SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

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February 23, 2015

Rita Garcia
Michael Baker International
14725 Alton Parkway
Irvine, CA 92618-2027

Re: Initial Cambria Emergency Water Supply Project Adaptive Management Plan Monitoring Results (January 2015) / SWCA Project No. 31843

Dear Ms. Garcia:

SWCA Environmental Consultants (SWCA) conducted water quality and existing conditions monitoring in San Simeon Creek and Van Gordon Creek as described in the Adaptive Management Plan (AMP) for the Cambria Emergency Water Supply Project (CEWSP). Monitoring surveys were conducted on January 12 and January 30, 2015. This first month of monitoring and sampling was based on discussions with Bob Gresens of the Cambria Community Services District (CCSD) and RBF Consulting (RBF)/Michael Baker International (MBI) in order to: select sampling points; identify the existing infrastructure already in place for collecting data (e.g., stream gages, groundwater quality data recorders); and, establish the timing for the field monitoring. The CCSD began their emergency pumping activities at the CEWSP treatment facility on January 20, 2015, at approximately 1:20 p.m. This summary report includes discussion of the methods used to collect stream data, the locations of sites selected for data collection, and the results of the surveys.

DATA COLLECTION AND SITE SELECTION

SWCA identified four locations on San Simeon and Van Gordon Creeks for all water quality and water level data collection. These sites are shown on the map in Attachment A, and photos are provided in Attachment B. Three sites are in San Simeon Creek: 1) Site SS1 is located between source water well 9P7/Advanced Water Treatment Plant (AWTP) and recharge injection well RIW-1, near an existing County of San Luis Obispo (County)-maintained stream gauge station (San Simeon Sensor 718); Site SS2 is located under the pedestrian bridge that crosses San Simeon Creek in the upper lagoon; and Site SS3 is located in the lower lagoon near the mouth of San Simeon Creek at the beach. A fourth site (Site VG1) was selected in Van Gordon Creek downstream of the AWTP where the brine disposal pipeline and the filtrate line to San Simeon Creek Lagoon cross the creek. However, there were no flows in this creek during the month of January and thus, no data on water quality and/or flow were collected in January 2015.

SURFACE WATER FLOW MONITORING

SWCA measured stream velocity (feet per second) in San Simeon Creek and San Simeon Lagoon using a Gurley Model 625D Pygmy Flow Meter. Stream width and depth were recorded at the sample location, and stream flows were calculated in cubic feet per second (cfs). On January 12, 2015, stream flow at SS1 was calculated as 0.74 cfs, and on January 30, 2015, stream flow was calculated as 0.61 cfs. No detectable flow was recorded at SS2 or SS3, and, as noted above, no water was present at VG1 during the month of January.

SURFACE WATER LEVEL MONITORING

The County Department of Public Works monitors and maintains Sensor 718 in San Simeon Creek near monitoring Site SS1. Sensor 718 is adjacent to a monitoring station established by the U.S. Geological Survey (USGS) on November 25, 1987, in coordination with the County Division of Engineering. Stream stage data (in feet) is recorded at Sensor 718 throughout the day, multiple times per hour. The stream stage recordings at Sensor 718 (SS1) on January 12, 2015, averaged 4.23 feet and on January 30, 2015, averaged 4.34 feet.

In order to fully implement the AMP, another stream gage or other measuring device needs to be installed at the upper lagoon site (SS2) to record surface water levels. A request to install a device has been submitted to CCSD. Because the device had not yet been installed, surface levels were not measured at SS2 during the January 12, 2015 data collection. However, SWCA did collect measurements from the base of the existing pedestrian bridge (at the southwest corner of the bridge) on January 30, 2015, with the intention that this measurement can later be extrapolated to a surface water level at SS2. The distance from the bridge to the water surface on January 30 was 136 inches.

Discussions are ongoing with the CCSD to determine where and when a suitable measuring device can be installed at SS2 to monitor lagoon surface water levels. Additionally, a gage will need to be installed in Van Gordon Creek to measure surface water levels when water is present (as noted above, flows have been absent from Van Gordon Creek in the month of January 2015).

RIPARIAN VEGETATION MONITORING

SWCA plans to conduct three California Rapid Assessment Method (CRAM) analyses as a means of assessing the riparian habitat's health. These surveys will be conducted between February and April in upper San Simeon Creek and Van Gordon Creek near the extraction well, and in the upper lagoon area (exact locations to be determined), and results will be provided in future monitoring reports.

INSTREAM AND FISH HABITAT MONITORING

SWCA collected water quality data at SS1, SS2, and SS3 using an Extech Instruments Digital multi-meter Model DO700, including temperature (degrees Fahrenheit [ºF]), dissolved oxygen (parts per million [ppm]), total dissolved solids (milligrams per liter [mg/L]), and salinity (parts per thousand [ppt]). The results of the samples are shown in Table 1 below.

It was noted that high surf conditions modified the sandbar at the outflow of San Simeon Creek in the days prior to the second survey (conducted on January 30, 2015), and likely overtopped the sandbar and flowed into the lower lagoon. This may account for variations in the salinity measurements from the two dates.

No special-status species such as tidewater goby (*Eucyclogobius newberryi*), steelhead trout (*Oncorhynchus mykiss*), California red-legged frog (*Rana draytonii*), or western pond turtle (*Actinemys marmorata*) were observed during the surveys, though it should be noted that identification of these species was not the focus of the surveys. Suitable aquatic conditions were present for these species where water quality conditions were tolerable (discussion of tolerance levels for these species should be included with focused survey reports specific to each species, and included in the annual report).

Table 1. Water Quality Sampling Results

Date	Sampling Location	Temperature (°F)	Dissolved Oxygen (ppm)	Total Dissolved Solids (mg/L)	Salinity (ppt)
01/12/15	SS1	57.5	10.4	453	0.33
	SS2	58.4	5.9	939	0.66
	SS3	60.8	13.2	1270	0.89
01/30/15	SS1	54.5	8.3	473	0.34
	SS2	58.3	4.3	1240	0.85
	SS3	56.3	17.53	2010	1.38

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Attachment A:
Adaptive Management Plan Monitoring Site Locations Map


1
SAN SIMEON MONTEREY CREEK RD
SS1
Van Gordon Creek
SS3
VG1
SS2
San Simeon Creek
Monitoring Locations
Feet
0 250 500 1,000
N
W E
S
Aerial Imagery: County of San Luis Obispo, 2011.
SWCA
ENVIRONMENTAL CONSULTANTS
CEWSP AMP Monitoring Locations

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Attachment B:
Adaptive Management Plan Monitoring Site Locations Photographs

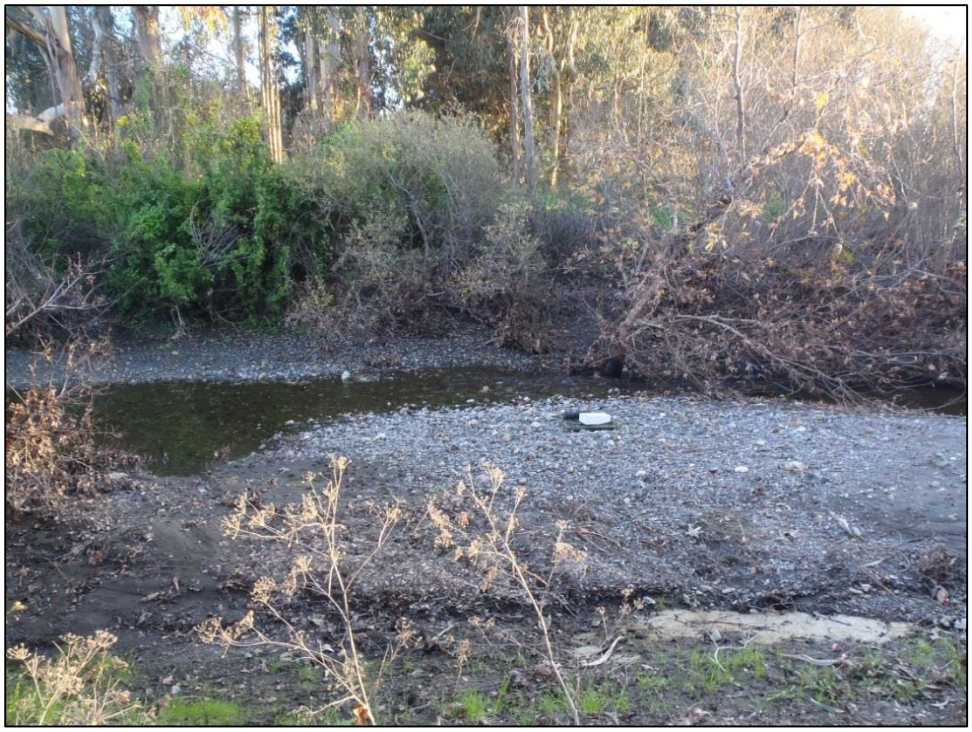

PHOTO 1:

Monitoring Site SS1 at USGS/County Sensor 718 Site in San Simeon Creek between source water well 9P7 and injection well RIW-1.

