

State of California
Department of Fish and Wildlife

Memorandum

Date: 10/7/2019

To: Sarah Mussulman
Sierra Fisheries Supervisor
Department of Fish and Wildlife
North Central Region

From: Mitch Lockhart
Environmental Scientist
Department of Fish and Wildlife
North Central Region

Subject: Visual Encounter Survey and Gill Net set at Young America Lake, Sierra County

Young America Lake (ID 12366), Sierra County, is an off-trail lake located just north of the Sierra Buttes fire lookout tower and east of the Pacific Crest Trail (Figure 1). Accessing the lake requires a 4x4 vehicle and a difficult cross-country hike. The lake was historically planted with rainbow trout (*Oncorhynchus mykiss*; RT), brook trout (*Salvelinus fontinalis*; BK), and Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*; LCT). More recently, it has received fingerling golden trout (*Oncorhynchus mykiss aguabonita*; GT) and was last planted in 2018.

On September 25, 2019, at 19:15, two California Department of Fish and Wildlife (CDFW) Scientific Aids set a gill net at Young America Lake to determine the species and relative densities of fish present. The gill net was left fishing overnight and pulled at 7:23 the next

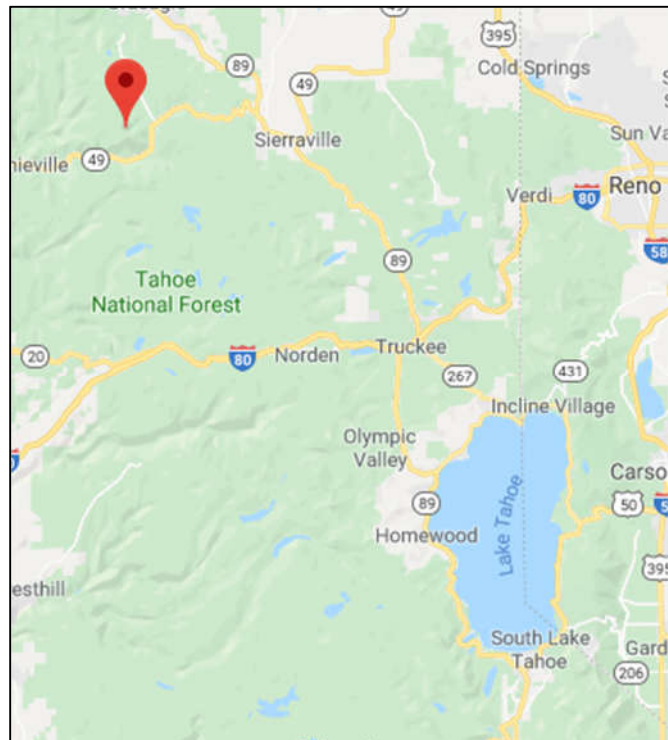


Figure 1: Map of the location of Young America Lake, Sierra Co. (Red Pine) in relation to Lake Tahoe (Google Maps, retrieved 10.16.19).

morning for a total sampling effort of 12 hours. The gill net sample yielded 14 BK and one GTxRT hybrid (Figures 2&3, Table 1). All fish were weighed, measured, and sexed.

Afterwards, the Scientific Aids performed a visual encounter survey (VES) of the lake. The goal of the survey was to determine if diurnal special status herpetofauna species were present in or around the lake. The VES began on September 25, 2019 at 9:05 and was concluded at 9:26 for a total effort of 29 minutes. The sky was clear, with light wind, and an air temperature of 12° Celsius. Both the inlet and outlet of the lake were dry at the time of the survey. No reptile or amphibian species were observed during the survey.

The continued presence of BK suggests the population is self-sustaining and has adequate spawning habitat. Fish were in average condition indicating an adequate food supply. Both sexes were present, but all females exhibited early egg stage in late September. This suggests spawn timing may be much later at Young America Lake than other high elevation BK populations in the Sierra Nevada. Alternatively, late egg development may be due to above average snowpack and late ice-out of 2019. Regardless, this could result in spawning interference if female BK consistently produce eggs late in the year.

The GTxRT hybrid exhibited the physical characteristics of a RT fish and was identified as an RT in the field. However, CDFW has no record of RT being planted at Young America Lake. Moreover, CDFW's GT brood stock at Cottonwood Lakes, John Muir Wilderness, have been hybridized with RT at some point in the past. Offspring may exhibit RT, GT, or GTxRT phenotypes. As a result, the fish captured at Young America Lake is considered a GTxRT hybrid despite the field identification.



Figure 2: Photograph of catch from a gill net survey at Young America Lake, Sierra Co., on September 25, 2019. The red arrow highlights the single GTxRT hybrid captured.



Figure 3: Close up of GTxRT hybrid captured in a gill net at Young America Lake, Sierra Co., on Sept. 25, 2019.

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Table 1: Total length, weight, sex, and egg stage of fish captured during a gill net survey at Young America Lake, Sierra Co., on Sept. 25, 2019.

