03%
Residential: Single Family	84	0.59%
Recreation	30	0.21%
Total	**14,355**	100%

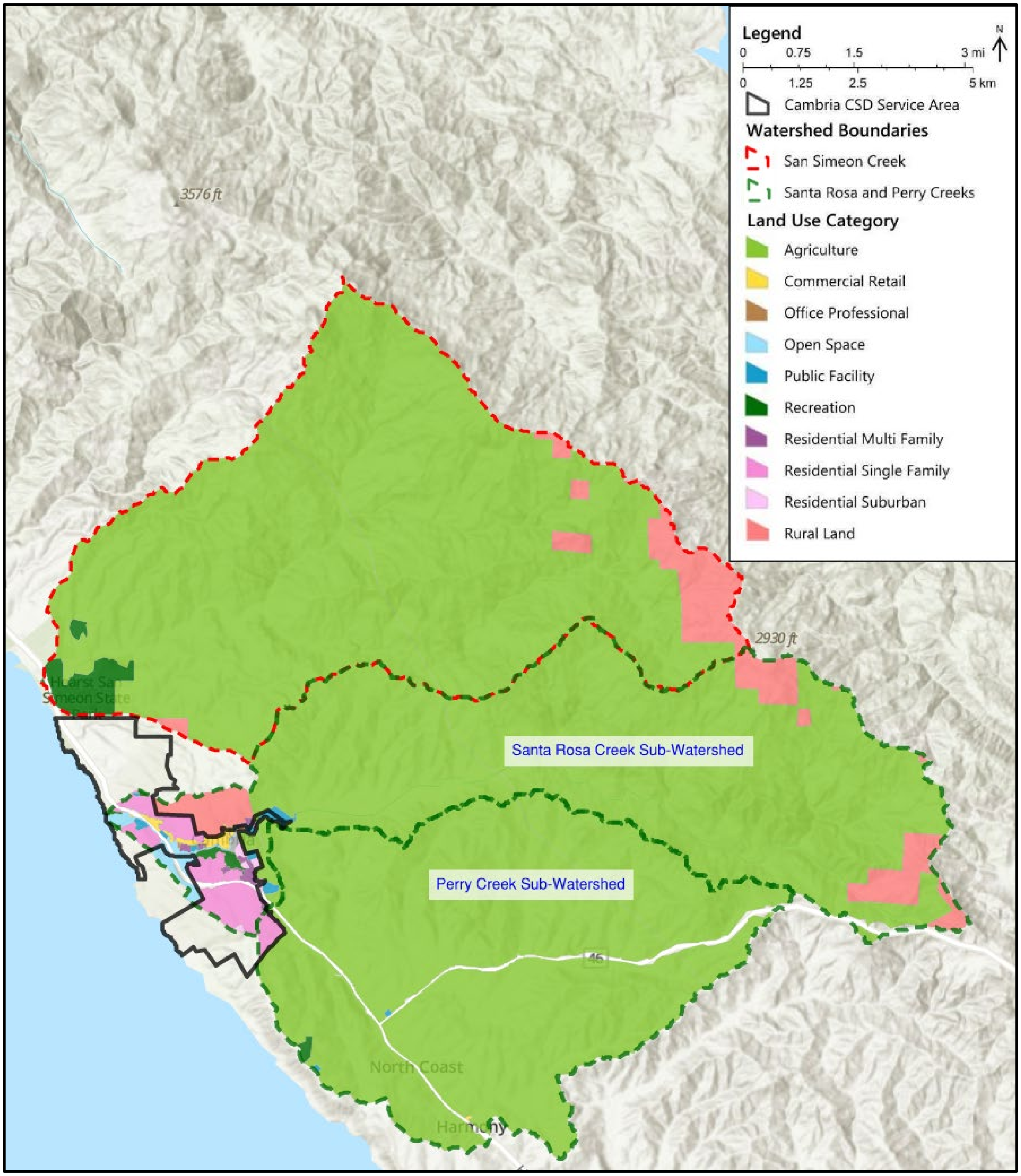

Figure 3. Watershed Boundaries and Land Use

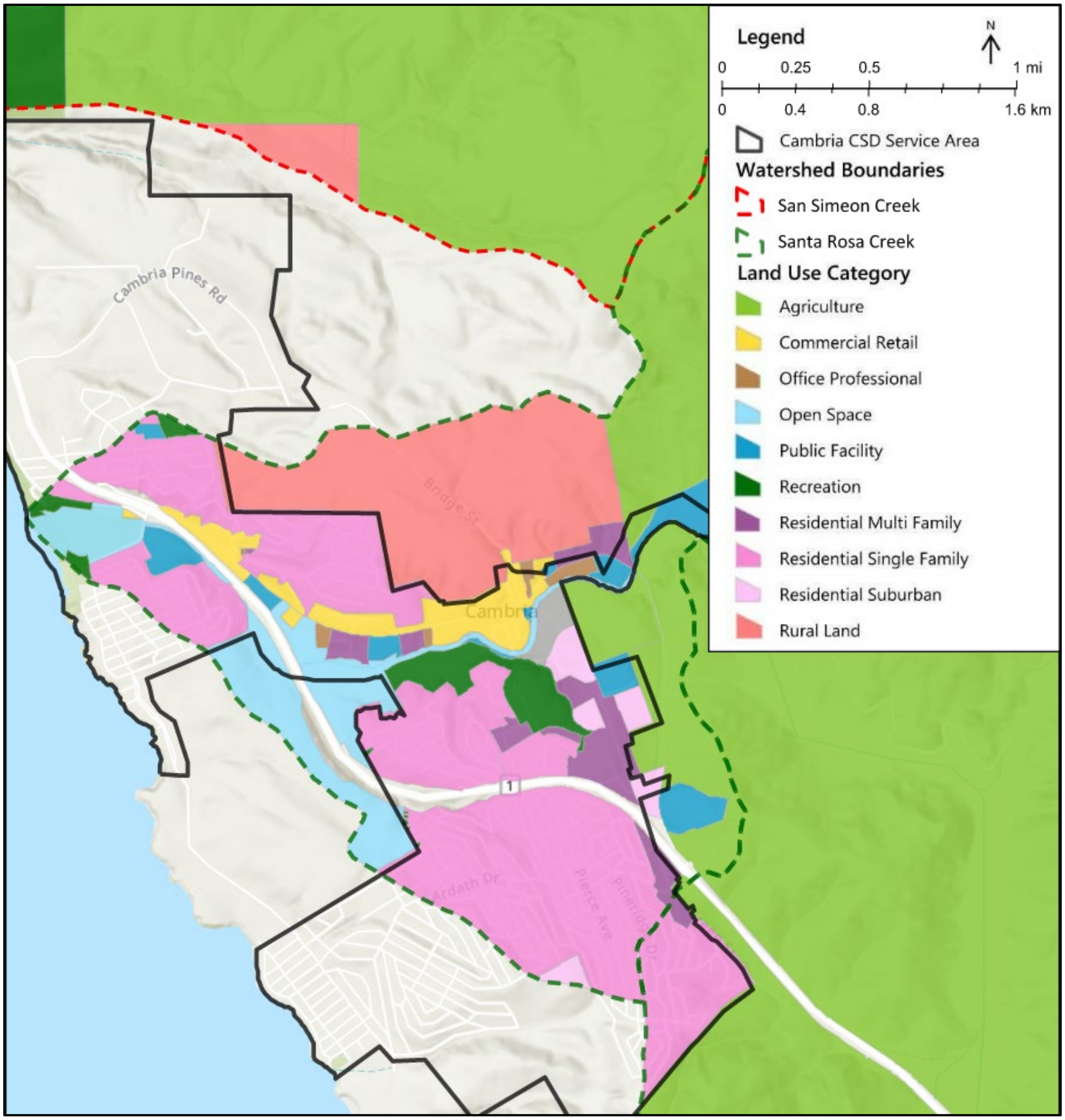

Figure 4. Watershed Boundaries and Land Use Cambria Detail

2.3.2 Anticipated Growth

The District has had a water connection moratorium in place since November of 2001 due to concerns over long-term reliability of its water supply and a need to increase water storage for fire suppression. To address these issues, the District conducted comprehensive water master planning studies, culminating in the certification of a program-level water master plan Environmental Impact Report (PEIR) by the District's Board of Directors in August 2008. The PEIR recommends a build-out of 4,650 existing and future residences. This will allow the 665 single family, 7 multifamily, and 10 commercial lot owners on the existing water connection wait list to proceed with connection, over a period of 22 years, once the moratorium is lifted. There is potential for additional connections beyond the lot owners on this wait list. The moratorium may be lifted as soon as 2026, which would allow for a projected population growth rate of approximately 1% per year for single family residences until a maximum of 4,650 residential units is reached from 2026 to 2043. The current population of the District, according the 2020 U.S. Census, is 5,678 people. Past, present, and future population data/projections from the U.S. Census and the Cambria 2020 Urban Water Management Plan (UWMP) is shown in Table 5. The projected population is an estimate based on the average growth rate projections presented in the 2020 UWMP.

Table 5. CCSD Historical and Projected Population

Year	CCSD Population
1990	5,382
2010	6,032
2020	5,678
2025	6,000
2030	6,300
2035	6,500
2040	6,800

A population breakdown for the San Simeon Creek and Santa Rosa Creek watersheds is summarized in Table 6. Neither watershed has experienced significant growth since the previous US Census Blocks in 2010 due to the moratorium. However, upon the lifting of the moratorium, the watershed populations are expected to grow at a similar rate to the unincorporated community of Cambria, around 1% per year as estimated in the 2020 UWMP.

Table 6. SSC and SRC Watersheds Population Breakdown

Watershed	CCSD Population
San Simeon-Arroyo de le Cruz	990
Santa Rosa Creek	5,900
Note: 1. Population estimated using US-LTRCD Watershed Snapshots.	

2.4 Geological and Ecological Watershed Characteristics

The San Simeon Valley and Santa Rosa Valley Groundwater Basins are located on the western slope of the Santa Lucia Mountain range and are predominantly composed of greywacke and metavolcanic rocks from the Franciscan formation. Cypress Mountain is the highest point in the Santa Rosa Creek Watershed and reaches a maximum elevation of 2,933 feet above sea level. Rocky Butte is the highest point in the San Simeon Watershed and peaks at 3,432 feet above sea level. The watershed area features mainly hilly terrain, with lower-lying regions along the coastline.

Soils along the coast of the San Simeon Creek Watershed are moderate to well-drained, fine to moderately course textured, and have moderate permeability in the stream channels. Sandy soils and sandy loam soils are found along the coast, with loam-textured soils in the middle region and gravel clay loams in the hills. The vegetation primarily consists of coastal oak woodland, with non-native annual grassland, chaparral, scrub oak, and serpentine Manzanita also present. The Arroyo de Los Chinos Creek, Arroyo de la Cruz Creek, Pico Creek, Steiner Creek, and San Simeon Creek provide habitat for Central California Coast Steelhead.

Cambria is located downstream of the confluence of Perry Creek and Santa Rosa Creeks. The geology is composed of hard greywacke sandstone and sheared argillite. There are steep hill slopes, shallow spoils, and sparse shrub vegetation along Santa Rosa Creek. The vegetation cover includes non-native grassland, coast live oak woodland, Montane hardwood, Monterey Pine, and closed-cone Pine Cypress. Upper and Lower Santa Rosa Creek and Lower Perry Creek contain habitat for Steelhead populations. A map of the watershed boundaries and surface water features is provided in Figure 5.

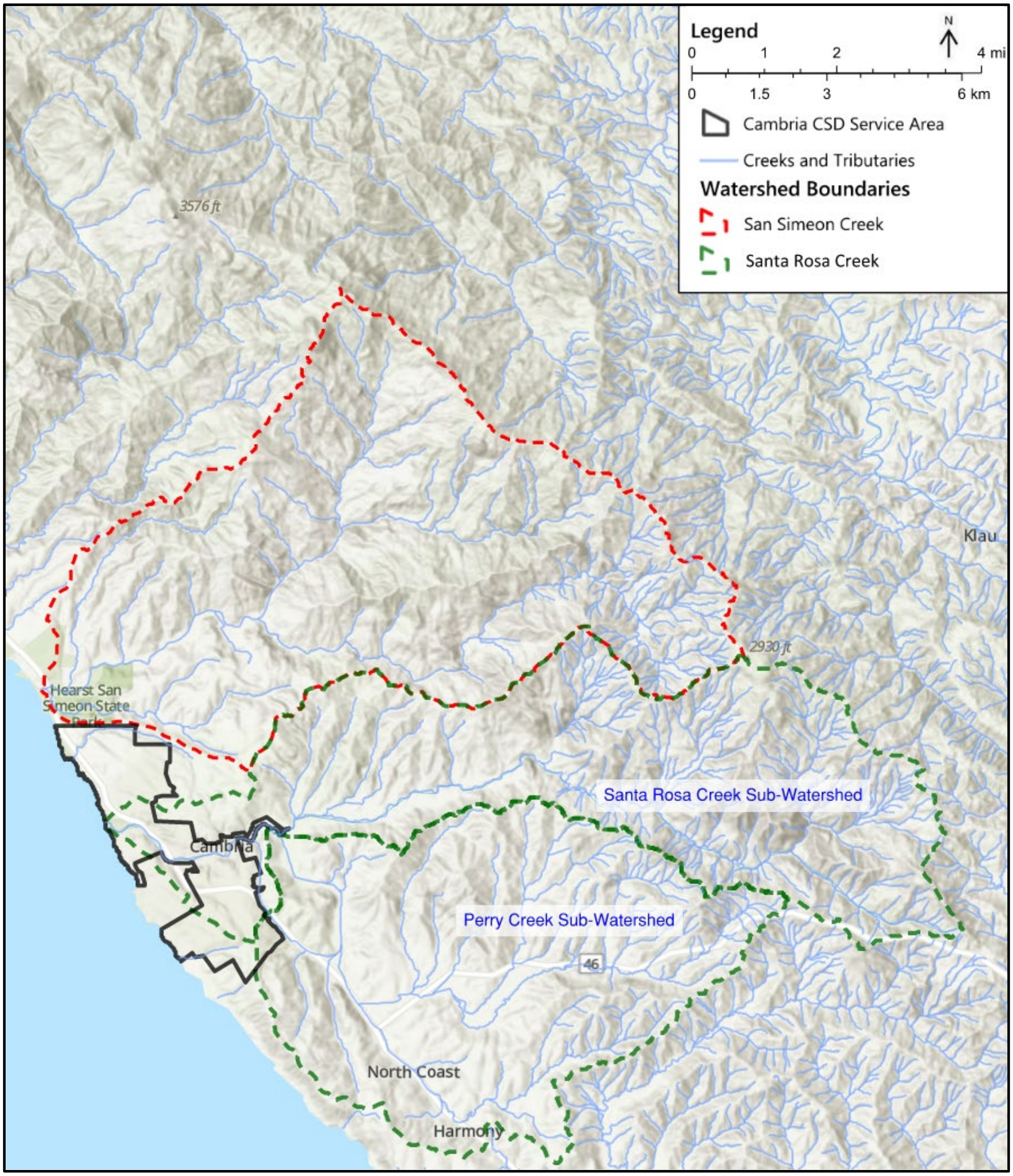

Figure 5. Watershed Boundaries and Surface Water Features

2.5 Precipitation Data

Over the past nine years, since the 2015 WSS, Cambria has received an annual rainfall of 21.27 inches, measured at the Santa Rosa Creek weather station on Main Street on the town's eastern side. This data is representative of typical rainfall totals in the lower elevations in the western portion of the Santa Rosa Creek Watershed and is summarized in Table 7 and Figure 6.

Table 7. Monthly Precipitation Data, Santa Rosa Creek (#717)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015	0.16	1.46	0.31	1.26	0	0.05	1.38	0	0	0.16	1.26	1.65	7.69
2016	6.77	0.32	5.27	0.24	0	0	0	0	0	2.09	2.36	5.28	22.33
2017	11.58	9.77	1.97	1.73	0.16	0	0	0	0.08	0.2	1.02	0.04	26.55
2018	3.16	0.12	9.41	0.67	0.04	0	0	0	0	0.2	3.11	1.61	18.32
2019	7.76	6.57	4.77	0.12	2.08	0	0	0	0	0	3.2	5.92	30.42
2020	0.96	0.04	2.95	2.34	0.44	0	0	0.12	0	0	0.59	1.3	8.74
2021	12.13	0.28	1.42	0	0.04	0	0	0	0	2.12	0.48	9.6	26.07
2022	0.12	0.04	1.84	0.68	0	0	0	0	1.12	0	1.55	10.01	15.36
2023	10.94	3.89	12.59	0.03	0.65	0.02	0.01	0.11	0.15	0.03	2.53	5	35.95
Monthly Averages	5.95	2.50	4.50	0.79	0.38	0.01	0.15	0.03	0.15	0.53	1.79	4.49	21.27

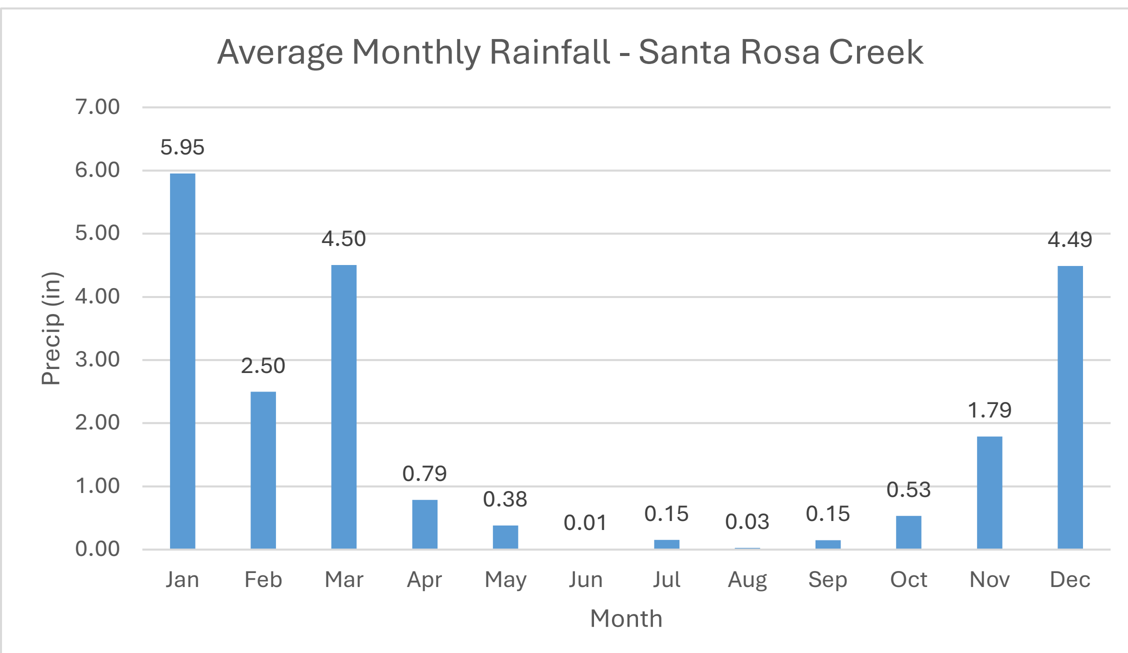

Figure 6. Average Monthly Precipitation Chart, Santa Rosa Creek (#717)

Similarly, Table 8 shows the monthly rainfall data for the San Simeon Creek station, located at a low elevation in the western portion of the San Simeon Creek Watershed.

Table 8. Monthly Precipitation Data, San Simeon Creek (#764)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015	0.12	1.46	0.2	1.02	0.04	0	0.63	0	0	0	0.98	1.44	5.89
2016	6.46	0.47	4.96	0.24	0	0	0	0	0	1.65	2.21	4.64	20.63
2017	13.28	8.67	1.73	2.05	0.16	0	0	0	0.08	0.16	0.67	0.04	26.84
2018	2.44	0.16	7.6	0.63	0.04	0	0	0	0	0.16	2.52	1.3	14.85
2019	6.22	4.72	3.72	0.12	1.54	0	0	0	0	0	1.69	5.94	23.95
2020	0.98	0	3.66	1.93	0.67	0	0	0.08	0	0	0.35	1.14	8.81
2021	10.31	0.24	1.26	0	0.08	0	0.04	0	0.35	1.72	0.56	8.24	22.8
2022	0	0.04	1.68	0.56	0	0	0	0	1.56	0	1.93	8.15	13.92
2023	8.6	2.67	11.7	0.05	0.51	0.04	0.02	0.11	0.17	0.03	2.72	3.95	30.57
Monthly Averages	5.38	2.05	4.06	0.73	0.34	0.00	0.08	0.02	0.24	0.41	1.51	3.87	18.70

Significantly more rainfall occurs in the higher peaks of the easternmost part of the Santa Rosa and San Simeon Creek Watersheds. This is due to the watersheds' location on the upslope and windward side of the Santa Lucia Mountain range. As moisture gets drawn off the Pacific Ocean, the increase in elevation causes an effect known as orographic lift which is where the clouds cool and compress allowing more moisture to fall. The Rocky Butte weather station is in the northeast corner of the San Simeon Creek Watershed and consistently receives some of the highest rainfall in San Luis Obispo County. The monthly precipitation data shown in Table 9 and Figure 7 is collected at Rocky Butte and is representative of the rainfall totals seen in the higher peaks of both the San Simeon and Santa Rosa Creek Watersheds.

Table 9. Monthly Precipitation Data, Rocky Butte (#703)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015	0.24	6.97	0.12	1.65	0.12	0	1.54	0.03	0	0.12	2.01	3.19	15.99
2016	10.47	1.34	9.02	0.67	0.07	0	0	0	0	4.26	3.34	8.51	37.68
2017	33.92	23.6	5.32	7.96	0.2	0	0	0	0.04	0.24	1.07	0.07	72.42
2018	4.57	0.28	21.91	0.35	0.08	0	0	0	0	0.63	5.98	2.72	36.52
2019	15.83	13.7	10.04	0.16	3.27	0	0	0	0	0	2.87	12.36	58.23
2020	1.06	0	5.55	4.61	1.3	0.35	0	0	0.08	0	1.02	1.65	15.62
2021	15.16	0.16	1.77	0	0	0	0	0.12	0.04	5.84	1.36	19.4	43.85
2022	0.08	0	2.44	1.2	0	0	0	0	3.28	0	4.16	27.24	38.4
2023	27.4	8	27.64	0	0.44			0.56	0.44	0.16	5.16	21.28	91.08
Monthly Averages	12.08	6.01	9.31	1.84	0.61	0.04	0.19	0.08	0.43	1.25	3.00	10.71	45.56

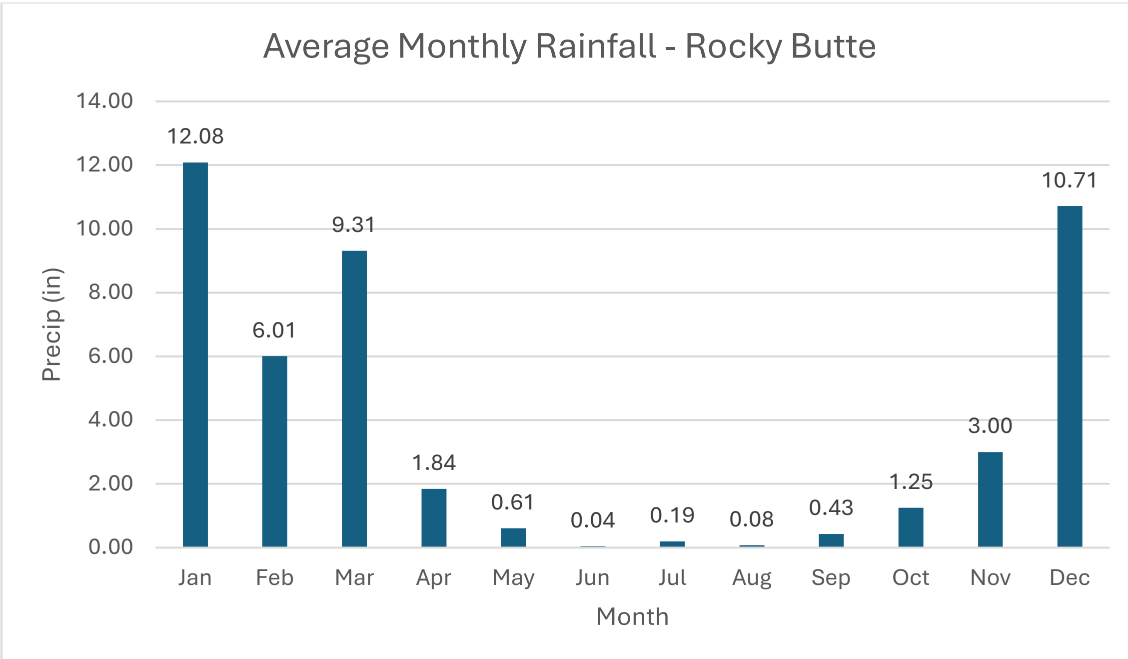

Figure 7. Average Monthly Precipitation Chart, Rocky Butte (#703)

In both watersheds, most of the rainfall occurs in the wet season (November through April) while the dry season (May through October), and especially the summer months, see little to no precipitation each year. The driest annual rainfall since the 2015 WSS update was 2015 with only 5.89 inches of rainfall measured at the San Simeon station and the wettest year was 2023 with 91.08 inches measured at Rocky Butte.

2.6 Potential Contaminant Sources

2.6.1 Wastewater Treatment

The District's WWTP is located in Cambria approximately two miles south of the San Simeon Creek and adjacent to the Santa Rosa Creek. The treatment plant includes three concrete lined effluent storage reservoirs. In 1988, effluent pumped to the disposal fields flowed, without treatment, into Van Gordon Creek. Consequently, the Central Coast Regional Water Quality Control Board (CCRWQCB) issued a Clean-Up/Abatement Order requiring the District to upgrade the capacity of the disposal fields for future flows. Major improvements to the effluent disposal area were made by 1995. The effluent disposal field includes four percolation ponds, each about six feet deep on approximately 20 acres, and are protected by an earthen berm along the perimeter. Sludge generated by the WWTP is aerobically digested, decanted, and then dewatered. The processed sludge is then hauled off to a disposal site located in Kern County. The disposal site is not located in or contributing contaminants to the San Simeon or Santa Rosa Creek Watersheds.

The Water Reclamation Facility (WRF) is supplied with percolated effluent from the WWTP and uses Membrane Filtration, Reverse Osmosis (RO), and Ultraviolet/Advanced Oxidation (UV/AOP) processes to treat wastewater for re-injection it into the San Simeon Valley Groundwater Basin. All chemical cleaning waste, reverse osmosis concentrates, and analytical waste flows are held in storage tanks and subsequently shipped off in tanker trucks to a properly licensed facility. Previously, the concentrate was to be disposed of in the Van Gordon Evaporation Pond, however, during a flood in 2017, storm water drained across San Simeon Creek Road and into the evaporation pond. This resulted in a Cease-and-Desist order for operation of the evaporation pond from the CCRWQCB and the current plan for disposal of concentrate is to truck it offsite and outside of the San Simeon and Santa Rosa Creek Watersheds.

No sewers or sewage disposal facilities are located within 50 and 100 feet respectively from all drinking water well sites.

2.6.2 Urban Runoff

Another potential source of contamination is urban runoff entering the San Simeon or Santa Rosa Creek Watersheds. Urban runoff from residential areas and transportation corridors (highways, parking lots, and gasoline stations) can carry oil, grease, gasoline, or automobile coolant into the surface features and/or groundwater basins. Urban areas only account for less than 1% of the Santa Rosa Creek Watershed, and even less in the San Simeon Creek Watershed, and therefor the risk of contamination due to urban runoff is limited.

The California Department of Transportation (Caltrans) uses herbicide products to limit plant and weed growth along highways. Two sections of Caltrans maintained highways are in the Santa Rosa and San Simeon creek Watersheds, Highway 46 (postmiles 0-12) and Highway 1 (postmiles 45-59). Caltrans sprays herbicides along these sections of highway to kill broadleaf weeds in cracks and around hardware such as signs, guardrails, and delineators on the shoulders of the road. Caltrans also sprayed fire strips and cut stumps in areas around Cambria. For most of the roadside applications, they used a truck to spray chemicals along the shoulder where needed, spot spraying was also used for smaller more precise applications. Table 10 shows the available data, since 2020, from Caltrans on herbicide applications in the areas located in the SSC and SRC Watersheds.

Table 10. Highway Herbicide Application

Year	Highway 46 (PM 0-12)		Highway 1 (PM 45-59)	
	Commercial Chemical Name	Application Rate (ounces/acre)	Commercial Chemical Name	Application Rate (ounces/acre)
2020	Telar XP Herbicide	2	Telar XP Herbicide	2
	Milestone Dow	7	Milestone Dow	6.93
	Pro-spreader	6.43	Pro-spreader	6.65
	Reign	32	Reign	32
	Esplanade	6.17	Esplanade	6.5
	Round-up pro	80	Round-up pro	80
	Cleantraxx	64	Cleantraxx	64
2021	Crosshair	8	-	-
	Hasten-EA	4	Smoke	64
	Round-up pro	80	Round-up pro	102
2022	Milestone Dow	7	Milestone Dow	7
	Crosshair	4	Crosshair	4
	Hasten-EA	10.72	Hasten-EA	4
	Esplanade	5.11	Esplanade	6.38
	Round-up pro	80	Round-up pro	86.32
	Cleantraxx	64	Cleantraxx	64
2023	Milestone Dow	6.61	Milestone Dow	8
	Crosshair	3.79	Crosshair	5.32
	Hasten-EA	6.08	Hasten-EA	5.26
	Esplanade	4.95	Esplanade	17.5
	Round-up pro	61.57	Round-up pro	87.33
	Cleantraxx	63.66	Cleantraxx	64
	Telar XP Herbicide	2.07	Esplanade Sure	15

There are also unregulated uses of herbicides that can contaminate the watershed through leaks or spills. Educational programs have been in effect since the Initial WSS to reduce the quantity of unregulated use of these herbicides.

