

Staff Report

for the Board of Directors Meeting of September 26, 2018

TO: Honorable Board of Directors
FROM: Greg Jones, Assistant General Manager
DATE: September 19, 2018
SUBJECT: **Combie Sediment Sale / Disposal**

ADMINISTRATION

RECOMMENDATION:

Review the Combie Reservoir Sediment and Mercury Removal Project sediment sale and disposal.

BACKGROUND:

At the June 20, 2018 Board of Directors meeting, staff informed the Board of its difficulty to determine market value for the Combie sediment until it has been removed. Since then, staff has identified a location near the project processing area which can serve as short-term (3-year) storage for the extracted sediment. NID and Teichert are finalizing an agreement to temporarily store the sediment while either: (i) A buyer purchases the material; or (ii) NID identifies a different permanent location for the material. NID is currently finalizing its grading plan, BMP's and storm water management plan which will ensure all mitigation measures included in the adopted CEQA document are implemented.

At the same June 20 meeting, staff presented results of the subsurface inorganic and organic analysis of 21 borings (up to 32' depth) and 5 bulk samples (up to 6' depth) of sediment at Combie Reservoir. The investigation, in part, was to characterize the sediment within the project study area in respect to the California EPA Department of Toxic Substances Control (DTSC) human health screening levels for total mercury (THg) concentrations. Based on our sampling, THg concentrations were found to be well below the human health screening levels for designation of hazardous waste in California.

Since then, staff has been requested to provide the Board with additional information on the characteristics of the sediment to be removed at Combie Reservoir. Dr. Carrie Monohan, Technical Advisor to the project and Science Director at The Sierra Fund, will present an overview to help clarify some commonly asked questions with respect to regulatory criteria and the sediment characteristics of the material to be removed from Combie Reservoir.

BUDGETARY IMPACT: N/A

Attachments (1):

- NID BOD Soil Tests at Combie – Power Point Presentation

Soil Tests at Combie

NID Board Meeting

Sept 26, 2018



Regulations

Soil

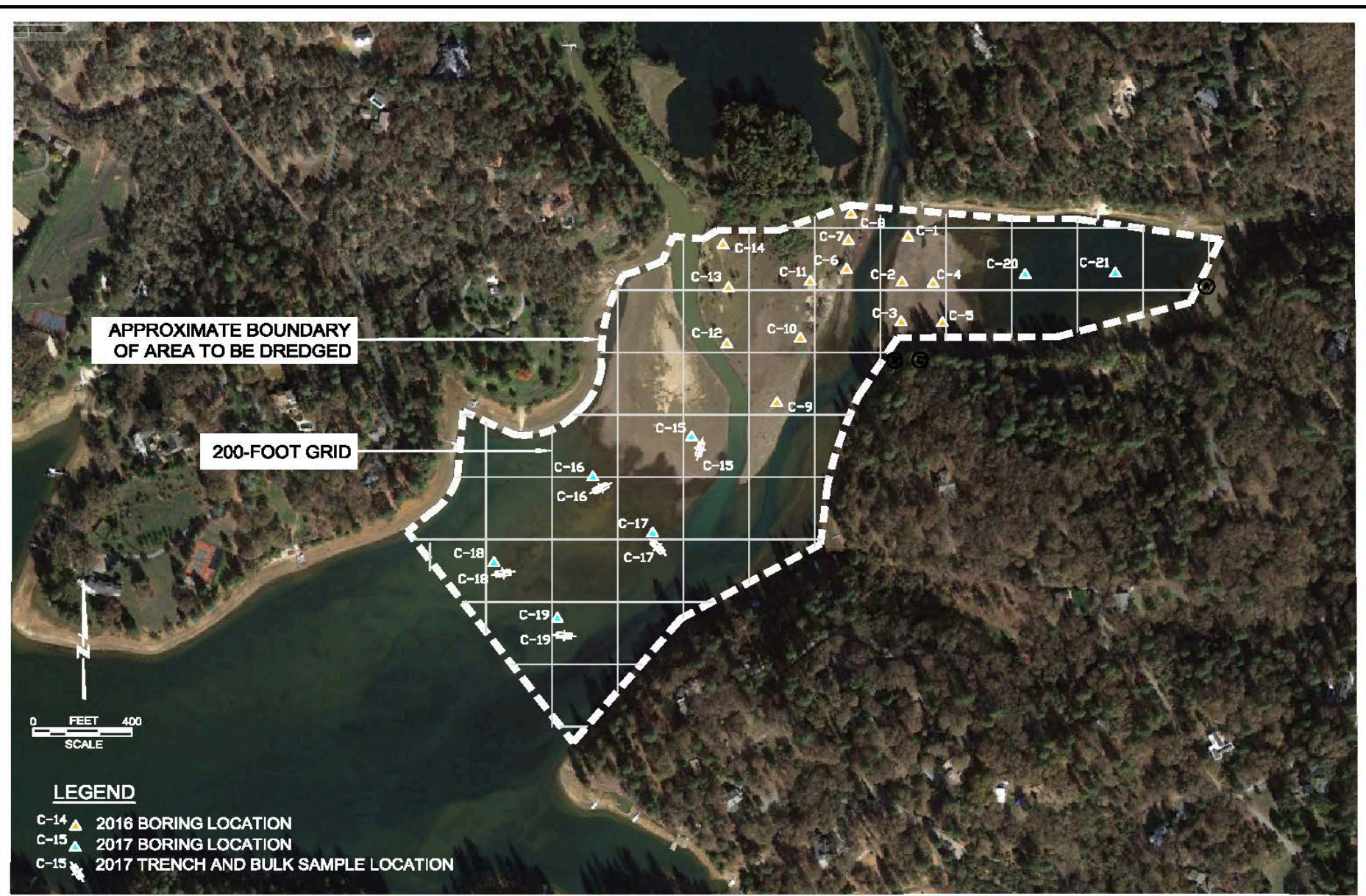
- Cal EPA Screening levels (DTSC-SLs)
- US EPA Regional Screening Levels (RSLs)



