



**CACHUMA CONSERVATION RELEASE BOARD
BOARD OF DIRECTORS**

REGULAR MEETING AGENDA

BY VIDEOCONFERENCE
(PARTICIPATION DETAILS BELOW)

City of Santa Barbara

Goleta Water District

Montecito Water District

**January 14, 2021
2: 00 PM**

MODIFIED BROWN ACT COMPLIANCE IN LIGHT OF COVID-19

Pursuant to State of California Executive Orders N-25-20 and N-29-20, members of the Cachuma Conservation Release Board (CCRB) Board of Directors (Board) and members of the public will participate in this meeting electronically by video- and/or teleconference, as described below. The access information for the Board and members of the public for this board meeting is as follows:

Join videoconference:

<https://us02web.zoom.us/j/81028270767?pwd=R3NqdUxZYVRBMjA1K2plMkZPa3oxdz09>

Join teleconference:

Call-in Number: 1.669.900.6833

Meeting ID: 81028270767#

Passcode: 203661#

The Board may utilize different call-in information for any Closed Session items.

Any member of the public on the telephone may speak during the **Public Comment Period** or may email public comments to pcantle@ccrb-board.org and all comments will be read aloud during the meeting. During this period of modified Brown Act compliance, CCRB will use best efforts to swiftly resolve requests for reasonable modifications or accommodations for individuals with disabilities, consistent with the Americans with Disabilities Act, and will resolve any doubt whatsoever in favor of accessibility.

ROLL CALL

PUBLIC COMMENT PERIOD

Any member of the public may address the Board on any subject within the jurisdiction of the Board. The President of the Board will determine the total time for public comments. If you wish to address the Board, please email pcantle@ccrb-board.org, with subject line of "Request to Speak" and include a description of the subject you wish to address.

CONSENT AGENDA

All matters listed hereunder constitute a consent agenda and may be acted upon by a single roll call vote of the Board.

CA-1) Meeting Minutes

Approval of minutes of the Board of Directors' December 3, 2020 meeting.

CA-2) Unaudited Interim Financial Statement for the Period Ending November 30, 2020

Receive and file the Unaudited Interim Financial Statement for the Period Ending November 30, 2020.

REGULAR AGENDA

RA-1) State Water Board Order and Federal Consultation Process Update

Consider status updates regarding State Water Resources Control Board Water Rights Order 2019-0148 and the Consultation process underway with the U.S. Bureau of Reclamation and National Marine Fisheries Service. (Estimated time: 10 min.)

CLOSED SESSION AGENDA

CS-1) Conference with Legal Counsel – Anticipated Litigation

Initiation of litigation pursuant to Government Code section 54956.9(d)(4) (one potential case)

Reconvene in open session and report on any actions taken in closed session pursuant to Government Code Section 54957.1

REGULAR AGENDA (CONT.)

RA-3) Identify Agenda Items for Future Board Meetings.

RA-4) Set Next Regular Meeting for 2 PM Thursday, February 4, 2021, by teleconference and/or videoconference; and Adjourn.

NOTICE TO PUBLIC

Americans with Disabilities Act: In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Cachuma Conservation Release Board representative (pcantle@ccrb-board.org) at least 48 hours prior to the meeting to enable the Board to make reasonable arrangements.

[This Agenda was posted to the CCRB website and delivered in accordance with Sections 54954.1 and 54956 of the Government Code.]

MINUTES OF A REGULAR MEETING
of the
CACHUMA CONSERVATION RELEASE BOARD
BOARD OF DIRECTORS
held via Videoconference

Thursday, December 3, 2020, 2:00 pm

CALL TO ORDER, ROLL CALL

The videoconference meeting was called to order at 2:03 p.m. by Board President Lauren Hanson. Those attending the meeting were:

Directors Present:

Lauren Hanson	Goleta Water District
Kristen Sneddon	City of Santa Barbara
Tobe Plough	Montecito Water District

Also Attending:

Ryan Drake	Kevin O'Brien
Cathy Taylor	Sam Bivins
Joshua Haggmark	Ted Harris
Nick Turner	Joel Mulder
Peter Cantele	Warren Greco

PUBLIC COMMENT

There were no requests from members of the public to address the Board during Public Comment.

