27 August 2018

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

CERTIFIED MAIL
7012 2210 0002 1420 2163

NOTICE OF APPLICABILITY (NOA) AMENDMENT; GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0076-01 FOR LIMITED THREAT DISCHARGES TO SURFACE WATER; NEVADA IRRIGATION DISTRICT; COMBIE RESERVOIR SEDIMENT AND MERCURY REMOVAL PROJECT, NEVADA AND PLACER COUNTIES

The Nevada Irrigation District (Discharger), Combie Reservoir Sediment and Mercury Removal Project (Project) was issued a Notice of Applicability (NOA) on 16 February 2018 for coverage under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order), and was assigned Limited Threat General Order number R5-2016-0076-019. On 24 April 2018, the Discharger requested an amendment of the NOA. The requested amendment is hereby approved and NOA R5-2016-0076-019 is amended as described below, and a clean version of the amended NOA is attached.

AMENDMENT

The Discharger's request for amendment and subsequent information noted that the estimated effluent flow of 0.096 million gallons per day (MGD) was much lower than realistic values to pump the dredging slurry based on consultation with the dredging contractor. The dredging contractor provided an updated estimated effluent flow rate of 1.0 MGD. During Project development, the Discharger also made changes to the treatment process, which now includes pumping and filtering water from the Bear River to aid in the extraction process. The Discharger's request for amendment included these changes in addition changes to the project operation dates and discharge point. Effective immediately, the NOA is amended (as shown in items 1 through 4 below) to include updates to the Project Description, Monitoring Station Locations (Table 2), Communication, and Project Location Map (Attachment A).

1. **Project Description.** Modify the second paragraph of the Project Description as shown in underline/strikeout format below:

   The Discharger is proposing to dredge the northeastern end of the reservoir using a ~~remote controlled~~ floating cutter head suction dredge capable of pulling up sediment at an approximate rate of ~~600~~1,200 to 1,500~~1000~~ 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, ~~T~~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 ~~by a trammel or mixing pond~~ and contained for offsite removal. The slurry is then pumped to the mercury removal process which consists of a ~~magnetic wheel and then through~~ 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 ~~secondary aggregate separation and~~ water clarifying process, which may include the use of polymers, coagulants, horizontal press machines, filtration, and/or clarifying basins or tanks. A maximum of 1.0~~0.096~~ million gallons of treated effluent per day is expected to be discharged to Combie Pond #3 where the Discharger will allow the effluent to flow through turbidity curtains prior to continuing into to the Combie Reservoir, a tributary to the Bear River. All project operations will occur between 1 April and 30 November~~April 1 and November 1~~ each year, unless precluded by winter storms. The extraction process may take place throughout the year as weather permits. The residual sand, silt, clay, and gravel from the treatment process 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.

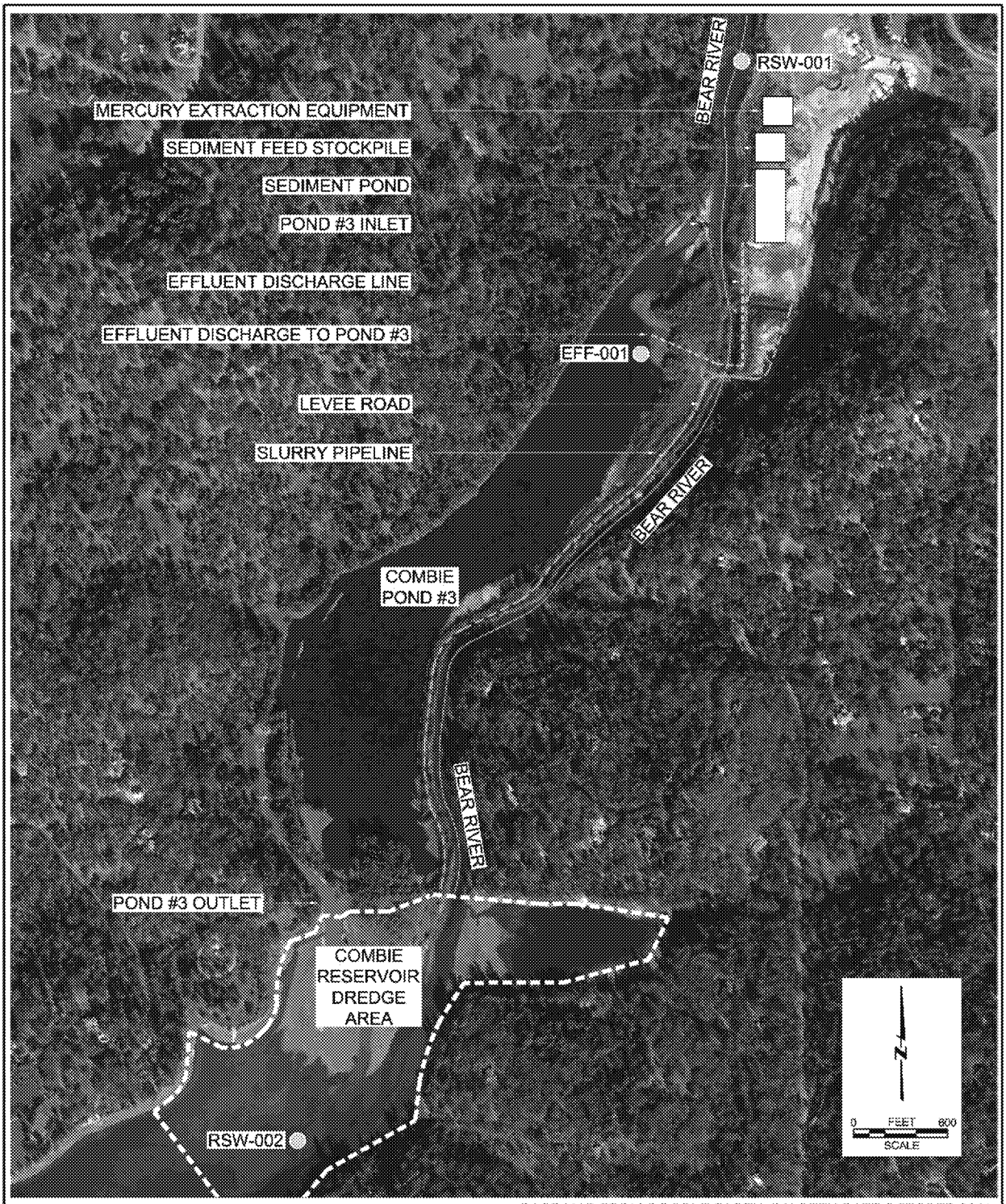
2. **Table 2. Monitoring Station Locations.** Modify this table in underline/strikeout format as shown below:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	A location where a representative sample of the effluent can be collected prior to discharging to Combie Pond #3~~Bear River~~ within 50 feet of the final treatment of turbidity curtains.
--	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).