Water

- Clean Water Act





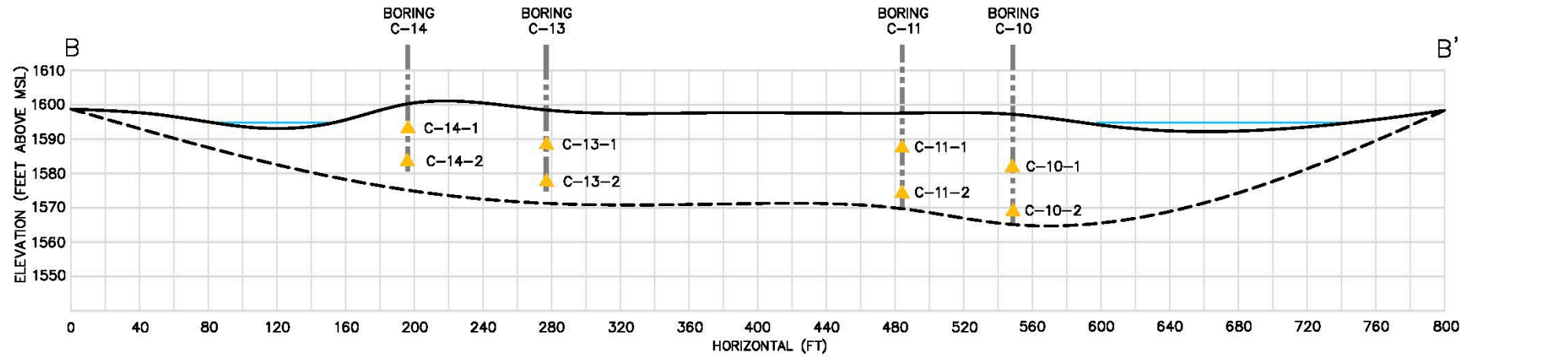
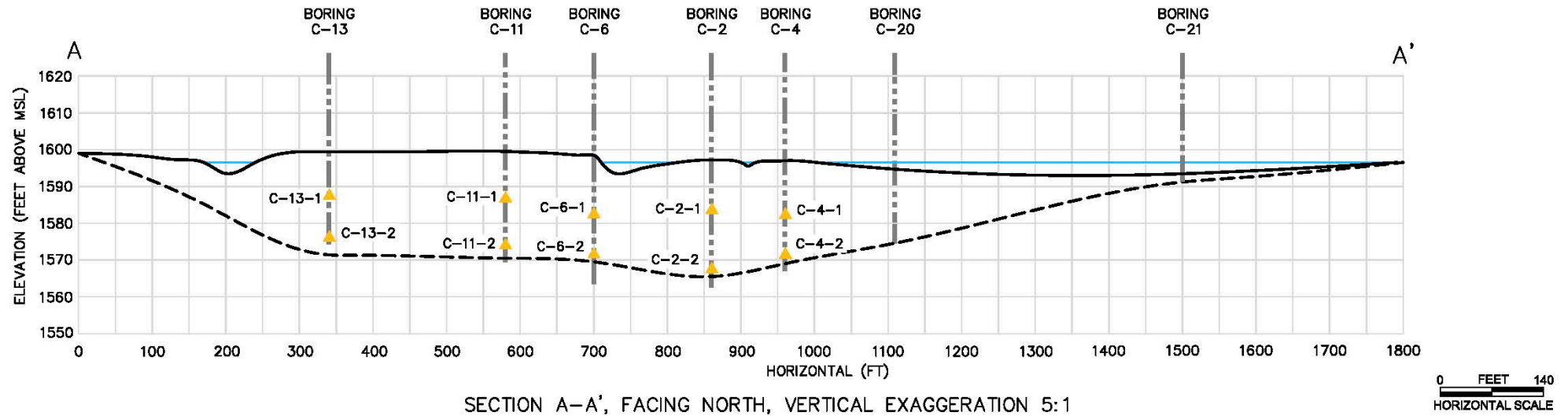
BASE MAP FROM GOOGLE EARTH, IMAGERY DATE OCTOBER 2011