2.6.3 Chemical Spills

The SWRCB geographic environmental database GeoTracker was used to identify sites of hazardous material spills or cleanup activities which occurred since the Initial WSS. Significant spills and cleanup activities are summarized in Table 11. All significant spills have undergone remediation and thorough testing to ensure the groundwater in the surrounding area has not been impacted. The most recent active cleanup was from the MTBE plume in 2000. After the completion of multiple rounds of tests and remediations over multiple years, the MTBE plume case closed in February of 2018.

Table 11. History of Spills in the Watersheds

Site Location	Report Date	Substances Released	Remedial Action	Cleanup Status
Chevron S/S #9-2565 (former)	10/26/1988	Diesel, Gasoline	Excavation, In Situ Biological Treatment, In Situ Physical/Chemical Treatment	Case Closed as of 5/2/2014
Cambria General Store	8/14/1990	MTBE/TBA/Other Fuel Oxygenates, Gasoline	Excavation, In Situ Physical/Chemical Treatment	Case Closed as of 12/29/2014
Cambria Air Force Station	11/25/1990	Diesel	n/a	Case Closed as of 2/23/1993
Hampton Hotel	8/1/1991	Gasoline	In Situ Physical/Chemical Treatment	Case Closed as of 11/9/2012
Chevron Station #9-0919[1]	6/1/1993	MTBE/TBA/ Other Fuel Oxygenates, Gasoline	Excavation, Pump & Treat, In Situ Physical/Chemical Treatment	Case Closed as of 2/15/2018
Former Miller Property	5/12/1998	Gasoline	In Situ Physical/Chemical Treatment	Case Closed as of 11/26/2012
Ski's Marketplace	10/11/2001	Benzene, MTBE/TBA/Other Fuel Oxygenates, Gasoline	Excavation, Monitored Natural Attenuation	Case Closed as of 6/14/2011

Notes:

1. **MTBE plume from 1993 impacted wells SR1 and SR3 prompting construction of SR4 in 2000.**

2.6.4 Wildlife and Grazing Animals

The presence of grazing animals and wildlife in the watershed raises concern for water-borne pathogens such as *Giardia* or *Cryptosporidium*. Most of the wildlife in the watersheds include beavers, deer, bear, coyotes, muskrats, and other rodents. Unusual animal species were identified in the Pico Creek Watershed, which includes a portion of the Hearst Ranch, bordering the San Simeon Creek Watershed on the northwest. Unusual species include Himalayan Tahr, Barberry Sheep, Zebra, Sambar Deer, Wild Pigs, and Rocky Mountain Elk.

There have not been observed physical or reported indications that the watershed areas exhibited unusual characteristics regarding livestock grazing. Crop cultivation provides separation between the livestock and the streams. However, pathogen contamination could still exist due to roaming livestock, and proximity of tourist and recreational open space activities which may become inundated.

2.6.5 Recreational Activities

Recreational activities have been labeled as a potential source of contaminants in past surveys. There are two campgrounds in the San Simeon Creek Watershed, located in San Simeon State Park and operated by California State Parks. The campgrounds have a combined 205 campsites for both tent camping and recreational vehicles. The wastewater from the San Simeon Creek Campground is pumped to the District's WWTP through force mains via three lift stations. The wastewater from the Washburn Campground is pumped, transported out by pumping trucks, and hauled to the Santa Maria Wastewater Treatment plant for processing. Recreational activities in the Santa Rosa Creek Watershed include tourist commercial services and recreational hiking in open public spaces.

2.6.6 Geologic Hazards

Two geologic hazards that could potentially contaminate Cambria's water sources are landslides and earthquakes. These hazards could negatively impact the watershed through large sediment deposits and increased turbidity in the source water. The United States Geological Survey (USGS) considers Cambria to have high landslide potential, especially in the rainy winter months when saturated water can inhibit mass movement. The USGS has noted two minor landslides occurring in and around Cambria. The most recent event was in 2017, when heavy rainfall between January 3rd and 9th spurred a mudslide near Main St., trapping vehicles and felling some trees. Landslides like this one have contributed sediment to the watershed creeks but no adverse water quality impacts have been recorded as a result. Earthquake hazard in the region is significant, with the Cambria and Cayucos faults being located near the watersheds. However, no significant adverse water quality impacts have been detected as a result of historic earthquakes.

San Simeon Creek field is a designated special flood hazard area, and the three District SSC wells are within the 100-year flood zone. Damage to the SSC and SRC wells occurred during flooding in March 1995, requiring the wells to be flood protected. The SSC wells were raised in 1996 to provide the required flood protection. The District also looked into options for relocating the wells out of the flood plain in the SRC Watershed.

2.6.7 Fires and Fire Hazards

Fires can expose and contaminate the water supply with suspended solids and organic matter. Firefighting materials, such as fire-retardant chemicals, can also contribute to contamination of source water. The California Department of Forestry and Fire Protection (CAL FIRE) identified in the unincorporated community ofCambria and the surrounding watersheds as a high to very high fire hazard severity zone. In recent years, the high percentage of dead or dying native pines in the Cambria forests pose a severe threat to the watershed. In addition to threatening homes and rural lands, fires within the watershed are considered a potential source of suspended solids and organic matter and could increase runoff and sedimentation of the creeks.

Using the fire history information available through the CAL FIRE geodatabase, three fires were identified in the Santa Rosa Creek and San Simeon Creek Watersheds since the 2015 WSS update. The Rosa Fire in 2022 burned 16.2 acres about a half mile north of Santa Rosa Creek Rd, approximately 4 miles east from Cambria. Three fires occurred in the Santa Rosa Creek Watershed in 2023: the Green Fire and two other small grass fires. The Green Fire burned 247 acres about 3 miles east of Highway 1 near Green Valley Rd (Hwy 46). The impacted area was in between two tributaries of Santa Rosa Creek, the Green Valley Creek and Perry Creek. The smaller grass fires occurred along Green Valley Road and near Harmony Ranch Road, later in 2023, burning 9.5 acres and 4.5 acres. While fires such as these have not shown to have a significant impact on the watershed, the risk remains prominent to the water quality of the area should a large-scale fire emergency occur. Figure 8 shows historical burn areas from fires as marked by the CAL FIRE geodatabase.

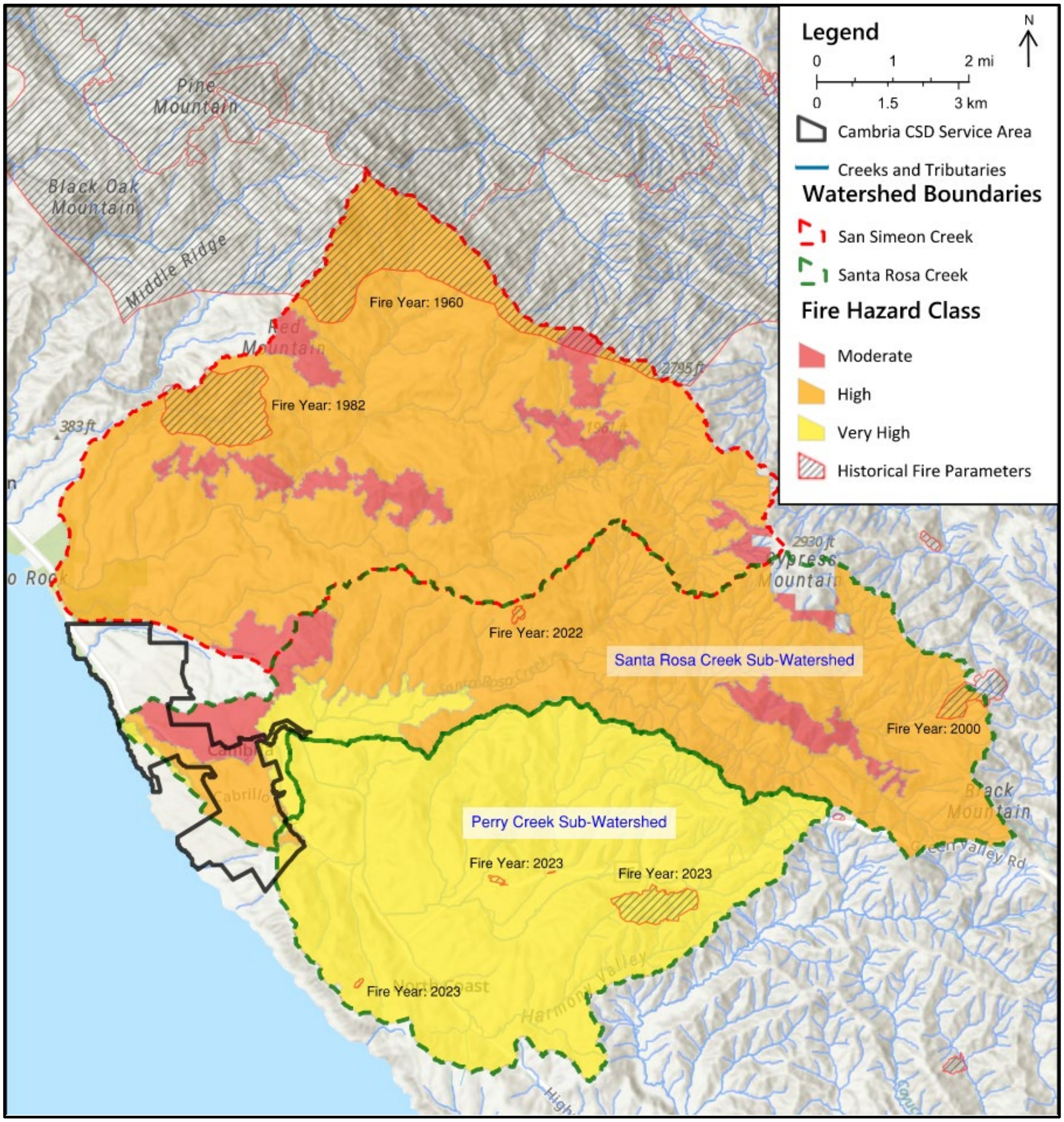

Figure 8. Watershed Fire Hazard and History

2.6.8 Mines

Mercury, used partly to amalgamate gold ore, was mined from the Little Bonanza deposit in San Luis Obispo County, as early as 1862. The Oceanic Mine located in the Santa Rosa Creek Watershed, near the Curtis Creek tributary, produced nearly as much mercury as all other mines in San Luis Obispo County combined. During a study of inactive mercury mines in SLO County, the CCRWQCB documented iron-rich, red seepage from the mine, which reportedly pollutes and discolors Curtis Creek for most of the downstream distance to Santa Rosa Creek, and the erosion of mercury-rich waste rock by Curtis Creek. The study determined that SCR was one of the most heavily impacted of the 49 studied watersheds affected by mining due to the former mill site. Studies have been implemented in the areas in and around the SRC and SSC Watersheds to identify all inactive mines, attribute specific water quality problems to the mines, and determine the best methods to abate contaminant sources. These studies are funded partially by the Clean Water Act Water Quality Planning Program. Very low trace amounts of mercury were detected in the District's drinking water wells in 2011. Since then, the mercury levels have been consistently non-detect.

2.6.9 Septic Systems

There are several septic tank systems in the SRC Watershed. Notably, several rural properties on Santa Rosa Creek Road just east of SR4 have septic tank systems. The north end of the Cambria Community Services District service area encompasses the Leimert estates, where a third of the properties are also on septic. However, this location is not adjacent to any water sources for the community. Due to their low density in the watersheds, septic systems do not pose a significant threat to water quality.

2.6.10 Changes in Sources of Contaminants

The most significant change the watershed may see is an increase in population growth in the Santa Rosa and San Simeon Creek Watersheds. This growth seen could cause a slight increase in urban developed areas and urban runoff. However, recent increases in urban development have been limited and have not been considered a significant risk for potential contaminants.

Section 3. Water Quality Data

Water quality goals and constituents of concern for surface water and groundwater are outlined by the Central Coast Regional Water Quality Control Board Basin Plan, Santa Rosa Creek Watershed Master Plan, Surface Water Ambient Monitoring Program (SWAMP), Central Coast Ambient Monitoring Program (CCAMP), and other regulations.

3.1 Constituents of Concern

The primary constituents of concern for raw water quality in both surface water and groundwater include the following:

Nutrients – Treated wastewater disposal and agricultural activities, such as cattle grazing and field crop fertilization, can contribute nutrients to surface and groundwater supplies.

Total Dissolved Solids (TDS) – High TDS can have negative environmental impacts and degrade drinking water quality. Effluent from the District's WWTP is monitored to ensure it does not exceed limitations set by the District's Discharge Order (Waste Discharge Order No. 01-100) to maintain water quality.

Hardness – Hardwater can cause mineral buildup on pipes. Customers typically use water softeners to reduce the hardness of their potable water, but this process increases the sodium and TDS concentrations in treated wastewater effluent, which percolates into the groundwater.

Sodium – Sodium can contaminate groundwater and have negative environmental impacts when discharged. Use of water softeners by individual water system customers to reduce their water hardness can contribute to increased sodium concentrations in the wastewater. This increases sodium concentrations in the treated wastewater effluent, which percolates into the groundwater.

Metals – The District monitors concentrations of lead and copper in the distribution system triennially and has been consistently under the actions levels for both constituents in recent years. The District has had a handful of samples with elevated lead levels in the past, but upgrades to the District's drinking water storage tanks in the mid-2010s resolved any lead related issues. The District completed the 2024 Lead Service Line Inventory (LSLI) required by the EPA, and verified that the District does not have any lead service lines. The District's water supply is non-corrosive. Despite the Oceanic mercury mine contamination in Santa Rosa Creek watershed, elevated mercury concentrations have not been observed in the Santa Rosa Valley Groundwater Basin.

Sulfate – While sulfate levels have been well below the SMCL in the District's drinking water in recent years, sulfate concentrations in creeks and streams have previously exceeded the recommended standard (SMCL) in both watersheds. Sources of sulfate in the watersheds include runoff and leaching from natural deposits and industrial wastes.

Organics – Due to agricultural development in the watersheds, high levels of pesticides and organics are a concern. Routine water quality testing from the potable water wells have indicated there are no detected levels of almost all organics, with a few organics present at very, very low levels within DDW guidelines.

Microbiology and turbidity – Microbiological contaminants such as bacteria, viruses, and protozoa in drinking water can cause illnesses and are heavily monitored to protect public health. The District continuously monitors turbidity and chlorine contact time, in addition to bacteriological sampling. These results are submitted to DDW as part of the District's monthly water quality reports.

Disinfection Byproducts (DBPs) – DBPs include trihalomethanes (THMs) and halo-acetic acids (HAAs). These constituents are regulated by the Disinfectants/Disinfection Byproducts Rule (D/DBP), which sets MCLs for chlorine, chlorine dioxide, chloramines, THMs, HAAs, bromate, and chlorite, etc. Testing conducted by the District indicates very low levels of THMs and HAAs in the distribution system, indicating low levels of organic material in the District's source water.

Radiological Constituents – Radioactive contaminants found in drinking water are regulated by the United States Environmental Protection Agency (EPA). The District's wells have been historically well below the MCL for radioactive contaminant levels, with the most recent groundwater samples non-detect.

3.2 Surface Water Quality

Surface water quality is monitored throughout the SSC and SRC watersheds to identify potential contaminants and prevent them from infiltrating the groundwater, the only source of drinking water for the District.

3.2.1 Surface Water Quality Objectives

The CCRWQCB Basin Plan (Basin Plan) summarizes surface water quality objectives for Santa Rosa Creek. These objectives are annual mean values based on the preservation of existing surface water quality or surface water quality enhancement believed attainable following control of point sources. These surface water quality objectives are summarized in Table 12.

Table 12. CCRWQCB Basin Plan Santa Rosa Creek Water Quality Objectives

Constituent	Median Surface Water Quality Objectives (mg/L)
TDS	500
Cl	50
SO_4	80
B	0.2
Na	50

3.2.2 Surface Water Quality Effects on Beneficial Uses

The CCRWQCB Basin Plan designates several beneficial uses for Santa Rosa Creek, including municipal and domestic supply, groundwater recharge, non-contact water recreation, fishing, and migration of aquatic organisms, among others. The Santa Rosa Creek Watershed Master Plan has identified constituents of concern in Santa Rosa Creek which occasionally exceed the water quality parameters for surface water during certain times of the year, limiting the beneficial uses of the creek during those periods. These constituents include TDS, sulfates, sodium, and chloride. These constituents are sampled at the wells in the SRC watershed and reported on the DDW Water Watch website.

The Basin Plan designates similar beneficial uses for San Simeon Creek with the addition of it being a habitat for endangered species, such as the Central California Coast Steelhead. In San Simeon Creek, contamination from effluent deposited by the District's WWTP is monitored. Notable concerns from this effluent are Nitrates, Dissolved Oxygen, Total Dissolved Solids, and Sodium.

3.2.3 Surface Water Quality Data

The Surface Water Ambient Monitoring Program (SWAMP) is designed as an ongoing program to assess the effectiveness of State Water Resources Control Board and local Regional Water Quality Control Board regulatory water quality programs by creating a statewide picture of the status and trends in surface water quality and developing site-specific information in areas that are known or suspected to have water quality problems.

The CCAMP, which has been underway since 1997, represents the Central Coast Region's participation in the statewide SWAMP program. The following tables (Table 13-Table 16) show the historical water quality for SSC (CCAMP Sites 310-SSC and 310-SSU) and SRC (CCAMP Sites 310-SRO and 310-SRU). A significant contamination from surface contaminants in the watershed would hopefully be detected by CCAMP or other monitoring/observation programs before entering the groundwater basins and contaminating the groundwater. The data from the CCAMP monitoring program also provides a good summary of historical water quality in the creeks, which is indicative of the cleanliness of the watershed. The data in tables below was sourced from the CCAMP Data Navigator. The CCAMP Monitoring locations are shown in Figure 9.

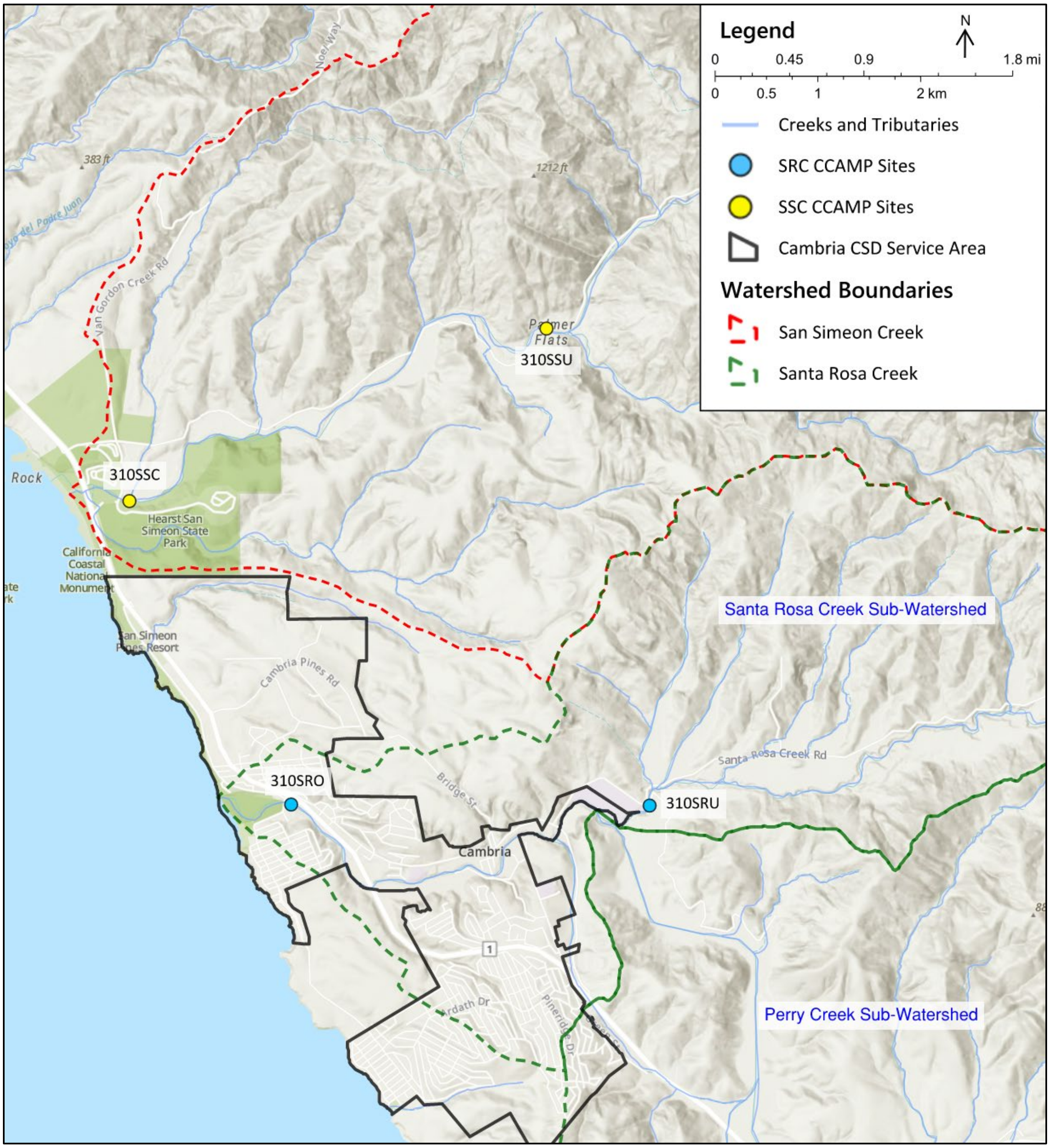

Figure 9. CCAMP Monitoring Locations

Table 13. San Simeon Creek Water Quality Data (Site 310-SSC)

Analyte Name	Units	Min	Mean	Median	Max	Samples	Dates	Aquatic Life Goal	Human Health Goal
Algae-filamentous	%	0	30	8	99	22	2001-2004	50	-
Algae-floating mats	%	0	12.16	2	90	112	2012-2023	20	-
Alkalinity as CaCO3	ug/l	110,000	297.5	335,000	410,000	8	2009-2023	20,000	-
Ammonia as N, Total	mg/l	0.003	0.047	0.015	1.6	221	2001-2023	1.9	30
Ammonia as N, Unionized	mg/l	2.25E-05	0.001	0.0002	0.012	115	2001-2012	0.025	-
Boron	mg/l	0.063	5.74	0.33	520	97	2012-2023	1.5	1
Boron, Dissolved	mg/l	0.072	0.327	0.3	3.3	199	2001-2020	1.5	1
Calcium	mg/l	20	73.1	65	370	97	2012-2023	-	-
Calcium Dissolved (as Ca)	mg/l	12	60.9	63	140	114	2001-2012	-	-
Chloride	mg/l	4	271.8	130	13,000	207	2001-2023	122	250
Chlorophyll a	ug/l	0	28.9	2	1,471	229	2001-2023	15	-
Coliform, E. coli	MPN/100ml	4.1	277.2	56	9,100	179	2005-2022	-	126
Coliform, Fecal	MPN/100ml	2	474.0	80	35,000	203	2001-2019	-	200
Coliform, Total	mpn/100ml	31	3,830	540	160,988	205	2001-2020	-	1,000
Flow, Field Measurement	mg/l	0.0002	7.55	0.831	70.3	43	2005-2017	-	-
Hardness as CaCO3	cfs	120	420.8	340	4,500	127	2001-2023	-	-
Nitrate as N	mg/l	0.005	5.54	2.55	28	220	2001-2023	1	10
Nitrate, Nitrite as N	mg/l	0.01	5.56	2.52	28.14	118	2001-2019	1	10
Nitrite as N	mg/l	0.0007	0.038	0.024	0.54	221	2001-2023	0.15	1
Nitrogen, Total	mg/l	0.25	5.49	2.638	28.44	180	2001-2020	2.3	-
Nitrogen, Total Kjeldahl	mg/l	0.018	0.59	0.26	33	214	2001-2023	2.3	-
OrthoPhosphate as P	mg/l	0.002	0.74	0.72	2.3	220	2001-2023	0.13	-
Oxygen, Dissolved	mg/l	1.46	6.32	6.03	29.28	502	2001-2023	7	-
Oxygen, Saturation	mg/l	15	64.17	61.4	342	500	2001-2023	85	-
pH	%	6.65	7.42	7.36	8.62	499	2001-2023	-	-
Phosphorous as P	-log[H+]	0.005	0.844	0.86	7.6	211	2001-2023	0.122	0.0001
Salinity	mg/l	0.05	0.821	0.6	23.42	232	2001-2023	-	-
Silica as SiO2	ppt	5.4	25.69	24	130	97	2012-2023	-	-
Sodium	mg/l	5.9	175.8	110	6,600	206	2001-2023	-	20
Specific Conductivity	mg/l	131.3	1,301	1,134	36,942	430	2001-2023	1,460	900
Sulfate	uS/cm	9,400	108,455	74,000	1,800,000	80	2001-2023	-	500,000
Suspended Solids, Total	mg/l	0.115	34.32	2	2,200	218	2001-2023	30	-
Total Dissolved Solids (TDS)	mg/l	25	597.8	403.5	20,000	642	2001-2023	-	1,000
Turbidity	ntu	0	30.99	0.6	3,000	235	2001-2023	25	1
Urea	mg/l	4	12.35	5	333	110	2008-2022	-	-
Water Tempature	Degrees C	8.64	16.01	16.14	21.41	501	2001-2023	18	-

Table 14. San Simeon Creek Water Quality Data (Site 310-SSU)

Analyte Name	Units	Min	Mean	Median	Max	Samples	Dates	Aquatic Life Goal	Human Health Goal
Algae-filamentous	%	0	15	2	60	9	2002-2003	50	-
Algae-floating mats	%	0	1.2	0	5	5	2015-2015	20	-
Alkalinity as CaCO3	ug/l	190,000	246,000	255,000	285,000	5	2009-2016	20,000	-
Ammonia as N, Total	mg/l	0.005	0.016	0.013	0.045	24	2002-2016	1.9	30
Ammonia as N, Unionized	mg/l	0.0001	0.0004	0.0002	0.0011	15	2002-2009	0.025	-
Boron	mg/l	0.21	0.246	0.24	0.3	5	2015-2015	1.5	1
Boron, Dissolved	mg/l	0.1	0.217	0.22	0.24	17	2002-2015	1.5	1
Calcium	mg/l	18	40.8	49	52	5	2015-2015	-	-
Calcium Dissolved (as Ca)	mg/l	13	43.06	46	54	16	2002-2009	-	-
Chloride	mg/l	4.8	13.14	12.5	18	20	2002-2016	122	250
Chlorophyll a	ug/l	0	3.4	0.8	43.87	21	2002-2015	15	-
Coliform, E. coli	MPN/100 ml	16.9	487.4	122.1	4,500	12	2009-2015	-	126
Coliform, Fecal	MPN/100 ml	21	388.4	130	5,000	21	2002-2015	-	200
Coliform, Total	mpn/100 ml	79	3,360	300	50,000	21	2002-2015	-	1,000
Flow, Field Measurement	cfs	0.191	3.44	0.48	12.59	4	2009-2009	-	-
Hardness as CaCO3	mg/l	93	254.88	269	330	16	2002-2015	-	-
Nitrate as N	mg/l	0.004	0.094	0.033	0.88	22	2002-2016	1	10
Nitrate, Nitrite as N	mg/l	0.006	0.091	0.024	0.919	18	2002-2011	1	10
Nitrite as N	mg/l	0.002	0.007	0.005	0.039	22	2002-2016	0.15	1
Nitrogen, Total	mg/l	0.02	0.345	0.212	3.92	24	2002-2016	2.3	-
Nitrogen, Total Kjeldahl	mg/l	0.018	0.278	0.11	3	22	2002-2016	2.3	-
OrthoPhosphate as P	mg/l	0.002	0.018	0.006	0.1	24	2002-2016	0.13	-
Oxygen, Dissolved	mg/l	8.58	10.45	10.5	12.12	26	2002-2016	7	-
Oxygen, Saturation	%	89.4	99.73	100.2	111.4	22	2002-2016	85	-
pH	-log[H+]	7.75	8.11	8.1	8.84	24	2002-2016	-	-
Phosphorous as P	mg/l	0.006	0.036	0.01	0.39	24	2002-2016	0.122	0.0001
Salinity	ppt	0.06	0.253	0.27	0.37	26	2002-2016	-	-
Silica as SiO2	mg/l	17	20	19	26	6	2015-2016	-	-
Sodium	mg/l	5.6	16.86	18	23	17	2002-2015	-	20
Specific Conductivity	umhos/cm	133	480.4	533.6	629	27	2002-2016	1,460	900
Sulfate	ug/l	39,000	46,142	45,000	60,000	7	2002-2011	-	500,000
Suspended Sediment Concentration	mg/l	1			1	2	2011-2011	400	-
Suspended Solids, Total	mg/l	0.115	22.61	0.82	470	23	2002-2015	30	-
Total dissolved Solids (TDS)	mg/l	40	203.2	210	360	63	2002-2015	-	1,000
Turbidity	ntu	0	24.57	1.7	525	25	2002-2015	25	1
Water Tempature	Degrees C	8.9	14.56	14.74	21.82	26	2002-2016	18	-

Table 15. Santa Rosa Creek Water Quality Data (Site 310-SRO)

