

**State of California  
Department of Fish and Wildlife**

# Memorandum

**Date:** October 22, 2019

**To:** Sarah Mussulman  
Senior Environmental Scientist; Supervisor  
Department of Fish and Wildlife  
North Central Region  
1701 Nimbus Road, Suite A  
Rancho Cordova, CA 95670

**Cc:** CDFW North Central Region Fish Files

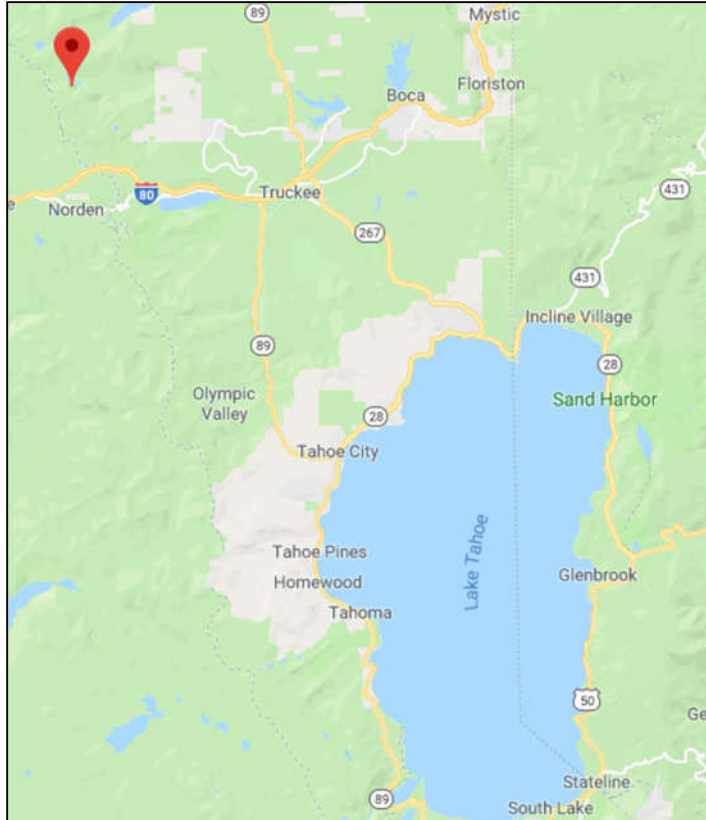
**From:** Mitch Lockhart; Environmental Scientist  
Department of Fish and Wildlife  
1701 Nimbus Road, Suite A  
Rancho Cordova, CA 95670

**Subject: Resource Assessment at Devil's Oven Lake, Nevada County**

Devil's Oven Lake (Lake ID 12925), Nevada County, is a backcountry destination northwest of Truckee, CA, and seven miles from the Pacific Crest Trail at Donner Summit (**Figure 1**). The lake is the headwaters to North Fork Prosser Creek, and a tributary to Warren Lake, Prosser Creek Reservoir, and the Truckee River. Historically, Devil's Oven Lake was aerielly planted by California Department of Fish and Wildlife (CDFW) with brook trout (*Salvelinus fontinalis*; BK) from 1950 until 1999. Golden trout (*Oncorhynchus aguabonita*; GT) were planted instead of BK from 1967 until 1981. CDFW surveyed the lake in 2004, and again in 2011, and found only BK, indicating GT did not persist in the absence of regular plants.

To determine the current status of the fishery at Devil's Oven Lake and if additional trout plants are warranted, two CDFW Scientific Aids surveyed the lake from September 11, 2019 to September 12, 2019. A monofilament gill net was set at 8:08 pm on September 11, 2019 and was pulled the following morning on September 12, 2019 at 7:11 am for a total survey effort of approximately 11 hours. The gill net sample captured ten BK (**Table 1**).