CONSENT AGENDA

Executive Director Cantele noted that the finalized 2019 financial audit had been completed with minor edits suggested by the Board. A motion was made (Plough) and seconded (Sneddon) to approve the items on the Consent Agenda. The motion passed on a 3-0 roll call vote.

REGULAR AGENDA

RA-1, State Water Rights Order and Federal Consultation Process Update. Executive Director Cantele summarized the status of CCRB's assistance to Reclamation in both regulatory processes. Regarding the 2019 Water Rights Order, in January, the Board will consider a draft water quality plan outline (required by Term 24.b.4) that, with Board approval, can be provided to Reclamation for its use in complying with the Order. Regarding consultation, Reclamation is focused on submitting a new draft

Biological Assessment (BA) to the National Marine Fisheries Service on or about December 18, 2020, using the 2019 Water Rights Order flow regime as the basis of a proposed action for Section 7 consultation. The new BA uses the 2019 BA as its underlying model, with updates to reflect the Order flow regime. Cantle advised the Board that CCRB staff and the downstream interests have successfully collaborated with Reclamation staff to electronically review key sections of the draft BA, in advance of the pending target submittal date, and that more such review is anticipated. The Board agreed to reserve 11 am, December 16, 2020 for a special meeting of the Board should additional consideration of BA-related issues be required.

CLOSED SESSION

CS-1, Conference with Legal Counsel Anticipated Litigation. With Counsel concurrence, the Board determined there was no need for closed session and tabled the closed session items for future discussion.

REGULAR AGENDA – CONT.

RA-3, Agenda Items for Future Board Meetings. The Board identified the consideration of a draft water quality plan outline as an item for the January 2021 Board meeting.

RA-4, Set Next Meeting and Adjourn. A special meeting of the CCRB Board was scheduled for 11 am, December 16, 2020, if needed. The next regular meeting of the CCRB Board is scheduled for 2:00 pm Thursday, January 14, 2021 and will be held by videoconference. President Hanson adjourned the meeting at 2:32 pm.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Mike Cantle", is written over a horizontal line.

Secretary to the Board



Cachuma Conservation
Release Board
Board of Directors

City of Santa Barbara
Goleta Water District
Montecito Water District

For Agenda Of: January 14, 2021
Estimated Time: (Consent)
Continued Item: No
If Yes, date from:

TO: Board Members
FROM: Peter Cantle, Executive Director
SUBJECT: CA-2: Unaudited Interim Financial Statement for Period Ending November 30, 2020

Legal Concurrence:

As to form: N/A

Recommended Actions:

Receive and file the Unaudited Interim Financial Statement for Period Ending November 30, 2020.

Discussion:

The Board of Directors approves the CCRB budget each fiscal year. It is subsequently approved by each Member Agency's governing body and becomes CCRB's annual operating budget. During the fiscal year, monthly unaudited interim financial results are provided to the Board to compare fiscal performance against the adopted budget. This report addresses the period ending November 30, 2020.

Fiscal Analysis:

Total income shown through November 30 was \$488,799.90, reflecting first and second quarter billings to the three Member Agencies. (As per Board direction, quarterly billings are being adjusted to reflect anticipated quarterly expenditures.) Total expenses booked through November 30 were \$176,730.98, reflecting the second-quarter resumption of CCRB's technical support to Bureau of Reclamation in the State Water Board Order and Consultation regulatory processes, support which had been temporarily paused for much of the first quarter.

