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GOVERNOR



JARED BLUMENFELD  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

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## Central Valley Regional Water Quality Control Board

5 July 2019

Greg Jones  
Assistant General Manager  
Nevada Irrigation District  
1036 West Main Street  
Grass Valley, CA 95945

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### **AMENDED NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0076 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; NEVADA IRRIGATION DISTRICT, COMBIE RESERVOIR SEDIMENT AND MERCURY REMOVAL PROJECT, NEVADA AND PLACER COUNTIES**

Our office received a Notice of Intent on 26 July 2017 from Nevada Irrigation District (hereinafter Discharger), for discharge of treated wastewater from dredging activities to surface water. The Discharger was previously covered under a Notice of Applicability (NOA) for the Limited Threat General Order R5-2013-0073, which has been renewed by Order R5-2016-0076. Based on the application packet submitted by the Discharger, staff determined that the Combie Reservoir Sediment and Mercury Removal Project (Project) met the required conditions for approval under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order), Tier 2. On 16 February 2018, this Project was issued a NOA under the Limited Threat General Order and assigned Limited Threat General Order R5-2016-0076-019 and National Pollutant Discharge Elimination System (NPDES) Permit CAG995002. Please reference your Limited Threat General Order, **R5-2016-0076-019**, in your correspondence and submitted documents.

### **AMENDMENTS**

On 24 April 2018, the Discharger requested an amendment of the NOA, which included updating the estimated effluent flow of 0.096 million gallons per day (MGD) to 1.0 MGD based on a more realistic value to pump the dredging slurry from the dredging contractor. During Project development, the Discharger also added pumping and filtering water from the Bear River to the treatment process to aid in the extraction process. The amendment also included changes to the project operation dates and discharge point. On 27 August 2018, the NOA was amended to update the Project

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KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

11020 Sun Center Drive #200, Rancho Cordova, CA 95670 | [www.waterboards.ca.gov/centralvalley](http://www.waterboards.ca.gov/centralvalley)

Description, Monitoring Station Locations (Table 2), Communication, and Project Location Map (Attachment A) to reflect these changes.

On 9 May 2019, the Discharger requested a subsequent amendment of the NOA to include the addition of an alternative 7-acre dredging area in Combie Pond #3 and a new discharge point to a natural drainage to the Bear River. The Discharger is proposing to dredge and treat approximately 3,000 cubic yards of sediment from the Combie Pond #3 dredging area; however, the additional dredging area does not increase the total volume of sediment that was previously described in the Project Description. Therefore, this NOA has been amended as of the date of this issuance to include updates to the Project Description, Monitoring Station Locations (Table 2), Monitoring and Reporting, Communication, and Project Location Map (Attachment A) to reflect these changes and supersedes previously issued amendments for NOA R5-2016-0076-019.

The project activities shall be operated in accordance with the requirements contained in the Limited Threat General Order and as specified in this NOA. You are urged to familiarize yourself with the entire contents of the enclosed [Limited Threat General Order](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf) ([https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2016-0076-01.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf)). A copy of the Limited Threat General Order can also be obtained by contacting or visiting the Central Valley Water Board's office weekdays between 8:00 AM and 5:00 PM.

## **CALIFORNIA TOXICS RULE / STATE IMPLEMENTATION POLICY MONITORING**

The Limited Threat General Order incorporates the requirements of the California Toxics Rule (CTR) and the State Water Resources Control Board's (State Water Board), *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, 2005, also known as the State Implementation Policy (SIP). Screening levels for CTR constituents and other constituents of concern are found in Attachment I of the Limited Threat General Order. Review of your effluent water quality data in comparison to the screening values, showed reasonable potential for the discharge to cause or contribute to an exceedance of manganese water quality objectives in the Bear River, which is a water of the United States. However, due to the removal of metals by the proposed treatment system the Project qualifies for the Limited Threat General Order.

## **PROJECT DESCRIPTION**

Combie Reservoir is located on the Bear River, which lies along the Nevada-Placer County border. The sediment that flows into Combie Reservoir contains elevated mercury concentrations that are remnants of gold processing practices used over a century ago. The Project aims to remove elemental mercury from the deposited sediment and restore reservoir capacity for drinking water use and recreational opportunities in the upper portion of Combie Reservoir.