3. **Communication.** Modify the first paragraph of Communication as shown in underline/strikeout format below:

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: Marisela Peña~~Kari Holmes~~. Ms. Peña~~Holmes~~ can be reached at (916) 464-4826~~623~~ or Marisela.Pena~~Kari.Holmes~~@waterboards.ca.gov.

4. **Project Location Map (Attachment A).** Replace the existing Project Location Map (Attachment A) with the figure below:



BASE MAP FROM GOOGLE EARTH; IMAGERY DATE OCTOBER 2011

SITE MAP AND MONITORING LOCATIONS COMBIE RESERVOIR MEADOW VISTA, CALIFORNIA	WDID #	5A29CR00068	ATTACHMENT A
	NPDES #	CAG995002	
	NV5 PROJECT	4688.02	
	DATE	MAY 2018	

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 amendment, 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. Copies of the law and regulations applicable to filing petitions may be found on the internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

Original Signed by Adam Laputz for

Patrick Palupa
Executive Officer

Enclosure: Attachment 1 – Amended Notice of Applicability

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

16 February 2018

ATTACHMENT 1

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

CERTIFIED MAIL
91 7199 991 7035 8418 7487

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 is currently 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 has determined that the Combie Reservoir Sediment and Mercury Removal Project (Project) meets the required conditions for approval under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order), Tier 2. This project is hereby assigned Limited Threat General Order R5-2016-0076-019 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002. Please reference your Limited Threat General Order number, **R5-2016-0076-019**, in your correspondence and submitted documents.

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 Limited Threat General Order. To conserve resources, the Limited Threat General Order may be viewed at the following web address: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076_mod.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. A maximum of 1.0 million gallons of treated effluent per day is expected to be discharged to Combie Pond #3 where the Discharger will allow the effluent to flow through turbidity curtains prior to continuing into to the Combie Reservoir, a tributary to the Bear River. All project operations will occur between 1 April and 30 November each year, unless precluded by winter storms. The extraction process may take place throughout the year as weather permits. The residual sand, silt, clay, and gravel from the treatment process 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 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

Parameter	Units	Effluent Limitations		Section Reference
		Average Monthly	Maximum Daily	
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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
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.
--	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 – When discharging to Bear River, the Discharger shall monitor the effluent at EFF-001 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 ºC	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[5]	[2,5]
Chronic Toxicity	--	Grab	1/Project Term[5]	[2,5]

[1] 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.

[2] 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.

[3] 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.

[4] 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.

[5] 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	[2,3]
Electrical Conductivity @ 25 ºC	µmhos/cm	Grab	1/Month	[2,3]
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Month	[2,3]
pH	standard units	Grab	1/Month	[2,3]
Temperature	°F	Grab	1/Month	[2,3]
Turbidity	NTU	Grab	1/Month	[2,3]

[2] 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.

[3] 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 by the Discharger.