Photo taken on January 12, 2015.

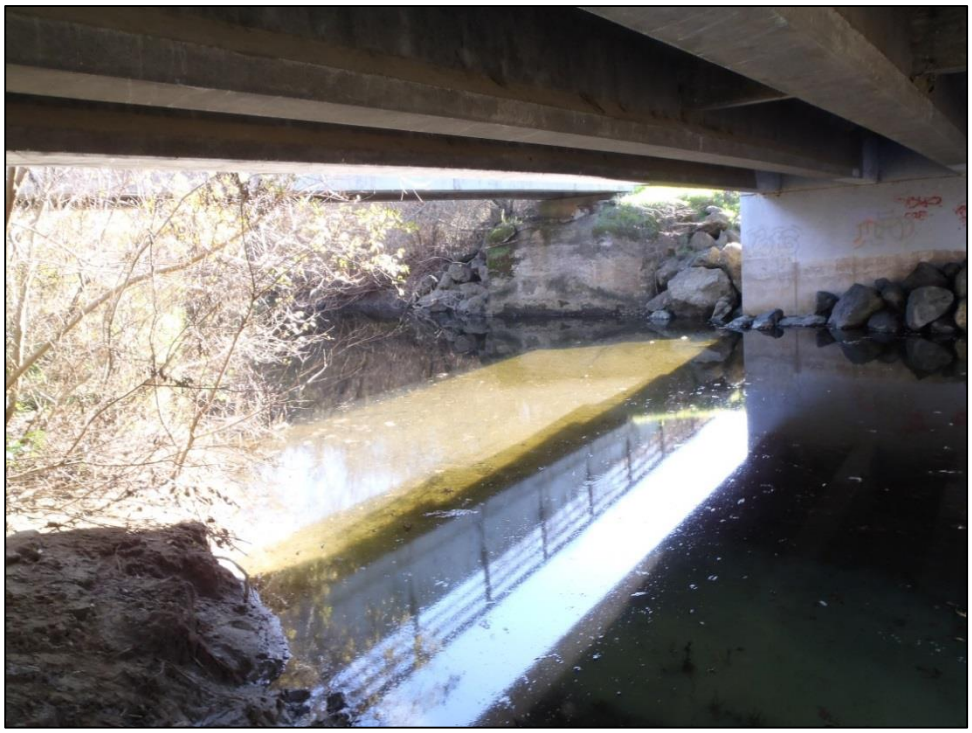

PHOTO 2:

Monitoring Site SS2 at pedestrian/ automobile bridges in upper San Simeon Creek Lagoon.

Photo taken on January 12, 2015.

PHOTO 3:

Monitoring Site SS3 at lower San Simeon Creek Lagoon (refer to yellow arrow for approximate monitoring site. Sandbar separated creek and ocean during all January monitoring visits.

Photo taken on January 12, 2015.

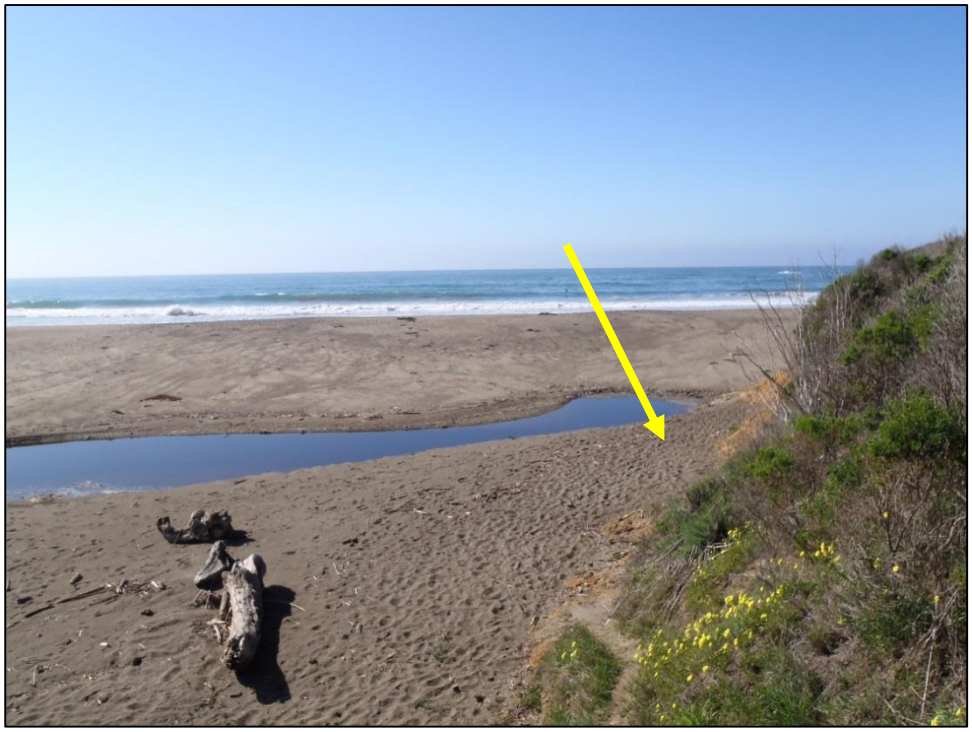

PHOTO 4:

High surf conditions in late January increased the sandbar and decreased the size of the lower lagoon, shifting the monitoring location approximately 40 feet east (yellow arrow).

Photo taken on January 30, 2015.

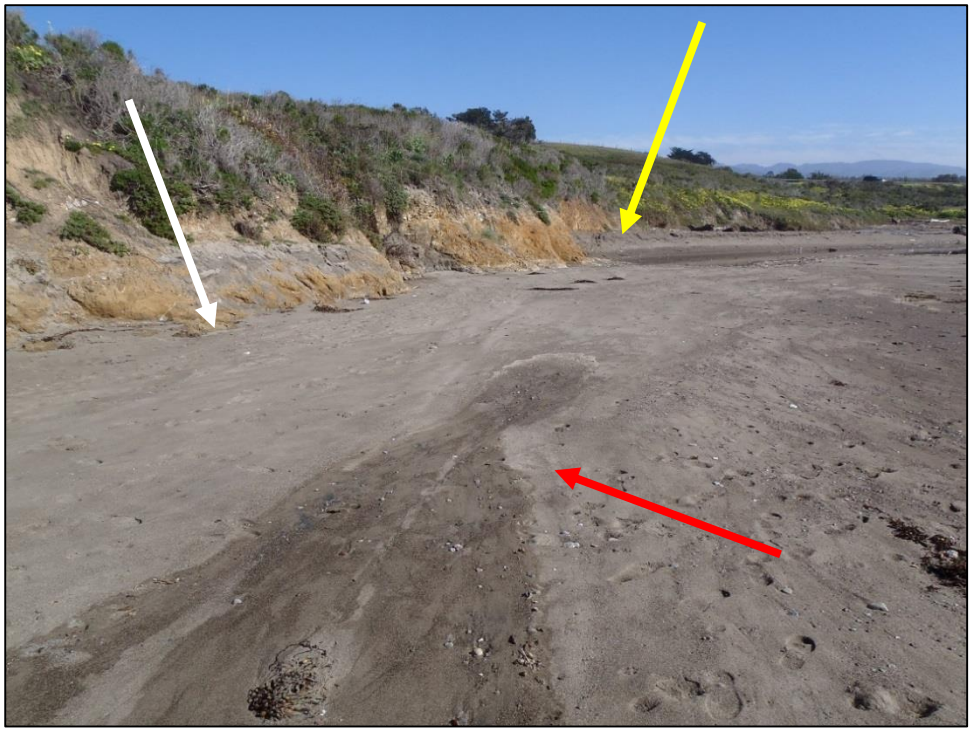

PHOTO 5:

View east toward lagoon from sandbar. Note signs of high surf overtopping sandbar (red arrow). Approximate January 12 sampling point is shown by white arrow and January 30 sampling point is shown with yellow arrow.