Attachments:

Attachment 1: Unaudited Interim Financial Statement for the period ending November 30, 2020

Authored by:

Peter Cantle, Executive Director

ATTACHMENT 1

**UNAUDITED INTERIM FINANCIAL STATEMENT
PERIOD ENDING NOVEMBER 30, 2020**

Cachuma Conservation Release Board
Statement of Revenue and Expense- Budget vs. Actual
July through November 2020

	<u>Jul - Nov 20</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
Ordinary Income/Expense				
Income				
4200 · Income	488,799.90	1,222,000.00	-733,200.10	40.0%
Total Income	488,799.90	1,222,000.00	-733,200.10	40.0%
Expense				
5050 · Office Lease	1,400.00	5,000.00	-3,600.00	28.0%
5100 · Audit	2,788.50	10,000.00	-7,211.50	27.9%
5200 · Liability Insurance	2,978.63	7,000.00	-4,021.37	42.6%
5301 · Managers Salary				
5301.01 · Managers Gross Wages	61,538.50	0.00	61,538.50	100.0%
5301.02 · Employer Tax Expense	4,088.17			
5301 · Managers Salary - Other	0.00	179,000.00	-179,000.00	0.0%
Total 5301 · Managers Salary	65,626.67	179,000.00	-113,373.33	36.7%
5304 · Administrative Support	2,275.43	16,000.00	-13,724.57	14.2%
5312 · Misc Admin Expense	1,076.28	40,000.00	-38,923.72	2.7%
5313 · Communications/Computer	1,583.26	80,000.00	-78,416.74	2.0%
5316 · Admin Fixed Assets	0.00	40,000.00	-40,000.00	0.0%
5318 · Fraud	0.00			
5330 · Admin Travel Expense	0.00	80,000.00	-80,000.00	0.0%
5331 · Travel Federal & State Meetings	0.00	20,000.00	-20,000.00	0.0%
5332 · Transportation	0.00	10,000.00	-10,000.00	0.0%
6500 · Contingency	0.00	103,000.00	-103,000.00	0.0%
7000 · Legal	64,974.22	146,000.00	-81,025.78	44.5%
7001 · BO Reconsultation Legal Support	33,917.99	406,000.00	-372,082.01	8.4%
7002 · SWRCB Water Rights	0.00	80,000.00	-80,000.00	0.0%
7100 · SWRCB Support				
7200 · SWRCB Proceedings Support	110.00	185,000.00	-184,890.00	0.1%
Total 7100 · SWRCB Support	110.00	185,000.00	-184,890.00	0.1%
7500 · Hydrologic Technical Support	0.00	40,000.00	-40,000.00	0.0%
Total Expense	176,730.98	1,447,000.00	-1,270,269.02	12.2%
Net Ordinary Income	312,068.92	-225,000.00	537,068.92	-138.7%
Net Income	312,068.92	-225,000.00	537,068.92	-138.7%

11:29 AM

12/03/20

Cachuma Conservation Release Board
Reconciliation Summary
1020 · CWB - Chkg #7204, Period Ending 11/30/2020

	<u>Nov 30, 20</u>
Beginning Balance	131,379.46
Cleared Transactions	
Checks and Payments - 16 items	-32,603.97
Deposits and Credits - 2 items	212,407.94
Total Cleared Transactions	<u>179,803.97</u>
Cleared Balance	<u><u>311,183.43</u></u>
Uncleared Transactions	
Checks and Payments - 5 items	-33,404.01
Total Uncleared Transactions	<u>-33,404.01</u>
Register Balance as of 11/30/2020	<u><u>277,779.42</u></u>
New Transactions	
Checks and Payments - 3 items	-6,309.08
Total New Transactions	<u>-6,309.08</u>
Ending Balance	<u><u>271,470.34</u></u>