Analyte Name	Units	Min	Mean	Median	Max	Samples	Dates	Aquatic Life Goal	Human Health Goal
Algae-filamentous	%	0	11	2	90	23	2001-2004	50	-
Algae-floating mats	%	0	2.544	0	60	79	2012-2023	20	-
Alkalinity as CaCO3	ug/l	210,000	337,500	370,000	420,000	8	2009-2023	20,000	-
Ammonia as N, Total	mg/l	0.0025	0.030	0.015	0.94	176	2001-2023	1.9	30
Ammonia as N, Unionized	mg/l	3.05E-05	0.001	0.0005	0.019	102	2001-2012	0.025	-
Boron	mg/l	0.056	0.199	0.18	0.62	67	2012-2022	1.5	1
Boron, Dissolved	mg/l	0.06	0.182	0.17	0.62	158	2001-2020	1.5	1
Calcium	mg/l	37	81.75	79	230	68	2012-2023	-	-
Calcium Dissolved (as Ca)	mg/l	16	69.91	72	87	101	2001-2012	-	-
Chloride	mg/l	9.4	101.5	45	2,400	165	2001-2023	122	250
Chlorophyll a	ug/l	0	2.036	1.1	53.47	173	2001-2023	15	-
Coliform, E. coli	MPN/100 ml	1	607	99	22,000	137	2005-2022	-	126
Coliform, Fecal	MPN/100 ml	7.8	1197	130	50,000	158	2001-2019	-	200
Coliform, Total	mpn/100 ml	27	7147	900	160,000	160	2001-2020	-	1,000
Flow, Field Measurement	cfs	0	6.93	1.05	84.469	44	2005-2022	-	-
Hardness as CaCO3	mg/l	95	449.9	437	1700	98	2001-2023	-	-
Nitrate as N	mg/l	0.0043	0.151	0.051	1.3	174	2001-2023	1	10
Nitrate, Nitrite as N	mg/l	0.0049	0.156	0.054	1.37	103	2001-2019	1	10
Nitrite as N	mg/l	0.0007	0.006	0.005	0.071	176	2001-2023	0.15	1
Nitrogen, Total	mg/l	0.0091	0.433	0.25	9.91	152	2001-2020	2.3	-
Nitrogen, Total Kjeldahl	mg/l	0.018	0.312	0.2	8.9	171	2001-2023	2.3	-
OrthoPhosphate as P	mg/l	0.0023	0.038	0.029	0.37	174	2001-2023	0.13	-
Oxygen, Dissolved	mg/l	0.3	8	8.28	14.37	261	2001-2023	7	-
Oxygen, Saturation	%	3.4	80.73	81.25	160.1	258	2001-2023	85	-
pH	-log[H+]	6.78	7.9	7.89	8.7	258	2001-2023	-	-
Phosphorous as P	mg/l	0.005	0.099	0.032	6.5	167	2001-2023	0.122	0.0001
Salinity	ppt	0.09	0.537	0.46	5.69	186	2001-2023	-	-
Silica as SiO2	mg/l	12	25.99	21	170	68	2012-2023	-	-
Sodium	mg/l	12	64.26	40	1,300	164	2001-2023	-	20
Specific Conductivity	umhos/cm	190	1,003	866	11,600	238	2001-2023	1,460	900
Sulfate	ug/l	16,000	102,090	103,000	410,000	66	2001-2023	-	500,000
Suspended Solids, Total	mg/l	0.115	79.63	2	7,700	174	2001-2023	30	-
Total Dissolved Solids (TDS)	mg/l	40	436.4	400	6,000	511	2001-2023	-	1,000
Turbidity	ntu	0	45.36	0.5	3,000	190	2001-2023	25	1
Urea	mg/l	4	145.5	4	10,000	78	2009-2022	-	-
Water Tempature	Degrees C	5.65	16.42	17.01	23.74	261	2001-2023	18	-

Table 16. Santa Rosa Creek Water Quality Data (Site 310-SRU)

Analyte Name	Units	Min	Mean	Median	Max	Samples	Dates	Aquatic Life Goal	Human Health Goal
Algae-filamentous	%	0	9	8	33	12	2002-2003	50	-
Algae-floating mats	%	0	0.875	0	5	8	2015-2015	20	-
Alkalinity as CaCO3	ug/l	350,000			440,000	3	2009-2016	20,000	-
Ammonia as N, Total	mg/l	0.005	0.021	0.013	0.06	35	2002-2016	1.9	30
Ammonia as N, Unionized	mg/l	8.25E-05	0.001	0.0003	0.003	26	2002-2009	0.025	-
Boron	mg/l	0.16	0.179	0.19	0.19	7	2015-2015	1.5	1
Boron, Dissolved	mg/l	0.1	0.182	0.18	0.23	27	2002-2015	1.5	1
Calcium	mg/l	73	84.14	81	110	7	2015-2015	-	-
Calcium Dissolved (as Ca)	mg/l	19	69.44	74	83	26	2002-2009	-	-
Chloride	mg/l	8.7	19.73	21	25	28	2002-2016	122	250
Chlorophyll a	ug/l	0	2.346	0.6	55.95	35	2002-2015	15	-
Coliform, E. coli	MPN/100 ml	14	1,133	110	18,000	19	2009-2015	-	126
Coliform, Fecal	MPN/100 ml	13	1,819	130	50,000	33	2002-2015	-	200
Coliform, Total	mpn/100 ml	40	7,071	500	160,000	33	2002-2015	-	1,000
Flow, Field Measurement	cfs	0.385	2.22	1.101	7.55	10	2009-2015	-	-
Hardness as CaCO3	mg/l	96	407.1	421.5	470	22	2002-2015	-	-
Nitrate as N	mg/l	0.004	0.156	0.094	1.4	35	2002-2016	1	10
Nitrate, Nitrite as N	mg/l	0.006	0.160	0.099	1.456	27	2002-2009	1	10
Nitrite as N	mg/l	0.004	0.011	0.005	0.056	35	2002-2016	0.15	1
Nitrogen, Total	mg/l	0.028	0.652	0.25	10.52	35	2002-2016	2.3	-
Nitrogen, Total Kjeldahl	mg/l	0.018	0.515	0.2	9.8	35	2002-2016	2.3	-
OrthoPhosphate as P	mg/l	0.005	0.040	0.024	0.27	35	2002-2016	0.13	-
Oxygen, Dissolved	mg/l	6.3	9.203	9	14.43	87	2002-2016	7	-
Oxygen, Saturation	%	63.7	93.67	90.5	161.1	85	2002-2016	85	-
pH	-log[H+]	7.57	8.062	8.04	8.9	85	2002-2016	-	-
Phosphorous as P	mg/l	0.006	0.273	0.022	7.6	35	2002-2016	0.122	0.0001
Salinity	ppt	0.07	0.401	0.42	0.5	38	2002-2016	-	-
Silica as SiO2	mg/l	21	26	22	52	8	2015-2016	-	-
Sodium	mg/l	11	27.02	27	32	27	2002-2015	-	20
Specific Conductivity	umhos/cm	151.3	761.4	811.2	958	39	2002-2016	1,460	900
Sulfate	ug/l	44,000	99,454	105,000	120,000	11	2002-2015	-	500,000
Suspended Solids, Total	mg/l	0.115	419.5	1.1	13,000	33	2002-2015	30	-
Total Dissolved Solids (TDS)	mg/l	70	331.8	342	590	102	2002-2015	-	1,000
Turbidity	ntu	0	58.37	0.1	1,139	37	2002-2015	25	1
Water Tempature	Degrees C	9.47	16.54	16.87	22.17	87	2002-2016	18	-

3.3 Groundwater and WWTP Effluent Water Quality

3.3.1 Groundwater Objectives

3.3.1.1 Santa Rosa Valley Groundwater Basin Objectives

Basin Plan objectives for groundwater in the Santa Rosa Valley Groundwater Basin are summarized in Table 17. These objectives are intended to serve as a water quality baseline for evaluating water quality management in the Santa Rosa Valley Groundwater Basin. The objectives shown are median values based on data averages. They are set to preserve existing water quality or enhance water quality to an attainable level following control of point sources. Water in the Santa Rosa Valley Groundwater Basin has consistently met these objectives.

Table 17. CCRWQCB Basin Plan Santa Rosa Valley Groundwater Objectives

Constituent	Median Groundwater Quality Objectives (mg/L)
TDS	700
Cl	100
SO_4	80
B	0.2
Na	50
N	5

3.3.1.2 San Simeon Valley Groundwater Basin Objectives

There are no water quality objectives for the San Simeon Valley Groundwater Basin in the Basin Plan, however, San Simeon Creek Watershed is has been listed as impaired under Clean Water Act Section 303(d) due to the water exceeding water quality standards for nitrate, dissolved oxygen, sodium, and chloride in past years. The Draft San Simeon Creek Total Maximum Daily Load (TMDL) report, prepared by the CCRWQCB, addresses this impairment by identifying the probably sources of pollution, establishing the maximum amount of pollution the stream can receive while still meeting water quality standards, and allocating that amount to all probable contributing sources. One of the sources described in the draft TMDL was the potential impact of land discharge of wastewater effluent from the Cambria WWTP on sub-surface flow in San Simeon Creek. The report developed waste load allocations by reviewing data from CCAMP and determining what concentration of discharge may be permitted to improve water quality. The Draft TMDL Report concluded that wastewater discharge along with other discharge sources such as agricultural runoff shall not cause the San Simeon Creek to exceed the following:

- 1.3 mg/L Total Nitrogen during the dry season (July-December)
- 10 mg/L Nitrate as N
- 0.05 mg/L Total Phosphorous (P) during the dry season
- 69 mg/L Sodium (Na)
- 106 mg/L Chloride (Cl)

The Draft TMDL also concluded that the WWTP effluent discharge percolating into San Simeon Creek impairs its beneficial uses for municipal and domestic supply, agricultural supply, and cold freshwater habitat. This report did not get published due to the District improving their effluent treatment to meet the recommended requirements.

The District's WWTP operates under a waste discharge Permit (Waste Discharge Requirements Order No. 01-100) which requires them to monitor the water quality of their effluent. This Permit requires the District to sample their WWTP effluent for Nitrate (N-NO3), Sodium (Na), Total Dissolved Solids (TDS), and Dissolved Oxygen (DO). This effluent is delivered to the percolation ponds in the SSC watershed and percolates into San Simeon Valley Groundwater Basin downgradient of the District's San Simeon Wellfield. The District is not currently required to sample Total Phosphorous or Chloride in its effluent as it is not required by their permit. Each of the constituents monitored in the WWTP effluent as required by the District's discharge Permit is described below.

Nitrate (measured as nitrogen, abbreviated as NO3-N) – Nitrate is a nutrient that requires monitoring to prevent groundwater contamination and other negative environmental impacts. The Draft San Simeon Creek TMDL Report identified the water quality objective for nitrate in the receiving water column (San Simeon Creek Valley Groundwater Basin) at no greater than 10 mg/L (NO3-N), and no greater than 1.3 mg/L total nitrogen during July through December. The District's WWTP permit does not require the effluent meet a certain limit, but cannot cause nitrate concentrations in the groundwater downgradient of the disposal area to exceed the drinking water MCL of 10 mg/L NO3-N.

Sodium (Na) – Sodium can contaminate groundwater and have other negative environmental impacts when discharged. Use of water softeners by individual water system customers to reduce their water hardness can contribute to increased sodium concentrations in the wastewater which percolates into the groundwater. The Draft TDML concluded that discharges shall not cause the receiving waters to exceed a concentration of 69 mg/L for Na. The current WWTP discharge permit does not have a requirement for the concentrations of sodium in the effluent however, it does express that the discharge shall not cause a significant increase in mineral constituent concentrations in underlying groundwaters.

Total Dissolved Solids (TDS) – TDS is important to monitor as high TDS can have negative environmental impacts. The WWTP permit requires the District maintain a 30-day mean effluent TDS concentration not exceeding 1,000 mg/L, with no given day exceeding the daily instantaneous limit of 1,500 mg/L. The District currently takes daily grab samples and reports TDS lab samples quarterly at the WWTP to comply with these regulations. Pumping of the San Simeon Valley Groundwater Basin groundwater is currently used to reduce the TDS concentrations in the District's drinking water and subsequently the wastewater effluent to mitigate against elevated TDS concentrations. TDS concentrations in the wastewater effluent may be elevated due to potential seawater infiltration into the collection system associated with early season rain events.

Dissolved Oxygen (DO) – DO concentrations are measured monthly and are required to be at least 2.0 mg/L when discharging to percolation ponds. DO is required to support the aerobic bacteria that break down organic matter in the effluent.

3.3.2 Groundwater Data

3.3.2.1 Santa Rosa Valley Groundwater Data

In the most recent round of tests on the DDW Water Watch site for raw water from SR3 and SR4 the detected concentrations for TDS and Na were at, or under the water quality objectives. Results for sulfate (SO4) remained under the SMCL of 250 mg/L but exceeded the Basin Plan objective of 80 mg/L, with measured concentrations 128 mg/L and 133 mg/L in SR3 and SR4, respectively. There have been a few exceedances of iron and manganese, in the raw well water, in the last five years. All other constituents with a groundwater objective outlined in the Basin Plan displayed concentrations well below their objectives in the most recent round of tests at SR3 and SR4 in July 2023.

3.3.2.2 San Simeon Valley Groundwater Data

Review of water quality sampling results from DDW Water Watch indicated no MCL/SMCL exceedances in the San Simeon wells SS1, SS2, and SS3 for any constituents since the last WSS update in 2015. The most recent exceedances in 2011 for iron, nitrate, and turbidity.

3.3.2.3 WWTP Effluent

The San Simeon Valley Groundwater Basin water quality can be impacted by effluent from the District's WWTP effluent, which is disposed of via percolation ponds in close proximity to the SSC. WWTP Effluent water quality data for 2023 is shown in Figure 10 and Table 18 below. Each parameter is monitored monthly or quarterly, as required by the Draft San Simeon Creek TMDL report, to demonstrate that the percolated WWTP effluent is not adversely impacting the San Simeon Valley Groundwater Basin. The data was obtained from the District's WWTP Annual Reports. Higher concentrations in TDS in the October sample can be attributed to high TDS in stormwater capture during the beginning of the wet season in middle to late fall.

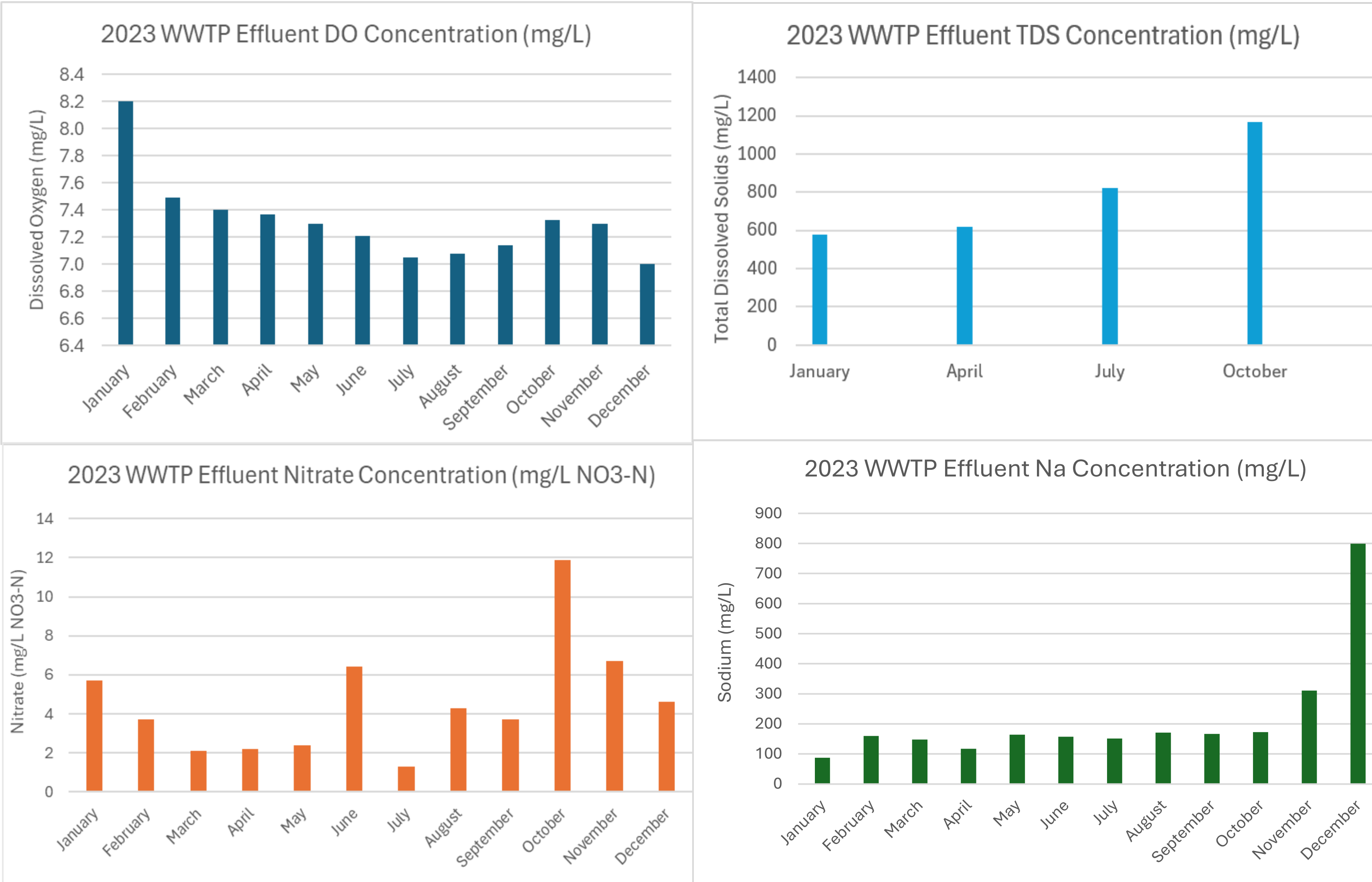

Figure 10. Charts of 2023 WWTP Effluent Water Quality for DO, TDS, NO3-N, and Na

Table 18. 2023 WWTP Effluent Water Quality Data

Month	DO (mg/L)	NO3-N (mg/L)	Na (mg/L)	TDS (mg/L)
January	8.2	5.7	87.2	576
February	7.5	3.7	160	-
March	7.4	2.1	148	-
April	7.4	2.2	117	620
May	7.3	2.4	164	-
June	7.2	6.4	157	-
July	7.1	1.3	151	820
August	7.1	4.3	171	-
September	7.1	3.7	167	-
October	7.3	11.9	173	1170
November	7.3	6.7	311	-
December	7.0	4.6	799	-

Historic water quality data for the WWTP effluent is shown in Table 19 below. The data was obtained from the previous sanitary surveys and the WWTP Annual Reports provided by the District. The reduction in nitrate concentrations seen in recent years is attributed to modifications to the secondary treatment process, which uses an activated sludge process to simulate a Modified Ludzak-Ettinger (MLE) process to reduce nitrate in the effluent. This modification was prompted by the implementation of the WRF project. The WRF project required that the WWTP reduce the nitrate concentration in the effluent to 2.3 mg/L NO3-N or lower to ensure the source water for the WRF was of the required water quality. The WWTP effluent is discharged to percolation ponds in the San Simeon Creek Watershed, where it then percolates into the shallow basin, and is then extracted and send to headworks at the WRF.

Table 19. Cambria WWTP Effluent Nitrate, TDS, Na, and DO Concentrations

Year	Annual Average NO3-N Concentration (mg/L)	Total Dissolved Solids (mg/L)	Sodium (mg/L)	Dissolved Oxygen (mg/L)
2023	4.6	797	217	7.3
2022	1.8	863	175	7.4
2021	2.1	1078	252	7.4
2020	3.2	845	163	7.2
2019	4.3	1308	279	7.3
2018	2.5	895	177	6.9
2017	3.0	798	152	6.9
2016	2.1	130	261	6.2
2015	20.0	1056	207	2.3
2014	36.1	1077	182	3.1
2013	23.3	872	167	3.0
2012	30.7	952	182	3.9
2011	28.8	829	152	-
2010	24.0	847	165	-
2009	35.2	840	163	3.6
2008	31.5	840	155	-
2007	22.5	945	174	-
2006	36.3	866	169	-
2005	17.6	857	131	-
2004	15.6	847	138	-
2003	34.5	905	155	6.0
2002	17.6	860	203	7.4

3.4 Potable Water System Water Quality

Source water samples are collected at the District's SR and SS wells. Water from the SS wells is dosed with sodium hypochlorite at the wellhead. Water from SR3 and SR4 is treated for iron and manganese via filter units at each well. Sodium hypochlorite and ferric chloride are dosed before filtration to induce coagulation. After treatment, water is delivered to clear well tanks for disinfection contact time before entering the distribution system. The water then travels through the distribution system before going to storage tanks around Cambria with a total capacity of 1,750,000 gallons. Booster pump stations "lift" water to the tanks, located at higher elevations than the homes they serve. The wells pump water until demand is met and tanks are full. The tank levels are monitored regularly to ensure there is sufficient water to meet customer and firefighting needs.

In the past, raw water from the Santa Rosa Valley Groundwater Basin wells has exceeded or approached the secondary MCL for manganese (50 µg/L), but the filter units reduce manganese concentrations significantly below the secondary MCL before it is served to the District's customers. The District's 2023 Consumer Confidence Report (CCR) indicated no violations of primary or secondary MCLs for the potable water system.

Section 4. Requirements of the Surface Water Treatment Rule (SWTR)

4.1 Surface Water Treatment Rule

The Surface Water Treatment Rule (SWTR) is a regulation that applies to all public water systems using surface water or ground water under the direct influence of surface water (GWUDI). The SWTR mandates that GWUDI systems treat their water through disinfection and filtration, with specific limits for individual and combined filter effluent. Additionally, the SWTR imposes a treatment technique requirement to control microbes, including a four-log removal of viruses and a three-log removal of *Giardia lamblia*.

The SWTR specifies that 95% of the measurements taken every month must have turbidity concentrations at or below 0.3 NTU (see Average Treated column in Table 20 below). The SWTR also requires that filtered water turbidity may not exceed 5.0 NTU at any time. As part of the continuous turbidity monitoring mandated by the SWTR, measurements are taken, recorded, and reported in 4-hour intervals.

SR3 and SR4 produce GWUDI water and have filters at each site to lower turbidity. There have been no historical violations of the 0.5 NTU limit in the treated water at wells SR3 and SR4. The turbidity data of wells SR3 and SR4 are shown in Table 20. Samples are not collected when the wells are not in use.

Table 20. Santa Rosa Wells Turbidity Data

Months		SR3		SR4	
		Peak Raw Turbidity (NTU)	Average Treated Turbidity (NTU)	Peak Raw Turbidity (NTU)	Average Treated Turbidity (NTU)
2023	January	-	-	2	0.049
	February	-	-	3.2	0.054
	March	-	-	1.1	0.037
	April	-	-	-	-
	May	-	-	0.1	0.045
	June	-	-	1.8	0.049
	July	-	-	1.5	0.053
	August	-	-	3	0.06
	September	-	-	2.1	0.059
	October	-	-	3.9	0.065
	November	-	-	1.3	0.069
	December	-	-	0.4	0.08
2022	January	-	-	11.3	0.04
	February	-	-	-	-
	March	-	-	-	-
	April	-	-	-	-
	May	-	-	-	-
	June	0.7	0.038	-	-
	July	0.2	0.033	-	-
	August	0.2	0.039	2.9	0.064
	September	0.5	0.035	2.1	0.043
	October	-	-	9.5	0.046
	November	-	-	3.1	0.046
	December	-	-	-	-

As described in Section 2.1, the Santa Rosa Creek wells have treatment facilities that provide iron and manganese removal, filtration and disinfection. The District tracks the effluent concentration of iron and manganese for SR3 and SR4, the two Santa Rosa wells that are used to produce drinking water. The results for 2024 and 2014 from the previous WSS are summarized in Table 21. Results are typically below the SMCLs of 300 µg/L for iron and 50 µg/L for manganese. There are no recent results for SR3 because it has not been in operation in recent years.

Table 21. Santa Rosa Wells Iron and Manganese Effluent Results

Santa Rosa Well 3			Santa Rosa Well 4		
Report Date	Sample Results (µg/L)		Report Date	Sample Results (µg/L)	
	Iron	Manganese		Iron	Manganese
--	--	--	6/21/2024	ND	ND
--	--	--	5/21/2024	ND	ND
--	--	--	5/3/2024	ND	ND
12/16/2014	170	ND	12/22/2014	ND	0.8
11/17/2014	140	0.8	12/16/2014	110	ND
11/10/2014	310	ND	11/17/2014	100	3.5
10/24/2014	130	ND	11/10/2014	100	ND
10/16/2014	190	1	10/24/2014	110	ND
9/30/2014	120	ND	10/16/2014	110	1.8
9/22/2014	110	ND	9/30/2014	100	0.6
9/11/2014	140	ND	9/22/2014	70	ND
9/2/2014	230	ND	9/11/2014	80	ND
8/21/2014	130	ND	9/2/2014	230	ND

Section 5. Control and Management

The District completed various projects in the SRC and SSC Watersheds and for its potable water system, and is currently working on additional projects. Proper maintenance and management of these facilities is not only necessary to deliver safe water to the District's customers, but also to maintain the quality of the source water in the San Simeon Valley and Santa Rosa Valley Groundwater Basins.

5.1 San Simeon Transmission Water Main

On December 23rd, 2021, the transmission water main that supplies water from the San Simeon Well Field to the District water distribution system develop a significant leak. All San Simeon well pumps were turned off and an external engineering contractor was requested to assist in inspecting the break and develop solutions for repair. The break was located near the San Simeon Creek Campground area, so the District obtained a permit from California State Parks to perform emergency repairs. Two weeks later on January 6th, 2022, the main was repaired by installing approximately 3,000 feet of temporary HDPE 12" pipe to bypass the section of the main that developed a leak. After pressure testing and disinfection, the temporary pipeline was activated on January 10th, 2022, to allow the San Simeon Well Field to resume delivery of water to the distribution system. Plans to permanently replace the failed transmission main are currently under development.

During the time the San Simeon Wells were offline, the sole water source for the District was SR4. SR4 was capable of supplying water for the District during this emergency condition.

5.2 Stuart Street Tanks Replacement

An agreement for engineering design and construction services with MKN & Associates, Inc. was approved on January 11th, 2024, to replace the Stuart Street Tanks. Construction is anticipated to begin in Winter 2025, with each tank being replaced one at a time and taking roughly 6 months per tank to remove and rebuild. The existing tank pads are insufficient, so the contractor will be removing the existing pads and constructing new ones.

5.3 WWTP SST Upgrades

The District WWTP is currently being upgraded. Many of these upgrades are being completed to replace aging and outdated infrastructure at the WWTP, which has not been significantly upgraded since 1993. Many of the upgrades are part of the PG&E Sustainable Solutions Turnkey (SST) Program which combines many services into one source to help customers like the District in completing comprehensive energy and infrastructure projects which enhance facility performance while reducing operating costs and environmental footprint. Upgrades and replacements are being done on the influent flow equalization tank and lift station, the MLE Process, the Blower System, RAS/WAS Pumping, backup power, SCADA system, and sewer lift stations (B1 and B4). Many of these upgrades are still in progress or have not yet been started. The project is scheduled to be completed in late fall of 2025.

5.4 San Simeon Well 3

In June 2024, the District replaced the pump and motor on San Simeon Well 3. The replacement is due to the aging infrastructure which has been in place since 1985. The removal of the existing well components began on June 10th, 2024. Afterwards, a video observation of the existing casing was performed, and it was determined to be in excellent condition.

5.5 Santa Rosa Well 4

In 2022, SR4 required unplanned repairs during the dry season, because the well was producing a marginal amount of silt and only 40% of its typical flowrate. Two small tubercles (a mineral buildup or hard nodule formed from suspended minerals from corrosion of iron/steel pipe) had grown from the inside and breached the exterior wall of the pipe at 81 and 91 feet below surface. These breaches allowed silt to enter the well, which interfered with the pump and its capacity. To address the issue, the submersible pump and motor were replaced, and swage patches were used to close the holes in the well casing. SR4 came back online on August 25th, 2022.

Section 6. Recommendations and Conclusion

6.1 Sanitary Survey Recommendations

The recommendations outlined in this section were developed to prevent contaminants from entering watershed surface waters and to enhance watershed monitoring for potential sources of contamination. These recommendations aim to maintain the health of the watershed by proactive monitoring, education, and containment strategies.

6.1.1 Operational Data

The District has very limited operational data for the filter systems on SR 3 and SR 4, as they have been operated very little since installation. It may be worth running once a quarter to collect data on the efficacy of the treatment process.

The WRF has not been operated since installation. If the District can obtain proper permitting, it would be beneficial to collect water quality data on the source water, treated recycled water, and RO concentrate.

6.1.2 Continued Watershed Monitoring

While many of the potential sources of contaminants have not significantly affected the District's water supplies, it is important to monitor, because the risk of contamination is still present. Ongoing monitoring will ensure that any spills are detected and mitigated as early as possible. Continued partnerships with CCAMP and the Monterey Bay Sanctuary Citizen Watershed Monitoring Network are recommended.

6.1.3 Continued Education

Public outreach and education efforts have previously been effective at reducing contamination. Continued education in the form of informational signage and public events such as beach cleanup are recommended. Connect with local environmental organizations that aim to protect the District's watersheds such as Greenspace, Friends of Fiscalini Ranch Preserve, and the Cambria Forest Committee.

6.2 Conclusion

Since the last WSS in 2015, there have not been significant changes to the San Simeon Creek or Santa Rosa Creek Watersheds. Both watersheds remain largely undeveloped, low-population areas with agriculture as the most significant land use. Industrial and commercial activities in the watershed are minimal. The potential contaminant sources have not changed significantly since the last WSS and have not posed a significant threat or impacted the quality of the District's water supply sources in that time period. Before the previous WSS the Chevron Station #9-0919 MTBE plume which emerged in 1993, and impacted water quality at SR1 and SR3, represented a threat to the District's drinking water supply. However, the site underwent multiple remediations, and the contamination case was determined to be closed with no further action needed in 2018.