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BORING AND TRENCH LOCATIONS
COMBIE RESERVOIR SEDIMENT AND MERCURY REMOVAL
 MEADOW VISTA, CALIFORNIA

DRAWN BY:	BOTSFORD
CHECKED BY:	MUIR
H&K PROJECT:	4688-01
DATE:	NOVEMBER 2017

FIGURE
1



- LEGEND**
- C-2-1 ▲ SOIL SAMPLE LOCATION (OCTOBER 2016)
 - C-15 ▲ BULK SAMPLE LOCATION (OCTOBER 2017)
 - INTERPOLATED SEDIMENT SURFACE
 - INTERPOLATED NATIVE SOIL/ROCK SURFACE
 - APPROXIMATE WATER SURFACE ELEVATION

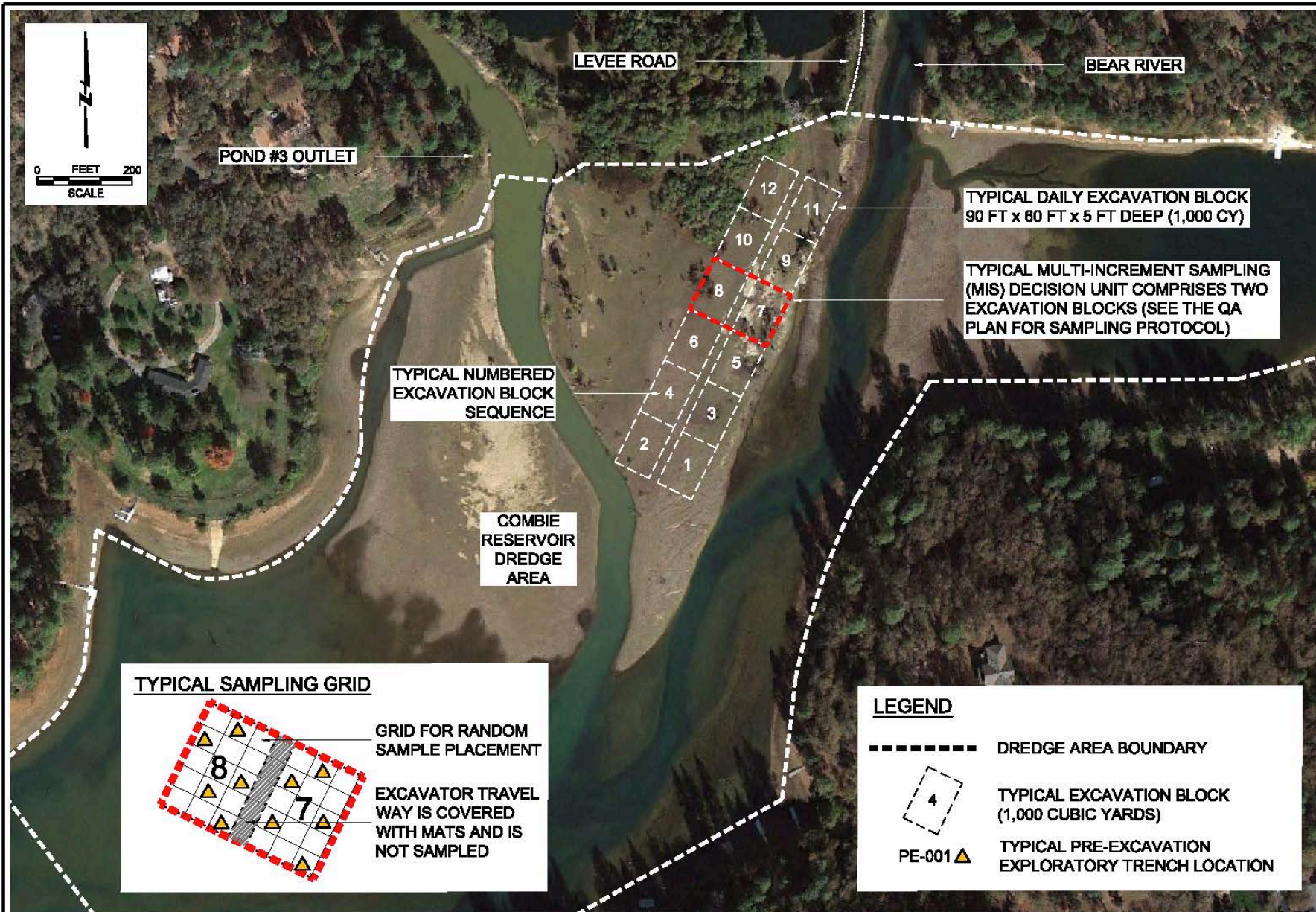
SECTIONS A - A' AND B - B'
 COMBIE RESERVOIR SEDIMENT AND MERCURY REMOVAL
 MEADOW VISTA, CALIFORNIA

NO.	REVISIONS	DATE

DRAWN BY:	BOTSFORD
CHECKED BY:	MUIR
H&K PROJECT:	4688-01
DATE:	JANUARY 2018

FIGURE
4





BASE MAP FROM GOOGLE EARTH; IMAGERY DATE OCTOBER 2011



PRE-EXCAVATION SAMPLING PLAN
COMBIE RESERVOIR SEDIMENT AND MERCURY REMOVAL PROJECT
 MEADOW VISTA, CALIFORNIA

WDID #	5A29CR00068
NPDES #	CAG985002
NVS PROJECT	4688.02
DATE	MAY 2018

FIGURE
6

Mercury Methylation → Fish



NOTICE TO SIERRA ANGLERS

A healthy guide to eating fish from California lakes and reservoirs
This information applies to all lakes and reservoirs in California without site-specific advice.

Women 18 - 45 and children 1 - 17

<p>Rainbow trout ♡</p>	<p>Bullhead Catfish Bluegill or Other Sunfish Brown trout 16 inches or less ♡</p>	<p>Bass Carp Brown trout over 16 inches</p>		
2 servings a week	OR	1 serving a week	OR	Do not eat

Women over 45 and men can safely eat more fish

6 servings a week	OR	2 servings a week	OR	1 serving a week
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What is a serving?

For Adults For Children
The recommended serving of fish is about the size and thickness of your hand. Give children smaller servings.

Why eat fish?

Eating fish is good for your health. Fish have Omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

What is the concern?

Some fish have high levels of mercury. Mercury can harm the brain, especially in unborn babies and children. Women over 45 and men have lower risk and can eat more fish.