The Scientific Aids conducted a Visual Encounter Survey (VES) of the entire lake on September 11, 2019 searching for diurnal herpetofauna. The VES began at 3:40 pm under clear skies, calm wind, and an air temperature of 14° C. The survey continued until 4:05 pm for a total survey effort of 30 minutes. No herpetofauna were observed.



**Figure 1:** Map of Devil's Oven Lake, Nevada Co., (Red Pin) in relation to Lake Tahoe and Truckee, CA (Google Maps, retrieved 10.14.19)

BK persist and naturally reproduce in Devil's Oven Lake despite the lack of aerial planting for the past 20 years. Captured fish represent at least three year-classes. Individual fish exhibit good body condition indicating abundant food supply. For these reasons, there is little evidence supporting the need for additional aerial plants at Devil's Oven Lake.

The lake could be a potential target for mechanical fish removal to benefit Sierra Nevada yellow-legged frogs (*Rana sierrae*) or LCT, but it is not within the scope of this report to evaluate the basin for mechanical fish removal.

**Table 1:** Total length, weight, sex, and egg stage of fish captured during a gill net survey at Devil's Oven Lake, Nevada Co., on Sept. 11, 2019.

Species	Length (mm)	Weight (gm)	Sex (M/F)	Egg Stage
Brook Trout	280	240		
Brook Trout	282	210		
Brook Trout	142	195	F	Early
Brook Trout	167	170	M	
Brook Trout	185	230	F	Early
Brook Trout	180	225	F	Early & Late
Brook Trout	315	315	M	
Brook Trout	345	420	F	Early
Brook Trout	362	540	F	Early & Late
Brook Trout	380	510	F	Early & Late

GILLNET SURVEY DATA SHEET

Date 9/11/19-9/12/19 Water Devil's Oven Lake Sampler(s) L. Mitchem, C. Hettrick  
 SET TIME 9/11/19: 2008 PULL TIME 9/12/19: 0711 WATER TEMP (9/11): 13°C (9/12): 10°C

VTM Latitude 0727592, 4363480 Longitude \_\_\_\_\_

Species	BK		Set Egg		Length TL (mm)	Weight (gm)	Length TL (mm)	Weight (gm)	Length TL (mm)	Weight (gm)
	Length TL (mm)	Weight (gm)	Length TL (mm)	Weight (gm)						
1	280	240	-	-						
2	282	210	-	-						
3	142	195	F	E						
4	167	170	M	-						
5	185	230	F	E						
6	180	275	F	E/						
7	315	315	M	-						
8	365	420	F	E						
9	362	540	F	E/L						
10	380	510	F	E/L						
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Figure 2: Data sheet with gill net data from a survey conducted Sept. 11, 2019, at Devil's Oven Lake, Nevada County.