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 **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

Sampling Frequency	Monitoring Period Begins On…	Quarterly Report Due Date
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: Marisela Peña. Ms. Peña can be reached at (916) 464-4826 or Marisela.Pena@waterboards.ca.gov.

We have transitioned to a paperless office, therefore, please convert all documents to a searchable Portable Document Format (pdf) and email them to 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; and the CIWQS place ID 796256 in the body of the email. 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. Copies of the law and regulations applicable to filing petitions may be found on the internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

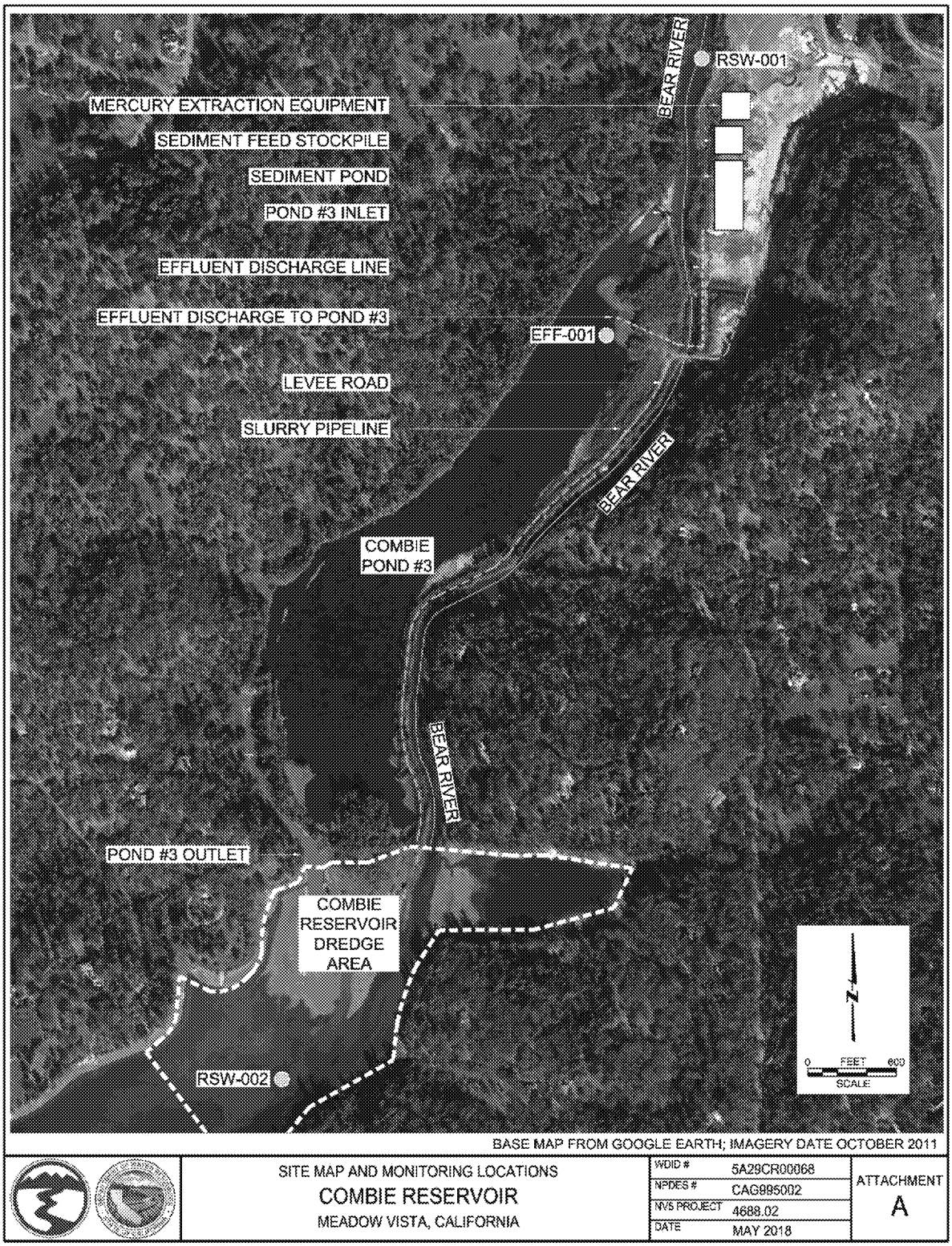
Original Signed by Adam Laputz for

Pamela C. Creedon
Executive Officer

Enclosures (3): Attachment A - Project Location Map
Attachment B – Effluent Monitoring Rationale
Monitoring Report Transmittal Form (Discharger only)

cc: David Smith, 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 GOOGLE EARTH; IMAGERY DATE OCTOBER 2011

SITE MAP AND MONITORING LOCATIONS COMBIE RESERVOIR MEADOW VISTA, CALIFORNIA	WDID #	5A29CR00068	ATTACHMENT A
	NPDES #	CAG995002	
	NVS PROJECT	4688.02	
	DATE	MAY 2018	

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.