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Section 8. Drinking Water Source Assessment and Protection (DSWAP) Program Forms

The Drinking Water Source Assessment and Protection (DWSAP) forms in the appendices of this section were completed in 2015 during the previous WSS Update. The California State Water Resources Control Board (SWRCB) recommends updating these forms when a new groundwater source is created or has been rehabilitated, if there are significant changes to the surrounding area, or if there has been modifications to the sources that would change the possible contaminating activities. Since there has not been any significant changes to the area or sources since the completion of these forms, the original forms completed in 2015 are attached. A minor change is noted in red on one of the forms, as the MTBE plume identified in Appendix D in 2015 has since been remediated and the case has closed.

Drinking Water Source Assessment and Protection (DWSAP) Forms:

Appendix A	Drinking Water Source Location
Appendix B	Delineation of Surface Water Protection Zones
Appendix C	Physical Barrier Effectiveness Checklist
Appendix D	Possible Contaminating Activities (PCA) Inventory
Appendix E	Vulnerability Analysis

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Board of Directors

AGENDA NO. **5.C**

FROM: Matthew McElhenie, General Manager
Jim Green, Utilities Department Manager

Meeting Date: October 10, 2024

Subject: Discussion and Consideration of Approval of a Public Works Contract with Alpha Electrical Service for Construction of the Rodeo Grounds Pump Station Back-up Power System Replacement Project and Authorization for the General Manager to Execute the Agreement

FISCAL IMPACT:

There is $155,000 budgeted for procurement and installation of a new backup power system. The bid from Alpha Electrical is for $136,692.89.

DISCUSSION:

In February 2024, during a storm that caused a PG&E power outage, an oil leak was identified in the Rodeo Grounds Generator while it was operating on backup power. Generator technicians were called in to assess the issue and give a proposal to repair the leak. Unfortunately, they encountered challenges in sourcing necessary parts and could not guarantee a successful repair. They stated the useful life of a generator is 20-25 years, and the Rodeo Grounds generator will reach 30 years of age in June 2025.

The Rodeo Grounds Generator is a 125KVA diesel-powered unit crucial for providing emergency backup power to the Rodeo Grounds Boost Pumps. It supports the operation of the booster pumps that transfer water from the Pine Knolls tank to the Stuart Street tank and subsequently to the Fiscalini Tank. The Stuart Street Tank supplies water to 75% of the residential customers in town. Additionally, the backup power source provides power to the Facilities & Resources building and grounds. The generator remains operational for emergency purposes despite the oil leak issue.

Following an assessment by technicians, it was determined that the generator was considered obsolete by the manufacturer. Any necessary repairs would involve custom fabrication of hoses and oil seals/gaskets without the guarantee of any future issues. The manufacturer doesn't support their generator simply due to its age. The unit is at the end of its life expectancy and, should another major problem develop, may not be repairable due to the unavailability of parts. (See attached repair proposal and appraisal)

Additionally, discussions with the Air Pollution Control District for San Luis Obispo County revealed that compliance requires upgrading a Tier 4 generator, subject to their approval.

In response to the information about the cost of repairs and the availability of parts, staff has chosen to proceed with obtaining informal bids for the replacement of the backup power system, which includes replacing the generator with a new Tier-4-final compliant model, the existing manual transfer switch with a new automatic transfer switch (ATS), and the associated wiring with new wiring. The bid requirements also called for the contractor to dispose of the old generator, transfer switch, and any project-related trash. On September 6, 2024, the CCSD released Bid No. 05-2024-09, an informal bid request pursuant to CCSD Municipal Code Section 1.06.010, for bids from licensed contractors to complete the project. The bidding closed on September 25, 2024, at 3:00 PM, and the District received two proposals, which were evaluated by staff and the Resources and Infrastructure Committee for completeness and ranked from lowest to highest bid price. The chosen bidder, Alpha Electrical Service, presented here, is the qualified bidder who has submitted a complete bid.

It is recommended that the Board of Directors approve a Public Works Contract with Alpha Electrical Service for the construction of the Rodeo Grounds Pump Station Backup Power System Replacement Project and authorize the General Manager to execute the agreement.

ATTACHMENTS:

1. Request for Informal Bid
2. Engineer's Estimate for the Rodeo Grounds Pump Station Backup Power System Replacement Project
3. Public Works Contract
4. Exhibit A - Alpha Electrical Service Bid
5. Got Power Inc. DBA CD and Power Bid

REQUEST FOR INFORMAL BID

September 2024

Bid No. 05-2024-09

PACKET CONTENTS

Cambria Community Services District

Utilities & Engineering Department

NOTICE TO BIDDERS

Request for Quotations for Informal Bid No. 05-2024-09

DATE: September 5, 2024

SUBJECT: Emergency/Backup Generator and Automatic Transfer Switch Installation

The Cambria Community Services District is requesting proposals from licensed contractors for the replacement of a backup power supply generator and automatic transfer switch and the disposal of the old generator and transfer switch.

TIME AND PLACE FOR SUBMISSION:

BIDS DUE BY 3:00 PM ON September 25, 2024

Bids are to be delivered sealed to the District's Office, 1316 Tamson Drive, Cambria, CA 93428, or the CCSD Wastewater Treatment Plant, 5500 Heath Ln, Cambria, CA 93428, or mailed to Cambria Community Services District (CCSD) P.O. Box 65, Cambria, CA. 93428 by September 25th, 2024, at 3:00 p.m. At 3:30 pm at 5500 Heath Ln, Cambria, CA 93428, said informal bids will be opened. Emailed bids will be accepted at engineering@cambriacsd.org. Any bids which are delivered after this date and time will be refused. Any mailed bids received after this date and time will be returned unopened. Proposals that do not meet all the standards and requirements will not be considered.

Informal bids shall be presented in accordance with the specifications for the same, which are on file with the Utility Manager at the website address listed below.

https://www.cambriacsd.org/request-for-proposals

Inquiries regarding this informal bid should be directed to the Utility Manager via the Request for Information form at the above-listed website address.

Bid Security. Each proposal must be accompanied by cash, a certified or cashier's check, or bidder's bond on the prescribed form and made payable to the District for an amount equal to at least 10 percent of the amount of the Bid, such guaranty to be forfeited should the apparent successful bidder to whom the contract is awarded fail to furnish the required bonds and insurance certificates, and timely enter into the contract with the District. The security of unsuccessful bidders will be returned no later than sixty (60) days following the date of the award of the contract for the work.

- **CONTRACTOR MUST POSSESS, PRIOR TO AWARD, A VALID CALIFORNIA STATE ELECTRICAL CONTRACTORS LICENSE.**
- **THE SUBCONTRACTOR LISTING FORM AND NON-COLLUSION DECLARATION (INCLUDED IN EXHIBIT A) MUST BE SUBMITTED WITH THE BID.**
- **SUBCONTRACTORS MUST POSSESS A VALID CALIFORNIA STATE CONTRACTORS LICENSE FOR THEIR SUBCONTRACTED AREA PRIOR TO AWARD.**
- **THIS PROJECT IS TO BE BID AT PREVAILING WAGE RATES**

- **THE CONTRACTOR AWARDED THE PROJECT WILL ENTER INTO THE DISTRICT'S SHORT FORM PUBLIC WORKS CONTRACT AS ATTACHED HERE, AND MUST SUBMIT ANY REQUIRED BONDS AND THE CERTIFICATE OF WORKERS COMPENSATION, SUBCONTRACTOR LIST, AND NON-COLLUSION DECLARATION AS PROVIDED IN EXHIBIT A: BID PROPOSAL FORM**

PROJECT LOCATION:

2021 Rodeo Grounds Road, Cambria California

PROJECT NAME/BASIC DESCRIPTION:

Rodeo Grounds Pump Station Backup Power System Replacement Project

PROJECT DESCRIPTION SUMMARY:

The project consists of removing the existing manual transfer switch and replacing it with a new, automatic one, reworking the wiring and connections on the conductors between the new automatic transfer switch (AST) and exterior junction box to the left of the utility meter, and replacing the generator with a new generator on the same supports.

EQUIPMENT DESCRIPTION:

Blue Star Power Systems VD125-02FT4, Generator 277/480/3 Engine Model: Volvo TAD572VE 125kW Standby Power or similar tier 4 diesel-powered generator.

REQUIREMENTS FOR SUBMISSION:

- A filled-out copy of the Bid Proposal Form, including all the required attachments.
- A dated cover letter, signed by a person fully authorized to act on behalf of the **CONTRACTOR**, must be submitted with the proposal. The letter must indicate that the **CONTRACTOR** agrees to be bound by the proposal without modifications unless mutually agreed upon by the **CONTRACTOR** and CCSD.
- A work plan as outlined in Exhibit B – Project Description.
- A statement of qualifications and a list of five (5) references must be provided, along with documentation demonstrating the **CONTRACTOR's** ability to maintain accurate records.

Prevailing Wages. In accordance with the provisions of California Labor Code Sections 1770,1773, 1773.1, 1773.6 and 1773.7 as amended, the Director of the Department of Industrial Relations has determined the general prevailing rate of per diem wages in accordance with the standards set forth in Section 1773 for the locality in which the work is to be performed. A copy of said wage rates is on file at the office of the District. It shall be mandatory upon the contractor to whom the work is awarded and upon any subcontractor under the contractor to pay not less than said specified rates to all workers employed by them in the execution of the work.

Recommended Pre-Bid Conference. There will be an optional pre-bid conference on September 16th, 2024 at 1:00 pm at the Project Site. Bidders may contact James Green, Utility Manager, for additional information.

Contractor Registration with Department of Industrial Relations. In accordance with California Labor Code Section 1725.5, Contractors and Subcontractors (as defined by California Labor Code Section 1722.1) bidding on Public Works contracts in California shall be registered with the Department of Industrial Relations prior to bidding. Failure to provide proof of Contractor's registration as part of the Bid shall deem the Bid as non-responsive and will therefore be rejected by the District.

Compliance Monitoring and Enforcement. In accordance with the requirements of Labor Code Section 1771.4(a)(1), Bidders are hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relation.

Deposit of Securities in Lieu of Retainage. The Contractor may elect to receive 100 percent of payment due under the Contract Documents from time to time, without retention of any portion of the payment by the District, by depositing securities of equivalent value with the District in accordance with the provisions of Section 22300 of the California Public Contract Code. Such securities, if deposited by the Contractor, shall be valued by the District, whose decision on valuation of the securities shall be final. Securities eligible for investment under this provision shall be limited to those listed in Section 16430 of the California Government Code or bank or savings and loan certificates of deposit.

Agreement to Assign. In accordance with Section 4552 of the California Government Code, the bidder shall conform to the following requirements: In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act 15 U.S.C. 15, or under the Cartwright Act, Chapter 2.

Award of Contract. The District intends to award a contract to the responsive and responsible bidder with the lowest total bid price. All bids submitted shall be in accordance with the provisions of the contract documents. The District specifically reserves the right, in its sole discretion, to reject any or all bids, to re-bid, or to waive inconsequential defects in bidding not involving time, price or quality of the work. District may waive any minor irregularities in the bids. Any bid may be withdrawn prior to bid opening but not afterward.

Generator Replacement

Scope of Work:

Remove the existing generator.

- Install new generator on I-beam supports used for existing generator.
- Tie in existing wiring and test system.
- Flush-cut old wires in the second conduit and cap conduit.
- Dispose of the existing generator.
- Does not include permit (Project Permitting will be performed by CCSD)

Transfer Switch, Removal and Installation

- Provide and install 200 amp, 480-volt automatic transfer switch. It will be mounted in place of the existing manual transfer switch and have an integrated main circuit breaker.
- Rework wiring and connections on generator conductors between ATS and exterior junction box to the left of the utility meter. The junction box is to be replaced as it is in poor condition and rated for indoor use only.
- Contact & coordinate power interruption with PG&E for ATS installation.
- Dispose of the old generator, transfer switch, and all other old materials.
- Does not include freight, as it will be determined upon delivery.

Additional Notes:

- CCSD to obtain the necessary permits prior to the commencement of work.
- See Exhibit B for additional details.

SHORT FORM PUBLIC WORKS CONTRACT

for the Construction of:

RODEO GROUNDS PUMP STATION EMERGENCY/BACKUP GENERATOR REPLACEMENT

THIS AGREEMENT, made and entered into this ________ day of ______, 2024, by and between the **CAMBRIA COMMUNITY SERVICES DISTRICT**, a special district, hereinafter designated District, party of the first part, and ______________, hereinafter designated as Contractor, party of the second part,

WITNESSETH: That the parties hereto do mutually agree as follows:

ARTICLE I. For and in consideration of the payments and agreements hereinafter mentioned to be made and performed by District, Contractor agrees with District to furnish all materials, equipment and labor and construct facilities for District, and to perform and complete in a good and workmanlike manner all the work pertaining thereto shown on the plans and described in the specifications hereto attached and as generally described hereinbelow (the "project" or "work"), and to furnish at his own proper cost and expense all tools, equipment, labor, and materials necessary therefore, except such materials as in the said specifications are stipulated to be furnished by District, and to do everything required by this Contract and the said specifications and plans, and the requirements of the Utility Department Manager under them, to wit:

The Contractor's Proposal dated   , is hereby incorporated herein by this reference and attached as Exhibit A and made a part of this contract.

PROJECT OVERVIEW:

- Disconnect and remove the existing generator.
- Install new generator on I-beam supports used for existing generator.
- Flush-cut old wires in the second conduit and cap conduit.
- Contact & coordinate power interruption with PG&E for ATS install.
- Provide and install 200 amp, 480-volt automatic transfer switch (ATS).
  - To be mounted in place of the existing manual transfer switch
  - Will have an integrated main circuit breaker.
- Replace the exterior junction box and rework the wiring between ATS and the new exterior junction box.
- Tie in existing wiring and test system.
- Disposal of the existing generator and all other removed equipment and materials.

COMMENCEMENT OF WORK AND TIME LIMITS:
The Contractor shall commence Work on the Project as of May 1, 2025, and shall diligently prosecute the completion of said Project. Prior to commencing work, Contractor shall sign and return a copy of this Contract and any document hereto; provide proof of insurance as required herein; and, meet and confer with the Utility Manager and water system distribution staff at least one (1) day in advance. **ALL WORK MUST BE COMPLETED BY SEPTEMBER 1, 2025.**

LIQUIDATED DAMAGES:

Liquidated Damages. Pursuant to Government Code Section 53069.85, if work is not completed within the contract time or in strict accordance with the Project Schedule, it is understood, acknowledged and agreed that the District will suffer damage. It is therefore agreed that the Contractor shall pay to the District the sum of ($1000.00) for each and every calendar day of delay beyond the Contract Time, or beyond any completion schedule, construction schedule or Project milestones established in or pursuant to the Project Schedule, or beyond the time indicated in the Project Schedule for any individual Contract activity.

Contractor expressly understands, acknowledges and agrees that such liquidated damages can and shall be imposed if the Contractor does not meet each and every aspect of any activity schedule, completion schedule, construction schedule or Project milestones established in or pursuant to the Project Schedule. If the District accepts work or makes any payment under this Contract after a default by reason of delays, the acceptance of such work and/or payment(s) shall in no respect constitute a waiver or modification of any provisions regarding Contract Time, a completion schedule, the Project Schedule or the accrual of liquidated damages. In the event the same is not paid, the Contractor further agrees that the District may deduct the amount thereof from any money due or that may become due the Contractor under the Contract. This paragraph does not exclude recovery of damages under provisions of the Contract Documents, and is expressly in addition to the District's ability to seek other damages.

PAYMENT SCHEDULE:
District shall pay Contractor for the Project on a lump sum basis for a not-to-exceed amount of ____________.
A five percent (5%) retention shall be withheld from any monthly partial payment requests.

Final payment, constituting the entire unpaid balance of the Contract Sum, shall be paid by the District to the Contractor no sooner than thirty-five (35) days after a Notice of Completion has been recorded, unless otherwise stipulated in the Notice of Completion, provided the work has then been completed, the Contract fully performed, and a final Certificate for Payment has been issued by the District.

This Contract is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of contractors by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to Contractor of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This Agreement hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

ARTICLE II. For furnishing all said equipment, materials and labor, performing demolition as required, and doing all the work contemplated and embraced in this Contract; and for all loss and damage arising out of the nature of the work aforesaid, or from the action of the elements or from any unforeseen difficulties which may arise or be encountered in the prosecution of the work until its acceptance by District, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of work, except such as in the said specifications are expressly stipulated to be borne by District; and for well and faithfully completing the work and the whole thereof, in the manner shown and described in the said plans and specifications and in accordance with the requirements of the Utility Department Manager under them, District will pay and Contractor shall receive as full compensation therefore the amounts for such work as described above.

ARTICLE III. District hereby promises and agrees with said Contractor to employ, and does hereby employ, said Contractor to provide the materials and to do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner and upon the conditions set forth in the specifications; and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein contained.

ARTICLE IV. The following contract documents (if checked) are hereby incorporated in and made a part of this Contract as though set forth in full:

X	1.	Public Contract Code Section 9204;
X	2.	Statement of Prevailing Wages;
X	3.	Bond for Labor and Materials;
X	4.	Bond for Faithful Performance;
X	5.	Specifications (Standard Specifications, General Conditions & Technical);
X	6.	Exhibit B – Project Description;

ARTICLE V. If checked above, Contractor shall forthwith furnish in triplicate, a faithful performance bond in an amount equal to 100% of the contract price and a labor and materials bond in an amount equal to 100% of the contract price, both bonds to be written by a surety company acceptable to District and in the form prescribed by law.

ARTICLE VI. Materials: Should any of the materials or equipment prove defective or should the work prove defective due to faulty workmanship, material furnished or methods of installation, or should the work or any part thereof fail to operate properly as originally intended and in accordance with the drawings, typical details, and specifications, due to any of the above causes, all within twelve (12) months after date on which the work called for in this Contract is accepted by District, the undersigned agrees to reimburse District, upon demand, for its expenses incurred in restoring said work to the condition contemplated in said project, including the cost of any such equipment or materials replaced and the cost of removing and replacing any work necessary to make such replacement or repairs, or, upon demand by District, to replace any such materials and to repair said work completely without cost to District so that said work will function successfully as originally contemplated.
District shall have the unqualified option to make any needed replacement or repairs itself or to have such replacements or repairs done by the undersigned. In the event District elects to have said work performed by the undersigned, the undersigned agrees that the repairs shall be made and such materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from District. If the undersigned shall fail or refuse to comply with his obligations under this guaranty, District shall be entitled to all costs and expenses, including attorney's fees, reasonably incurred by reason of the said failure or refusal.

ARTICLE VII. If Contractor should be adjudged bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his subcontractors should persistently violate any of the provisions of the Contract, or if he should disregard laws, ordinances or the instructions of the Engineer, then District may, upon certificate of the Engineer when sufficient cause exists to justify such action, serve written notice upon Contractor and his surety (if applicable) of its intention to terminate the Contract, such notice to contain the reasons for such intention to terminate the Contract, and unless, within five (5) days after the serving of such notice, such violations shall cease and satisfactory arrangements for correction thereof be made, the Contract shall, upon the expiration of said five (5) days, cease and terminate.

In the event of any such termination, District shall immediately serve written notice thereof upon the surety (if applicable) and Contractor, and the surety shall have the right to take over and perform the Contract, provided, however, that if the surety, within ten (10) days after the serving upon it of notice of termination, does not give District written notice of its intention to take over and perform the Contract or does not commence performance thereof within the ten (10) days stated above from the date of the serving of such notice, District may take over the work and prosecute the same to completion by Contract or by any other method it may deem advisable, for the account and at the expense of Contractor, and Contractor and his surety shall be liable to District for any excess cost occasioned District thereby, and in such event District may, without liability for so doing, take possession of and utilize in completing the work such materials, appliances, plans and other property belonging to Contractor as may be on the site of the work and necessary therefore. In such case Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract price shall exceed the expenses of finishing the work, including compensation for additional managerial and administration services, such excess shall be paid Contractor. If such expense shall exceed such unpaid balance, Contractor shall pay the difference to District. The expense incurred by District, as herein provided, and damage incurred through Contractor's default, shall be certified by the District Utility Department Manager.

ARTICLE VIII. The Contractor shall indemnify, and hold harmless, the District, and its officers, officials, employees and agents, from and against any and all claims asserted, liability, loss, damage, expense, costs (including without limitation costs and fee of litigation) arising from, directly or indirectly, or in connection with this Contract or the acts or omissions of Contractor, Contractor's Subcontractors, employees, representatives, agents and invitees including, but not limited to, performance of the work hereunder or failure to comply with any of the obligations contained herein, except such loss or damage which was caused by the established proven negligence or willful misconduct of District, its officers, officials, employees and agents. Said indemnification and hold harmless provisions shall be in full force and effect regardless of whether or not there shall be insurance policies covering and applicable to such liability, loss, damage, expense or cost.

The Contractor agrees that the use of any and all public streets and improvements which are part of or subject to this Contract shall be at all times, prior to the final acceptance by the District, the sole and exclusive risk of the Contractor. The Contractor further specifically agrees that he shall indemnify and hold District free of any liability for any accident, loss, or damage to the work, which is the subject of this Contract prior to its completion and acceptance by the District.

ARTICLE IX. It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid or proposal (if one) therefore, then this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said bid or proposal conflicting herewith.

ARTICLE X. Time is of the essence of this contract and failure to comply with this provision shall be a material breach of this contract.

ARTICLE XI. If any part of this contract is held invalid by a court of competent jurisdiction, the balance shall retain its full force and effect.

ARTICLE XII. Maintenance of required insurance coverage is a material element of this contract and failure to maintain or renew coverage or to provide evidence of renewal shall be a material breach of this contract. **Contractor shall execute and provide the attached Certificate of Workers Compensation Insurance.**

ARTICLE XIV. Additional Provisions Required by Law. Each and every provision of law and clause required by law to be inserted in this Contract, including but not limited to the following statutorily required provisions, shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

The following statutorily required provisions hereby apply to this contract:

Record Audit. In accordance with Government Code, Section 8546.7, records of both the District and the Contractor shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

Retention of Securities. Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract, at the request and expense of the Contractor.

Claims. In accordance with the requirements of Public Contract Code Section 9204(e), a copy of Public Contract Code Section 9204 is attached hereto and made a part hereof.

IN WITNESS WHEREOF: The parties hereto have caused this Contract to be executed the day and year first above written.

CAMBRIA COMMUNITY SERVICES DISTRICT

____
MATTHEW MCELHENIE, General Manager

ATTEST:

____
HALEY DODSON, Confidential Administrative Assistant

APPROVED AS TO FORM:

____
TIMOTHY J. CARMEL, District Counsel

CONTRACTOR

By:____________________

Its:

Date:

CALIFORNIA PUBLIC CONTRACT CODE SECTION 9204

Resolution of claims in connection with public works project [Effective until 1/1/2027]

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)(A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d)(1)(A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2)(A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on their own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute that is enacted before January 1, 2027, deletes or extends that date.

Ca. Pub. Cont. Code § 9204

Amended by Stats 2019 ch 489 (AB 456),s 1, eff. 1/1/2020.

Added by Stats 2016 ch 810 (AB 626),s 1, eff. 1/1/2017.

-- END CALIFORNIA PUBLIC CONTRACT CODE SECTION 9204 --

STATEMENT OF PREVAILING WAGES

In accordance with California Labor Code Section 1725.5, Contractors and Subcontractors (as defined by California Labor Code Section 1722.1) bidding on or engaging in the performance of any Public Works contracts in California shall be registered with the Department of Industrial Relation.

In accordance with California Labor Code Section 1770 and 1773, the District has determined that prevailing wage rates apply to this project. Copies of the prevailing rates of per diem wages applicable to this Contract are available from the California Division of Labor Statistics and Research at https://www.dir.ca.gov/Public-Works/Prevailing-Wage.html or 455 Golden Gate Ave. 9th Floor, San Francisco, CA 94102. Any employee whose type of work is not covered by any of the classified wage rates shall be paid not less than the rate of wage listed for the classification which most nearly corresponds to the type of work performed.

Pursuant to California Labor Code Section 1775, the Contractor shall forfeit no more than $200 per calendar day, or portion of a day, for each worker paid less than the prevailing rates for such work or craft, and the penalty shall be imposed and distributed pursuant to Section 1775.

The following Labor Code sections are hereby referenced and made a part of this Agreement:

1. Section 1775 - Penalty for Failure to Comply with Prevailing Wage Rates.
2. Section 1777.5 - Apprenticeship Requirements.
3. Section 1813 - Penalty for Failure to Pay Overtime.
4. Sections 1810 and 1811 - Working Hour Restrictions.
5. Section 1776 - Payroll Records.
6. Section 1773.8 - Travel and Subsistence Pay.

The District will not recognize any claims for additional compensation because of the payment of the wages set forth in the Contract.

In accordance with the requirements of Labor Code Section 1771.4(a)(1), this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations

In accordance with the provisions of the California Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.17 of the California Labor Code. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid or may have been paid to a debarred subcontractor by a contractor on the Project shall be returned to the Agency. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

-- END OF STATEMENT OF PREVAILING WAGES --

PAYMENT BOND (FOR LABOR AND MATERIAL)

KNOW ALL MEN BY THESE PRESENTS:

That we, ____ , as Principal, and ______________________________________ as Surety, are held and firmly bound unto the Cambria Community Services District, in the sum of ____ Dollars ($____________________)

lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The condition of the above obligation is such that whereas said Principal has been awarded and is about to enter into a written contract with the Cambria Community Services District for the work described in CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF, **"Rodeo Grounds Pump Station Emergency/Backup Generator Replacement",** which is attached hereto, made a part hereof, and to which reference is hereby made for all particulars, and is required by said District to give this bond in connection with the execution of said contract;

NOW THEREFORE, if said Principal, as Contractor in said contract, or Principal's Subcontractor, fail to pay any of the persons referred to in Section 9100 of the Civil Code of the State of California for labor performed, skills or other necessary services bestowed, site improvement made, equipment leased, or appliances, equipment implements, machinery, materials, power, provender, provisions, teams, or trucks furnished or used in, upon, for, or about the performance of the work contracted to be done, or for amounts due under the employment Insurance Act with respect to work or labor performed by any such claimant, said Surety shall pay for the same. In an amount not exceeding the sum specified above; and if suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond is pursuant to the provisions of Ch 7 Div 3, Pt 4, Tit 15, of the Civil Code of the State of California, and shall insure to the benefit of any of the persons referred to in said Civil Code Section 9100, as it now exists or may hereafter be amended, so as to give a fight of action to such persons or their assigns in any suit brought upon this bond. No premature payment by said District to said Principal shall exonerate any Surety unless the District Board of Directors of said District shall have actual notice that such payment is premature at the time and it is ordered by said Board, and then only to the extent that such payment shall result in loss to such Surety, but in no event more than the amount of such premature payment.

It is agreed, that any alterations in the work to be done, or increase or decrease of the material to be furnished, which may be made pursuant to the terms of said contract shall not in any way release either the Principal or Surety hereunder, nor shall any extension of time granted under the provisions of said contract release either the Principal or Surety, and notice of such alterations or extensions of the contract is hereby waived by the surety.

WITNESS our hands this _________________ day of __________________, 20__.

_______________________________ _______________________________

_______________________________ _______________________________

Surety Principal

ALL SIGNATURES MUST BE WITNESSED BY NOTARY (Attach appropriate jurats)

-- END OF PAYMENT BOND --

FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, ____ , as Principal, and ____ as Surety, are held and firmly bound unto the Cambria Community Services District,

in the sum of ____ Dollars

($____________________________)

lawful money of the United States, for the payment of which sum, well and truly to be made, has been awarded and is about to enter into a written contract with the Cambria Community Services District for the work described in the CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF **"Rodeo Grounds Pump Station Emergency/Backup Generator Replacement"**, which is attached hereto, made a part hereof, and to which reference is hereby made for all particulars, and is required by said District to give this bond in connection with the execution of said contract;

NOW, THEREFORE, if said Principal shall well and truly do and perform all of the covenants and obligations of said contract on Principal's part to be done and performed at the times and in the manner specified therein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect. No premature payment by said District to said Principal shall exonerate any Surety unless the District Board of Directors of said District shall have actual notice that such payment is premature at the time it is ordered by said Board, and then only to the extent that such payment shall result in loss to such Surety, but in no event more than the amount of such premature payment.

It is agreed, that any alterations in the work to be done, or increase or decrease of the material to be furnished, which may be made pursuant to the terms of said contract shall not in any way release either the Principal or Surety hereunder, nor shall any extensions of time granted under the provisions of said contract release either the principal or surety, and notice of such alterations or extensions of the contract is hereby waived by the Surety.

WITNESS our hands this ________________ day of __________________, 20__.

___________________________________ ___________________________________

___________________________________ ___________________________________

Surety Principal

ALL SIGNATURES MUST BE WITNESSED BY NOTARY (Attach appropriate jurats)

-- END OF FAITHFUL PERFORMANCE BOND --

STANDARD SPECIFICATIONS

A. General: The work embraced herein shall be done in accordance with the applicable provisions of the most recently issued California Building Code, "Green Book" Standard Specifications for Public Works Construction, hereinafter referred to as Standard Specifications, the District's Standard Plans, hereinafter referred to as "Standard Plans", insofar as the same may apply, and in accordance with the following Standard Provisions.

The following provisions are hereby added to the Standard Specifications:

i. Section 5 – Utilities, subpart 5-1: All potholes must be filled in the same day, unless otherwise allowed by the Utility Director. Surrounding areas shall be restored to their original condition.

B. Definition of Terms: Whenever the following terms are used in the Standard Specifications, they shall be understood to mean the following:

"Owner" or "Agency":	Cambria Community Services District
"Board":	Cambria Community Services District Board of Directors
"Defective Work":	The term "defective work" shall include work that does not conform to the contract specifications.
"Utility Director":	The Utility Director, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Other terms appearing in the Standard Specifications shall be given the intent and meaning specified therein.