Photo taken on January 30, 2015.

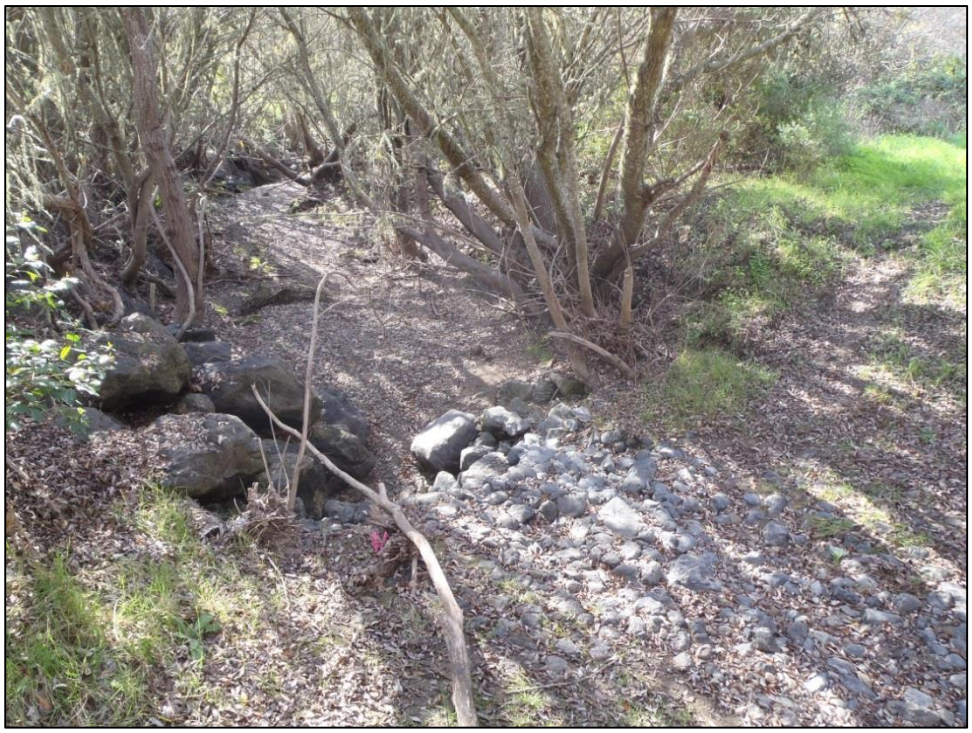

PHOTO 6:

Monitoring Site VG1 in Van Gordon Creek. No water was present during the January monitoring visits.

Photo taken on January 30, 2015.

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WWW.CRAMWETLANDS.ORG

CRAM

California Rapid Assessment Method

Summary Assessment Report

Assessment not mapped

Basic Information

eCRAM ID	4073
Assessment Area Name	San Simeon Creek 1
Project Name	
Assessment Area ID	San Simeon Creek 1
Project ID	Cambria Emergency Water
Wetland Type	riverine non-confined
CRAM Version	6.1

Visit Date	2015-04-22
AA Category	
Practitioners	Travis Belt (lead practitioner)
Other Practitioners	Ben Hart
County	
Ecoregion	
AA Centroid Latitude	
AA Centroid Longitude	
AA Size (Hectares)	
Approximate Length of AA	100
Average Bankful Width	19.8
Flowing water at time of assessment?	No
Apparent Hydrologic Flow Regime	intermittent
Tidal Stage	not recorded
Is this a public record?	No
AA Comment	This AA is located in San Simeon Creek approximately 125 meters from the CSD well field. Dry season flows may be altered by the ground water extraction. German ivy has invaded the riparian corridor and is negatively affecting the lower and mid strata vegetation. The assessment was conducted during a drought. The area has not received average precipitation in three years.

During operation of the EWS project facilities,

by the addition of water into the lagoon as part of the project's lagoon discharge feature, or by operation of the extraction wells On 4/22/2016, the EWS facility was off, and had been shut down by the CCSD on 4/17/2016.

Metric Scores

Attribute	Buffer And Landscape Context	90.29
	Stream Corridor Continuity	A (12)
	Percent Of AA With Buffer	A (12)
	Average Buffer Width	B (9)

	Buffer Condition	B (9)
Attribute	**Hydrology**	**66.67**
	Water Source	C (6)
	Channel Stability	B (9)
	Hydrologic Connectivity	B (9)
Attribute	**Physical Structure**	**87.50**
	Structural Patch Richness	A (12)
	Topographic Complexity	B (9)
Attribute	**Biotic Structure**	**80.56**
	Number Of Plant Layers Present	A (12)
	Number Of Co-Dominant Species	A (12)
	Percent Invasion	B (9)
	Plant Community Score	11
	Horizontal Interspersion And Zonation	C (6)
	Vertical Biotic Structure	A (12)
Index Score		**81**

Stressors

3 total, **1** with significant negative effect - *indicated below with* *

Attribute	**Biotic Structure**
	Lack of treatment of invasive plants adjacent to AA or buffer*
Attribute	**Buffer And Landscape Context**
	Transportation corridor
Attribute	**Hydrology**
	Groundwater extraction

This report was created on Thursday May 28, 2015, 10:00 AM using the SFEI eCRAM Mapper at www.cramwetlands.org

The data provided in this report is for informational purposes only and may not be sufficient for the purposes of fulfilling the requirements of a regulatory permit. Please see "Using CRAM (California Rapid Assessment Method) To Assess Wetland Projects As an Element of Regulatory and Management Programs" CWMW, Oct. 13, 2009.

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CRAM

California Rapid Assessment Method

Summary Assessment Report

Assessment not mapped

Basic Information

eCRAM ID	4074
Assessment Area Name	San Simeon 2
Project Name	
Assessment Area ID	Van Gordon Creek
Project ID	Cambria Emergency Water
Wetland Type	riverine non-confined
CRAM Version	6.1

Visit Date	2015-04-22
AA Category	
Practitioners	Travis Belt (lead practitioner)
Other Practitioners	Ben Hart
County	
Ecoregion	
AA Centroid Latitude	
AA Centroid Longitude	
AA Size (Hectares)	
Approximate Length of AA	100
Average Bankful Width	5.5
Flowing water at time of assessment?	No
Apparent Hydrologic Flow Regime	
Tidal Stage	not recorded
Is this a public record?	No
AA Comment	The AA is located in Van Gordon Creek approximately 100 feet downstream of a gravel low water crossing and approximately 650 feet upstream of the Van Gordon Creek and San Simeon Creek confluence. The wastewater treatment plant percolation ponds are approximately 100 feet from the AA boundary. The brackish water extraction wells are approximately 700 feet from the AA boundary. Van Gordon Creek was dry at the time of the assessment and appeared that it had not flowed in the 2014/2015 season. Lack of flow may have been due to drought conditions and the ephemeral nature of the creek. The low and mid-strata vegetation in the AA has significant coverage of Vinca major and German ivy. The upper strata is all willow. The banks of the creek are uniform throughout the AA.