OK
Dec 3, 2020

**Cachuma Conservation Release Board
Reconciliation Detail
1020 · CWB - Chkg #7204, Period Ending 11/30/2020**

Type	Date	Num	Name	Clr	Amount	Balance
Beginning Balance						131,379.46
Cleared Transactions						
Checks and Payments - 16 items						
Bill Pmt -Check	09/23/2020		Patterson Self-Stora...	X	-280.00	-280.00
Bill Pmt -Check	10/27/2020		California Strategies...	X	-8,000.00	-8,280.00
Bill Pmt -Check	10/27/2020		Downey Brand Attor...	X	-7,914.26	-16,194.26
Bill Pmt -Check	10/27/2020		California Special Di...	X	-1,482.00	-17,676.26
Bill Pmt -Check	10/27/2020		AccountabilityPlus, Inc	X	-671.66	-18,347.92
Bill Pmt -Check	10/27/2020		Peter Cante	X	-400.13	-18,748.05
Bill Pmt -Check	10/27/2020		Patterson Self-Stora...	X	-280.00	-19,028.05
Bill Pmt -Check	10/27/2020		CIO Solutions, LP	X	-63.26	-19,091.31
Check	11/04/2020		Payroll Tax	X	-3,271.58	-22,362.89
General Journal	11/04/2020		Peter Cante	X	-3,115.05	-25,477.94
Check	11/04/2020		Payroll Vault	X	-66.00	-25,543.94
Check	11/17/2020		Payroll Tax	X	-2,984.48	-28,528.42
General Journal	11/18/2020		Peter Cante	X	-3,258.60	-31,787.02
Check	11/18/2020		Payroll Vault	X	-66.00	-31,853.02
Bill Pmt -Check	11/23/2020		AccountabilityPlus, Inc	X	-414.06	-32,267.08
Bill Pmt -Check	11/23/2020		Peter Cante	X	-336.89	-32,603.97
Total Checks and Payments					-32,603.97	-32,603.97
Deposits and Credits - 2 items						
Payment	11/23/2020		City of Santa Barbara	X	99,910.72	99,910.72
Payment	11/25/2020		Goleta Water District	X	112,497.22	212,407.94
Total Deposits and Credits					212,407.94	212,407.94
Total Cleared Transactions					179,803.97	179,803.97
Cleared Balance					179,803.97	311,183.43
Uncleared Transactions						
Checks and Payments - 5 items						
Bill Pmt -Check	11/23/2020		Downey Brand Attor...		-22,272.25	-22,272.25
Bill Pmt -Check	11/23/2020		California Strategies...		-8,000.00	-30,272.25
Bill Pmt -Check	11/23/2020		Bartlett, Pringle & W...		-2,788.50	-33,060.75
Bill Pmt -Check	11/23/2020		Patterson Self-Stora...		-280.00	-33,340.75
Bill Pmt -Check	11/23/2020		CIO Solutions, LP		-63.26	-33,404.01
Total Checks and Payments					-33,404.01	-33,404.01
Total Uncleared Transactions					-33,404.01	-33,404.01
Register Balance as of 11/30/2020					146,399.96	277,779.42
New Transactions						
Checks and Payments - 3 items						
General Journal	12/02/2020	PR12...	Peter Cante		-3,258.60	-3,258.60
Check	12/02/2020	EFT	Payroll Tax		-2,984.48	-6,243.08
Check	12/02/2020	EFT	Payroll Vault		-66.00	-6,309.08
Total Checks and Payments					-6,309.08	-6,309.08
Total New Transactions					-6,309.08	-6,309.08
Ending Balance					140,090.88	271,470.34

ACC

OK
Dec 3, 2020



Cachuma Conservation
Release Board

Board of Directors

City of Santa Barbara

Goleta Water District

Montecito Water District

For Agenda Of: January 14, 2021
Estimated Time : 10 minutes
Continued Item: No
If Yes, date from:

TO: Board Members

FROM: Peter Cante, Executive Director

SUBJECT: Item RA-1: State Water Board Order and Federal Consultation Process Update

Legal Concurrence:

As to form: N/A

Recommended Actions:

Receive a status update regarding the State Water Resources Control Board (State Water Board) Water Rights Order and the federal Endangered Species Act Sec. 7 Consultation process underway with the U.S. Bureau of Reclamation (Reclamation) and National Marine Fisheries Service (NMFS).

Discussion

State Water Resources Control Board Water Rights Order. The State Water Board approved Water Rights Order 2019-0148 (the Order) on September 17, 2019. The Order requires Reclamation, as permit holder, to: a) release additional water from Cachuma Reservoir during wetter-than-normal years; and, b) develop plans and conduct studies to assess, among other things, the feasibility of steelhead passage around Bradbury Dam, the benefits of the increased flows, other opportunities for habitat enhancement, and reduction of predatory invasive species in the watershed.