The only lakes and reservoirs that have site-specific guidelines in the Sierra are: Rollins, Combie, Camp Far West, Englebright, Donner, Oroville, Folsom, and Hatoma. For site-specific information about eating fish from these and other locations in California, go to www.oehha.ca.gov/fish.html.

This health advisory information is issued by the California Office of Environmental Health Hazard Assessment. Posting this information is a project of The Sierra Fund in collaboration with the South Yuba River Citizens League, Wolf Creek Community Alliance, and Nevada Irrigation District, among others. This project is funded by grants from the Clarence E. Heller Charitable Foundation, California Department of Water Resources, California Environmental Protection Agency, and The California Wellness Foundation.

Components of Advisories

NOTICE TO SIERRA ANGLERS

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 Rainbow trout ♡	 Bullhead Catfish Bluegill or Other Sunfish Brown trout 16 inches or less ♡	 Bass Carp Brown trout over 16 inches
2 servings a week	OR 1 serving a week	Do not eat

♡ = High in Omega-3s

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Logos: CALIFORNIA DEPARTMENT OF WATER RESOURCES, GOOD CATCH CALIFORNIA, THE SIERRA FUND, WOLF CREEK COMMUNITY ALLIANCE, SYRCL, NID, CALFPA.

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1. Species
2. Population Group
3. Frequency of Consumption

Diagram Source: OEHPA


Sediment Core Results

- ← Soil Regulatory Criteria


	Hg	MeHg	Ba	Cr	Co	Cu	Pb	Ni	V	Zi
DTSC-SL & RSLs	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Average	1	7.8	5200	170	660	300	80	1600	5300	23000
Average	<0.42	0.00028	28.9	19.6	3.8	8.7	2.5	15.3	15.8	12.4
C-1	0.22									
C-2	0.18									
C-3	0.61									
C-4-1	<0.1	0.00011	25	15	3.6	6.7	2.1	14	11	11
C-4-2	0.3	<0.0001	61	51	5.4	25	7	20	64	22
C-5	0.48									
C-6	<0.1									
C-7-1	<0.1	<0.0001	19	16	2.9	6.5	1.5	12	10	10
C-7-2	<0.1	<0.0001	13	12	2	4.6	1.2	8.3	6.1	7.6
C-8	<0.1	<0.0001								
C-9	<0.1									
C-10-1	<0.1	<0.0001	46	19	4.8	9.7	3.4	18	15	16
C-10-2	<0.1	<0.0001	31	15	4.4	7.3	2.2	15	11	14
C-11-1	<0.1	0.00045	38	33	6.7	12	3.1	36	18	15
C-11-2	<0.1	<0.0001	26	14	3.5	6.4	2.2	13	9.7	14
C-12-1	<0.1	<0.0001	13	9.9	2.2	4.3	1.2	8.8	6.1	7.4
C-12-2	<0.1	<0.0001	17	11	2.4	4.6	1.3	8.2	6.8	7.2
C-13	<0.1									
C-14	<0.1									
C-15	0.42	0.00025								
C-16	0.63	0.00036								
C-17	0.47	0.00016								
C-18	0.48	0.00036								
C-19	0.38	0.00026								


FINAL
SEDIMENT CHARACTERIZATION REPORT
 FOR
COMBIE RESERVOIR
SEDIMENT AND MERCURY REMOVAL PROJECT
 MEADOW VISTA, CALIFORNIA
 JANUARY 25, 2018

PREPARED FOR:



NEVADA IRRIGATION DISTRICT
 ENGINEERING DEPARTMENT
 1036 WEST MAIN STREET
 GRASS VALLEY, CALIFORNIA 95945





HOLDREGE & KULL, AN NV5 COMPANY
 792 SEARLS AVENUE
 NEVADA CITY, CALIFORNIA 95959
 PROJECT NO. 4688.01

Summary- Key Points

- Regarding Hg concentrations, sediment and water are regulated differently
- Removal in the dry is a way to avoid stirring up mercury
- Removal in the wet with special equipment will reduce turbidity
- Regulatory and Efficiency monitoring will be performed