Metric Scores

Attribute	Buffer And Landscape Context	79.75

	Stream Corridor Continuity	A (12)
	Percent Of AA With Buffer	A (12)
	Average Buffer Width	C (6)
	Buffer Condition	C (6)
Attribute	**Hydrology**	**83.33**
	Water Source	C (6)
	Channel Stability	A (12)
	Hydrologic Connectivity	A (12)
Attribute	**Physical Structure**	**37.50**
	Structural Patch Richness	D (3)
	Topographic Complexity	C (6)
Attribute	**Biotic Structure**	**63.89**
	Number Of Plant Layers Present	A (12)
	Number Of Co-Dominant Species	C (6)
	Percent Invasion	C (6)
	Plant Community Score	8
	Horizontal Interspersion And Zonation	C (6)
	Vertical Biotic Structure	B (9)
Index Score		**66**

Stressors

4 total, **1** with significant negative effect - *indicated below with* *

Attribute	**Biotic Structure**
	Lack of treatment of invasive plants adjacent to AA or buffer*
Attribute	**Buffer And Landscape Context**
	Transportation corridor
Attribute	**Hydrology**
	Point Source (PS) discharges (POTW, other non-stormwater discharge)
Attribute	**Physical Structure**
	Vegetation management

This report was created on Thursday May 28, 2015, 1:09 PM using the SFEI eCRAM Mapper at www.cramwetlands.org

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CRAM

California Rapid Assessment Method

Summary Assessment Report

Assessment not mapped

Basic Information

eCRAM ID	4075
Assessment Area Name	San Simeon 3
Project Name	
Assessment Area ID	San Simeon Creek/Lagoon
Project ID	Cambria Emergency Water
Wetland Type	riverine non-confined
CRAM Version	6.1

Visit Date	2015-05-22
AA Category	
Practitioners	Travis Belt (lead practitioner)
Other Practitioners	Ben Hart
County	
Ecoregion	
AA Centroid Latitude	
AA Centroid Longitude	
AA Size (Hectares)	
Approximate Length of AA	100
Average Bankful Width	19.2
Flowing water at time of assessment?	No
Apparent Hydrologic Flow Regime	perennial
Tidal Stage	not recorded
Is this a public record?	No
AA Comment	The AA is located in the lower reach of San Simeon Creek approximately 1,200 feet upstream of the creek's mouth on the beach. The Van Gordon Creek Road bridge crosses the lower portion of the AA. The AA is located approximately 675 feet from the WTP percolation ponds and 3000 feet downstream of the freshwater extraction wells. The vegetation is dominated by willows. The water in the creek was stagnant (not flowing) with very bad quality and severe algae growth.

Metric Scores

Attribute	Buffer And Landscape Context	90.29
	Stream Corridor Continuity	A (12)
	Percent Of AA With Buffer	A (12)
	Average Buffer Width	B (9)

	Buffer Condition	B (9)
Attribute	**Hydrology**	**83.33**
	Water Source	C (6)
	Channel Stability	A (12)
	Hydrologic Connectivity	A (12)
Attribute	**Physical Structure**	**62.50**
	Structural Patch Richness	C (6)
	Topographic Complexity	B (9)
Attribute	**Biotic Structure**	**63.89**
	Number Of Plant Layers Present	A (12)
	Number Of Co-Dominant Species	D (3)
	Percent Invasion	B (9)
	Plant Community Score	8
	Horizontal Interspersion And Zonation	C (6)
	Vertical Biotic Structure	B (9)
Index Score		**75**

Stressors

5 total, **2** with significant negative effect - *indicated below with* *

Attribute	**Biotic Structure**
	Lack of treatment of invasive plants adjacent to AA or buffer
Attribute	**Buffer And Landscape Context**
	Active recreation (off-road vehicles, mountain biking, hunting, fishing)
Attribute	**Hydrology**
	Actively managed hydrology*
	Engineered channel (riprap, armored channel bank, bed)
Attribute	**Physical Structure**
	Nutrient impaired (PS or Non-PS pollution)*

This report was created on Thursday May 28, 2015, 3:12 PM using the SFEI eCRAM Mapper at www.cramwetlands.org

The data provided in this report is for informational purposes only and may not be sufficient for the purposes of fulfilling the requirements of a regulatory permit. Please see "Using CRAM (California Rapid Assessment Method) To Assess Wetland Projects As an Element of Regulatory and Management Programs" CWMW, Oct. 13, 2009.

Cindy Cleveland
Senior Biologist
535 Cuesta Place
Arroyo Grande, CA 93420
805.234.3759

December 10, 2015

Rita Garcia
Technical Manager
RBF Consulting, a Michael Baker International Company
14725 Alton Parkway
Irvine, CA 92618
949.472.3454

RE: Final 2015 California Red-legged Frog Field Survey for the Cambria Community Services District Emergency Water Supply Project

Dear Ms. Garcia,

This report presents the findings of the 2015 California red-legged frog (*Rana draytonii*) field surveys for the Cambria Community Services District (CCSD) Emergency Water Supply Project (Project) located in San Luis Obispo County, California. The Project is located between the communities of San Simeon to the north and Cambria to the south (Figure 1). The CCSD completed the Cambria Emergency Water Supply Project to help alleviate an emergency water shortage in the Community of Cambria. The Project treats brackish water to produce potable water that is injected into a water recharge well for use in the groundwater basin. The Project is located on CCSD's San Simeon well field and percolation pond system property located east of Van Gordon Creek Road and south of San Simeon-Monterey Creek Road.

This survey is a follow-up survey to a September 29 and October 5, 2014 focused California red-legged frog survey completed by RBF Consulting, a Mike Baker International Company (RBF Consulting 2015). The RBF Consulting focused surveys were to establish baseline California red-legged frog population data for the Project. The RBF Consulting focused surveys verified the presence of and estimated the number of California red-legged frogs in San Simeon Lagoon and lower San Simeon Creek. This field survey duplicated RBF Consulting focused surveys but there was no handling, capture, or "take" of California red-legged frogs (per U.S. Fish and Wildlife guidance) and the study area was located on CCSD property, upstream of San Simeon Creek pedestrian bridge (study area).

1.0 Species Background

Federally listed California red-legged frogs are the largest native frog in the western United States (USFSW 2010). Historically, California red-legged frogs occurred in California and Baja California from sea level to approximately 5,000 feet (USFWS 2010). The lower abdomen and underside of the hind legs are usually red or pink in color and they have prominent dorsal folds (USFWS 2000).

Breeding for the California red-legged frog takes place from late November to late April (USFWS 2000) but can vary depending on seasonal variations (USFWS 2010). Males usually show up at breeding pools two to four weeks ahead of females and commence vocalizations. Egg masses are laid in pools among emergent vegetation, twigs, or other structures (USFWS 2010). Eggs hatch in 6-14 days and tadpoles metamorphose in 3.5-7 months. California red-legged frogs may live up to ten years. Habitat for California

red-legged frogs includes still or slow moving water in ponds, reservoirs, marshes, streams, and other permanent bodies of water and the surrounding upland habitats (USFWS 2000).

2.0 Methodology

Cindy and Paul Cleveland and Kevin Merk conducted two daytime and two nighttime California red-legged frog surveys following the survey protocol contained in the "Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog" (USFWS 2005) on February 25 and April 1, and August 14, and October 2, 2015. On September 22, 2015 the Project was turned on and to capture any impacts to California red-legged frogs, the last frog survey took place on October 2, 2015. The surveys were conducted within the study area that extended from San Simeon Creek pedestrian bridge upstream for approximately 400 feet (Figure 2).

Prior to the fieldwork, Cindy Cleveland conducted a review of documents concerning the Project site and the surrounding areas, including a search of the California Natural Diversity Database (CDFW 2015a and CDFW 2015b). Other resources utilized for this summary report included various State and Federal regulations and aerial photographs.