C. Description of the Work: The work shall consist of furnishing and supplying labor, materials, tools, equipment, transportation, and services necessary to complete the subject project as described in the project plans.

D. Control of Work: The Utility Director shall decide all questions, which may arise as to quality of work, acceptability of materials, and conduct of the work, including, but not limited to, coordination and changes in plans, superintendence of work, control of equipment, and inspection of work. Any person employed who is found by any District representative to be incompetent, intemperate, troublesome, disorderly, or otherwise objectionable or who fails or refuses to perform work properly and acceptably, shall be immediately removed from the Project upon request, by the Contractor, and shall not again be employed on the Project.

E. Construction Schedule: The contractor shall provide the Utility Director with a detailed schedule outlining the procedure and approved by the Utility Director prior to performing any work other than preliminary matters such as ordering materials and setting up staging areas. Extensions of the contract period due to delays that do not affect the critical path will not be allowed, if the delay can be accommodated within available float time.

F. Guaranty: The Contractor shall guarantee all materials, equipment furnished, and work performed for a period of one (1) year from the date of final completion. The Contractor warrants and guarantees for a period of one (1) year from the date of final acceptance of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reasons of such defects including the repairs of any damages to other parts of the system resulting from such defects. The District will give notice of observed defects with reasonable promptness. In the event that the Contractor should fails to make such repairs, adjustments, or other work that may be necessary by such defects the District may do so and charge the Contractor the cost thereby incurred, as well as an administrative fee of an additional twenty 20% of the cost thereby incurred by the District.

G. Contract Changes: When changes in work are required or initiated by the Contractor or the Cambria Community Services District, the procedures in Section 3 of the Standard Specifications shall govern.

H. Existing Utilities: The Contractor shall be responsible for contacting all utility companies and/or utility districts as to location and/or relocation of existing utilities prior to construction. The Contractor shall contact Underground Service Alert [USA], telephone 1-800-642-2444, a minimum of ten (10) days prior to any excavation. The District assumes no responsibility for the completeness or accuracy of the delineation of any underground utilities, or the existence of other buried objects or utilities which are not shown on the Plans. The Contractor is solely responsible for any damage to underground or above ground utilities, which may be incurred as a result of any work performed by him under this Contract, regardless of the fact that the utilities' existence was known or unknown.

I. Prosecution, Progress and Acceptance of the Work: The Contractor's prosecution, progress and acceptance of the work shall be in accordance with Section 6 of the Standard Specifications and these Special Provisions.

J. Traffic, Access and Signage: Traffic control, if any, shall be in accordance with Section 7-10 of the Standard Specifications. The Contractor shall furnish, place and maintain such devices necessary to provide safe passage for the traveling public through the construction sites, as well as for the safeguard of workers. The Contractor shall furnish, place and maintain such devices in accordance with the most recent "California Manual on Uniform Traffic Control Devices" published by the State of California, Department of Transportation (Caltrans). The provisions shall not relieve the Contractor from the responsibility to provide such additional devices as are necessary for public safety. The Contractor shall furnish, place, maintain and remove all signage needed for maintaining public safety and controlling traffic.

K. Insurance Requirements and Indemnification:

i. General: The Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder, by the Contractor, his agents, representatives, employees or Subcontractors.

ii. Minimum Scope of Insurance: Coverage shall be at least as broad as:

a. ISO CGL coverage ("Occurrence," Form CG-0001).
b. ISO CGL Endorsement Form (ISO CG 20 10 11 85).
c. ISO Form No. CA-0001 (ED. 1/78), covering Automobile Liability, Code 1, "Any Auto," and endorsement CA-0025.
d. Worker's Compensation Insurance as required by the State of California;
e. Course of Construction insurance covering for all risks of loss.

iii. Minimum Limits of Insurance: The Contractor shall maintain limits no less than:

General Liability:	$1,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit;
Automobile Liability:	$1,000,000 combined single limit per accident for bodily injury and property damage; and
Worker's Compensation:	As required by the State of California.

iv. Other Insurance Provisions: The policies are to contain, or to be endorsed to contain, the following provisions:

GENERAL LIABILITY AND AUTOMOBILE LIABILITY COVERAGE:

a. The District, its officials, employees, agents and volunteers; are to be covered as insured as respects liability arising out of activities performed by or on behalf of the Contractor, including but not limited to blanket contractual liability, broad form property damage, explosion, collapse and underground hazard coverage, products and completed operations of the Contractor, or premises owned, leased or used by the Contractor, or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its officials, employees or volunteers, and shall protect them from claims for personal injury, death or property damage suffered by third persons or by officers, agents and employees of Contractor and arising out of or in connection with the work which is the subject of this Contract.

b. The Contractor's insurance coverage shall be primary insurance as respects the District, its officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by the District, its officials, employees, agents or volunteers; shall be in excess of the Contractor's insurance, and shall not contribute with it.

c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officials, employees, agents or volunteers.

d. Coverage shall state that the Contractor's insurance shall apply separately to each insured against who claim is made or suit is brought, except with respect to the limits of the insurer's liability.

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY COVERAGE:

a. The insurer shall agree to waive all rights of subrogation against the District, its officials, employees, agents, and volunteers for losses arising from work performed by the Contractor for the District.

ALL COVERAGE:

a. Each insurance policy required by this Section shall be in effect on the date the work is commenced and shall expire no sooner than one (1) year after the date on which the work is accepted by the District. Each insurance policy required by this Section shall be endorsed using ISO Form (CG 20 10 11 85) to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits, except after thirty (30) days prior written notice by Certified Mail, Return Receipt Requested has been given to the District.

b. Insurance is to be placed with insurers with a Best Rating of no less than A-V and who are admitted to write policies in the State of California and contribute to the state guaranty fund.

c. Contractors shall furnish the District with certificates of insurance and with original endorsements affecting coverage required by this Section (actual policy). The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms provided by the District and are to be received and approved in writing by the District before work commences. The District reserves the right to require complete, certified copies of all insurance policies, including endorsements affecting the coverage required by these Special Provisions at any time.

d. The Contractor shall include all Subcontractors as named insured under his policies, or shall furnish separate certificates and endorsements for each Subcontractor. All coverage for Subcontractors shall be subject to all of the requirements stated herein.

e. The Contractor shall indemnify, defend, and hold harmless the District, and its officers, officials, employees and agents, from and against any and all claims asserted, liability, loss, damage, expense, costs (including without limitation costs and fee of litigation) of every nature arising of, directly or indirectly, or in connection with this Contract or the acts or omissions of Contractor, contractor's subcontractors, employees, representatives, agents and invitees including, but not limited to, performance of the work hereunder or failure to comply with any of the obligations contained herein, except such loss or damage which was caused by the established active negligence of District or the established sole negligence or willful misconduct of District, its officers, officials, employees and agents. Said indemnification and hold harmless provisions shall be in full force and effect regardless of whether or not there shall be insurance policies covering and applicable to such liability, loss, damage, expense or cost. The Contractor agrees that the use of any and all public streets and improvements which are part of or subject to this Contract shall be at all times, prior to the final acceptance by the District, the sole and exclusive risk of the Contractor. The Contractor further specifically agrees that he shall indemnify and hold the District free of any liability for any accident, loss, or damage to the work, which is the subject of this Contract prior to its completion and acceptance by the District.

L. <u>Non-Discrimination</u>: While this Contract is in effect, the Contractor shall comply with all provisions of the California Labor Code Section 1735, as amended, regarding non-discrimination practices and equal employment opportunity.

M. <u>Permits and Taxes</u>: Unless otherwise provided in Contract documents, the Contractor shall obtain, and pay for, all construction permits, licenses or other permits necessary to complete the project and shall be responsible for all governmental charges, inspection fees, utility connection charges, and sales and use taxes.

N. <u>Notices</u>: Any notices from one party to the other with respect to this Contract shall be mailed, faxed, e-mailed, or delivered as shown on the signature block on the Contract.

O. <u>Effectiveness:</u> This Contract shall be effective only when signed by both parties to the Contract.

P. <u>Waiver</u>: The waiver of any breach of any condition, covenant, term, or provision of this Contract by any party to this Contract shall not be deemed to be a waiver of any preceding or subsequent breach under the Contract, nor shall any waiver constitute a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver.

Q. <u>Authorizations</u>: All officers and individuals executing, this and other documents on behalf of the respective parties do hereby certify and warrant that they have the capacity and have been duly authorized to so execute said documents on behalf of the entity so indicated. Each signatory shall also indemnify the other party to this Agreement, and hold them harmless, from any and all damages, costs, attorneys' fees, and other expenses, if the signatory is not so authorized.

R. <u>Severability:</u> If any term, provision, covenant, or condition of this Contract shall be or become illegal, invalid, null, void, unenforceable, or against public policy, in whole or in part, or shall be held by any court of competent jurisdiction to be illegal, invalid, null, or void, or against public policy, the term, provision, covenant, or condition shall be deemed severable, and the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected, impaired, or invalidated. The term, provision, covenant, or condition that is so invalidated, voided, or held to be unenforceable shall be modified or changed by the Parties to the extent possible to carry out the intentions and directives set forth in this Contract.

S. <u>Entire Agreement:</u> This Contract constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the Contract and supersedes all prior and contemporaneous agreements, promises, representations, warranties, understandings, or undertakings by either of the Parties, either oral or written, of any character or nature. No party has been induced to enter into this Agreement by, nor is any party relying on, any representation or warranty outside those expressly set forth in this Contract.

T. <u>Attorney's Fees.</u> In any litigation, arbitration, or other proceeding in law or equity by which one party to the Contract seeks to enforce its contract rights under the Contract, to resolve an alleged dispute, breach, default, or misrepresentation in connection with any of the provisions of this Contract, to seek a declaration of any rights or obligations under this Contract, or to interpret the provisions of this Contract, the prevailing party shall be entitled to recover from the losing party actual attorneys' fees incurred to resolve the dispute and to enforce the final judgment, award, decision, or order and such fees, costs; or expenses shall be in addition to any other relief to which the prevailing party may be entitled.

-- END OF STANDARD SPECIFICATIONS –

EXHIBIT B - PROJECT DESCRIPTION

Project overview: The project consists of removing the existing manual transfer switch and replacing it with a new, automatic one, reworking the wiring and connections on generator conductors between the new automatic transfer switch (AST) and exterior junction box to the left of the utility meter, and replacing the generator with a new generator on the same supports.

Additional details on the project:

1. The basic specifications for the automatic transfer switch are that it is a 200 amp, 480-volt automatic transfer switch. It will be mounted in place of the existing manual transfer switch and have an integrated main circuit breaker.
2. Replace the wiring and connections on generator conductors between ATS and the exterior junction box to the left of the utility meter. The junction box must be replaced as it is in poor condition and rated for indoor use only.
3. Establish a connection for temporary backup power (pin and sleeve) to maintain power to the Booster Station during installation. The CCSD will provide a towable backup power generator.
4. Remove the existing generator; install a new diesel-powered generator on the same supports; use the existing underground conduit to wire the generator to the replaced junction box next to the ATS. Flush cut the wires in the second conduit and cap conduit. Please include the make and model of the generator and the make and model of the diesel engine for the generator in the RFP response. The replacement generator must be powered by a diesel engine and be Tier 4 compliant.
5. Dispose of all removed equipment and parts, including the old generator, the old transfer switch, and all other removed materials, as well as any trash generated during the installation process.
6. Provide training to staff on new equipment operations.

The following must be noted and measures to comply (e.g., a work plan) included in the response to the RFP:

1. The **MAXIMUM** amount of time the pump station can be without backup power is 36 hours. This is incredibly important and **MUST** be taken into consideration when planning the work. The scope of work includes adding a connector/plug for a trailer-mounted generator for backup power during the generator replacement work. CCSD will supply a trailer-mounted generator.
2. The **MAXIMUM** amount of time the pump station can be without power entirely (e.g., during ATS installation/connection or disconnection) is 6 hours.

Additional notes:

1. Permits are outside the scope of this project. CCSD will supply all the necessary permits for the work to be performed.
2. Inspections of the completed work are outside the scope of this project. CCSD will provide all inspections it deems necessary.

The completed project shall result in a fully functional, permanent-mounted, diesel-powered generator and automatic transfer switch.

-- END EXHIBIT B - PROJECT DESCRIPTION --

Engineers' Estimate for the Rodeo Grounds Pump Station Backup Power System Replacement Project

Informal Bid No 05-2024-09

Item	Estimated Cost
Generator	$87,270.00
Freight for Generator	$5,000.00
Generator Installation materials and labor	$16,900.00
Automatic Transfer Switch materials and labor	$14,241.00
Generator Disposal	$2,000.00
Total	$125,411.00

Note: All labor at prevailing wage rates

SHORT FORM PUBLIC WORKS CONTRACT

for the Construction of:

RODEO GROUNDS PUMP STATION BACKUP POWER SYSTEM REPLACEMENT PROJECT

THIS AGREEMENT, made and entered into this __________ day of _______, 2024, by and between the **CAMBRIA COMMUNITY SERVICES DISTRICT**, a special district, hereinafter designated District, party of the first part, and **ALPHA ELECTRICAL SERVICE** hereinafter designated as Contractor, party of the second part,

WITNESSETH: That the parties hereto do mutually agree as follows:

ARTICLE I. For and in consideration of the payments and agreements hereinafter mentioned to be made and performed by District, Contractor agrees with District to furnish all materials, equipment and labor and construct facilities for District, and to perform and complete in a good and workmanlike manner all the work pertaining thereto shown on the plans and described in the specifications hereto attached and as generally described hereinbelow (the "project" or "work"), and to furnish at his own proper cost and expense all tools, equipment, labor, and materials necessary therefore, except such materials as in the said specifications are stipulated to be furnished by District, and to do everything required by this Contract and the said specifications and plans, and the requirements of the Utility Department Manager under them, to wit:

The Contractor's Proposal dated September 25, 2024, is hereby incorporated herein by this reference and attached as Exhibit A and made a part of this contract.

PROJECT OVERVIEW:

- Disconnect and remove the existing generator.
- Install new generator on I-beam supports used for existing generator.
- Flush-cut old wires in the second conduit and cap conduit.
- Contact & coordinate power interruption with PG&E for ATS install.
- Provide and install 200 amp, 480-volt automatic transfer switch (ATS).
    - To be mounted in place of the existing manual transfer switch
    - Will have an integrated main circuit breaker.
- Replace the exterior junction box and rework the wiring between ATS and the new exterior junction box.
- Tie in existing wiring and test system.
- Disposal of the existing generator and all other removed equipment and materials.

COMMENCEMENT OF WORK AND TIME LIMITS:
The Contractor shall commence Work on the Project as of May 1, 2025, and shall diligently prosecute the completion of said Project. Prior to commencing work, Contractor shall sign and return a copy of this Contract and any document hereto; provide proof of insurance as required herein; and, meet and confer with the Utility Manager and water system distribution staff at least one (1) day in advance. **ALL WORK MUST BE COMPLETED BY SEPTEMBER 1, 2025.**

LIQUIDATED DAMAGES:

Liquidated Damages. Pursuant to Government Code Section 53069.85, if work is not completed within the contract time or in strict accordance with the Project Schedule, it is understood, acknowledged and agreed that the District will suffer damage. It is therefore agreed that the Contractor shall pay to the District the sum of ($1000.00) for each and every calendar day of delay beyond the Contract Time, or beyond any completion schedule, construction schedule or Project milestones established in or pursuant to the Project Schedule, or beyond the time indicated in the Project Schedule for any individual Contract activity.

Contractor expressly understands, acknowledges and agrees that such liquidated damages can and shall be imposed if the Contractor does not meet each and every aspect of any activity schedule, completion schedule, construction schedule or Project milestones established in or pursuant to the Project Schedule. If the District accepts work or makes any payment under this Contract after a default by reason of delays, the acceptance of such work and/or payment(s) shall in no respect constitute a waiver or modification of any provisions regarding Contract Time, a completion schedule, the Project Schedule or the accrual of liquidated damages. In the event the same is not paid, the Contractor further agrees that the District may deduct the amount thereof from any money due or that may become due the Contractor under the Contract. This paragraph does not exclude recovery of damages under provisions of the Contract Documents, and is expressly in addition to the District's ability to seek other damages.

PAYMENT SCHEDULE:
District shall pay Contractor for the Project on a lump sum basis for a not-to-exceed amount of one hundred and thirty-six thousand six hundred and ninety-two dollars and eighty-nine cents ($136,692.89).
A five percent (5%) retention shall be withheld from any monthly partial payment requests.

Final payment, constituting the entire unpaid balance of the Contract Sum, shall be paid by the District to the Contractor no sooner than thirty-five (35) days after a Notice of Completion has been recorded, unless otherwise stipulated in the Notice of Completion, provided the work has then been completed, the Contract fully performed, and a final Certificate for Payment has been issued by the District.

This Contract is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of contractors by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to Contractor of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This Agreement hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

ARTICLE II. For furnishing all said equipment, materials and labor, performing demolition as required, and doing all the work contemplated and embraced in this Contract; and for all loss and damage arising out of the nature of the work aforesaid, or from the action of the elements or from any unforeseen difficulties which may arise or be encountered in the prosecution of the work until its acceptance by District, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of work, except such as in the said specifications are expressly stipulated to be borne by District; and for well and faithfully completing the work and the whole thereof, in the manner shown and described in the said plans and specifications and in accordance with the requirements of the Utility Department Manager under them, District will pay and Contractor shall receive as full compensation therefore the amounts for such work as described above.

ARTICLE III. District hereby promises and agrees with said Contractor to employ, and does hereby employ, said Contractor to provide the materials and to do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner and upon the conditions set forth in the specifications; and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein contained.

ARTICLE IV. The following contract documents (if checked) are hereby incorporated in and made a part of this Contract as though set forth in full:

X	1.	Public Contract Code Section 9204;
X	2.	Statement of Prevailing Wages;
X	3.	Bond for Labor and Materials;
X	4.	Bond for Faithful Performance;
X	5.	Specifications (Standard Specifications, General Conditions & Technical);
X	6.	Exhibit B – Project Description;

ARTICLE V. If checked above, Contractor shall forthwith furnish in triplicate, a faithful performance bond in an amount equal to 100% of the contract price and a labor and materials bond in an amount equal to 100% of the contract price, both bonds to be written by a surety company acceptable to District and in the form prescribed by law.

ARTICLE VI. Materials: Should any of the materials or equipment prove defective or should the work prove defective due to faulty workmanship, material furnished or methods of installation, or should the work or any part thereof fail to operate properly as originally intended and in accordance with the drawings, typical details, and specifications, due to any of the above causes, all within twelve (12) months after date on which the work called for in this Contract is accepted by District, the undersigned agrees to reimburse District, upon demand, for its expenses incurred in restoring said work to the condition contemplated in said project, including the cost of any such equipment or materials replaced and the cost of removing and replacing any work necessary to make such replacement or repairs, or, upon demand by District, to replace any such materials and to repair said work completely without cost to District so that said work will function successfully as originally contemplated.
District shall have the unqualified option to make any needed replacement or repairs itself or to have such replacements or repairs done by the undersigned. In the event District elects to have said work performed by the undersigned, the undersigned agrees that the repairs shall be made and such

materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from District. If the undersigned shall fail or refuse to comply with his obligations under this guaranty, District shall be entitled to all costs and expenses, including attorney's fees, reasonably incurred by reason of the said failure or refusal.

ARTICLE VII. If Contractor should be adjudged bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his subcontractors should persistently violate any of the provisions of the Contract, or if he should disregard laws, ordinances or the instructions of the Engineer, then District may, upon certificate of the Engineer when sufficient cause exists to justify such action, serve written notice upon Contractor and his surety (if applicable) of its intention to terminate the Contract, such notice to contain the reasons for such intention to terminate the Contract, and unless, within five (5) days after the serving of such notice, such violations shall cease and satisfactory arrangements for correction thereof be made, the Contract shall, upon the expiration of said five (5) days, cease and terminate.

In the event of any such termination, District shall immediately serve written notice thereof upon the surety (if applicable) and Contractor, and the surety shall have the right to take over and perform the Contract, provided, however, that if the surety, within ten (10) days after the serving upon it of notice of termination, does not give District written notice of its intention to take over and perform the Contract or does not commence performance thereof within the ten (10) days stated above from the date of the serving of such notice, District may take over the work and prosecute the same to completion by Contract or by any other method it may deem advisable, for the account and at the expense of Contractor, and Contractor and his surety shall be liable to District for any excess cost occasioned District thereby, and in such event District may, without liability for so doing, take possession of and utilize in completing the work such materials, appliances, plans and other property belonging to Contractor as may be on the site of the work and necessary therefore. In such case Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract price shall exceed the expenses of finishing the work, including compensation for additional managerial and administration services, such excess shall be paid Contractor. If such expense shall exceed such unpaid balance, Contractor shall pay the difference to District. The expense incurred by District, as herein provided, and damage incurred through Contractor's default, shall be certified by the District Utility Department Manager.

ARTICLE VIII. The Contractor shall indemnify, and hold harmless, the District, and its officers, officials, employees and agents, from and against any and all claims asserted, liability, loss, damage, expense, costs (including without limitation costs and fee of litigation) arising from, directly or indirectly, or in connection with this Contract or the acts or omissions of Contractor, Contractor's Subcontractors, employees, representatives, agents and invitees including, but not limited to, performance of the work hereunder or failure to comply with any of the obligations contained herein, except such loss or damage which was caused by the established proven negligence or willful misconduct of District, its officers, officials, employees and agents. Said indemnification and hold harmless provisions shall be in full force and effect regardless of whether or not there shall be insurance policies covering and applicable to such liability, loss, damage, expense or cost.

The Contractor agrees that the use of any and all public streets and improvements which are part of or subject to this Contract shall be at all times, prior to the final acceptance by the District, the sole and exclusive risk of the Contractor. The Contractor further specifically agrees that he shall indemnify and hold District free of any liability for any accident, loss, or damage to the work, which is the subject of this Contract prior to its completion and acceptance by the District.

ARTICLE IX. It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid or proposal (if one) therefore, then this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said bid or proposal conflicting herewith.

ARTICLE X. Time is of the essence of this contract and failure to comply with this provision shall be a material breach of this contract.

ARTICLE XI. If any part of this contract is held invalid by a court of competent jurisdiction, the balance shall retain its full force and effect.

ARTICLE XII. Maintenance of required insurance coverage is a material element of this contract and failure to maintain or renew coverage or to provide evidence of renewal shall be a material breach of this contract. **Contractor shall execute and provide the attached Certificate of Workers Compensation Insurance.**

ARTICLE XIV. Additional Provisions Required by Law. Each and every provision of law and clause required by law to be inserted in this Contract, including but not limited to the following statutorily required provisions, shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

The following statutorily required provisions hereby apply to this contract:

Record Audit. In accordance with Government Code, Section 8546.7, records of both the District and the Contractor shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

Retention of Securities. Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract, at the request and expense of the Contractor.

Claims. In accordance with the requirements of Public Contract Code Section 9204(e), a copy of Public Contract Code Section 9204 is attached hereto and made a part hereof.

IN WITNESS WHEREOF: The parties hereto have caused this Contract to be executed the day and year first above written.

CAMBRIA COMMUNITY SERVICES DISTRICT

____
MATTHEW MCELHENIE, General Manager

ATTEST:

____
HALEY DODSON, Confidential Administrative Assistant

APPROVED AS TO FORM:

____
TIMOTHY J. CARMEL, District Counsel

CONTRACTOR

By:__________________________

Its:

Date:

CALIFORNIA PUBLIC CONTRACT CODE SECTION 9204

Resolution of claims in connection with public works project [Effective until 1/1/2027]

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)(A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d)(1)(A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2)(A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on their own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute that is enacted before January 1, 2027, deletes or extends that date.

Ca. Pub. Cont. Code § 9204

Amended by Stats 2019 ch 489 (AB 456),s 1, eff. 1/1/2020.

Added by Stats 2016 ch 810 (AB 626),s 1, eff. 1/1/2017.

-- END CALIFORNIA PUBLIC CONTRACT CODE SECTION 9204 --

STATEMENT OF PREVAILING WAGES

In accordance with California Labor Code Section 1725.5, Contractors and Subcontractors (as defined by California Labor Code Section 1722.1) bidding on or engaging in the performance of any Public Works contracts in California shall be registered with the Department of Industrial Relation.

In accordance with California Labor Code Section 1770 and 1773, the District has determined that prevailing wage rates apply to this project. Copies of the prevailing rates of per diem wages applicable to this Contract are available from the California Division of Labor Statistics and Research at https://www.dir.ca.gov/Public-Works/Prevailing-Wage.html or 455 Golden Gate Ave. 9th Floor, San Francisco, CA 94102. Any employee whose type of work is not covered by any of the classified wage rates shall be paid not less than the rate of wage listed for the classification which most nearly corresponds to the type of work performed.

Pursuant to California Labor Code Section 1775, the Contractor shall forfeit no more than $200 per calendar day, or portion of a day, for each worker paid less than the prevailing rates for such work or craft, and the penalty shall be imposed and distributed pursuant to Section 1775.

The following Labor Code sections are hereby referenced and made a part of this Agreement:

1. Section 1775 - Penalty for Failure to Comply with Prevailing Wage Rates.
2. Section 1777.5 - Apprenticeship Requirements.
3. Section 1813 - Penalty for Failure to Pay Overtime.
4. Sections 1810 and 1811 - Working Hour Restrictions.
5. Section 1776 - Payroll Records.
6. Section 1773.8 - Travel and Subsistence Pay.

The District will not recognize any claims for additional compensation because of the payment of the wages set forth in the Contract.

In accordance with the requirements of Labor Code Section 1771.4(a)(1), this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations

In accordance with the provisions of the California Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.17 of the California Labor Code. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid or may have been paid to a debarred subcontractor by a contractor on the Project shall be returned to the Agency. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

-- END OF STATEMENT OF PREVAILING WAGES --

PAYMENT BOND (FOR LABOR AND MATERIAL)

KNOW ALL MEN BY THESE PRESENTS:

That we, ____ , as Principal, and ______________________________________ as Surety, are held and firmly bound unto the Cambria Community Services District, in the sum of ____ Dollars ($______________________)

lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The condition of the above obligation is such that whereas said Principal has been awarded and is about to enter into a written contract with the Cambria Community Services District for the work described in CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF, **"Rodeo Grounds Pump Station Emergency/Backup Generator Replacement",** which is attached hereto, made a part hereof, and to which reference is hereby made for all particulars, and is required by said District to give this bond in connection with the execution of said contract;

NOW THEREFORE, if said Principal, as Contractor in said contract, or Principal's Subcontractor, fail to pay any of the persons referred to in Section 9100 of the Civil Code of the State of California for labor performed, skills or other necessary services bestowed, site improvement made, equipment leased, or appliances, equipment implements, machinery, materials, power, provender, provisions, teams, or trucks furnished or used in, upon, for, or about the performance of the work contracted to be done, or for amounts due under the employment Insurance Act with respect to work or labor performed by any such claimant, said Surety shall pay for the same. In an amount not exceeding the sum specified above; and if suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond is pursuant to the provisions of Ch 7 Div 3, Pt 4, Tit 15, of the Civil Code of the State of California, and shall insure to the benefit of any of the persons referred to in said Civil Code Section 9100, as it now exists or may hereafter be amended, so as to give a fight of action to such persons or their assigns in any suit brought upon this bond. No premature payment by said District to said Principal shall exonerate any Surety unless the District Board of Directors of said District shall have actual notice that such payment is premature at the time and it is ordered by said Board, and then only to the extent that such payment shall result in loss to such Surety, but in no event more than the amount of such premature payment.

It is agreed, that any alterations in the work to be done, or increase or decrease of the material to be furnished, which may be made pursuant to the terms of said contract shall not in any way release either the Principal or Surety hereunder, nor shall any extension of time granted under the provisions of said contract release either the Principal or Surety, and notice of such alterations or extensions of the contract is hereby waived by the surety.

WITNESS our hands this ____________________ day of ______________________, 20__.

____ ____

____ ____

Surety Principal

ALL SIGNATURES MUST BE WITNESSED BY NOTARY (Attach appropriate jurats)

-- END OF PAYMENT BOND --

FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, ____ , as Principal, and ____________________________________ as Surety, are held and firmly bound unto the Cambria Community Services District, in the sum of ____ Dollars ($_________________________)

lawful money of the United States, for the payment of which sum, well and truly to be made, has been awarded and is about to enter into a written contract with the Cambria Community Services District for the work described in the CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF **"Rodeo Grounds Pump Station Emergency/Backup Generator Replacement"**, which is attached hereto, made a part hereof, and to which reference is hereby made for all particulars, and is required by said District to give this bond in connection with the execution of said contract;

NOW, THEREFORE, if said Principal shall well and truly do and perform all of the covenants and obligations of said contract on Principal's part to be done and performed at the times and in the manner specified therein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect. No premature payment by said District to said Principal shall exonerate any Surety unless the District Board of Directors of said District shall have actual notice that such payment is premature at the time it is ordered by said Board, and then only to the extent that such payment shall result in loss to such Surety, but in no event more than the amount of such premature payment.

It is agreed, that any alterations in the work to be done, or increase or decrease of the material to be furnished, which may be made pursuant to the terms of said contract shall not in any way release either the Principal or Surety hereunder, nor shall any extensions of time granted under the provisions of said contract release either the principal or surety, and notice of such alterations or extensions of the contract is hereby waived by the Surety.

WITNESS our hands this _______________ day of _______________, 20__.

______________________________	______________________________
______________________________	______________________________
Surety	Principal

ALL SIGNATURES MUST BE WITNESSED BY NOTARY (Attach appropriate jurats)

-- END OF FAITHFUL PERFORMANCE BOND --

STANDARD SPECIFICATIONS

A. General: The work embraced herein shall be done in accordance with the applicable provisions of the most recently issued California Building Code, "Green Book" Standard Specifications for Public Works Construction, hereinafter referred to as Standard Specifications, the District's Standard Plans, hereinafter referred to as "Standard Plans", insofar as the same may apply, and in accordance with the following Standard Provisions.