Assistance with Plans Required by the Order. At Reclamation's request, CCRB has been providing technical assistance in developing multiple plans required by the Order. This assistance is generally in the field of fisheries biology, with hydrology and legal regulatory input, as needed. Assistance efforts were paused at the Board's direction in July 2020 pending resolution of contract matters involving Reclamation and the Cachuma Member Units. The Board then approved staff's re-engagement in mid-October with resolution of the contract matters that had been at issue. CCRB staff continue to meet electronically at regular intervals with Reclamation staff in furtherance of efforts to provide technical assistance.

To date, CCRB has worked with Reclamation primarily on plans required by Terms 20 and 24, which are closely linked within the Order. Term 20 requires Reclamation to develop a plan for conducting studies identified in Term 24 "and any other studies that may be necessary to determine the measures necessary to protect the public trust resources of the Santa Ynez River and keep the steelhead fishery in the Santa Ynez

River in good condition at the individual, population and community level.” CCRB assisted Reclamation in drafting the Term 20 plan, which Reclamation submitted to the Water Board for review on March 17, 2020. While Reclamation has yet to receive input on the Term 20 plan, they note that the Water Board has agendized the matter for discussion early in the new year.

Term 24 of the Order identifies several studies that are required of Reclamation, one of which (per Term 24.b.4) is to evaluate water quality issues that may impact steelhead in the lower Santa Ynez River. Further to providing technical assistance to Reclamation, a draft study plan to evaluate water quality issues in the lower river has been developed for the CCRB Board’s review and input (Attachment 1). Upon Board approval, staff will provide the draft study plan to Reclamation for consideration and ultimate submittal to the Water Board. Additional plans required by the Order will be presented for review and approval by the CCRB Board prior to submittal to Reclamation.

Cachuma Project Section 7 Consultation Process. Reclamation submitted a new proposed action and supporting biological assessment (BA) to NMFS in 2018 and November 2019, respectively. CCRB assisted Reclamation in developing both documents. However, in February 2020, NMFS notified Reclamation the BA had insufficient information to allow NMFS to move forward with its effects analysis and, in late March 2020, NMFS terminated formal consultation on the new proposed action purportedly based on Reclamation’s inadequate response to the NMFS letter. One issue NMFS identified was Reclamation’s failure to incorporate the recently issued Water Rights Order 2019-0148 into the BA.

On August 21, 2020, Reclamation notified NMFS it would submit a revised BA incorporating Water Rights Order 2019-0148 on or about December 18, 2020. Reclamation, CCRB staff and the downstream interests worked collaboratively to revise and update the November 2019 BA, using the Water Rights Order flow regime as its basis. The BA was also scoped to include other anticipated Reclamation actions, such as the long-term Master Service Contract and the COMB O&M contract. No issues of significance arose as a result of these collaborative exchanges. Reclamation also tasked Stetson Engineering with producing hydrological modeling of specific scenarios in support of the draft BA; however, the modeling output was not ready in time for the December 18 target submittal date. Reclamation thus submitted the BA to NMFS on December 18, 2020 without the modeling results and, as of this writing, has not heard back from NMFS. Reclamation plans to provide hydrological modeling in support of the proposed action via a supplement to the BA, which will allow CCRB additional time to review and consider the modeled output. Staff anticipates continued collaborative engagement with Reclamation regarding the modeling and the BA over the next several months.

We will continue to update the Board with any new information on these consultation and Water Rights Order matters that come to light.

Fiscal Analysis:

CCRB’s approved FY21 budget of \$1,222,000 provides for staff and consulting support related to both the Water Board Order and the federal Consultation process.

Attachments:

Attachment 1. Draft Study Plan: Water Quality Issues That May Impact Steelhead (ICF)

Report authored by:

Peter Cantle, Executive Director

ATTACHMENT 1

DRAFT STUDY PLAN:

**WATER QUALITY ISSUES THAT MAY IMPACT STEELHEAD
(ICF)**

Study Plan: Water Quality Issues That May Impact Steelhead

1.0 Introduction

On September 17, 2019, the State of California Water resources Control Board issued a final Water Rights Order WR 2019-0148 (Order) to Reclamation for the Cachuma Project on the Santa Ynez River. The Order includes various conditions for the protection of fish and other public trust resources in the Santa Ynez River, which must be met by Reclamation. Term 24 is one of these conditions. It includes development and implementation of a study to identify and evaluate water quality issues in the Santa Ynez River that are needed to keep steelhead in good condition:

24. Right holder shall, at a minimum, conduct the following studies to evaluate measures that may be necessary to keep the steelhead fishery in the Santa Ynez River below Bradbury Dam in good condition at the individual, population, and community level and shall be informed by current scientific information on southern California steelhead recovery, including NMFS' 2012 Final Southern California Steelhead Recovery Plan:

b. Conduct an instream flow study to determine conditions necessary to keep the steelhead in the Santa Ynez River watershed in good condition at the individual, population, and community levels. This study shall include analyses of both flow and non-flow measures that could improve the quantity and quality of steelhead habitat. At a minimum, the study must:

(4) Evaluate water quality issues that may impact steelhead including but not limited to elevated temperatures, low dissolved oxygen, and sediment transport and potential measures to address these issues.

This document presents the Proposed Study Plan for Term 24.b.(4). Note that sediment transport is not a component of water quality per se, but rather a hydrogeomorphic process describing the relationship between mobilization of streambed particle sizes and flow velocities. As such, sediment transport is not included in this study plan, but is included in the study plan related to channel morphology and sediment transfer, per Term 24.b.(2).

2.0 Goals and Objectives

The overarching objective of the study, as described in Term 24 of the Order, is to evaluate water quality issues that may affect steelhead in the lower Santa Ynez River (mainstem river downstream of Bradbury Dam) (LSYR), and identify management options that could ameliorate these issues. To evaluate water quality issues in the LSYR for steelhead, the following components of water quality in the lower Santa Ynez River will be evaluated:

- A. Identify limiting dissolved oxygen and temperature factors for various steelhead life stages in the LSYR.
- B. Identify longitudinal changes in water temperatures and dissolved oxygen levels moving downstream from Bradbury Dam.
- C. Where data exist, identify other water quality components which may limit steelhead production and growth in the LSYR, such as nutrient loading, ammonia, pH, turbidity, etc.

- D. Evaluate expected effects of discharging State Water Project water into the LSYR on steelhead and designated critical habitat, including, but not limited to, juvenile steelhead olfactory-imprinting and rearing habitat water quality conditions.

3.0 Data Sources

3.1 Temperature and Dissolved Oxygen In-Situ Data

- Cachuma Operations and Maintenance Board (COMB) Fisheries Monitoring Program Water Quality Data 1995-Present.
- USGS Gage data.

3.2 Publications

- Boughton, D .A., Lee R. Harrison, Andrew S. Pike, Juan L. Arriaza & Marc Mangel (2015) Thermal Potential for Steelhead Life History Expression in a Southern California Alluvial River, Transactions of the American Fisheries Society, 144:2, 258-273.
- Boughton, D. A. and M. Goslin. 2006. Potential steelhead over-summering habitat in the south-central/Southern California coast recovery domain: maps based on the envelope method. NOAA Technical Memorandum NMFS, NOAA-TM-NMFS-SWFSC-394.
- R2 Resource Consultants. 2013a. Evaluation of Summer Water Temperature and Dissolved Oxygen Levels on Steelhead Trout During Habitat Flows in the Santa Ynez River, 2012: Supplement to Analysis of 2010-2011 Data. Technical Memorandum. Report prepared for Santa Ynez River Water Conservation District; Santa Ynez, California.
- R2 Resource Consultants. 2013b. Evaluation of Water Temperature and Dissolved Oxygen Impacts of Water Rights Releases and Habitat Flows on Steelhead Trout in the Santa Ynez River. Technical Memorandum. Report prepared for Santa Ynez River Water Conservation District; Santa Ynez, California.
- R2 Resource Consultants. 2013c. Identification of Water Temperature and Dissolved Oxygen Criteria Applicable to Assessing Effects of Water Rights and Habitat Flow Releases on Steelhead Trout in the Santa Ynez River.
- Santa Ynez River Technical Advisory Committee (SYRTAC). 2000. Lower Santa Ynez River Fish Management Plan. Prepared for: Santa Ynez River Consensus Committee. October 2.
- COMB Fisheries Monitoring Program Annual Monitoring Reports 2005-2019
- COMB Fisheries Monitoring Program Synthesis and analysis of Fishery and Habitat (1993-2004)