The daytime survey consisted of walking around the Project site study area and surrounding areas to characterize the habitat, assess site conditions, and prepare for the nighttime survey. Nighttime surveys consisted of walking upstream from San Simeon Creek pedestrian bridge, using Nite Lite Wizard II headlamps and Vortex Viper HD 8 X 40 binoculars, scanning for eyeshine and identifying all amphibians observed.

3.0 Results

According to the CNDDB there are multiple occurrences of California red-legged frogs in and around the study area. The earliest known records of California red-legged frogs in the study area are from 1992 (RBF 2015). The author (Cindy Cleveland) found California red-legged frogs in the study area in a 1997 survey. The RBF Consulting (2015) survey consisted of two mark-recapture night surveys with a total of 53 California red-legged frogs either captured or escaped. California red-legged frogs are also known to occur in watersheds that are within two miles of the study area: Pico Creek (Cindy Cleveland pers. ob.), Leffingwell Creek and Santa Rosa Creek (RBF 2015). The entire study area is located in California red-legged frog critical habitat (USFWS 2015).

The study area is located at 35°35'44"N/121°07'27"W, with agricultural uses to the north, San Simeon State Park to the south and west, and the onsite CCSD percolations ponds and wells on the northeast and eastern portions of the study area, respectively. Beyond San Simeon State Park and CCSD property are rolling hills that support livestock, agricultural crops and native habitats. San Simeon Creek is mostly unconsolidated alluvium underlain by bedrock (USGS 1998). The main stem of San Simeon Creek dries up during the summer months (USGS 1998).

The nighttime surveys were completed between the hours of 1900 and 2200. For the February 25, 2015 survey, daytime temperature was 60 degrees Fahrenheit, nighttime temperature was 54 degrees Fahrenheit, wind speed was 2 miles per hour, cloud cover was 2%, and the moon was 50% full.

For the April 1, 2015 survey, daytime temperature was 59 degrees Fahrenheit, nighttime temperature was 55 degrees Fahrenheit, wind speed was 2-3 miles per hour, cloud cover was 0%, and the moon was 70% full.

For the August 14, 2015 survey, daytime temperature was 69 degrees Fahrenheit, nighttime temperature was 56 degrees Fahrenheit, wind speed was 2-3 miles per hour, cloud cover was 0%, and the moon was 0% full.

For the and October 2, 2015 survey, daytime temperature was 68 degrees Fahrenheit, nighttime temperature was 57 degrees Fahrenheit, wind speed was 2-3 miles per hour, cloud cover was 30%, and the moon was 75% full.

For the February 25, 2015 survey, San Simeon Creek water depth varied from 2 feet to 4 feet. Bankfull width was approximately 32 feet and bankfull depth was approximately 6 feet. There was a 1% slope in the study area. San Simeon instream substrates were approximately 20% silt, 60% gravel, and 20% cobble with some bedrock banks. There was one bedrock pool, approximately 3 feet deep in the study area; the rest of the study area was a glide with frog habitat created by willow rootwads. Water clarity was excellent (see Attachment 2 Photographs). For the April 1, 2015 survey the only change from the February 25, 2015 survey was a slight lowering of the bankfull depth and width and for the August 14 and October 2, 2015 survey the only changes were that the water levels were slightly lower and water clarity was poor due to algae growth (see Attachment 2 Photographs).

The banks of San Simeon Creek are lined with Central Coast Arroyo Willow Riparian Forest dominated by dense stands of arroyo willow (*Salix lasiolepis*; see Attachment 2 Photographs). The willows provided approximately 40% overhead cover.

For the February 25, 2015 survey two juvenile and two adult California red-legged frogs were visually observed and three California red-legged frogs were auditorily located. For the April 1, 2015 survey one adult and nine juvenile California red-legged frogs were observed and one possible bullfrog was observed. The identification of the bullfrog is unclear; it was visually observed for a few seconds before it went into the water, but without a squeak. For the August 14, 2015 survey two juveniles, three adults, two tadpoles, and one metamorph were observed. For the October 2, 2015 survey three subadults and four adults were observed. The operation of the Project did not appear to have impacted water levels or California red-legged frogs after operating for eleven days (the EWS facility was off during Thanksgiving week).

3.0 Conclusion

The Project site study area contains high quality habitat for California red-legged frogs. The 2015 surveys identified a stable breeding population of California red-legged frogs in the study area. If you have any questions or need additional information, please contact Cindy Cleveland at 805.234.3759.

Sincerely,

Cindy Cleveland

Enclosures:

- Figure 1: Project Site Location Map
- Figure 2. Project Study Area Location Map
- Attachment 1: References
- Attachment 2: Photographs