The following provisions are hereby added to the Standard Specifications:

i. Section 5 – Utilities, subpart 5-1: All potholes must be filled in the same day, unless otherwise allowed by the Utility Director. Surrounding areas shall be restored to their original condition.

B. Definition of Terms: Whenever the following terms are used in the Standard Specifications, they shall be understood to mean the following:

"Owner" or "Agency":	Cambria Community Services District
"Board":	Cambria Community Services District Board of Directors
"Defective Work":	The term "defective work" shall include work that does not conform to the contract specifications.
"Utility Director":	The Utility Director, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Other terms appearing in the Standard Specifications shall be given the intent and meaning specified therein.

C. Description of the Work: The work shall consist of furnishing and supplying labor, materials, tools, equipment, transportation, and services necessary to complete the subject project as described in the project plans.

D. Control of Work: The Utility Director shall decide all questions, which may arise as to quality of work, acceptability of materials, and conduct of the work, including, but not limited to, coordination and changes in plans, superintendence of work, control of equipment, and inspection of work. Any person employed who is found by any District representative to be incompetent, intemperate, troublesome, disorderly, or otherwise objectionable or who fails or refuses to perform work properly and acceptably, shall be immediately removed from the Project upon request, by the Contractor, and shall not again be employed on the Project.

E. Construction Schedule: The contractor shall provide the Utility Director with a detailed schedule outlining the procedure and approved by the Utility Director prior to performing any work other than preliminary matters such as ordering materials and setting up staging areas. Extensions of the contract period due to delays that do not affect the critical path will not be allowed, if the delay can be accommodated within available float time.

F. Guaranty: The Contractor shall guarantee all materials, equipment furnished, and work performed for a period of one (1) year from the date of final completion. The Contractor warrants and guarantees for a period of one (1) year from the date of final acceptance of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reasons of such defects including the repairs of any damages to other parts of the system resulting from such defects. The District will give notice of observed defects with reasonable promptness. In the event that the Contractor should fails to make such repairs, adjustments, or other work that may be necessary by such defects the District may do so and charge the Contractor the cost thereby incurred, as well as an administrative fee of an additional twenty 20% of the cost thereby incurred by the District.

G. Contract Changes: When changes in work are required or initiated by the Contractor or the Cambria Community Services District, the procedures in Section 3 of the Standard Specifications shall govern.

H. Existing Utilities: The Contractor shall be responsible for contacting all utility companies and/or utility districts as to location and/or relocation of existing utilities prior to construction. The Contractor shall contact Underground Service Alert [USA], telephone 1-800-642-2444, a minimum of ten (10) days prior to any excavation. The District assumes no responsibility for the completeness or accuracy of the delineation of any underground utilities, or the existence of other buried objects or utilities which are not shown on the Plans. The Contractor is solely responsible for any damage to underground or above ground utilities, which may be incurred as a result of any work performed by him under this Contract, regardless of the fact that the utilities' existence was known or unknown.

I. Prosecution, Progress and Acceptance of the Work: The Contractor's prosecution, progress and acceptance of the work shall be in accordance with Section 6 of the Standard Specifications and these Special Provisions.

J. Traffic, Access and Signage: Traffic control, if any, shall be in accordance with Section 7-10 of the Standard Specifications. The Contractor shall furnish, place and maintain such devices necessary to provide safe passage for the traveling public through the construction sites, as well as for the safeguard of workers. The Contractor shall furnish, place and maintain such devices in accordance with the most recent "California Manual on Uniform Traffic Control Devices" published by the State of California, Department of Transportation (Caltrans). The provisions shall not relieve the Contractor from the responsibility to provide such additional devices as are necessary for public safety. The Contractor shall furnish, place, maintain and remove all signage needed for maintaining public safety and controlling traffic.

K. Insurance Requirements and Indemnification:

i. General: The Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder, by the Contractor, his agents, representatives, employees or Subcontractors.

ii. Minimum Scope of Insurance: Coverage shall be at least as broad as:

a. ISO CGL coverage ("Occurrence," Form CG-0001).
b. ISO CGL Endorsement Form (ISO CG 20 10 11 85).
c. ISO Form No. CA-0001 (ED. 1/78), covering Automobile Liability, Code 1, "Any Auto," and endorsement CA-0025.
d. Worker's Compensation Insurance as required by the State of California;
e. Course of Construction insurance covering for all risks of loss.

iii. Minimum Limits of Insurance: The Contractor shall maintain limits no less than:

General Liability:	$1,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit;
Automobile Liability:	$1,000,000 combined single limit per accident for bodily injury and property damage; and
Worker's Compensation:	As required by the State of California.

iv. Other Insurance Provisions: The policies are to contain, or to be endorsed to contain, the following provisions:

GENERAL LIABILITY AND AUTOMOBILE LIABILITY COVERAGE:

a. The District, its officials, employees, agents and volunteers; are to be covered as insured as respects liability arising out of activities performed by or on behalf of the Contractor, including but not limited to blanket contractual liability, broad form property damage, explosion, collapse and underground hazard coverage, products and completed operations of the Contractor, or premises owned, leased or used by the Contractor, or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its officials, employees or volunteers, and shall protect them from claims for personal injury, death or property damage suffered by third persons or by officers, agents and employees of Contractor and arising out of or in connection with the work which is the subject of this Contract.

b. The Contractor's insurance coverage shall be primary insurance as respects the District, its officials, employees, agents, and volunteers. Any insurance or self-insurance maintained by the District, its officials, employees, agents or volunteers; shall be in excess of the Contractor's insurance, and shall not contribute with it.

c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officials, employees, agents or volunteers.

d. Coverage shall state that the Contractor's insurance shall apply separately to each insured against who claim is made or suit is brought, except with respect to the limits of the insurer's liability.

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY COVERAGE:

a. The insurer shall agree to waive all rights of subrogation against the District, its officials, employees, agents, and volunteers for losses arising from work performed by the Contractor for the District.

ALL COVERAGE:

a. Each insurance policy required by this Section shall be in effect on the date the work is commenced and shall expire no sooner than one (1) year after the date on which the work is accepted by the District. Each insurance policy required by this Section shall be endorsed using ISO Form (CG 20 10 11 85) to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits, except after thirty (30) days prior written notice by Certified Mail, Return Receipt Requested has been given to the District.

b. Insurance is to be placed with insurers with a Best Rating of no less than A-V and who are admitted to write policies in the State of California and contribute to the state guaranty fund.

c. Contractors shall furnish the District with certificates of insurance and with original endorsements affecting coverage required by this Section (actual policy). The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms provided by the District and are to be received and approved in writing by the District before work commences. The District reserves the right to require complete, certified copies of all insurance policies, including endorsements affecting the coverage required by these Special Provisions at any time.

d. The Contractor shall include all Subcontractors as named insured under his policies, or shall furnish separate certificates and endorsements for each Subcontractor. All coverage for Subcontractors shall be subject to all of the requirements stated herein.

e. The Contractor shall indemnify, defend, and hold harmless the District, and its officers, officials, employees and agents, from and against any and all claims asserted, liability, loss, damage, expense, costs (including without limitation costs and fee of litigation) of every nature arising of, directly or indirectly, or in connection with this Contract or the acts or omissions of Contractor, contractor's subcontractors, employees, representatives, agents and invitees including, but not limited to, performance of the work hereunder or failure to comply with any of the obligations contained herein, except such loss or damage which was caused by the established active negligence of District or the established sole negligence or willful misconduct of District, its officers, officials, employees and agents. Said indemnification and hold harmless provisions shall be in full force and effect regardless of whether or not there shall be insurance policies covering and applicable to such liability, loss, damage, expense or cost. The Contractor agrees that the use of any and all public streets and improvements which are part of or subject to this Contract shall be at all times, prior to the final acceptance by the District, the sole and exclusive risk of the Contractor. The Contractor further specifically agrees that he shall indemnify and hold the District free of any liability for any accident, loss, or damage to the work, which is the subject of this Contract prior to its completion and acceptance by the District.

L. <u>Non-Discrimination</u>: While this Contract is in effect, the Contractor shall comply with all provisions of the California Labor Code Section 1735, as amended, regarding non-discrimination practices and equal employment opportunity.

M. <u>Permits and Taxes</u>: Unless otherwise provided in Contract documents, the Contractor shall obtain, and pay for, all construction permits, licenses or other permits necessary to complete the project and shall be responsible for all governmental charges, inspection fees, utility connection charges, and sales and use taxes.

N. Notices: Any notices from one party to the other with respect to this Contract shall be mailed, faxed, e-mailed, or delivered as shown on the signature block on the Contract.

O. Effectiveness: This Contract shall be effective only when signed by both parties to the Contract.

P. Waiver: The waiver of any breach of any condition, covenant, term, or provision of this Contract by any party to this Contract shall not be deemed to be a waiver of any preceding or subsequent breach under the Contract, nor shall any waiver constitute a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver.

Q. Authorizations: All officers and individuals executing, this and other documents on behalf of the respective parties do hereby certify and warrant that they have the capacity and have been duly authorized to so execute said documents on behalf of the entity so indicated. Each signatory shall also indemnify the other party to this Agreement, and hold them harmless, from any and all damages, costs, attorneys' fees, and other expenses, if the signatory is not so authorized.

R. Severability: If any term, provision, covenant, or condition of this Contract shall be or become illegal, invalid, null, void, unenforceable, or against public policy, in whole or in part, or shall be held by any court of competent jurisdiction to be illegal, invalid, null, or void, or against public policy, the term, provision, covenant, or condition shall be deemed severable, and the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected, impaired, or invalidated. The term, provision, covenant, or condition that is so invalidated, voided, or held to be unenforceable shall be modified or changed by the Parties to the extent possible to carry out the intentions and directives set forth in this Contract.

S. Entire Agreement: This Contract constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the Contract and supersedes all prior and contemporaneous agreements, promises, representations, warranties, understandings, or undertakings by either of the Parties, either oral or written, of any character or nature. No party has been induced to enter into this Agreement by, nor is any party relying on, any representation or warranty outside those expressly set forth in this Contract.

T. Attorney's Fees. In any litigation, arbitration, or other proceeding in law or equity by which one party to the Contract seeks to enforce its contract rights under the Contract, to resolve an alleged dispute, breach, default, or misrepresentation in connection with any of the provisions of this Contract, to seek a declaration of any rights or obligations under this Contract, or to interpret the provisions of this Contract, the prevailing party shall be entitled to recover from the losing party actual attorneys' fees incurred to resolve the dispute and to enforce the final judgment, award, decision, or order and such fees, costs; or expenses shall be in addition to any other relief to which the prevailing party may be entitled.

-- END OF STANDARD SPECIFICATIONS –

EXHIBIT A – CONTRACTORS PROPOSAL

EXHIBIT B - PROJECT DESCRIPTION

Project overview: The project consists of removing the existing manual transfer switch and replacing it with a new, automatic one, reworking the wiring and connections on generator conductors between the new automatic transfer switch (AST) and exterior junction box to the left of the utility meter, and replacing the generator with a new generator on the same supports.

Additional details on the project:

1. The basic specifications for the automatic transfer switch are that it is a 200 amp, 480-volt automatic transfer switch. It will be mounted in place of the existing manual transfer switch and have an integrated main circuit breaker.
2. Replace the wiring and connections on generator conductors between ATS and the exterior junction box to the left of the utility meter. The junction box must be replaced as it is in poor condition and rated for indoor use only.
3. Establish a connection for temporary backup power (pin and sleeve) to maintain power to the Booster Station during installation. The CCSD will provide a towable backup power generator.
4. Remove the existing generator; install a new diesel-powered generator on the same supports; use the existing underground conduit to wire the generator to the replaced junction box next to the ATS. Flush cut the wires in the second conduit and cap conduit. Please include the make and model of the generator and the make and model of the diesel engine for the generator in the RFP response. The replacement generator must be powered by a diesel engine and be Tier 4 compliant.
5. Dispose of all removed equipment and parts, including the old generator, the old transfer switch, and all other removed materials, as well as any trash generated during the installation process.
6. Provide training to staff on new equipment operations.

The following must be noted and measures to comply (e.g., a work plan) included in the response to the RFP:

1. The **MAXIMUM** amount of time the pump station can be without backup power is 36 hours. This is incredibly important and **MUST** be taken into consideration when planning the work. The scope of work includes adding a connector/plug for a trailer-mounted generator for backup power during the generator replacement work. CCSD will supply a trailer-mounted generator.
2. The **MAXIMUM** amount of time the pump station can be without power entirely (e.g., during ATS installation/connection or disconnection) is 6 hours.

Additional notes:

1. Permits are outside the scope of this project. CCSD will supply all the necessary permits for the work to be performed.
2. Inspections of the completed work are outside the scope of this project. CCSD will provide all inspections it deems necessary.

The completed project shall result in a fully functional, permanent-mounted, diesel-powered generator and automatic transfer switch.

-- END EXHIBIT B - PROJECT DESCRIPTION --

EXHIBIT A

Bid Proposal Form

BID PROPOSAL

TO: **CAMBRIA COMMUNITY SERVICE DISTRICT**, a California Special Services District, acting by and through its Board of Directors ("the District").

FROM:

Alpha Electrical Service
(Name of Bidder)

PO Box 1978
(Address)

Atascadero, CA 93423
(City, State, Zip Code)

805-595-2720 or 805-235-4728
(Telephone)

kevin@alphaelectrical.com
(E-mail Address of Bidder's Representative(s))

Kevin Piper
(Name(s) of Bidder's Authorized Representative(s))

1 Bid Proposal:

Total Bid Amount	$136,692.89

1.1 Bid Proposal Amount. The undersigned Bidder proposes and agrees to perform the Contract including, without limitation, providing and furnishing any and all of the labor, materials, tools, equipment and services necessary to perform the Contract and complete in a workmanlike manner all of the Work required for the Project described as:

Informal Bid Number:
23-2024-08

Project Name/Description:
RODEO GROUNDS PUMP STATION EMERGENCY/BACKUP GENERATOR REPLACEMENT for the sum of:

Bid Amount Spelled Out:
One Hundred Thirty Six Thousand Six Hundred Ninety Two & 89/100

Bid Amount (Dollar Amount - Numeric):	$136,692.89

The Bidder confirms that it has checked all of the above figures and understands that neither the District nor any of its agents, employees or representatives shall be responsible for any errors or omissions on the part of the undersigned Bidder in preparing and submitting this Bid Proposal.

1.2 **Acknowledgment of Bid Addenda.** The Bidder confirms that this Bid Proposal incorporates and is inclusive of all items or other matters contained in Bid Addenda issued by or on behalf of the District.

Initials
Addenda Nos. KP No Addenda with the exception of Exhibit B received, acknowledged and incorporated into this Bid Proposal.

1.3 **Alternate Bid Items.** The Bidder's price proposal(s) for Alternate Bid Items is/are set forth in the form of Alternate Bid Item Proposal included herewith. Price proposal(s) for Alternate Bid Item(s) will not form the basis for the District's award of the Contract unless an Alternate Bid Item is incorporated into the scope of Work of the Contract awarded.

2 **Documents Accompanying Bid.** The Bidder has submitted with this Bid Proposal and "Attachment A" the following: (a) Bid Security; (b) Subcontractors List; and(c) Non-Collusion Affidavit. The Bidder acknowledges that if this Bid Proposal and the foregoing documents are not fully in compliance with applicable requirements set forth in the Call for Bids, the Instructions for Bidders and in each of the foregoing documents, the Bid Proposal may be rejected as non-responsive.

3 **Award of Contract.** If the Bidder submitting this Bid Proposal and "Attachment A" is awarded the Contract, the undersigned will execute and deliver to the District the Contract for Labor and Materials in the form attached hereto within five (5) days after notification of award of the Contract. Concurrently with delivery of the executed Agreement to the District, the Bidder awarded the Contract shall deliver to the District: (a) Certificates of Insurance evidencing all insurance coverages required under the Contract Documents; (b) the Performance Bond; (c) the Labor and Materials Payment Bond; (d) the Certificate of Workers' Compensation Insurance; and (e) the Drug-Free Workplace Certificate. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District's rescission of the award of the Contract and/or forfeiture of the Bidder's Bid Security. In such event, the District may, in its sole and exclusive discretion elect to award the Contract to the responsible Bidder submitting the next lowest Bid Proposal, or to reject all Bid Proposals.

4 **Contractor's License.** The undersigned Bidder is currently and duly licensed in accordance with the California Contractors License Law, California Business & Professions Code §§7000 etseq., under the following classification(s): C-10
bearing License Number(s)

License Number(s)	Expiration Date(s)
764884	6/30/26

The Bidder certifies that: (a) it is duly licensed, in the necessary class(es), for performing the Work of the Contract Documents; (b) that such license shall be in full force and effect throughout the duration of the performance of the Work under the Contract Documents; and (c) that all Subcontractors providing or performing any portion of the Work shall be so properly licensed to perform or provide such portion of the Work.

5 **Acknowledgment and Confirmation.** The undersigned Bidder acknowledges its receipt, review and understanding of the Drawings, the Specifications and other Contract Documents pertaining to the proposed Work. The undersigned Bidder certifies that the Contract Documents are, in its opinion, adequate, feasible and complete for providing, performing and constructing the Work in a sound and suitable manner for the use specified and intended by the Contract Documents. The undersigned Bidder certifies that it has, or has available, all necessary equipment, personnel, materials, facilities and technical and financial ability to complete the Work for the amount bid herein within the Contract Time and in accordance with the Contract Documents.

By: ______________________

(Signature)

(Corporate Seal)

Kevin Piper

(Typed or Printed Name)

CEO

(Title)

Attachment A to Bid Form

Bidders shall provide the following attachments after this page to complete their bid:

a.) Bid Security
b.) List of Subcontractors
c.) Non-collusion Declaration
d.) Certificate of Workers Compensation

LIST OF SUBCONTRACTORS FORM

Pursuant to the provisions set forth in Sections 4100-4113, inclusive of the Public Contract Code of the State of California, it is required that the Contractor set forth in his Bid the name and principal business address of each Subcontractor who will perform work or labor or render service to the Contractor on or about the construction. Vendors or suppliers of materials, only, are not required to be listed.

If a Contractor fails to specify a Subcontractor for any portion of the work to be performed under the Contract, on or about the construction of the project, in excess of 1/2 of 1% of the Contractor's total Bid, he shall be deemed to have agreed to perform such portion himself, using his own resources and employed personnel and he shall not be permitted to sub-contract that portion of the work, except under the conditions set forth in Section 4107 of the Public Contract Code.
Subcontractors shall not sublet their work as a whole.

Should the Contractor violate any of the provisions of said Chapter, his so doing will be deemed a violation of his Contract and the awarding authority shall have the right to terminate the Contractor's control over the work. Upon any such violation, the Contractor may be subject to such penalties as are prescribed by Law.

In the event of an in advertent error in the California Contractor number is made for a subcontractor listed, such error shall not be grounds for filing a bid protest or grounds for considering a bid nonresponsive. The corrected license number must be submitted within 24 hours after bid opening and corrected contractor's license number must correspond to the submitted name and location.

If the prospective contractor fails to correct an inadvertent error for a listed subcontractor's license number within the 24-hour time period, the Owner may find the bid nonresponsive.

The prospective contractor shall be solely responsible to correct any errors in the notation of the listed subcontractors California Contractor's license number;

Failure to submit a corrected California Contractor's license number in compliance with the process set forth above will cause the bid to be nonresponsive.

SUBCONTRACTOR LIST

Portion of Work	2%
Subcontractor Name	Alltech Services, Inc.
Subcontractor Address	1320 El Camino Real, Atascadero, CA 93422
California CSLB Number	766034
DIR Registration Number	1000022318
DIR Registration Number Expiration Date	06-30-2025

Portion of Work	
Subcontractor Name	
Subcontractor Address	
California CSLB Number	
DIR Registration Number	
DIR Registration Number Expiration Date	

Portion of Work	
Subcontractor Name	
Subcontractor Address	
California CSLB Number	
DIR Registration Number	
DIR Registration Number Expiration Date	

Portion of Work	
Subcontractor Name	
Subcontractor Address	
California CSLB Number	
DIR Registration Number	
DIR Registration Number Expiration Date	

ADD ADDITIONAL FORMS AS NECESSARY TO LIST ALL SUBCONTRACTORS

NONCOLLUSION DECLARATION

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

I, Kevin Piper., declare that I am the authorized representative of Alpha Electrical Service., the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on September 24, 2024., at Atascadero. [city], California. [state].

(Signature and Title of Declarant)

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

PROJECT:

I, Kevin Piper. the CEO of Alpha Electrical Service , declare, state and certify that:

1. I am aware that California Labor Code §3700(a) and (b) provides:

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees."

2. I am aware that the provisions of California Labor Code §3700 require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of this Contract.

Alpha Electrical Service
(Contractor Name)

By: ______________________
(Signature)

Kevin Piper
(Typed or printed name)

AES ALPHA ELECTRICAL SERVICE
LIC.764884

Cover Letter

Date: 9/25/24

Customer: Cambria CSD Water & SWD (CCSD)
Project Location: 2021 Rodeo Grounds Road, Cambria California
RE: Request for Bid-Rodeo Grounds Pump Station Backup Power System Replacement Project-Emergency/Backup Generator and Automatic Transfer Switch Installation

To Whom It May Concern,

Alpha Electrical Service (AES) is pleased to present the following Proposal for Rodeo Grounds Pump Station Backup Power System Replacement Project.

Alpha Electrical Service agrees to perform the scope of work as outlined in the Request for Informal Bid and Exhibit B.

Alpha Electrical Service (AES) agrees to be bound by the proposal without modifications unless mutually agreed upon by AES and CCSD.

Thank you for your consideration on this project and please feel free to call me directly at (805) 235-4728.

Signed,

Kevin Piper-CEO, Alpha Electrical Service
8790 Plata Lane, Ste A Atascadero, CA 93422
kevin@alphaelectrical.com www.alphaelectrical.com
Mailing Address: PO Box 1978, Atascadero, CA 93423

A E S ALPHA ELECTRICAL SERVICE

LIC.764884

Work Plan

Date: 9/25/24

Customer: Cambria CSD Water & SWD (CCSD) Bid No. 05-2024-09

Work Plan: Removal and Replacement of Generator and Transfer Switch at Rodeo Grounds

- Install Pin and Sleeve or Temporary cables to provide power from the CSD provided portable generator to power the pump station while the ATS is being installed.
- PG&E to disconnect power and the existing manual transfer switch will be removed and the new ATS will be installed and connected to utility power.
- Once ATS is installed and connected PG&E to reconnect power.
- Disconnect and remove the existing generator.
- Install new generator on I-beam supports used for existing generator.
- Tie in existing wiring to the new generator.
- The scope of work shows cutting off and capping the extra conduit and wires, but there are not enough control conductors to both power the battery charger, block heater and have a start signal from the ATS to the new generator.
- AES plans on pulling out existing wires (unused and cut off at building end) and use conduit for new start signal conductors.
- Generator start up and testing to be performed by Sub Contractor.
- Test operation of the ATS calling the generator to start and transfer to generator power.

Clarifications:

- Please note that all clarifications below are expected to be an instrument or exhibit in our contract.
- Required note from Exhibit B: The <u>MAXIMUM</u> amount of time the pump station can be without backup power is 36 hours. This is incredibly important and <u>MUST</u> be taken into consideration when planning the work. The scope of work includes adding a connector/plug for a trailer-mounted generator for backup power during the generator replacement work. CCSD will supply a trailer-mounted generator.
- Required note from Exhibit B: The <u>MAXIMUM</u> amount of time the pump station can be without power entirely (e.g., during ATS installation/connection or disconnection) is 6 hours.

- Scope of pulling of new start signal conductors installation is based on the ability to use the existing conduit and also that the existing conductors for the battery charger and block heater in neighboring conduit are in good working condition.
- Provide and install 200 amp, 480 volt automatic transfer switch.
- It will be mounted in place of the existing manual transfer switch and will have an integrated main circuit breaker.
- Rework wiring and connections on generator conductors between ATS and exterior junction box to the left of the utility meter. Box to be replaced as it is in poor condition and rated for indoor use only.
- Contact & coordinate power interruption with PG&E for ATS install.

Generator Information:

TIER 4F 125 KW

Blue Star Power Systems VD125-02FT4, Generator 277/480/3,
Engine Model: Volvo TAD572VE 125kW Standby Power
Rating at 1800 RPM
Governor - Electronic Isochronous
Voltage: 480/277V 3 Phase 60 Hz 0.8 PF
Gen Model: Stamford UCI274E 12 Lead Wired 480V 3
Phase High Wye 105°C Rise Over 40°C Ambient
Voltage Regulator: Stamford AS440 Automatic Voltage
Regulator
Control Panel: Blue Star DCP7310 Microprocessor Based
Gen-Set Controller
Mounted Facing Left from Generator End (Unless Specified
Otherwise)
Standard Features: Low Oil Pressure, High Coolant Temp,
Overspeed, Overcrank Shutdowns
Emergency Stop Pushbutton, Audible Alarm Buzzer with
Silencing Switch
Control Panel Options:
Unit Color: White
Enclosure: Level 2 (Weather Proof Enclosure with Foam)
Powder Coated .090 Aluminum
Rugged and Durable 200 MPH Wind Rated Enclosure
Pitched Roof for Increased Structural Integrity and
Improved Watershed
Punched Intake with Baffle and Punched Exhaust Openings
Keyed Alike Lockable Doors with Draw Down Latches and
Stainless Steel Component Hinges
Additional 1.5" Thick Polydamp Type D Acoustical Foam
(PAF)
Formed Steel Base with Mounting and Lifting Holes
Includes Vibration Mounts to Isolate Unit from Base Rail
Sound Attenuation Foam: Sound Attenuation Installed in
Enclosure
Cooling: Unit Mounted Radiator (50°C Ambient)
Oil Drain Extension: Plumbed to Bulkhead Fitting in Base

Mainline Breaker: 200 Amp 3 Pole 600 Volt Breaker
Mounted & Wired in a NEMA 1 Enclosure
Jacket Water Heater: Engine Block Heater 1500W 120VAC
Rated for -20°F
Heater Installed with Isolation Valves and Wired to Terminal
Air Cleaner: Dry Single Stage
Air Restrictor Indicator: Installed in Air Filtration System
Silencer: SCR Catalyst / Silencer Mounted to Engine
Battery: 24 Volt System with Rack and Cables
Battery Charger: 24 Volt 5 Amp Mounted and Wired to Terminal
Sales Tax San Luis Obispo County 2024

Lead Time: Currently 28-30 Weeks

Exclusions:

- Includes no permitting costs.

Pricing:

Material and Labor: $136,692.89

QUOTE # 2771CCSD - REVISED - Generator and Transfer Switch Installation

Kevin Piper / CEO
Alpha Electrical Service
PO Box 1978
Atascadero, CA 93423
cell 805-235-4728, kevin@alphaelectrical.com

* Quote is valid for 15 days unless a written exception is made by AES. All invoices are due and payable upon receipt. All balances 30 days past due shall be subject to finance charge of 1.5% per month.
Per California code of Regulations Title 8, Chapter 2. Sub Chapter IV all electricians are Certified Journeyman General Electricians.

AES ALPHA ELECTRICAL SERVICE

LIC.764884

Statement of Qualifications

Date: 9/25/24

Customer: Cambria CSD Water & SWD (CCSD), 2021 Rodeo Grounds Road, Cambria California
Project Name: Rodeo Grounds Pump Station Backup Power System Replacement Project
RE: Request for Bid of Emergency/Backup Generator and Automatic Transfer Switch Installation

The following proposal and statement of qualifications will cover our experience and references, demonstrating our ability to execute this project within the terms of the scope, and our ability to keep accurate work records with regards to the work plan noted in Exhibit B-Project description.
Alpha Electrical is located in Atascadero, CA. and has been servicing both the public and private sector in San Luis Obispo County for over 25 years. AES has earned our role as the preferred company to service and maintain the water and wastewater facilities in the area because of our track record of providing solutions and results to our customers. As a local vendor, our dedicated team provides 24hr-7 day a week on-call service with an average 30-45 minute response time. We are presently the on-call service provider for the County of San Luis Obispo-Los Osos wastewater, Cambria CSD water and wastewater, Morro Bay water and wastewater, Paso Robles wastewater, San Luis Obispo water, wastewater & collections and Pismo Beach water and wastewater. AES proudly serves our local communities by providing on-call services, preventative maintenance, troubleshooting and repairs as well as design and installation of electrical and control systems.

Our team is dedicated to executing projects with diligence, attention to detail and safety. AES performs maintenance, testing, service, repair, design and installation with the highest professionalism. We are equally confident that the quality of our team and our understanding of the necessary elements needed on this project will provide you with a quality, finished product.

Our company has over 40 years experience in electrical, automation, control, maintenance, installation, service & repair. We are a certified small business and a member of ISNetworld. All our electricians are state certified with the Department of Industrial Relations.

AES License/Certification

- C-10 & C-36 LIC# 764884
- ISNetworld # 400-468013
- DIR# 1000022040
- Small Business Certification SB ID# 2015033

The following includes a list of clients and projects completed with references.