3.3 Nutrient-related Water Quality Data Sources

- Central Coast Ambient Monitoring Program (CCAMP). The CCAMP is the Central Coast Water Board's regionally scaled water quality and assessment program.
- California Environmental Data Exchange Network (CEDEN). CEDEN is the State Water Board's data system for surface water quality in California.
- Cooperative Monitoring Program (CMP). CMP is the surface water quality monitoring program conducted by Central Coast Water Quality Preservation, Inc. for growers enrolled in the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Agricultural Order).
- U.S. Geological Survey's National Water Information System.

- U.S. Environmental Protection Agency’s STORET data retrieval system.
- California Integrated Water Quality System Project (CIWQS). Effluent water quality is available from CIWQS. CIWQS is a database system used by the Regional Water Quality Control Boards to track information about places of environmental interest and it allows online submittal of data by Permittees within certain programs.
- Storm Water Multiple Application and Report Tracking System (SMARTS). Water quality data associated with NPDES33 permitted stormwater discharges are available from SMARTS, which is an online database for documents and data from stormwater discharges.
- NPDES Monitoring Reports for Santa Ynez Band of Chumash Indians Wastewater Treatment Plant – Zanja de Cota Creek
- NPDES Monitoring Reports for City of Lompoc Regional Wastewater Treatment Plant

4.0 Water Quality Evaluation Criteria for Steelhead

To evaluate water quality issues that may affect steelhead, we must first establish suitable criteria for water quality parameters for the various steelhead lifestage requirements. A summary of criteria to be used for this study, based on review of scientific literature and existing state or federal limits for warmer steelhead-bearing waters typical of southern and central California, is provided below.

Table 1 Steelhead Migration Water Temperature Thresholds and Supporting Literature

Temperature	Threshold	Literature Range	Supporting Literature
≥ 15 °C *	Smoltification inhibition temperature	> 13 °C – 15 °C	Adams et al. 1973; Zaugg and Wagner 1973; Wedemeyer et al. 1980
≥ 23.9 °C *	Migration inhibition temperature for smolts and adults	> 21 °C – 23.9 °C	Nielsen et al. 1994; Richter and Kolmes 2005

* Threshold temperatures selected for analysis in this BA use the higher end of the identified literature ranges because southern California steelhead may be adapted to warmer overall water temperature regimes (Moyle et al. 2008).

Table 2 Steelhead Spawning Water Temperature Thresholds and Supporting Literature

Temperature	Threshold	Literature Range	Supporting Literature
≥13 °C	Reduced incubation survival temperature	> 13 °C – 15.6 °C	McEwan and Jackson 1996; NMFS 1996; McCullough et al. 2001
≥16 °C *	Very poor incubation survival temperature	> 15.6 °C – 16 °C	NMFS 1996; Velsen 1987, as cited in Richter and Kolmes 2005

* Threshold temperatures selected for analysis in this BA use the higher end of the identified literature ranges because southern California steelhead may be adapted to warmer overall water temperature regimes (Moyle et al. 2008).

Table 3 Steelhead Rearing Water Temperature Thresholds and Supporting Literature

Temperature	Threshold	Supporting Literature (As Cited in R2 2013)
≥ 20 °C *	Behaviorally Stressful Conditions	Myrick and Cech 2001; Carter 2008
≥ 24 °C *	Physiologically Severely Stressful Conditions	Myrick and Cech 2001; Carter 2008; SYRTAC 2000; Spina 2007; Bell et al. 2011; Bell et al. 2012; Dagit et al. 2015
≥ 29 °C **	Incipient Lethal Temperature / Instantaneous Lethal Temperature	Matthews and Berg 1997; Carpanzano 1996, as cited by Entrix 2003 and Moyle et al. 2008; Boughton et al. 2009; SYRTAC 2000

* Seven Day Average Daily Maximum Temperature (7-DADM)