The Discharger is proposing to dredge the northeastern end of the reservoir using a floating cutter head suction dredge capable of pulling up sediment at an approximate rate of 1,200 to 1,500 gallons per minute. The project will also utilize mechanical excavation using an environmental bucket and dry mechanical excavation. In the case of sediment removal by floating dredge, the dredge material (slurry) will be pumped to an on-shore mechanical mobile separation and dewatering system where trash, debris, and rocks greater than approximately ¼-inch in size will be separated and contained for offsite removal. The slurry is then pumped to the mercury removal process which consists of a centrifuge where mercury and other heavy metals will be extracted and collected for transport off site as required by the Placer County Hazardous Materials Business Plan. The extraction process will require pumping of approximately of 150 gallons per minute of fresh water from the Bear River. After the dewatering, the centrate (remaining liquid effluent) will be transferred into a water clarifying process, which may include the use of polymers, coagulants, horizontal press machines, filtration, and/or clarifying basins or tanks.

Dredging operations are proposed to take place on the north end of Combie Reservoir between 1 April and 30 November each year, unless precluded by winter storms. Dredging of approximately 3,000 cubic yards may also take place alternatively in Combie Pond #3 during the last weeks of the annual dredging operations. A maximum of 1.0 million gallons of treated effluent per day is expected to be discharged to either Combie Pond #3 (Discharge Point 001) where the Discharger will allow the effluent to flow through turbidity curtains prior to continuing into the Combie Reservoir or to a natural drainage canal to the Bear River (Discharge Point 002), a tributary to Combie Reservoir. The extraction process may take place throughout the year as weather permits. The residual sand, silt, clay, and gravel from the treatment process will be transported to an aggregate plant for processing a half-mile upstream from the project location. Sand concentrates from the extraction process will be placed on-site as engineered fill in accordance with the Storm Water Pollution Prevention Plan and a grading permit issued by the County of Placer. Non-marketable materials will be disposed of in accordance with existing state and federal regulatory permits issued to the plant operator.

The initial project is estimated to take three years to complete and is anticipated to remove between 60,000 and 120,000 cubic yards of sediment and 150 pounds of mercury from Combie Reservoir. The United States Geological Survey is partnering with the Discharger to monitor water quality and ecological parameters of interest and study the effects that the mercury removal process has on water quality and biota. The documented benefits may be used to educate responsible parties for other 303(d) listed reservoirs on the benefits of mercury removal using this process.

## **EFFLUENT LIMITATIONS**

Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the Limited Threat General Order. Based on the information provided in the NOI, only effluent limitations for acute toxicity, manganese, mercury, and pH, as

specified in Section V.A.1 of the Limited Threat General Order, are applicable to this discharge. The applicable effluent limitations are shown below:

1. **pH (Section V.A.1.b.ii).** The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Creek) shall at all times be within the range of 6.5 and 8.5.
2. **Whole Effluent Toxicity, Acute (Section V.A.3.b).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste for all limited threat discharges shall be no less than:
  - i. 70%, minimum for any one bioassay; and
  - ii. 90%, median for any three consecutive bioassays.

The Bear River is listed for mercury on the Clean Water Act 303(d) List of impaired water bodies. A Total Maximum Daily Load (TMDL) has not yet been established for Bear River. However, the Project plans to disturb mercury containing sediment in order to remove mercury from the sediment. Therefore, mercury effluent limitations and monitoring requirements will be required by this Notice of Applicability.

**Table 1. Effluent Limitations for Constituents and Parameters of Concern**

<b>Parameter</b>	<b>Units</b>	<b>Average Monthly Effluent Limitation</b>	<b>Maximum Daily Effluent Limitation</b>	<b>Section Reference</b>
Manganese, Total Recoverable	µg/L	80	160	V.A.1.e
Mercury, Total Recoverable	µg/L	0.05	0.10	V.A.1.f

## **RECEIVING WATER LIMITATIONS**

The Limited Threat General Order includes receiving surface water limitations in Section VIII.A. Based on the information provided in the NOI, only the following receiving surface water limitations are applicable to this discharge:

- Bacteria (VIII.A.2);
- Biostimulatory substances (VIII.A.3);
- Chemical constituents (VIII.A.4);
- Color (VIII.A.5);
- Dissolved oxygen (VIII.A.6.a);
- Floating material (VIII.A.7);
- Oil and grease (VIII.A.8);
- pH (VIII.A.9.a);
- Pesticides ((VIII.A.10);
- Radioactivity (VIII.A.11);
- Suspended sediments (VIII.A.12);

- Settleable substances (VIII.A.13);
- Suspended material (VIII.A.14);
- Taste and odors (VIII.A.15);
- Temperature (VIII.A.16);
- Toxicity (VIII.A.17); and
- Turbidity (VIII.A.18.a).