Public Sector Clientele

- The City of Paso Robles Wastewater & Collections
- The City of San Luis Obispo Wastewater Reclamation
- City of San Luis Obispo Water Department
- City of San Luis Obispo Utilities / Collections
- Cambria CSD Water Department
- Cambria CSD Wastewater & Collections
- City of Morro Bay Wastewater & Collections
- City of Morro Bay Water Department
- City of Pismo Beach Wastewater & Collections
- Heritage Ranch CSD Wastewater, Collections and Water
- County of San Luis Obispo Los Osos Wastewater & Collections
- County of San Luis Obispo Water Department
- County of San Luis Obispo General Services
- County of San Luis Obispo Parks & Recreation
- San Simeon CSD Water and Wastewater
- Superior Courts of California San Luis Obispo County
- Superior Courts of California Santa Barbara County

Projects

Cold Canyon Processing
2112 Carpenter Canyon Rd, San Luis Obispo, CA.
Installation of 2500 amp Switchgear and refeed two existing switchgears from the new switchgear
Project Amount: $280,000.00

CDM Smith - For Cambria Community Services District
Utilities and Engineering Department
1316 Tamson Drive, Cambria, CA 93428
Advanced Water Treatment Project
Project Amount: $168,214.00

County of San Luis Obispo
Los Osos Wastewater Treatment Facility
2270 Los Osos Valley Rd, Los Osos, CA 93402
Preventive Maintenance Project
Project Amount: $180,000 per year/5ys

References

Sean Loveridge
Chief Wastewater Plant Operator - Public Works, County of San Luis Obispo
2270 Los Osos Valley Road, Los Osos, CA
805-855-5537

References Cont'd

Tony Artho
Chief Wastewater Plant Operator - Cambria Community Services District WWTP
5500 Heath Lane, Cambria, CA
805-801-3933

John Huggins
WRFF Chief Maintenance Technician - City of San Luis Obispo WWTP
35 Prado Rd., San Luis Obispo, CA
805-540-1521

Jared Pickens
Wastewater Collections Supervisor - City of Paso Robles WWTP
3200 Sulphur Springs Rd., Paso Robles, CA
805-423-5048

Joaquin Casillas
Waste Connections - Cold Canyon Processing
2112 Carpenter Canyon Rd, San Luis Obispo, CA
805-235-1591

Conforms with The American Institute of Architects, A.I.A. Document A310 (2010 Edition)

Bid Bond

CONTRACTOR:
(Name, legal status and address)
Alpha Electrical Service
PO BOX 1978
ATASCADERO, CA 93423

SURETY:
(Name, legal status and principal place of business)
Old Republic Surety Company

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)
Cambria Community Services District
1316 Tamsen Street, Suite 201, Cambria CA 93428

BOND AMOUNT:
$136,692

PROJECT:
(Name, location or address, and Project number, if any)
Rodeo Grounds Emergency/Backup Generator and Automatic Transfer Switch installation

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 24th day of September, 2024

(Witness)	Kevin Piper *(Contractor as Principal)* *(Seal)*
	CEO *(Title)*
(Witness)	Timothy M [illegible] *(Surety)* *(Seal)*
	Agent *(Title)*

C&D &POWER

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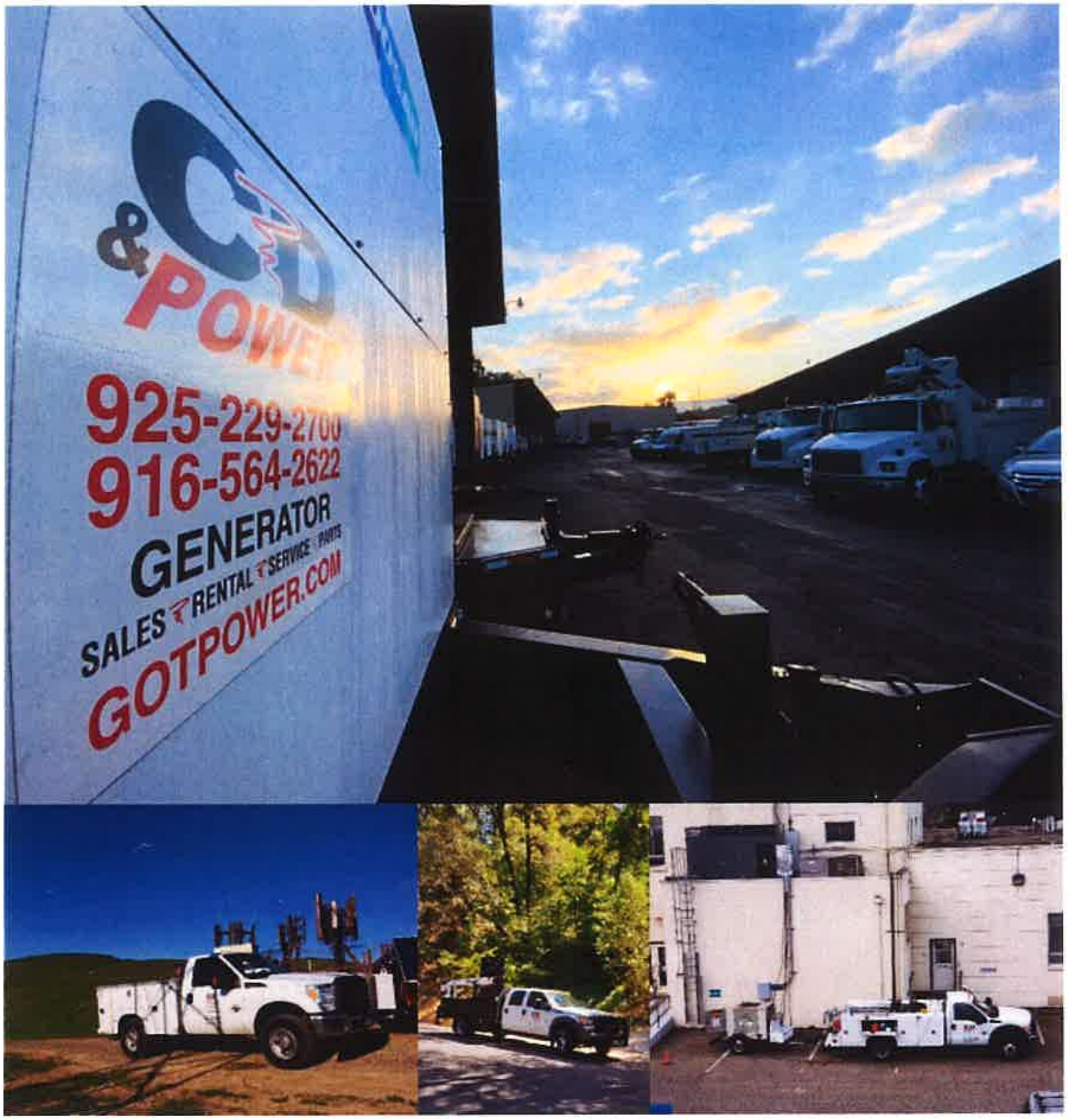

CAMBRIA COMMUNITY SERVICE DISTRICT – GENERATOR PROJECT

2021 Rodeo Grounds Road, Cambria, CA

September 25, 2024

Corporate Headquarters:
150 Nardi Lane
Martinez, California 94553
Phone 925.229.2700
Fax 925.229.2702

Contractor License #757162

Sacramento Branch:
4372 Pinell Street
Sacramento, California 95838
Phone 916.564.2622
Fax 916.564.1083

GotPower.com

Your official source for generators
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We do it all!

September 25, 2024

Cambria Community Service District
Attn: Jim R. Green
Phone: (805) 550-3558
Email: jgreen@cambriacsd.org

Re: 2021 Rodeo Grounds Road, Cambria, CA – GENERATOR REPLACEMENT

Hello Jim,

We are pleased to submit our proposal for the above-referenced generator replacement project. CD & Power (formerly known as California Diesel & Power and officially known as Got Power, Inc.) has been in business since 1985 and specializes in engine and generator service, rental, sales, and turn-key installation.

Our company is the largest independent generator service organization in Northern California with 25+ factory trained generator technicians equipped with field service trucks stocked with parts and supplies.

CD & Power is a licensed contractor, #757162 A, C10; a certified woman-owned business; and registered with the Department of Industrial Relations for public works projects.

Throughout our 39+ years in business, our company culture has been based on outstanding service, safe work practices, continuous learning and training, and customer service. We strive to build long-term relationships with our customers built on trust and integrity.

REQUIREMENTS FOR SUBMISSION:

CD & Power agrees to be bound by the proposal without modifications unless mutually agreed upon by CD & Power and CCSD.

CD & Power understands and accepts the SOW identified in Exhibit B:

The following must be noted and measures to comply (e.g., a work plan) included in the response to the RFP:

1. The **MAXIMUM** amount of time the pump station can be without backup power is 36 hours. This is incredibly important and **MUST** be taken into consideration when planning the work. The scope of work includes adding a connector/plug for a trailer-mounted generator for backup power during the generator replacement work. CCSD will supply a trailer-mounted generator.
2. The **MAXIMUM** amount of time the pump station can be without power entirely (e.g., during ATS installation/connection or disconnection) is 6 hours.

Your official source for generators
Sales · Service · Installation · Rentals · Parts
We do it all!

CD & Power owns 200+ Rental Generators and can deploy a install an towable portable generator onsite within 6 hours of shut down as required.

CD & Power will install the desired generator plug/quick connect to expedite the installation of one of our owned towable generators.

A towable generator will be reserved and/or placed at the jobsite to meet these requirements.

Should you have any questions about anything in this proposal, I welcome your call. We would appreciate the opportunity to perform this work for the Cambria Community Service District.

Sincerely,

Hayden Piper

Area Sales Manager
Hpiper@gotpower.com
(925) 387-9594

Powered by Integrity **GOTPOWER.COM**

California Diesel & Power

TRADE REFERENCE & CREDIT INFO

CORPORATE HEADQUARTERS:

150 Nardi Ln
Martinez, CA 94553
925.229.2700 925.229.2702 fax

SACRAMENTO BRANCH:

4372 Pinell St
Sacramento, CA 95838
916.564.2622 925.229.2702 fax

CONTACT: ACCOUNTS RECEIVABLES – MEL OWENS MEL@GOTPOWER.COM
ACCOUNTS PAYABLE – AARON LOPEZ AARON@GOTPOWER.COM
INVOICE CONTACT – APINVOICES@GOTPOWER.COM
ACH CONTACT – ACHNOTICES@GOTPOWER.COM

FEDERAL TAX ID: 68-0424585
STATE TAX ID: 97-505209
NUMBER OF EMPLOYEES: 65
DUNS NUMBER: 17-842-4644
CONTRACTOR LIC: 757162 A:C10

RESELLERS #: SYCH 97-505209
DATE ESTABLISHED: JUNE 1985
SIC: 7538 /7539
NAISC: 811310 532490

BUSINESS TYPE: GENERATOR – REPAIR, SALES, INSTALLATIONS, PARTS & RENTAL, TRUCK REPAIR

TRADE REFERENCES:

#1) MULTIQUIP POWER – ACCOUNT # 25417
CONTACT: A/R PHONE: 800-421-1244 FAX: 310-537-3165
18910 WILMINGTON AVE, CARSON, CA 90746

#2) HUNT & SONS – ACCOUNT # 72765
CONTACT: A/R PHONE: 925-755-3835
PO BOX 101630, PASADENA, CA 91189-1630

#3) ANA – ACCOUNT GOTPOWER INC. DBA CD & POWER CONTACT: SAM WELCH PHONE: 562-450-3570

#4) CONTRA COSTA FIRE DEPARTMENT
CONTACT: Wendy Riley
PHONE: 925-941-3300
wriley@cccfpd.org

#5) CONTRA COSTA PUBLIC WORKS
CONTACT: Dave Lavelle
PHONE: 925-941-7052

Hayden Piper
Area Sales Manager

EXHIBIT A

Bid Proposal Form

BID PROPOSAL

TO: **CAMBRIA COMMUNITY SERVICE DISTRICT**, a California Special Services District, acting by and through its Board of Directors ("the District").

FROM:

Got Power Inc DBA CD & Power
(Name of Bidder)

150 Nardi Lane
(Address)

Martinez,CA,94553
(City, State, Zip Code)

925 229 2700
(Telephone)

hpiper@gotpower.com
(E-mail Address of Bidder's Representative(s))

Hayden Piper
(Name(s) of Bidder's Authorized Representative(s))

1 Bid Proposal:

Total Bid Amount	$171,137.55

1.1 Bid Proposal Amount. The undersigned Bidder proposes and agrees to perform the Contract including, without limitation, providing and furnishing any and all of the labor, materials, tools, equipment and services necessary to perform the Contract and complete in a workmanlike manner all of the Work required for the Project described as:

Informal Bid Number:
23-2024-08

Project Name/Description:
RODEO GROUNDS PUMP STATION EMERGENCY/BACKUP GENERATOR REPLACEMENT for the sum of:

Bid Amount Spelled Out:
One Hundred and Seventy One Thousand One Hundred and Thirty Seven Dollars and Fifity Five Cents

Bid Amount (Dollar Amount - Numeric):	$171,137.55

The Bidder confirms that it has checked all of the above figures and understands that neither the District nor any of its agents, employees or representatives shall be responsible for any errors or omissions on the part of the undersigned Bidder in preparing and submitting this Bid Proposal.

1.2 **Acknowledgment of Bid Addenda.** The Bidder confirms that this Bid Proposal incorporates and is inclusive of all items or other matters contained in Bid Addenda issued by or on behalf of the District.

Initials H P
Addenda Nos. N/A received, acknowledged and incorporated into this Bid Proposal.

1.3 **Alternate Bid Items.** The Bidder's price proposal(s) for Alternate Bid Items is/are set forth in the form of Alternate Bid Item Proposal included herewith. Price proposal(s) for Alternate Bid Item(s) will not form the basis for the District's award of the Contract unless an Alternate Bid Item is incorporated into the scope of Work of the Contract awarded.

2 **Documents Accompanying Bid.** The Bidder has submitted with this Bid Proposal and "Attachment A" the following: (a) Bid Security; (b) Subcontractors List; and(c) Non-Collusion Affidavit. The Bidder acknowledges that if this Bid Proposal and the foregoing documents are not fully in compliance with applicable requirements set forth in the Call for Bids, the Instructions for Bidders and in each of the foregoing documents, the Bid Proposal may be rejected as non-responsive.

3 **Award of Contract.** If the Bidder submitting this Bid Proposal and "Attachment A" is awarded the Contract, the undersigned will execute and deliver to the District the Contract for Labor and Materials in the form attached hereto within five (5) days after notification of award of the Contract. Concurrently with delivery of the executed Agreement to the District, the Bidder awarded the Contract shall deliver to the District: (a) Certificates of Insurance evidencing all insurance coverages required under the Contract Documents; (b) the Performance Bond; (c) the Labor and Materials Payment Bond; (d) the Certificate of Workers' Compensation Insurance; and (e) the Drug-Free Workplace Certificate. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District's rescission of the award of the Contract and/or forfeiture of the Bidder's Bid Security. In such event, the District may, in its sole and exclusive discretion elect to award the Contract to the responsible Bidder submitting the next lowest Bid Proposal, or to reject all Bid Proposals.

4 **Contractor's License.** The undersigned Bidder is currently and duly licensed in accordance with the California Contractors License Law, California Business & Professions Code §§7000 etseq., under the following classification(s): A,C10
bearing License Number(s)

License Number(s)	Expiration Date(s)
757162 A,C10	12/31/2024
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	

The Bidder certifies that: (a) it is duly licensed, in the necessary class(es), for performing the Work of the Contract Documents; (b) that such license shall be in full force and effect throughout the duration of the performance of the Work under the Contract Documents; and (c) that all Subcontractors providing or performing any portion of the Work shall be so properly licensed to perform or provide such portion of the Work.

5 **Acknowledgment and Confirmation.** The undersigned Bidder acknowledges its receipt, review

5 **Acknowledgment and Confirmation.** The undersigned Bidder acknowledges its receipt, review and understanding of the Drawings, the Specifications and other Contract Documents pertaining to the proposed Work. The undersigned Bidder certifies that the Contract Documents are, in its opinion, adequate, feasible and complete for providing, performing and constructing the Work in a sound and suitable manner for the use specified and intended by the Contract Documents. The undersigned Bidder certifies that it has, or has available, all necessary equipment, personnel, materials, facilities and technical and financial ability to complete the Work for the amount bid herein within the Contract Time and in accordance with the Contract Documents.

By: ______________________
(Signature)

(Corporate Seal)

Hayden Piperr, for CD&Power
(Typed or Printed Name)

Area Sales Manager
(Title)

Attachment A to Bid Form

Bidders shall provide the following attachments after this page to complete their bid:

a.) Bid Security ✓
b.) List of Subcontractors N/A ✓
c.) Non-collusion Declaration ✓
d.) Certificate of Workers Compensation ✓

LIST OF SUBCONTRACTORS FORM

Pursuant to the provisions set forth in Sections 4100-4113, inclusive of the Public Contract Code of the State of California, it is required that the Contractor set forth in his Bid the name and principal business address of each Subcontractor who will perform work or labor or render service to the Contractor on or about the construction. Vendors or suppliers of materials, only, are not required to be listed.

If a Contractor fails to specify a Subcontractor for any portion of the work to be performed under the Contract, on or about the construction of the project, in excess of 1/2 of 1% of the Contractor's total Bid, he shall be deemed to have agreed to perform such portion himself, using his own resources and employed personnel and he shall not be permitted to sub-contract that portion of the work, except under the conditions set forth in Section 4107 of the Public Contract Code. Subcontractors shall not sublet their work as a whole.

Should the Contractor violate any of the provisions of said Chapter, his so doing will be deemed a violation of his Contract and the awarding authority shall have the right to terminate the Contractor's control over the work. Upon any such violation, the Contractor may be subject to such penalties as are prescribed by Law.

In the event of an in advertent error in the California Contractor number is made for a subcontractor listed, such error shall not be grounds for filing a bid protest or grounds for considering a bid nonresponsive. The corrected license number must be submitted within 24 hours after bid opening and corrected contractor's license number must correspond to the submitted name and location.

If the prospective contractor fails to correct an inadvertent error for a listed subcontractor's license number within the 24-hour time period, the Owner may find the bid nonresponsive.

The prospective contractor shall be solely responsible to correct any errors in the notation of the listed subcontractors California Contractor's license number;

Failure to submit a corrected California Contractor's license number in compliance with the process set forth above will cause the bid to be nonresponsive.

HP

N/A

SUBCONTRACTOR LIST

Portion of Work	Click or tap here to enter text.
Subcontractor Name	Click or tap here to enter text.
Subcontractor Address	Click or tap here to enter text.
California CSLB Number	Click or tap here to enter text.
DIR Registration Number	Click or tap here to enter text.
DIR Registration Number Expiration Date	Click or tap here to enter text.

Portion of Work	Click or tap here to enter text.
Subcontractor Name	Click or tap here to enter text.
Subcontractor Address	Click or tap here to enter text.
California CSLB Number	Click or tap here to enter text.
DIR Registration Number	Click or tap here to enter text.
DIR Registration Number Expiration Date	Click or tap here to enter text.

Portion of Work	Click or tap here to enter text.
Subcontractor Name	Click or tap here to enter text.
Subcontractor Address	Click or tap here to enter text.
California CSLB Number	Click or tap here to enter text.
DIR Registration Number	Click or tap here to enter text.
DIR Registration Number Expiration Date	Click or tap here to enter text.

Portion of Work	Click or tap here to enter text.
Subcontractor Name	Click or tap here to enter text.
Subcontractor Address	Click or tap here to enter text.
California CSLB Number	Click or tap here to enter text.
DIR Registration Number	Click or tap here to enter text.
DIR Registration Number Expiration Date	Click or tap here to enter text.

ADD ADDITIONAL FORMS AS NECESSARY TO LIST ALL SUBCONTRACTORS

HP

NONCOLLUSION DECLARATION

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

I, Hayden Piper. declare that I am the authorized representative of CD & Power, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on September 25, 2024, at 150 Nardi Lane, Martinez [city], California [state].

[signature], Area Sales Manager

(Signature and Title of Declarant)

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

PROJECT:

I, Hayden Piper the Area Sales Manager

of CD & Power , declare, state and certify that:

1. I am aware that California Labor Code §3700(a) and (b) provides:

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees."

2. I am aware that the provisions of California Labor Code §3700 require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of this Contract.

CD & Power
(Contractor Name)

By: ____________________
(Signature)

Hayden Piper
(Typed or printed name)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we, Got Power, Inc. dba CD & Power as Principal, and The Ohio Casualty Insurance Company, a corporation duly organized under the laws of the State of New Hampshire, as Surety, are held and firmly bound unto Cambria Community Services District as Obligee, in the sum of Ten Percent (10%) of Total Amount Bid ($10% of Bid Amount) Dollars for the payment of which Principal and Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Principal has submitted a bid for Rodeo Grounds Pump Station Backup Power System Replacement Project ; #05-2024-09, the Project.

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal enters into a Contract with the Obligee for the Project; or, if the Principal pays the Obligee the amount of this Bond or the difference between Principal's bid and the next lowest bid for the Project, whichever is less: this obligation is null and void, otherwise to remain in full force and effect.

Signed and sealed this 25th day of September 2024.

Got Power, Inc. dba CD & Power

BY: [signature]
Principal

ITS: President

The Ohio Casualty Insurance Company

BY: Erica E. Mosley
Attorney-In-Fact
Erica E. Mosley

SURETY COMPANY ATTORNEY-IN-FACT ACKNOWLEDGEMENT

STATE OF WASHINGTON
COUNTY OF PIERCE

On September 25, 2024, before me, the undersigned, a Notary Public in and for the State, personally appeared Erica E. Mosley, known to me to be the duly authorized Attorney-in-Fact of the corporate Surety named in the within instrument, known to me to be authorized to execute that instrument on behalf of said corporation, known to me to be the person whose name is subscribed to such instrument as the Attorney-in-Fact of said corporation, and acknowledged to me that he (she) subscribed the name of said corporation thereto as Surety, and his (her) own name as Attorney-in-Fact and that said corporation executed the same.

I certify under PENALTY OF PERJURY under the laws of the State of Washington that the foregoing paragraph is true and correct.

WITNESS MY HAND AND OFFICIAL SEAL:

Notary Public
State of Washington
ROSELEE M DEJARNETTE
LICENSE # 22019016
MY COMMISSION EXPIRES
APRIL 1, 2026

(SEAL)

Signature: ______________________

, Notary Public for the State of Washington.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual. SURETY

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8208733-971868**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Brandi Kohlhorst, Brenda Lopez, Chelsea Grell, Erica E. Mosley, Francis Michael Heffernan, Heather Pate, Julia Ortega, Kelly Cordova, Kimberley D. Roman, Reynette Reuter, Sarah Pienovi, Sarah Shafor, Shila Lay, Stephanie E. Worden, Sydney Kish, Teri L. Koehler

all of the city of Walnut Creek state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 16th day of September, 2022.

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS
THE OHIO CASUALTY INSURANCE COMPANY INCORPORATED 1919 NEW HAMPSHIRE
WEST AMERICAN INSURANCE COMPANY INCORPORATED 1991 INDIANA

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey

David M. Carey, Assistant Secretary

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 16th day of September, 2022 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

TERESA PASTELLA COMMONWEALTH OF PENNSYLVANIA NOTARY PUBLIC

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella

Teresa Pastella, Notary Public

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 25th day of September 2024.

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS
THE OHIO CASUALTY INSURANCE COMPANY INCORPORATED 1919 NEW HAMPSHIRE
WEST AMERICAN INSURANCE COMPANY INCORPORATED 1991 INDIANA

By: Renee C. Llewellyn

Renee C. Llewellyn, Assistant Secretary

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Board of Directors

AGENDA NO. **5.D**

FROM: Matthew McElhenie, General Manager

Meeting Date: October 10, 2024

Subject: Discussion and Consideration Regarding Directing the Policy Committee to Develop a Policy for Streetlights and Lights at Other Facilities under CCSD's Jurisdiction

FISCAL IMPACT:

There is no fiscal impact associated with this item. The policy itself may recommend various funding strategies for streetlight installation and maintenance, which could have longer-term budgetary implications.

DISCUSSION:

Directing the Policy Committee to create a comprehensive Streetlight and Facilities Under CCSD's Jurisdiction Policy will provide a structured framework for managing streetlight installations, maintenance, and funding. There is no formalized policy guiding decisions related to streetlight installation, maintenance, or replacement. This has led to inconsistent streetlight coverage, varied levels of lighting in different areas, and challenges in budgeting for new installations and ongoing maintenance. This will help ensure consistent and equitable streetlight coverage across Cambria, enhance public safety and support community well-being.

It is recommended that the Board of Directors direct the Policy Committee to develop a comprehensive policy addressing streetlights and lights at other CCSD facilities. This policy would guide the installation, maintenance, and funding of streetlights throughout Cambria.

ATTACHMENTS:

CAMBRIA COMMUNITY SERVICES DISTRICT

TO: Board of Directors

AGENDA NO. **5.E**

FROM: Matthew McElhenie, General Manager

Meeting Date: October 10, 2024

Subject: Discussion and Consideration of Reading Aloud Written Comments at Board Meetings

FISCAL IMPACT:
There is no fiscal impact associated with this item.

DISCUSSION:
On September 12, 2024, Director Farmer and Director Thomas requested placing reading aloud written comment submitted by the public during Board meetings on a future Board agenda for further consideration.

During the pandemic and for a short period thereafter, staff members were required to read written public comment aloud during meetings. However, there is concern regarding the appropriateness of this practice, particularly concerning the staff's role in facilitating but not influencing public discourse. Additionally, reading written public comments aloud during meetings can take a significant amount of time and sometimes lead to challenges with impartiality or handling large volumes of submissions. The staff's primary role during Board meetings is to support the Board and manage logistics, not to be directly involved in the public comment process. Reading public comment aloud could be perceived as an endorsement or may place undue pressure on staff members. Lastly, per staff's research, not one government entity in our region reads public comments aloud at Board meetings.

Currently, the Board allows public comments during meetings in person or via written submissions. As such, those members of the public who wish to comment on matters before the CCSD Board can submit written correspondence to boardcomment@cambriacsd.org or through the District's website. Written correspondence received at least one hour prior to the meeting commencement will be forwarded to the Board of Directors and posted on the District's website as part of the official meeting record. Written comments and information become part of the official public record.

It is recommended that the Board of Directors discuss, consider, and provide direction to staff regarding reading written comments at Board meetings.

ATTACHMENTS:

Report on the September 24, 2024, Finance Standing Committee meeting, for the August 8, 2024, CCSD Board Agenda

The September 24, 2024, Regular Meeting of the Finance Standing Committee was held at the Veterans' Memorial Hall in person and via Zoom.

Committee Chair Tom Gray **called the meeting to order** at 10:00 a.m.

Other Committee members present were Vice-Chair Cheryl McDowell, Secretary David Pierson, Karen Chrisman, Keith Hinrichsen and Scott McCann.

Staff present were CCSD General Manager Matthew McElhenie via Zoom, Administrative Department Manager Denise Fritz, Confidential Administrative Assistant Haley Dodson, Fire Chief Michael Burkey, Fire Captain Michael Castellanos and Fire Engineer Kayla Graves.

Also attending were Dick Clark and CCSD Director Harry Farmer (in person) and CCSD Director Michael Thomas via Zoom.

In his **Chair Report**, Mr. Gray reported on the changes being made to the Standing Committee Bylaws.These include the Committee Chair no longer being a voting member and future ad hoc committees being limited to two people. He also reported on the updated Board and Committee calendar for 2025 and noted that, in December the Board will call for applications to the Standing Committees.

In **Ad Hoc Subcommittee Report(s),** Ms. Fritz reported on the progress made by the Administrative Overhead Allocation Ad Hoc Committee. She noted that the committee has researched the practices of other districts in setting allocation levels, and she said the most likely course for the CCSD would be to set levels periodically (e.g., every three to five years) based on administreative "effort" devoted to various functions. She said the definition of "effort" needs to be clarified, but that it should not have to be determined by a process as detailed as a time audit.

There was no **Public Comment** from attendees in person or via Zoom.

On the **Consent Agenda**, the Committee approved the July 23, 2024 Regular Meeting Minutes by a vote of 5-0.

Regular Business included the following items (4.A and 4.B were taken up in reverse order):

4.B: Discussion and Consideration of Cambria Skatepark Maintenance Cost and Funding and Provide Recommendations to the CCSD Board of Directors.

The committee discussed at length the potential cost of maintaining the Skatepark on Main Street. Ms. Fritz presented the results of the Staff's research into maintenance and repair costs of skateparks in nearby communities including Templeton, Los Osos, Nipomo, and Paso Robles. Her presentation included a four-year record of line-item skatepark expenditures for Templeton; otherwise, she said, spending specific to skateparks is included in larger budget categories and is diffidult to estimate. In all cases, staff time devoted to skatepark maintenance was not quantified.

Staff also presented a table listing proposed maintenance activities (e.g. restroom cleaning) with their expected frequency and needed supplies. Members of the committee commented that restroom cleaning would need occur daily, rather than weekly as proposed in the table.

Further discussion led the Committee members to identify at least five cost categories for which more information is needed:

- Current funding to cover dosts of major repairs and similar events that can be expected to occur in the longer term
- Restroom maintenance
- Security (including initial cost of technology sush as automated locks)
- Added insurance costs, if any
- Quantifying of staff time spent on maintenance.

Dick Clark, Chair of the Cambria Community Council, gave a presentation on how the use of an annuity-type account could fund the maintenance for a period of 20 years or more. He said the Council has $31,000 to put toward the skate park maintenance, and staff will ask the Tourism Board if the $47,000 grant from that board could be used for this fund. He also raised the possilibility that maintenance could be partically funded if funds are left over after construction of the facility.

Chair Gray asked what provisions can be made to ensure that adequate funds will be available 25 years from now. Mr. Clark said this could be done through the investment firm (Edward Jones) that holds the funds now. Mr. Gray suggested that the funds also could be turned over to the CCSD and be held and invested by the district as a restricted fund.

Because of the need for more cost data, this item was continued until the next Finance Committee meeting.

4.A: Discuss and Review the Comments and Revisions Proposed by the Policy Committee Regarding the Procurement Policies and Procedures Policy 2135 Revisions and Provide Recommendations to the Policy Committee and CCSD Board of Directors.

The committee reviewed the document in detail with the help of Ms. Fritz and Mr. McElheney. The redlined changes proposed by members of the Policy Committee were accepted in some cases, while in other cases the original versions were restored. Some additional changes were made for grammar and clarity.