** Critical Daily Maximum Temperature

Table 4 Steelhead Dissolved Oxygen Thresholds and Supporting Literature

Temperature	Threshold	Supporting Literature (As Cited in R2 2013)
≤ 5 mg/L	instantaneous incipient* stress	EPA 1986; CCRWQCB 2011; Carter 2008; WDOE 2002; Matthews and Berg 1997
≤ 3 mg/L	instantaneous incipient* lethal	

* Incipient means the general onset of the respective condition, stress or death

Table 5 Mean Surface Water Quality Objectives, mg/L*

Hydrologic Unit/Sub Area	TDS	Cl	SO4	B	Na
Santa Ynez River at Solvang	700	50	250	0.4	60
Santa Ynez River at Lompoc	1000	100	350	0.4	100
* Objectives shown are annual mean values. Objectives are based on preservation of existing quality or water quality enhancement believed attainable following control of point sources.					
Source: Source: CCRWQCB 2019					

Table 6 Toxic Metal Concentrations not to be Exceeded in Aquatic Life Habitats for the Central Coast Basin, mg/l^a

Freshwater (Cold, Warm)		
Metal	Hard (> 100 mg/l CaCO ₃)	Soft (< 100 mg/l CaCO ₃)
Cadmium ^b	0.03	0.004

Chromium	0.05	0.05
Copper	0.03	0.01
Lead	0.03	0.03
Mercury ^c	0.0002	0.0002
Nickel ^d	0.4	0.1
Zinc	0.2	0.004

a. Based on limiting values recommended in the National Academy of Sciences-National Academy of Engineers "Water Quality Criteria 1972." Values are 90 percentile values except as noted in qualifying note "c."

b. Lower cadmium values not to be exceeded for crustaceans and waters designated SPWN are 0.003 mg/l in hard water and 0.0004 mg/l in soft water.

c. Total mercury values should not exceed 0.05 µg/l as an average value; maximum acceptable concentration of total mercury in any aquatic organism is a total B.O.D. burden of 0.5 µg/l wet weight.

d. Value cited as objective pertains to nickel salts (not pure metallic nickel).

Source: CCRWQCB 2019

5.0 Analysis

5.1 Existing Information

Summarize known water quality issues in the Santa Ynez River and results of existing studies in the LSJR. For existing publications, identify a) data gaps, b) important factors that have not been addressed, and c) preliminary conclusions that could benefit from additional analysis.

5.2 Temperature and Dissolved oxygen

Using the water quality evaluation criteria for steelhead developed for the Santa Ynez River, determine if dissolved oxygen and water temperature are likely limiting any steelhead life stages. This analysis would identify specific locations and seasonal timing of exceedance of temperature and/or dissolved oxygen thresholds. All existing data for the Santa Ynez River will be compiled and presented in charts for discussion.

Identify longitudinal changes in water temperature and dissolved oxygen moving downstream from Bradbury Dam. This will include identification of relationships between discharge from Bradbury Dam and temperature and dissolved oxygen. Much of this information is already available in existing publications and will be summarized.

5.3 Other Water Quality Parameters

Where data available, identify other water quality impediments which may limit steelhead production and/or growth in the LSJR, such as nutrient loading, ammonia, pH, turbidity, etc. Identify the locations and potential sources of impediment in the LSJR where these issues are present.

5.4 Central California Coast Water Authority Discharge Mixing

Evaluate existing water quality monitoring data (COMB data) on temperature effects of past discharging of CCWA water into the Santa Ynez River on steelhead and designated critical habitat.

Conduct current literature review of the latest science on olfactory-imprinting and identify the steelhead life stages which are most susceptible to compromise of the imprinting process. Evaluate current practices (per the 2000 Biological Opinion Reasonable and Prudent Measures) of discharging CCWA

water to determine if the measures are effectively guarding against juvenile steelhead olfactory imprinting on CCWA water.

6.0 Management Actions

Identify management actions that could be implemented to address water quality impairment issues to improve steelhead habitat and benefit steelhead in the LSYS, based on the results of the above analyses.

7.0 Estimate of Implementation Cost

The cost to conduct this study and produce a final study report is estimated to be approximately \$35,000 to \$40,000.

8.0 References

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