**CDFW High Mountain Lakes - Amphibian and Reptile Visual Encounter Survey Data Sheet**

Site ID:	Date: 9/11/19	SKY: Clear	Partly Cloudy	Mostly Cloudy	Over-cast	Rain	Snow	Smoke	WIND: Calm	light	Moderate	Strong
Topo Name: (1:24,000)	County:	Elevation: m ft	If not surveyed, provide reason:		Private Property	Frozen	Not Found	No Access				
Surveyors: L. Mitchell, C. Hettrick		Water Type: Lake	Unmapped pond	Marsh/meadow	Spring seep	Stream (Skip to "STREAMS" on pg. 2)						
Lake Name: Devil's Oven Lake	East UTM:	North UTM:	UTM Zone:									
Color: Clear	Stained	Water (5 m from shore, 10cm deep): 16 @ 1539	C/F	Air (1 m above water): 14 @ 1537	C/F	Seasonality: Perennial	Currently Dry? Yes					
Turbidity: Clear	Cloudy	Temp 10cm deep:		Temp:		Seasonality: Ephemeral	Currently Dry? No					
Survey START time: 7540	Survey END time: 1605	Total survey duration (min): 30	HERPS SEEN? YES	NO	FISH SEEN? YES	NO						
*FOR LAKES/PONDS/MEADOWS: ALSO SURVEY FIRST 200 m OF INLETS AND OUTLETS. RECORD DATA SEPARATELY IN THE "STREAMS" SECTION ON PG. 2												
HERP SPECIES	# adults	# subadults	# metamorphs	# larvae	# eggs	# swabs	Survey Method					
Calling? Y N							Visual	Trapped				
							Aural	Hand Collected				
							Amp Net	Incidental				
Calling? Y N							Visual	Trapped				
							Aural	Hand Collected				
							Amp Net	Incidental				
Calling? Y N							Visual	Trapped				
							Aural	Hand Collected				
							Amp Net	Incidental				
Calling? Y N							Visual	Trapped				
							Aural	Hand Collected				
							Amp Net	Incidental				
FISH SPECIES (circle species seen, if known): BK (brook trout), BN (brown trout), CT (cutthroat trout), GT (golden trout), RT (rainbow trout) HYBRID (e.g., GT x RT), OTHER (e.g., minnows)												
Amphibians: S. Long-toed Salamander (AMNA); Yosemite Toad (ANCA, family BUCA); Sierran Treefrog (HYSI, family PSRE or HYRE); Sierra Nevada Yellow-legged Frog (RASI)												
Amph. less common in HML: CA Toad (ANBO, family BUBO); Bullfrog (RACT); Cascades Frog (RACA); CA Red-legged Frog (RADR); Sierra Newt (TASI, family TATO)												
Reptiles: Sierra Gartersnake (THCO); Mountain Gartersnake (THEL); Valley Gartersnake (THSI); Western Pond Turtle (EMMA, family CLMA)												

PHOTOS	Photo Number	Camera	Time	Date (yyyy-mm-dd)	UTM E	UTM N	Comments
Overview	Cian's Phone				0727477	4363437	"DO overview"
Herps							
Other	1551	LVC			0727577	4363561	FB, cascade → Warren

<p><b>SITE SKETCH:</b></p>	<p><b>NOTES:</b> Inlet running from mountain springs, into marsh buffer zone between mountain face and lake.</p>
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**Figure 3:** VES data sheet from a survey conducted Sept. 11, 2019, at Devil's Oven Lake, Nevada County.