FIGURE 1

Project Site Location Map

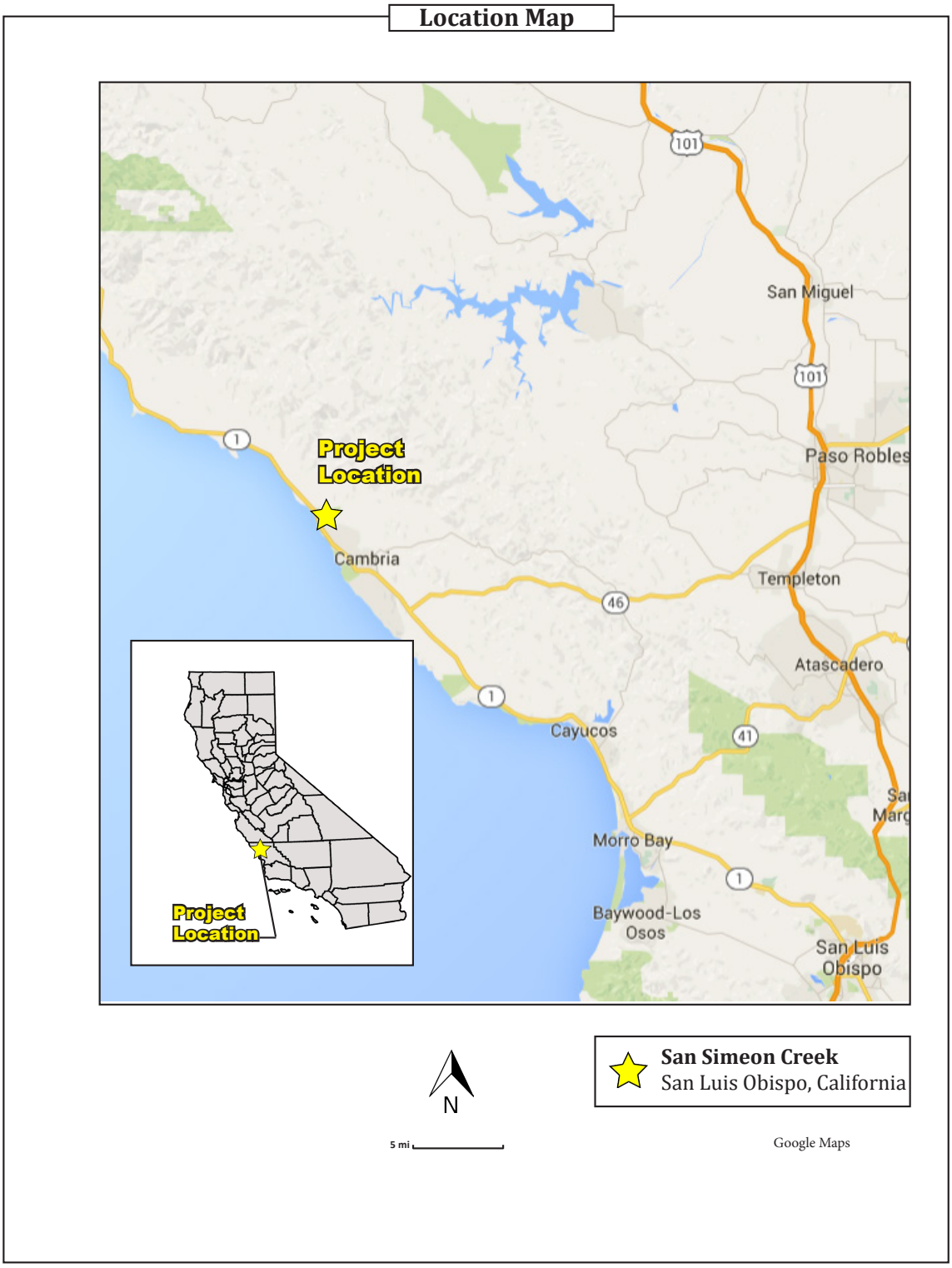

Figure 1. Project Site Location Map

FIGURE 2

Project Site Study Area Location Map

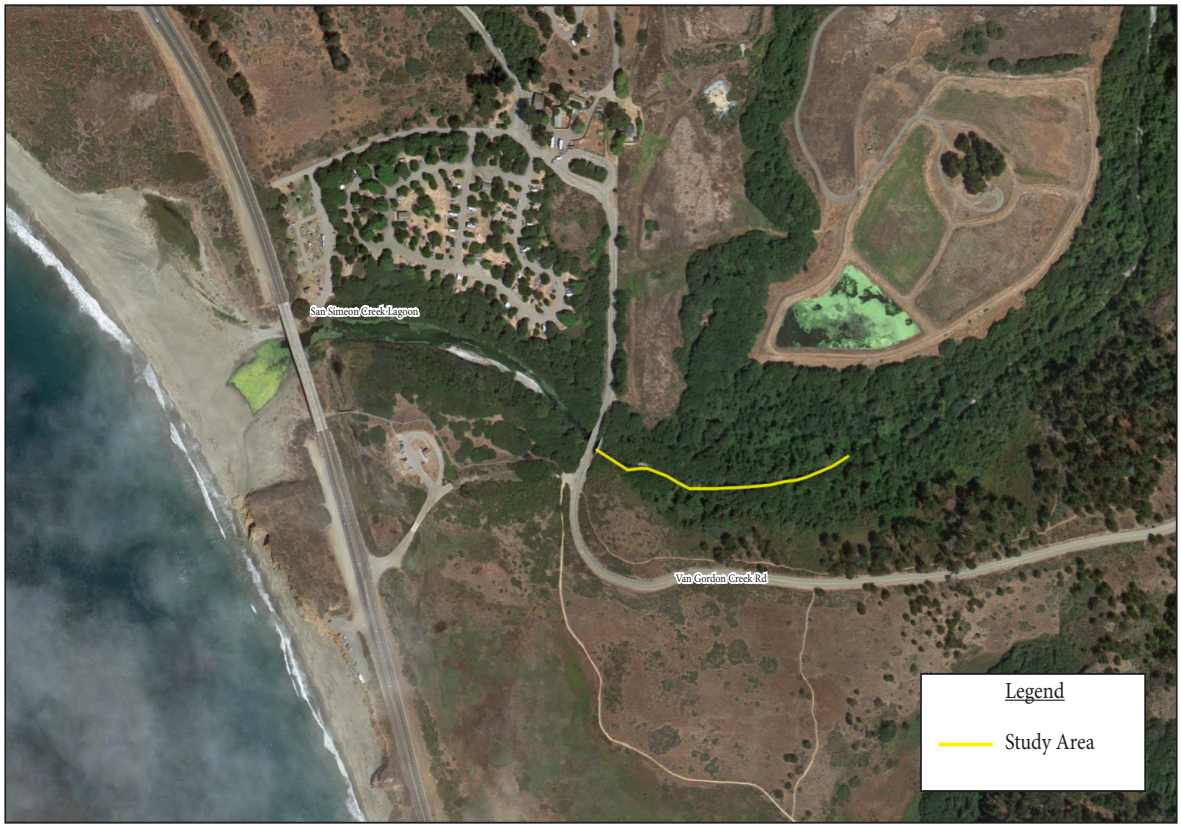

Figure 2. Project Site Study Area Location Map

ATTACHMENT 1

References

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ATTACHMENT 2

Photographs

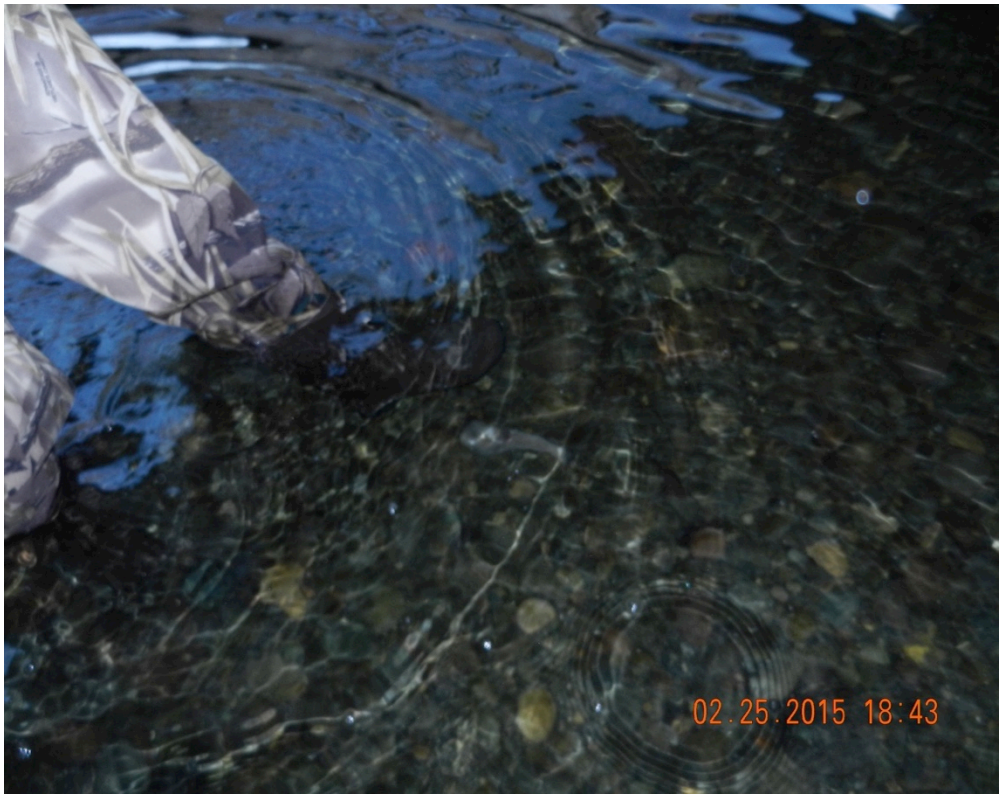

Figure 1. Study area water quality on February 25, 2015.