**MONITORING AND REPORTING**

Monitoring and reporting requirements are contained in Attachment C of the Limited Threat General Order. The Discharger is required to comply with the following specific monitoring and reporting requirements for the effluent and receiving water in accordance with Attachment C of the Limited Threat General Order.

**Monitoring Locations** – The Discharger shall monitor the effluent and receiving water at the specified location as follows:

**Table 2. Monitoring Station Locations**

<b>Discharge Point Name</b>	<b>Monitoring Location Name</b>	<b>Monitoring Location Description</b>
001	EFF-001	A location where a representative sample of the effluent can be collected prior to discharging to Combie Pond #3 within 50 feet of the final treatment of turbidity curtains at Discharge Point 001.
002	EFF-002	A location where a representative sample of the effluent can be collected prior to discharging to the natural drainage course to the Bear River at Discharge Point 002.
--	RSW-001	Bear River, approximately 200 feet upstream of the Material Separation and Dewatering System.
--	RSW-002	Combie Reservoir, approximately 200 feet downstream from the furthest extent of dredging in Combie Reservoir (southwestern edge).

**Effluent Monitoring** –The Discharger shall monitor the effluent at EFF-001 when discharging to Discharge Point 001 and EFF-002 when discharging to Discharge Point 002 as follows:

**Table 3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow	MGD	Estimate	1/Day	1
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Quarter	1,2
pH	standard units	Grab	1/Day	1,2
Turbidity	NTU	Grab	1/Day	1,2
Total Suspended Solids	mg/L	Grab	1/Week	2
Manganese, Total Recoverable	µg/L	Grab	1/Month	2
Mercury, Total Recoverable	µg/L	Grab	1/Month	2,3,4
Methyl Mercury, Total Recoverable	ng/L	Grab	1/Month	2,3,4
Acute Toxicity	% survival	Grab	1/Project Term	2,5
Chronic Toxicity	--	Grab	1/Project Term	2,5

<sup>1</sup> A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

<sup>2</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

<sup>3</sup> Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method 1630/1631 (Revision E) with a reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

<sup>4</sup> For priority pollutant constituents the reporting level shall be consistent with Sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

<sup>5</sup> Chronic and acute toxicity testing shall be conducted within 3 months of initiation of discharge. For acute toxicity testing, the test species shall be fathead minnows (*Pimephales promelas*). See the Monitoring and Reporting Program (Attachment C) for toxicity monitoring requirements.

**Receiving Water Monitoring** - When discharging to surface water, the Discharger shall monitor the receiving water at RSW-001 and RSW-002, in accordance with Table C-3 of the Limited Threat General Order and this NOA. The applicable monitoring requirements are as follows in Table 4:

**Table 4. Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Monitoring Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/Month	1,2
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Month	1,2
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	1/Month	1,2
pH	standard units	Grab	1/Month	1,2
Temperature	°F	Grab	1/Month	1,2
Turbidity	NTU	Grab	1/Month	1,2

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens, or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

**Monitoring Report Submittals** - Monitoring in accordance with the Limited Threat General Order shall begin upon initiation of discharge. Monitoring Reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the

<sup>1</sup> A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

<sup>2</sup> Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

**Second Quarter 2018.** This report shall be submitted on **1 August 2018**. If the initiation of the discharge begins before the estimated project start date of April 2018, the Discharger must notify the Central Valley Water Board and begin submittal of quarterly Monitoring Reports in accordance with the corresponding start date. If monitoring samples were not obtained within 24 hours of initiation of the discharge, the Discharger must document the reasons in the corresponding Monitoring Report. If the discharge has not begun there is no need to monitor. However, a certified Monitoring Report must be submitted stating that there has been no discharge. Table 5, below, summarizes the Monitoring Report due dates required under the Limited Threat General Order. Quarterly Monitoring Reports must be submitted until your coverage is formally terminated in accordance with the Limited Threat General Order, even if there is no discharge during the reporting quarter.