STREAM											
Inlet Outlet (circle one) # <u>1</u>		Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>		Stream Currently Dry? Y <input type="checkbox"/> N <input type="checkbox"/>		Intermittent? Y <input type="checkbox"/> N <input type="checkbox"/>		Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA <input type="checkbox"/>		Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA <input type="checkbox"/>	
Start UTM E: <u>0727579</u>		UTM N: <u>4363551</u>		End UTM E: _____		UTM N: _____		Water Temp: _____		Air Temp: _____	
Start Time: <u>1550</u>		End Time: <u>1552</u>		Duration (min): <u>2</u>		*BARRIERS (fill out info below)*					
Fish present? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		Barrier 1		Photo #'s: <u>(1551)</u>		UTM E: _____		UTM N: _____		Description: _____	
Herps present? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		Barrier 2		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning evidence? _____		Barrier 3		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning / Rdds / Fry / None											
Inlet Outlet (circle one) # _____		Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>		Stream Currently Dry? Y <input type="checkbox"/> N <input type="checkbox"/>		Intermittent? Y <input type="checkbox"/> N <input type="checkbox"/>		Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA <input type="checkbox"/>		Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA <input type="checkbox"/>	
Start UTM E: _____		UTM N: _____		End UTM E: _____		UTM N: _____		Water Temp: _____		Air Temp: _____	
Start Time: _____		End Time: _____		Duration (min): _____		*BARRIERS (fill out info below)*					
Fish present? Y <input type="checkbox"/> N <input type="checkbox"/>		Barrier 1		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Herps present? Y <input type="checkbox"/> N <input type="checkbox"/>		Barrier 2		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning evidence? _____		Barrier 3		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning / Rdds / Fry / None											
Inlet Outlet (circle one) # _____		Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>		Stream Currently Dry? Y <input type="checkbox"/> N <input type="checkbox"/>		Intermittent? Y <input type="checkbox"/> N <input type="checkbox"/>		Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA <input type="checkbox"/>		Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA <input type="checkbox"/>	
Start UTM E: _____		UTM N: _____		End UTM E: _____		UTM N: _____		Water Temp: _____		Air Temp: _____	
Start Time: _____		End Time: _____		Duration (min): _____		*BARRIERS (fill out info below)*					
Fish present? Y <input type="checkbox"/> N <input type="checkbox"/>		Barrier 1		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Herps present? Y <input type="checkbox"/> N <input type="checkbox"/>		Barrier 2		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning evidence? _____		Barrier 3		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning / Rdds / Fry / None											
Inlet Outlet (circle one) # _____		Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>		Stream Currently Dry? Y <input type="checkbox"/> N <input type="checkbox"/>		Intermittent? Y <input type="checkbox"/> N <input type="checkbox"/>		Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA <input type="checkbox"/>		Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA <input type="checkbox"/>	
Start UTM E: _____		UTM N: _____		End UTM E: _____		UTM N: _____		Water Temp: _____		Air Temp: _____	
Start Time: _____		End Time: _____		Duration (min): _____		*BARRIERS (fill out info below)*					
Fish present? Y <input type="checkbox"/> N <input type="checkbox"/>		Barrier 1		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Herps present? Y <input type="checkbox"/> N <input type="checkbox"/>		Barrier 2		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning evidence? _____		Barrier 3		Photo #'s: _____		UTM E: _____		UTM N: _____		Description: _____	
Spawning / Rdds / Fry / None											
HERP SPECIES	In/Outlet #	# adults	#subadults	#metamorphs	larvae	#egg m.	#swabs	Survey Method			
	(circle one) #							Visual	Trapped		
	IN							Aural	Hand Collected		
Calling? Y N	OUT							Amp Net	Incidental		
	(circle one) #							Visual	Trapped		
	IN							Aural	Hand Collected		
Calling? Y N	OUT							Amp Net	Incidental		
	(circle one) #							Visual	Trapped		
	IN							Aural	Hand Collected		
Calling? Y N	OUT							Amp Net	Incidental		
	(circle one) #							Visual	Trapped		
	IN							Aural	Hand Collected		
Calling? Y N	OUT							Amp Net	Incidental		

**FISH SPECIES** (circle species seen, if known): BK (brook trout), BN (brown trout), CT (cutthroat trout), GT (golden trout), RT (rainbow trout), HYBRID (e.g. GT x RT), OTHER (e.g. minnows)

**Amphibians:** S. Long-toed Salamander (AMMA); Yosemite Toad (ANCA, fmlly BU/CA); Sierran Treefrog (HYSI, fmlly PSRE or HYRE); Sierra Nevada Yellow-legged Frog (RAS1)

**Amph. less common in HML:** CA Toad (ANBO, fmlly BUBO); Bullfrog (RACT); Cascades Frog (RACA); CA Red-legged Frog (RADR); Sierra Newt (TASI, fmlly TATO)

**Reptiles:** Sierra Gartersnake (THCO); Mountain Gartersnake (THEL); Valley Gartersnake (THSI); Western Pond Turtle (EMMA, fmlly CLMA)

PLEASE Return to: Isaac Chellman, California Department of Fish and Wildlife, (916) 358-4038; 1701 Nimbus Rd., Rancho Cordova, CA 95670

Field review \_\_\_\_\_ Copied \_\_\_\_\_ Entered \_\_\_\_\_ Proofed \_\_\_\_\_

Herp Data Sheet, pg. 2 of 2

**Figure 3, Con't:** VES data sheet from a survey conducted Sept. 11, 2019, at Devil's Oven Lake, Nevada County.