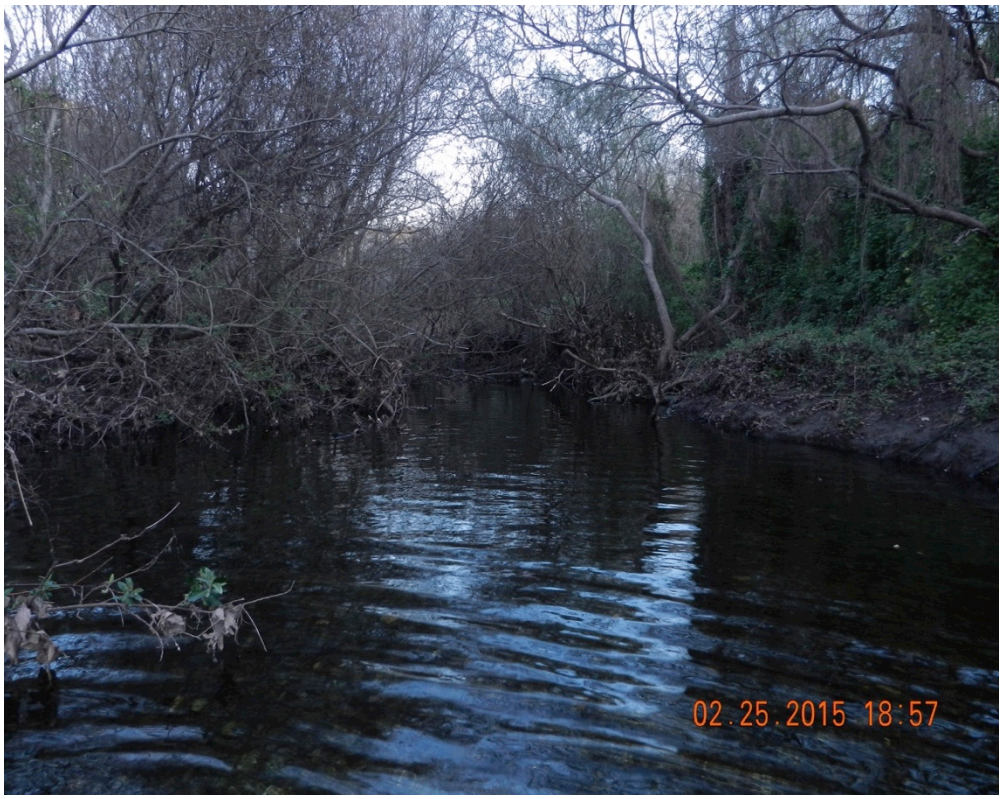

Figure 2. Study area looking east on February 25, 2015.

Figure 3. Study area looking east on August 14, 2015.

Cindy Cleveland
Senior Biologist
535 Cuesta Place
Arroyo Grande, CA 93420
805.234.3759

December 17, 2015

Rita Garcia
Technical Manager
RBF Consulting, a Michael Baker International Company
14725 Alton Parkway
Irvine, CA 92618
949.472.3454

RE: California Steelhead Trout and Tidewater Goby Visual Surveys for the Cambria Community Services District Emergency Water Supply Project

Dear Ms. Garcia,

This report presents the findings of the south-central California coast steelhead (*Oncorhynchus mykiss*) DPS (Distinct Population Segment) and tidewater goby (*Eucyclogobius newberryi*) visuals surveys for the Cambria Community Services District (CCSD) Emergency Water Supply Project (Project) located in San Luis Obispo County, California. The Project is located between the communities of San Simeon to the north and Cambria to the south (Figure 1). The CCSD completed the Cambria Emergency Water Supply Project to help alleviate an emergency water shortage in the Community of Cambria. The Project treats brackish water to produce potable water that is injected into a water recharge well for use in the groundwater basin. The Project is located on CCSD's San Simeon well field and percolation pond system property located east of Van Gordon Creek Road and south of San Simeon-Monterey Creek Road.

Historically, tidewater goby surveys have been conducted in San Simeon Creek Lagoon in early summer and early fall to measure the species' status immediately after sandbar closure and immediately before the sandbar opens again. Steelhead trout have been surveyed for in lower San Simeon Creek in the summer after young steelhead had hatched. Surveys for these two species were conducted during these same time periods, in order to capture consistent data with what has historically been evaluated and to continue building a database of fish presence, however, due to the lack of access outside of CCSD property, the study area was only upstream of campground's San Simeon Creek Pedestrian Bridge. Cleveland biologists conducted two rounds of visual surveys for tidewater goby and a single visual survey for steelhead trout.

1.0 Species Background and Study Area History

1.1 Tidewater Goby

Tidewater gobies are listed as a Federally threatened species under the Endangered Species Act. Tidewater gobies were originally listed as endangered on March 7, 1994, however, this listing was reclassified as threatened on March 13, 2014. Tidewater gobies critical habitat was designated and a new proposal for critical habitat is under review (USFWS 2015b). Currently, the study area is located in tidewater goby critical habitat (USFWS 2015a).

The tidewater goby is a small, elongate, fish rarely exceeding 2 inches and has large pectoral fins (USFWS 2015b). The tidewater goby usually lives for only about 1 year and may occur in populations with a few to thousands of individuals (USFWS 2015b). Reproduction peaks in spring and late summer but may occur year round (USFWS 2015b). Male gobies dig a vertical nesting burrow 10 to 20 centimeters deep in substrate while the female tidewater gobies lay 300 to 500 eggs (USFWS 2015b).

The tidewater goby is found in year round California coastal lagoons, estuaries, and marshes (USFWS 2015b). Tidewater gobies do not occur in areas where the coastline is steep and there are no lagoons or estuaries (USFWS 2015b). They live at the bottom of shallow, brackish water in lagoons and lower stream reaches (USFWS 2015b). Tidewater gobies prefer a sandy substrate for breeding and may have a wide tolerance for salinity, oxygenation, and temperature, especially over short time periods or seasonally (USFWS 2015b). Adult tidewater gobies may be flushed into marine habitats seasonal breaching of the sandbars following but may not survive for long periods in the marine environment (USFWS 2015b). The tidewater goby has been documented in slack freshwater habitats as far as 5 miles upstream from San Antonio lagoon in Santa Barbara County (USFWS 2015b). Tidewater gobies have been sampled in San Simeon Creek Lagoon (RBF Consulting 2015). In 2014 1,002 tidewater gobies were seined in San Simeon Lagoon (RBF Consulting 2015).

1.2 Steelhead Trout

Steelhead trout are listed as a Federally threatened species under the Endangered Species Act. Steelhead trout were originally listed on January 5, 2006 and the listing was updated on April 14, 2014 (NOAA 2015). Steelhead trout critical habitat is designated and the study area is located in steelhead trout critical habitat (NOAA 2015). In the study area steelhead trout are within the south-central California coast steelhead DPS (NOAA 2015).

Steelhead trout are silvery-white on the underside with a heavily speckled body and a pink to red stripe along their sides (NOAA 2015). Steelhead trout are hatched in cool, fast running streams where they stay in fresh water and some move to marine habitats (NOAA 2015). The fish that stay in fresh water are called rainbow trout. The fish that migrate to the ocean are called steelhead trout. Steelhead trout are usually larger than rainbow trout. Young steelhead trout feed primarily on zooplankton and adults feed on aquatic and terrestrial insects, mollusks, crustaceans, fish eggs, and other small fishes (NOAA 2015).

Juvenile steelhead may spend up to 7 years in freshwater before migrating to the ocean for up to 3 years before migrating back to freshwater to spawn (NOAA 2015). Adult female steelhead prepare a redd (or nest) in a stream and may deposit eggs in 4 to 5 "nesting pockets" within a single redd. Steelhead trout can live in a wide range of temperature conditions. Steelhead trout are found along the entire Pacific Coast. Steelhead trout have been documented in San Simeon Creek and lagoon (RBF Consulting 2015). CDFG performed Stream Habitat Inventories on San Simeon Creek in 1973 and 1992 (USGS 1998).

2.0 Methodology

Cindy Cleveland and Paul Cleveland conducted tidewater goby and steelhead trout surveys on July 8, August 12, and October 2, 2015. The surveys were conducted within the study area that extended from the San Simeon Creek pedestrian bridge upstream for approximately 400 feet and continued upstream till water flow ran subsurface approximately 0.5 miles upstream from the San Simeon Creek pedestrian bridge (Figure 2).

Prior to the fieldwork, Cindy Cleveland conducted a review of documents concerning the Project site and the surrounding areas, including a search of the California Natural Diversity Database (CDFW 2015a and CDFW 2015b). Other resources utilized for this summary report included various State and Federal regulations and aerial photographs.

The survey consisted of walking around the Project site study area and surrounding areas to characterize the habitat, assess site conditions, and visually observed fish species.

3.0 Results

The study area is located at 35°35'44"N/121°07'27"W, with agricultural uses to the north, San Simeon State Park to the south and west, and the onsite CCSD percolations ponds and wells on the northeast and east portions of the study area, respectively. Beyond San Simeon State Park and CCSD property are rolling hills that support livestock, agricultural crops and native habitats. San Simeon Creek is mostly unconsolidated alluvium underlain by bedrock (USGS 1998). The main stem of San Simeon Creek dries up during the summer months (USGS 1998).