**Table 5. Monitoring Periods and Reporting Schedule**

<b>Sampling Frequency</b>	<b>Monitoring Period Begins On...</b>	<b>Quarterly Report Due Date</b>
1/Day, 1/Week, 1/Month, 1/Quarter	First Day of Discharge	1 May (1 Jan – 31 Mar) 1 Aug (1 Apr – 30 Jun) 1 Nov (1 Jul – 30 Sep) 1 Feb, of following year (1 Oct – 31 Dec)

## **GENERAL INFORMATION AND REQUIREMENTS**

The Discharger must notify Central Valley Water Board staff within 24 hours of having knowledge of 1) the start of each new discharge, 2) noncompliance, and 3) when the discharge ceases. The Central Valley Water Board shall be notified immediately if any effluent limit violation is observed during implementation of the project.

Discharge of material other than what is described in the application is prohibited. The required annual fee (as specified in the annual invoice you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially terminated. You must notify this office in writing when the discharge regulated by the Limited Threat General Order is no longer necessary by submitting the Request for Termination of Coverage (Attachment E). If a timely written request is not received, the Discharger will be required to pay additional annual fees as determined by the State Water Resources Control Board.

## **ENFORCEMENT**

Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory Minimum Penalty (MMP) of \$3,000 per violation. In addition, late Monitoring Reports may be subject to MMPs or discretionary penalties of up to \$1,000 per day late. When discharges do not occur during a quarterly monitoring period, the Discharger must still submit a quarterly certified Monitoring Report indicating that no discharge occurred to avoid being subject to enforcement actions.

## COMMUNICATION

All documents, including Monitoring Reports, response to inspections, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Compliance Unit, Attention: Paul Wadding. Mr. Wadding can be reached at (916) 464-4826 or [Paul.Wadding@waterboards.ca.gov](mailto:Paul.Wadding@waterboards.ca.gov).

We have transitioned to a paperless office, therefore, please convert all documents to a searchable Portable Document Format (pdf) and submitted to the [general Central Valley Water Board email](mailto:centralvalleysacramento@waterboards.ca.gov) (centralvalleysacramento@waterboards.ca.gov). **Please include the following information in the email:**

- Attention: NPDES Compliance Unit
- Discharger: Nevada Irrigation District
- Facility: Combie Reservoir Sediment and Mercury Removal Project
- County: Nevada and Placer Counties
- CIWQS place ID: 796256

Documents that are 50 megabytes or larger must be transferred to a DVD, or flash drive and mailed to our office, attention "ECM Mailroom-NPDES". Please include the attached Monitoring Report Transmittal Form as the first page of each Monitoring Report.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Links to the laws and regulations and instructions for filing water quality petitions may be found on the [Petitions Home Page](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/) ([https://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/)) or will be provided upon request.