Comments from Policy Committee members were noted and discussed. These included proposals to ban all gifts to CCSD employees, managers and directors, to lower the document's dollar-amount thresholds for required Board action on contracts, and to require Board action to increase a budget line item if expenditures exceed 5% of the budgeted amount. Neither these or other proposed changets were accepted by the Finance Committee.

Mr. Pierson moved to recommend that the Board approve the document as amended during the meeting.

Mr. Hinrichsen seconded the motion.

The motion passed 5-0.

Chair Gray **adjourned** the meeting at 12:09 p.m.

--*Respectfully submitted by*
Tom Gray, Chair, Finance Standing Committee
October 10, 2024

PROS Committee Report for the October 10, 2024 CCSD Board Meeting

The CCSD Parks, Recreation and Open Space Committee held a meeting September 17, 2024, 2:00-3:55 PM, in person at the Vets Hall and via Zoom.

We had a quorum, with 4 Committee Members present: Shannon Sutherland, Juli Amodei, Steve Kniffen and Jim Bahringer. Jeff Wilson was absent, on vacation, having informed the committee chair of his absence in advance.

PROS Committee Chair Thomas presided over the meeting.

Staff was represented by GM McElhenie.

Public Present: Dick Clark, Tony Church, Shelley Becker, Kitty Connally, Karen Argano, Director Harry Farmer. We had the following participants on zoom: Crosby & Laura Swartz, Claudia Harmon Worthen.

Chair Report: Chair Thomas briefly reported on the amended Board and Standing Committee Bylaws, highlighted the agenda for the upcoming September 19 Board meeting, and expressed appreciation for recent improvements by SLO County Public Works.

Ad Hoc Subcommittee Report, 1:05 PM, Vice Chair Sutherland recommended that we disband the Signage Ad Hoc Committee, and address signage further down the road as the Community Park Phase 3 Plan matures.

Reports from Affiliated Community Groups:

Beautify Cambria, Claudia Harmon Worthen provided an oral report at 2:25 PM, as she joined on zoom after completion of this agenda item:

- Working on the spaghetti bowl hillside where the portulaca seems to be successfully rooting and spreading.
- Goodwill drive Saturday September 21 at the Santa Rosa Catholic Church.

Forest Committee, Laura Swartz provided an oral report at 2:07 PM: Continuing work on Cambria's Invasive Weeds guidebook and will look forward to bringing this to the committee at an upcoming meeting.

Friends of the Cambria Dog Park, Shelly Becker provided an oral report at 2:08 PM: Focusing on membership, manners, and training.

Greenspace the Cambria Land Trust, Executive Director Karin Argano provided an oral report at 2:09 PM:

- A collaborative day tomorrow with the high school kids, in cooperation with FFRP.
- Sponsoring a dog training session at Creekside Reserve.
- Working on permits for modifications at Creekside Reserve.
- USLTRCD will be providing California native plants in Strawberry Canyon.
- Speaker Series continues in October and November, stay tuned to the Chamber of Commerce calendar and CambriaCA, with Naturalist Obi Kaufmann Sunday, October 20, 5 PM at St. Paul's Episcopal Church.

Lampton Cliffs Adopt-a-Park Iceplant Removal Project, 2:12 PM: Although Suzanne Fiedler was unable to attend today, she communicated that she has met with the Supervising District Ranger, Lasca Gaylord, awaiting the green light. Her current plans are to initiate the first in a series of ice plant pulling sessions the week of October 21.

Reports & Project Updates:

Facilities & Resources Manager's Report, David Aguirre provided an oral report at 2:14 PM:

- As previously reported, F&R is short-handed, with 2 open positions.
- Removed 22 cubic yards of sand from the Lampton Cliffs County Park parking area this morning.

- Recently took stock of trail repair needs.
- Vice Chair Sutherland acknowledged the outstanding efforts keeping everything going while short-handed.

Friends of the Fiscalini Ranch Preserve Report, Executive Director Kitty Connolly provided an oral report, 2:18 PM:

- Great progress on and enthusiasm for the new Linking Boardwalk Trail. Planning on a dedication ceremony Saturday October 26.
- Working on updated trailhead signs and maps to reflect the new Linking Boardwalk Trail.
- Planning a tree planting party the Saturday after Thanksgiving, November 30, with trees to be provided by the Santa Barbara Botanic Garden.
- Working with USLTRCD for understory plants provided by the Santa Barbara Botanic Garden for planting in Fall 2025.
- Public Comment from Laura Schwartz asking about the constraints of USLTRCD access over the 10 year agreement.

Skatepark Project Update Report, Juli Amodei provided an oral report, 2:27 PM:

- The messaging is now "ramping up."
- Raised $1350 from the fundraiser on the Friday of Pinedorado weekend.
- Going to the Board Thursday with the design RFP.
- If all goes as planned, the schedule is for grant funding to be awarded January 2025, and potentially starting construction in fall 2025.
- Working on the maintenance fund.

East Ranch Community Park Restroom Project Update Report, GM McElhenie provided an oral report, 2:30 PM:

- The restroom has been ordered, still on schedule for a January 2025 delivery.
- The site preparation pre-bid meeting is scheduled for Monday 9/30/2024.
- Because the prefabricated restroom will be set in place by crane, timing will be dependent on weather and ground conditions.
- Responding to a question from Vice Chair Sutherland asking if the PROS Committee will have an opportunity to provide input regarding the location of the ADA concrete walkways, GM McElhenie will discuss with the Utilities Manager.
- Public Comment from Claudia Harmon Worthen regarding the exterior lights on the restroom, requesting no lights at night in support of dark skies, and sunlight tubes to improve interior lighting and reduce energy consumption.

In Regular Business:

Draft Community Park Phase 3 Plan, 2:36 PM, on behalf of the East Ranch Community Park Ad Hoc Committee, Vice Chair Shannon Sutherland summarized the report, presented the slides, facilitated discussion, and then focused conversation on the Engagement Plan to enlist the committee members in delivering engagement sessions to a broad and diverse array of stakeholders. Following fairly extensive discussions and comments from both Committee Members and the public, the PROS Committee voted unanimously in favor of the motion that the Draft Community Park Phase 3 Plan and Associated Presentation Materials are Ready to Begin Community Engagement and Committee Member will participate in Community Engagement Sessions as established during the discussion, and as noted in Attachment 1, Community Park Phase 3 Engagement Plan.

The next PROS Committee Regular Meeting is scheduled Tuesday, October 15, 2024, 2-4 PM.

Respectfully submitted,
Michael Thomas, Director and PROS Committee Chair

Community Park Phase 3 Engagement Plan

The following table is an extract from the Community Park Phase 3 Engagement Plan Spreadsheet established at the September 17, 2024 PROS Committee meeting, and updated by the Community Park Planning Ad Hoc Committee. The Community Park Phase 3 Engagement Plan Spreadsheet will be updated regularly frequently by Shannon Sutherland. Please direct questions and comments to shannon.sutherland@skydio.com.

Organization	Presenter
Greenspace	Jeff
Friends of Fiscalini Ranch Preserve	Jeff
The Rotary Club of Cambria	Juli
Dog park group	Shelly
CYAA	Shannon
Cambria Historical Society	Jim?
Cambria Community Scholarship Foundation	Shannon
SLO County Parks & Recreation Commission	Jeff / Steve
North Coast Advisory Council (NCAC)	Michael
Cambria Chamber of Commerce	Steve
Cambria Tourism Board	Steve
Cambria Community Council	Steve
The American Legion Post 432	Steve
The Lions Club of Cambria	Jim
Coast Unified School District	Juli
Farmers Market	Jim / Shannon
Cambria Library	Shannon
Local Churches	Shelly

Resources and Infrastructure Committee Report for October 10, 2024 CCSD Meeting

The Regular Meeting of the Resources & Infrastructure Committee was held on Monday September 9, 2024, in person at the Veterans Memorial Hall and via Zoom.

Opening (Time 2:00pm)

The meeting was called to order by Chairperson Dean at 2:00pm.

Committee members present were Chairperson Karen Dean, Vice Chair Steven Siebuhr, Secretary Derrik Williams, and Committee members Mark Meeks, Dennis Dudzik, and Jim Webb.

Staff present were General Manager Matthew McElhenie (remote), Utilities Department Manager Jim Green, Program Manager Tristan Reaper, Wastewater Department Superintendent Toni Artho, Water Systems Superintendent Cody Meeks, and Administration Technician Eric Johnson.

Others present were Directors Harry Farmer and Michael Thomas (remote), Allan Dean (remote), Chris Siebuhr, Crosby and Laura Swartz (remote), Kitty Connolly (remote), Elizabeth Bettenhausen (remote), and Ben Weaver (remote).

Chair Report (Time 2:01pm)

Chairperson Dean reported that the October 7 R&I meeting was cancelled, and a Special Meeting will be held on September 30 at 2:00pm.

Ad Hoc Subcommittee Report(s) (Time 2:02pm)

Committee member Meeks reported that was finally able to get in contact with Source Global regarding solar hydro-panels, and was going to meet with the representative on the following day to obtain more information, including cost for a commercial application. It is estimated that each panel, depending on weather conditions, could possibly produce 3 to 4 liters of water per day (approximately equivalent to one toilet flush). Utilities Department Manager Green estimated that around 1,360 panels could be installed on an acre of land, and could provide up to about 675,700 gallons of water per year, or about one day's water use in Cambria. Mr Green also mentioned that the water produced by these panels would probably have to go through some type of treatment process, and that would have to be a discussion with the Division of Drinking Water.
Committee member Meeks will bring back some cost estimates for discussion at a future meeting after he has obtained more info from the Source Global representative. Committee member Dudzik suggested the possibility of running a test program of 10 panels to see how they perform.

Committee Member Communications (Time 2:07pm)

Committee member Jim Webb reported that the Chumash Heritage Sanctuary was undergoing the final approval phase in Congress. It would regulate offshore drilling and mining, but not fisheries.

Committee member Derrik Williams reported that the County of San Luis Obispo has released an RFP for planning the Regional Desalination Plant. Utilities Manager Jim Green stated that the County has chosen Carollo Engineers, and that District Staff met with Carollo Engineers to discuss the District's needs as well.

Public Comment: There was no public comment on these reports.

Utilities Department Manager Report (Time 2:11pm)

Utilities Manager Jim Green gave a verbal update on the following projects.

- Rodeo Grounds Backup Generator: An RFP has been posted for the generator replacement project. The RFP closes on September 25th, and the responses will be reviewed at the upcoming R&I meeting.

- East Ranch Park Restroom: The District is completing the RFPs for the restroom. One RFP is for site preparation, which should happen in October. Another RFP will be for the restroom installation. The restroom has begun production and delivery is expected in late January or early February.

- Skatepark: The District has selected Spohn Ranch to complete the skate park design. There will be one more round of public input before the design is completed.

- San Simeon Water and Wastewater Transmission Lines: The District is working with CalTrans on the encroachment permitting. Results of the soils and geotechnical studies should be available soon. This should be the final permitting need.

- Stuart Street Tanks: The District has verified the Section 106 compliance requirements, and is now working with the EPA to finalize the permits.

- Wastewater Treatment Plant SST Program: pG&E is developing the design for lift station B4. The R&I Committee will be reviewing the costs and designs at upcoming meetings. The new SCADA equipment has been installed at the WWTP. The District is trying to complete as many of the SST projects as possible before the rainy season begins, especially those that required breaking ground to avoid any trenches filling up with rain water.

- Electric Vehicles: The District will take receipt of an electric vehicle in the next two months. Some of the funding for the charging station will be provided by the Air Pollution Control District. The District is also considering a new electric backhoe, State funds might cover enough of the cost of a new electric backhoe and make it so it is almost the same cost as a traditional backhoe.

- Zero Liquid Discharge Pilot Project: The District is waiting for data from Global Water to submit to the RWQCB. This data is needed to develop a monitoring plan.

Committee member Dennis Dudzik asked about the availability of water from Whale Rock Reservoir. Utilities Department Manager Jim Green said that there were no open allocations, but that will be reevaluated in the future.
Committee member Dennis Dudzik asked if there has been any progress on locating or siting a new well. Program Manager Tristan Reaper related that the next step would be to develop a set of criteria for evaluating and siting a new well. Mr Reaper will gather more data and report on this option at a future meeting
General Manager Matthew McElhenie stated that Board direction would be needed before the District started any large investments such as new wells or pipelines to Whale Rock Reservoir. The R&I Committee would need to request that the Committee Chairperson forward a recommendation to the Board to take any such project under consideration and direction.

Public Comment:

FFRP Executive Director Kitty Connolly reminded the committee that the conservation easement for the Fiscallini Ranch may not allow for a new well on the Ranch.

Crosby Swartz asks about updated information about the ZLD processes suggested by Clark Easter. Utilities Manager Jim Green stated that the District has not received any updated design information.

Public Comment (Time 2:33pm): There was no public comment on items not on the agenda.

Consent Agenda (Time 2:34pm)

Consideration to Approve the August 12, 2024 Regular Meeting Minutes

Chairperson Dean asked about the correct spelling of Mr. Gillham's name. Secretary Derrik Williams will correct the spelling in the minutes.
Committee member Mark Meeks moved to approve the minutes with the spelling correction, motion was seconded by Committee member Jim Webb. The minutes were approved unanimously.

Regular Business

4.A. Receive and Review the Completed Instream Flow Study and Consideration of Forwarding a Recommendation to the CCSD Board of Directors (Time 2:36pm)

Utilities Manager Jim Green gave an over view of the Instream Flow Study Report. Committee members Derrik Williams and Mark Meeks both asked about clarification of some of the conclusions in the report regarding stream flows and and pumping, the effects on steelhead in the creek and in the side pools once the creek flow ceases. It was questioned whether this report is looking at a very specific range of flows, and also if the agricultural wells in the area would have an impact on the District's ability to pump.
Utilities Manager Jim Green points out that the report states that the creek will dry out in the summer whether the District Pumps or not.

General Manager Matthew McElhenie emphasized that it is important to understand that this study identifies what naturally happens to the creek without the operation of the WRF, as the WRF has not operated in many years. This study will help inform SWCA in their work in developing the Adaptive Management Process and mitigation efforts for the WRF.

Public Comment:

Crosby Swartz pointed out that one recommendation is that when the creek flow is between 0 and 1 cubic feet per second (CFS), no pumping should be allowed.

Elizabeth Bettenhausen asked if this report has gone to the CCSD Board of Directors. General Manager McElhenie said this document is submitted to the County as part of the WRF permitting process, and will be presented to the Board for informational purposes in the near future.

Committee member Dennis Dudzik moved to forward this report to the Board or Directors for informational purposes, Committee member Mark Meeks seconded the motion. The motion was approved unanimously.

4.B. Receive and Discuss Information on the Adaptive Management Plan (Time 2:53pm.

Utilities Department Manager Jim Green presented the Adaptive Management Plan (AMP) item, and the proposed contract with SWCA. Under this proposed contract with SWCA, SWCA would develop an addendum to the Adaptive Management Plan that will include a Supplemental EIR. SWCA will also prepare a memorandum detailing the District's compliance with Condition 6 of the WRF Coastal Development Permit application.

Chairperson Dean clarified that there are changes in the WRF project description that must be updated in an addendum in the Adaptive Management Plan.

Public Comment: There was no public comment on this item.

Committee member Mark Meeks moved to recommend to the Board of Directors that they approve the contract with SWCA for the updates to the Adaptive Management Plan. Motion was seconded by Committee member Dennis Dudzik, and the motion was approved unanimously.

4.C. Discuss R&I Meeting Calendar for 2025 (Time 2:59pm)

Chairperson Karen Dean presented the item. The District will be modifying the Standing Committee meeting dates so there are two Committee meetings each day. The proposal is that the Finance Committee will meet in the morning and the Resources and Infrastructure Committee will meet in the afternoon on the Monday following the Board of Directors meeting which will be held on just one day a month on the second Thursday of each month. The PROS Committee and the Policy Committee will meet on the third Thursday of the month.

Committee member Derrik Williams moved to approve the R&I Committee dates and times, the motion was seconded by Committee member Dennis Dudzik. The motion was approved unanimously.

Future Agenda Items (Time 3:03pm)

Chairperson Dean asked for any future agenda items.

- The Rodeo Grounds backup generator proposals will come before the Committee at the next meeting.
- The Sanitary Survey Report will come before the Committee at the next meeting.
- An update on the ZLD pilot project should come to the Committee at the next meeting.
- There was a request to bring back the biomass cogeneration proposed project, Chairperson Dean requests that any questions or concerns about this project be sent to Utilities Department Manager Jim Green, Program Manager Tristan Reaper, or General Manager McElhenie. After responses to questions have been developed, this will come before the R&I Committee at a future meeting,
- Committee member Dudzik requested the criteria for a new well be presented to the Committee.
- The Wastewater Treatment Plant EV charger scope and costs will come to the Committee at a future meeting.
- The Committee will review and discuss Standing Committee Bylaw changes.

Chairperson Dean notes that if all the above items are on the next agenda, the meeting could be quite long.

Adjourn

Chairperson Karen Dean adjourned the meeting at 3:10pm.

Respectfully submitted,
CCSD Director Karen Dean, R&I Committee Chairperson

NCAC September 18, 2024 Meeting Summary for the CCSD Board of Directors

The North Coast Advisory Council held a meeting September 18, 2024, 6:00-7:30 PM via Zoom. This report summarizes some of the more salient points discussed. For the convenience of those watching the recorded meetings on YouTube, approximate start times are noted at several points in this report, but FYI, the recording started approximately 14 minutes after the establishment of a quorum and the start of the meeting, in other words the recording started around 6:14 PM. For further detail, please visit the well-organized NCAC website:

- Agendas with written reports: https://www.ncacslo.org/meeting-agendas.
- Minutes: https://www.ncacslo.org/minutes-of-meetings.

6:09 PM, **Blake Fixler** provided an oral report for Supervisor Bruce Gibson,

- The Board of Supervisors failed to approve the Bob Jones Trail connector, so will likely have to return the grant funding.
- Supervisor Gibson is on a Sea Level Rise Working Group.
- There were several questions from Cambrians about the Street Sweeping Schedule.
- Fairly extensive discussion regarding interest in Town Halls related to the proposed Wind Farm project with both proponents and opponents.
- Ted Key mentioned a Saturday 10/5, 12 noon rally at the Vets Hall Parking Lot to protest the wind farm development.

6:24 PM, **Land Use Committee**: Jeff Kwasny provided an oral report, discussed concessions the Land Use Committee was able to achieve for the community regarding safety and security for the Christmas Market and with the Atlas communications tower. Jeff briefly discussed the September 12 Coastal Commission Hearing on the Brambles development. Jeff explained the purpose of the Land Use Committee is to review land use proposals, identify impacts, and work on community behalf in attempts to mitigate the impacts.

SLO County Planning: Ana Luvera provided an oral report: 1 new Land Use Permit, C-DRC2024-00037, a request to demo an existing 900 SF home, and build a 1589 SF home. Planning is in the early review stage.

7:01 PM, **CCSD**: Michael Thomas provided a written report, summarized key points, and asked to present the Community Park Phase 3 Plan at the next NCC meeting.

7:05 PM, **Cambria Fire Safe Focus Group**: Dave Pierson provided a written report, and discussed highlights. Work at Rancho Marino resumed this week. Plans for controlled burns of the burn piles starting December, depending on weather conditions.

7:10 PM, **CCHD**: Cecilia Montalvo provided an oral report, Chamber mixer tomorrow 5-7 at the ambulance facility. NCAC will post the fact sheet.

7:22 PM, Mary Ann Gustafson discussed the upcoming **Lighthouse Century bike ride**, on the last Saturday in September each year. This year's ride will be Saturday 9/28, starting and ending at Morro Bay High School, with rest stops the same as last year at Pinedorado and Shamel Park. There will be no road closures.

The next NCAC Meeting will be October 16, 2024, at 6:00 PM via Zoom.

Respectfully submitted, Michael Thomas, CCSD Board of Directors

Friends of the Fiscalini Ranch Preserve September 10th, 2024 Meeting summary

Due to the current increasing presence of the Covid virus, today's meeting was held via Zoom and not at the Cambria Center for the Arts Green Room.

The meeting was called to order at 4PM by Chair Dianne Anderson. Also in attendance are Vice Chair Tom Loganbill, Executive Director Kitty Connolly, assistant to ED Connolly Barbara Beuche, Board members Bob Detweiler, Marvin Josephson, Cathleen Campe, Jose Luis Sanchez, Rusty Burns, CCSD Board member and PROS Chair Michael Thomas, and CCSD Board member and FFRP liaison Harry Farmer. Absent were Secretary John Nixon, Treasurer Mary Maher and Board members Ellie Etter and Shari Robascotti.

The first order of business was approving the Minutes of the August 9th meeting. Bob Detweiler made the motion to approve, with a second by Marvin Josephson. Board approval was unanimous.

Executive Director Connolly then provided an update on the Linking Boardwalk ribbon cutting Dedication taking place on Saturday, October 26th at 10AM. Construction of the Boardwalk is expected to be complete by the end of September, with plaques installed soon after. The dedication is open to the public, and Board members are encouraged to inform others of the event. This gathering is also being observed as the kickoff to celebrating the 25th anniversary of the Fiscalini Ranch Preserve. Folks are encouraged to submit brief comments of 350 words or less on their wonderful memories of the Ranch in their lives. The invited guest of honor will be Supervisor Bruce Gibson, with former Board Chairs Walt Andrus and Richard Lee, as well as FFRP's first Executive Director Jo Ellen Butler, providing uplifting thoughts on their experiences and involvement with the Ranch. CCSD and CUHD Board members are being encouraged to attend. Also, as a specific reason for the Boardwalk is ADA compliance, individuals to whom this is helpful are encouraged to celebrate this event as well. Donations will be accepted.

Ms Connolly then continued with her monthly ED Report. First, another unbelievably creative, imaginative and colorful entry in the Pinedorado Parade led to the second Sweepstakes Award in two years. Many smiles and laughter all around from both entry volunteers and parade spectators! And more good news. The Moonstone Cellars four month fundraiser led to dozens of donations, and a check of $1300 to FFRP! Plus, after the makeover of the shop on Main St, the number of sales almost doubled over the same period from the year before, and of course total earnings were up as well, as was an increase in visitors. And many thanks to Rancho Marino Program Manager Keith Seydel, who has generously made space for three tables at his walled garden, allowing FFRP to restart their tree growing program. Construction of the Trail head signs continue thanks to Walt Andrus.

At this point in the meeting, around 4:20, Kitty began having trouble with her computer and was not available.

Chair Anderson gave an update on her meeting of August 15th with CCSD General Manager Matt McElhenie, CCSD Board President and Finance Committee Chair Tom Gray, Board Director and PROS Committee Chair Michael Thomas, and CCSD Facilities and Resources Supervisor David Aguirre. The CCSD stated the annual amount budgeted for Ranch maintenance would be decreased from around $58,000 to $17,000. The group will meet again on October 17th to discuss and determine further details.

A written report was provided by Treasurer Mary Maher:

* FFRP received the final check of $91,861.91 from the Thomas Ridley estate, for a final total of $532,540.
* $350,000 was transferred from Schwab to Mechanics Bank to fund the initial payment on the Linking Boardwalk.

* Finally, FFRP ended July with $5.26 million in long term investments, $1.2 million in short term investments, and $45,000 in checking.

Marvin Josephson then provided his Ranch Committee Report. Much weeding took place in August, especially the very serious effort at mustard removal. The Committee met for two hours on September 3rd to discuss future endeavors. Major projects include upgrading and improving the Dolphin Trail, the Ridge Trail, the Creek to Ridge Trail, the Creek to Forest Loop Trail, and the Huntington Fire Road Trail. Also, more removal of ice plant is needed to widen the Bluff Trail. In addition to weekly volunteer work, a work party gathers on the 3rd Saturday of each month for a project to be determined. Upcoming will be identifying areas of French Broom to eradicate.

A thorough Stakeholders Report was available in a pdf for reading but no discussion took place.

ED Connolly returned to the meeting at 4:36 PM

Board member Detweiler applauded all those involved in the great Trail work being done on the Ranch.

Chair Anderson adjourned the meeting at 4:37 PM.

The next FFRP monthly meeting will be Tuesday, October 8th, at 4PM at the Cambria Center for the Arts Green Room.

This meeting summary written and submitted by CCSD Board Director and FFRP liaison Harry Farmer.

Cambria Forest Committee September 13th meeting summary

The meeting was called to order at 10:03 AM by Chair Crosby Swartz. Attending the meeting were Treasurer Laura Swartz, Greenspace Executive Director Karin Argano, Friends of the Fiscalini Ranch Preserve Executive Director Kitty Connolly, CCSD Director and Parks, Recreation and Open Space Committee Chair Michael Thomas, and CCSD Director and Forest Committee liaison Harry Farmer.

As for approval of the meeting minutes, Chair Swartz recommends reading Director Farmer's August 16th meeting summary in the September 12, 2024 CCSD Agenda Packet.

Treasurer Swartz had a very encouraging Treasurer's Report. Thanks to a Grant from the Cambria Community Council, as well as two anonymous donations, the new CFC bank balance is $2943.72.

As for Organization Reports. Chair Swartz began by giving an update on the August meeting of the Cambria Fire Safe Focus Group. Registered Professional Forester Steve Auten reported is in the process of preparing a Project Description Analysis (PSA) for future fire prevention and forest health projects in the north coast area.

FFRP ED Kitty Connolly then provided the latest on the Friends of the Fiscalini Ranch Preserve. First, FFRP's very creative, colorful and humorous Pinedorado Parade entry won the Sweepstakes Award, the top prize of the Parade that was certainly well deserved. Kudos to Brian Morgan and all the involved and committed volunteers. Also, coming up next month will be the long awaited dedication of the Linking Boardwalk Trail on Saturday, October 26th at 10AM. It will be a community event and the public is welcome to attend. A couple of elected officials have been invited, and there will be a few talks. As of now, the celebration will take place at the Bluff Trail entrance to the Boardwalk.

At this point, Laura Swartz brought up a conversation she'd had at the CFSFG meeting with Mr Auten and Upper Salinas-Las Tablas Resource Conservation District Project Manager Spencer Gordon. They are both receptive to having a more environmentally sensitive approach regarding upcoming forest projects, from CCSD owned properties, to the Fiscalini Ranch, and Fern Canyon. Kitty then expressed her gratitude that uniform standards would be used in upcoming projects.

Michael Thomas then commented, beginning with informing us he'd signed up for the Forest Stewardship Workshop Series. Some of the focus is on forest landowners developing their own Forest Management Plan. He then referenced the Forest Treatment Plans he'd read about, and how would these be implemented. Both Kitty and Karin spoke to this, stating that the forest management practices hadn't changed much in 20 years, and in fact a more more environmentally friendly ecological approach was now being taken. Karin expressed her appreciation that while initially Greenspace was going to be one of the individual projects, it was presently being bundled into the now being implemented Coastal Zone Project Specific Analysis. In addition, Karin complimented Steve Auten and Spencer Gordon for their evolving attitude that includes a more forward looking, ever changing approach toward forest health.

Laura then spoke up, expressing her concern regarding burn piles, recalling the disappointment of herself and others as to how burn piles created in the Leimert area in Cambria a number of years ago did harm to standing Monterey Pines, ultimately causing some of them to be destroyed. She hoped this would not be a problem in upcoming projects.

Karin now updated us on Greenspace the Cambria Land Trust. Recently Greenspace led a really nice walk in Strawberry Canyon for various folks from the California Native Plant Society, Also, Kitty and her are excited to soon be taking high school kids on hikes at the Bluff Trail on the Ranch, as well as in Strawberry Canyon. No doubt much fun will be had by everyone! The Greenspace Speaker Series will be featuring Obi Kaufman, a writer, naturalist, self described “eco philosopher”, on Sunday, October 20th at 5PM at St Paul’s Episcopal Church on Eton Road in Cambria. Also, the November speaker will be Joe Burnett, senior lead biologist at Ventana who will be speaking on the Condor Project. Karin also stated she recently did a site visit with Hailey Leurk and Eric Grinberg from the USLT-RCD for three new planting sites for their Habitat Restoration grant they received from the USLT-RCD. She also announced that FFRP and Greenspace are collaborating on a Bio-Blitz for Pollinators sponsored by National Parks in September. In addition, Karin will be leading Leffingwell High School students to the Creekside Reserve and the Ranch Bluff Trail to collect data to submit to the project. Karin also was pleased to announce that Greenspace received the Blue Ribbon Award for the best non commercial entry in the Pinedorado Parade.

Crosby then provided a brief statement from Rancho Marino Reserve Director Keith Seydel that workers would be returning from firefighting duty next week to finish the treatment work on Randall Dr.

Under New Business, Kitty Connolly provided an update on the Habitat Restoration Project on the Fiscalini Ranch Preserve. A grant has been obtained by the US-LT Resource Conservation District from the Wildlife Conservation Board that will fund the enhancing of pollinator habitat. Presently 1500 plants are being grown at the Santa Barbara Botanical Garden including toyon, coyote bush, and sticky monkey. Plantings will take place south of the Dolphin Bench on the Huntington Trail in Fall of 2025. Kitty added that FFRP has had good luck in the past with plants grown at the Santa Barbara Botanical Garden, and that their assistance in this endeavor has been very much appreciated.

Under Unfinished Business, discussion took place as to updating and reprinting the Invasive Weed Guide. Crosby and Laura informed everyone that a bit more work was being done by the Swartz’s and author Christine Heinrichs, and the goal is that the Weed Guide be as easy as possible to work with once it is sent to ASAP Reprographics for printing.

The meeting was then adjourned at 10:39 AM.

The next Cambria Forest Committee meeting will be Friday, October 12th at 10AM via Zoom.

This summary has been written and submitted by CCSD Director and CFC liaison Harry Farmer.