The banks of San Simeon Creek are lined with Central Coast Arroyo Willow Riparian Forest dominated by dense stands of arroyo willow (*Salix lasiolepis*). The willows provided approximately 40% overhead cover. No fish species except for three-spined stickleback (*Gasterosteus aculeatus*) were observed in the study area.

3.0 Conclusion

The Project site study area contains high quality habitat for tidewater goby and steelhead trout. If you have any questions or need additional information, please contact Cindy Cleveland at 805.234.3759.

Sincerely,

Cindy Cleveland

Enclosures:

Figure 1: Project Site Location Map
Figure 2. Project Study Area Location Map
Attachment 1: References

FIGURE 1

Project Site Location Map

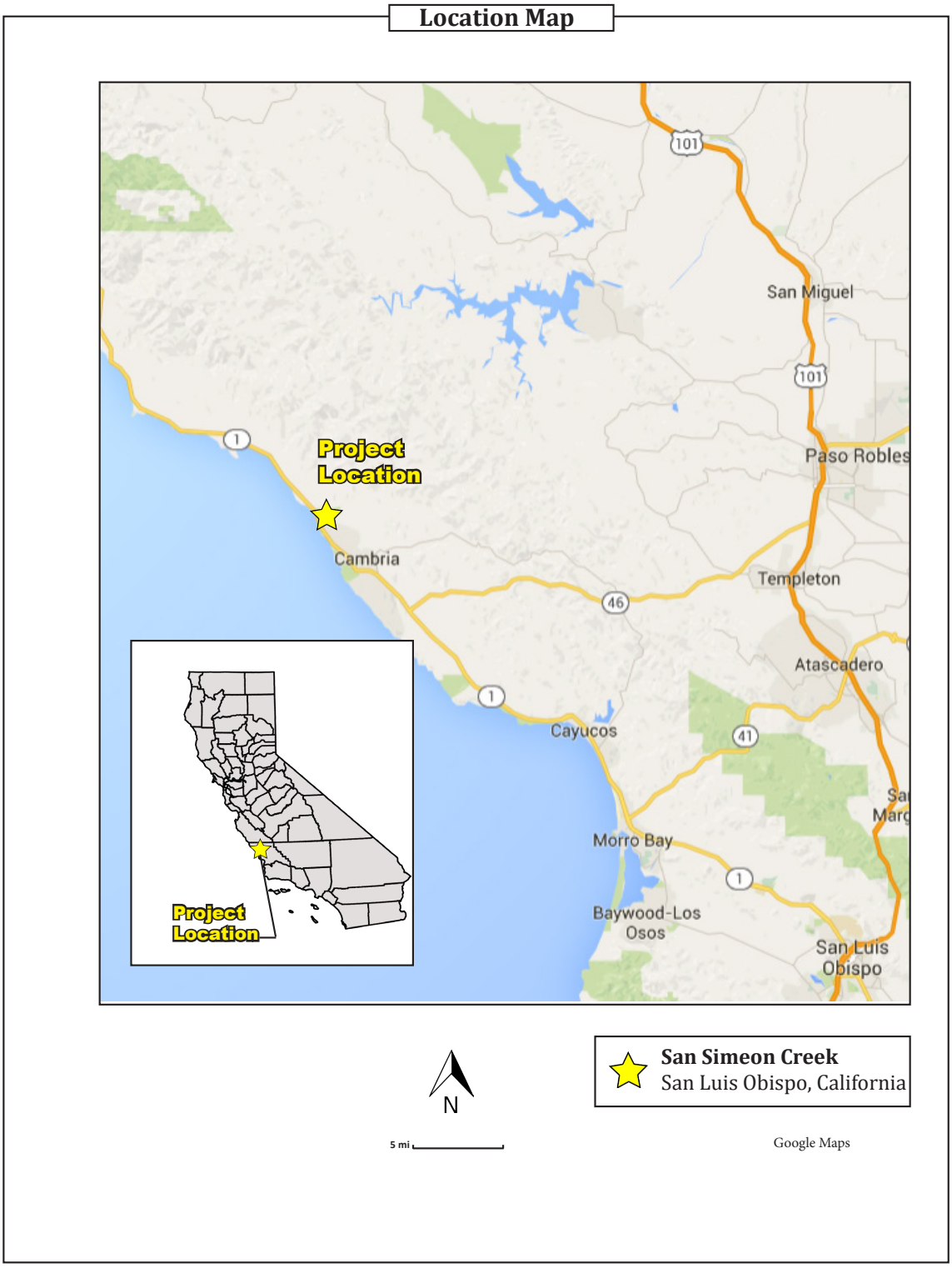

Figure 1. Project Site Location Map

FIGURE 2

Project Site Study Area Location Map

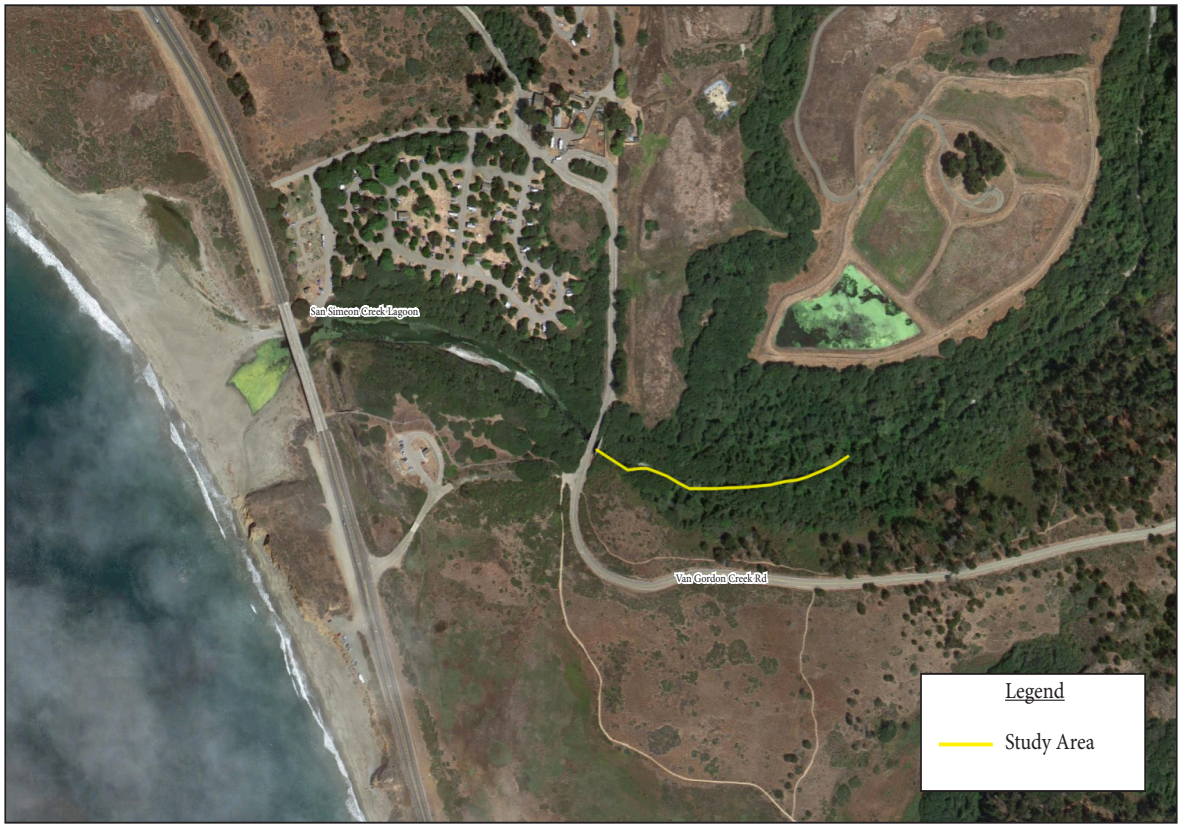

Figure 2. Project Site Study Area Location Map

ATTACHMENT 1

References

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