***Original Signed by Adam Laputz for***

Patrick Pulupa  
Executive Officer

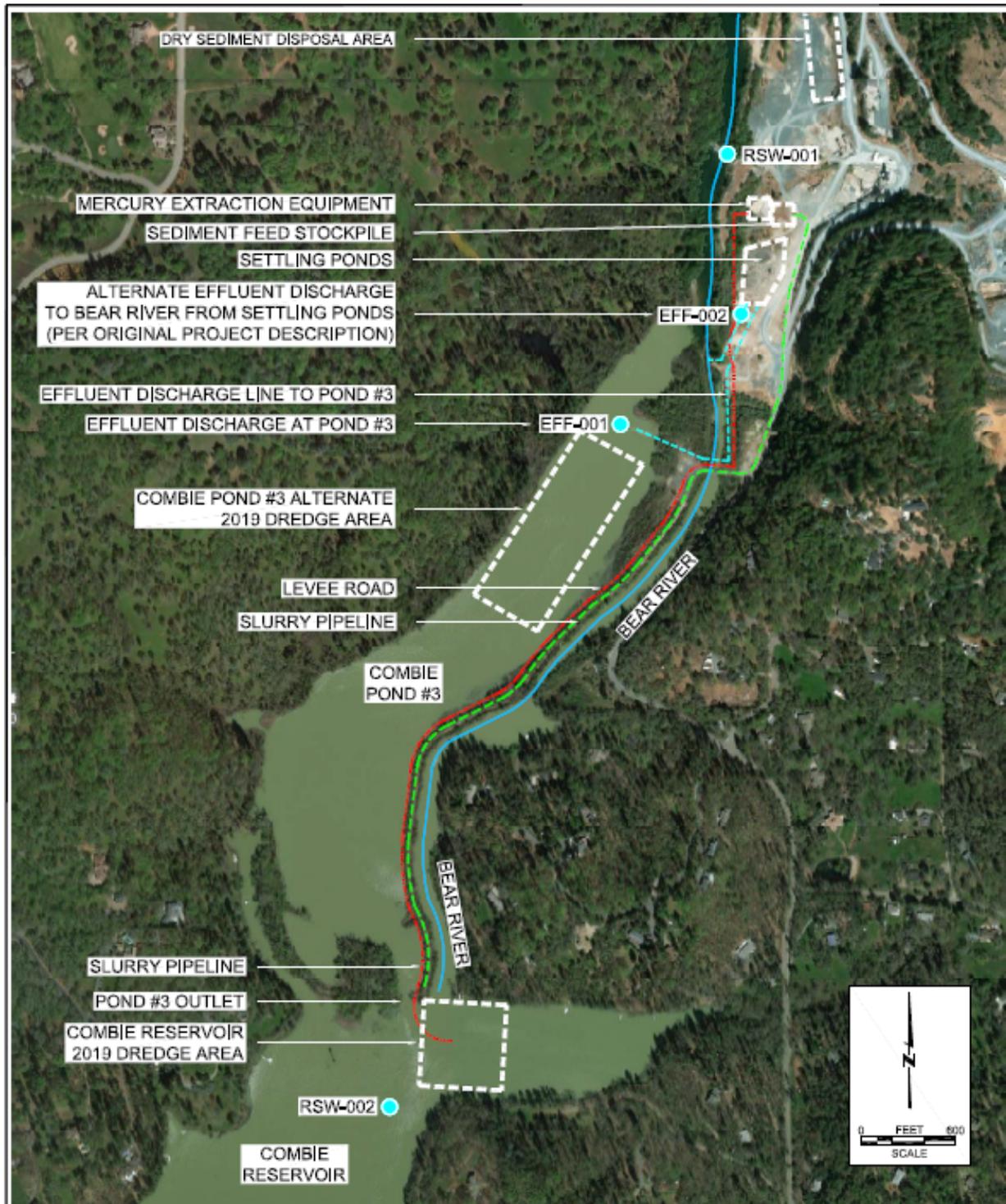
Enclosures (4): Attachment A - Project Location Map  
Attachment B - Effluent Monitoring Rationale  
Monitoring Report Transmittal Form (Discharger only)  
General Order R5-2016-00176-01 (Discharger only)

Greg Jones, Assistant General Manager - 10 -  
Nevada Irrigation District  
Combie Reservoir Sediment and Mercury Removal Project

5 July 2019

cc: Elizabeth Sablad, U.S. EPA, Region IX, San Francisco (email only)  
Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)  
Afrooz Farsimadan, Division of Water Quality, State Water Board, Sacramento  
(email only)

**ATTACHMENT A - PROJECT LOCATION MAP**



BASE MAP FROM NEVADA COUNTY GEOGRAPHIC INFORMATION SYSTEM



SITE MAP AND MONITORING LOCATIONS  
**COMBIE RESERVOIR**  
 MEADOW VISTA, CALIFORNIA

WDID #	5A29CR00068
NPDES #	CAG995002
NVS PROJECT	4688.02
DATE	JUNE 2019

ATTACHMENT  
**A**

## **ATTACHMENT B - RATIONALE FOR EFFLUENT MONITORING**

### **I. RATIONALE FOR EFFLUENT MONITORING**

#### **1. Effluent Monitoring**

- i. Effluent monitoring frequency and sample type for flow (once per day), electrical conductivity (once per quarter), pH (once per day), turbidity (once per day), total suspended solids (once per week), and mercury (once per month) have been retained from NOA R5-2013-0073-028 to determine compliance with effluent limitations for these parameters.
- ii. NOA R5-2013-0073-028 required monitoring for acute and chronic toxicity once per permit term. Since the project duration is less than five years, this NOA updates acute and chronic toxicity monitoring to once per project term.
- iii. Monitoring data submitted with the 8 December 2012 Notice of Intent indicates that manganese has reasonable potential to cause or contribute to an exceedance of water quality criteria. Therefore, this NOA increases the effluent monitoring frequency for manganese to once per month.
- iv. Monitoring data submitted with the 8 December 2012 Notice of Intent for aluminum, arsenic, iron, nickel, and zinc did not demonstrate reasonable potential to exceed water quality objectives/criteria. Thus, specific monitoring requirements for these parameters have not been retained from NOA R5-2013-0073-028.