Species	Length	Weight	Sex	Egg Stage
BK	125	8	M	-
BK	127	9	M	-
BK	171	48	F	Early
BK	180	49	F	Early
BK	171	47	M	-
BK	180	48	M	-
BK	199	56	F	Early
BK	187	54	F	Early
BK	194	55	M	-
BK	204	57	F	Early
BK	194	59	F	Early
BK	233	104	F	Early
BK	240	103	M	-
BK	252	105	M	-
GTXRT	131	10	M	-

LENGTH-WEIGHT DATA SHEET

Scanned 9.27.19
LAM

Date 9/25/19 - 9/26/19

Sampler L. Mitchell, C. Hettrick

Sampling Method Gill Net

Water Body Young America (12366)

UTM Area 10S 0701575, 4385962

Other Set: 1915 Pulled: 0723

Species	BK		Sex	Egg Stage	RT?		Sex	Egg	Length TL (mm)	Weight (gm)
	Length TL (mm)	Weight (gm)			Length TL (mm)	Weight (gm)				
1	125	8	M	-	131	10	M	-		
2	127	9	M	-						
3	127	9	M	-						
4	171	48	F	E						
5	180	49	F	E						
6	171	47	M	-						
7	180	48	M	-						
8	199	56	F	E						
9	187	54	F	E						
10	194	55	M	-						
11	204	57	F	E						
12	194	59	F	E						
13	233	104	F	E						
14	240	103	M	-						
15	252	105	M	-						
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Figure 4: Data sheet with gill net data from a survey conducted Sept. 25, 2019, at Young America Lake, Sierra County.

AMPHIBIAN AND REPTILE SURVEY DATA SHEET - 2017

Site ID: 12366	Date: 9/26/19	SKY: <input checked="" type="radio"/> Clear <input type="radio"/> Partly Cloudy <input type="radio"/> Mostly Over-Cloudy <input type="radio"/> Rain <input type="radio"/> Snow <input type="radio"/> Smoke	WIND: Calm <input checked="" type="radio"/> Light <input type="radio"/> Moderate <input type="radio"/> Strong					
Topo Name: (1:24,000)	County: Plumas County	Elevation: m ft	If not surveyed, provide reason: Private Property <input type="checkbox"/> Frozen <input type="checkbox"/> Not Found <input type="checkbox"/> No Access <input type="checkbox"/>					
Surveyors: L. Mitchell, C. Hettrick		Water Type: <input checked="" type="radio"/> Lake <input type="radio"/> Unmapped pond <input type="radio"/> Marsh/meadow <input type="radio"/> Spring seep <input type="radio"/> Stream (Skip to "STREAMS" below)						
Lake Name: (from map) Young America	East UTM:	North UTM:	UTM Zone:					
Color: <input checked="" type="radio"/> Clear <input type="radio"/> Stained	Turbidity: <input checked="" type="radio"/> Clear <input type="radio"/> Cloudy	Water (5 m from shore, 10 cm deep): Temp 10 @ 0904	Air (1 m above water): Temp 12 @ 0901					
Survey START time: 0905	Survey END time: 0926	Total survey duration (min): 29	HERPS SEEN? <input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> FISH SEEN? <input checked="" type="radio"/> YES <input type="radio"/> NO					
*FOR LAKES/PONDS/MEADOWS: ALSO SURVEY FIRST 200 m OF ALL INLETS AND OUTLETS. RECORD DATA SEPARATELY IN THE "STREAMS" SECTION BELOW.								
Species	# adults	# subadults	# metamorphs	# larvae	# egg m.	# swabs	Survey Method	
TF 0							<input checked="" type="radio"/> Visual Trapped	
Calling? <input checked="" type="radio"/> Y <input type="radio"/> N							<input type="radio"/> Aural Hand Collected	
							<input type="radio"/> Amp Net Incidental	
Calling? <input type="radio"/> Y <input type="radio"/> N							<input type="radio"/> Visual Trapped	
							<input type="radio"/> Aural Hand Collected	
Calling? <input type="radio"/> Y <input type="radio"/> N							<input type="radio"/> Amp Net Incidental	
							<input type="radio"/> Visual Trapped	
Calling? <input type="radio"/> Y <input type="radio"/> N							<input type="radio"/> Aural Hand Collected	
							<input type="radio"/> Amp Net Incidental	
STREAM								
Inlet Outlet (circle one) #	Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>	Stream Currently Dry? <input type="checkbox"/> Y <input type="checkbox"/> N	Intermittent? <input type="checkbox"/> Y <input type="checkbox"/> N					
Start E UTM: N UTM:	End E UTM: N UTM:	Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA	Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA					
Start Time: End Time: Duration (min):	Water Temp: Air Temp:	Herps Present? <input type="checkbox"/> YES <input type="checkbox"/> NO						
Inlet Outlet (circle one) #	Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>	Stream Currently Dry? <input type="checkbox"/> Y <input type="checkbox"/> N	Intermittent? <input type="checkbox"/> Y <input type="checkbox"/> N					
Start E UTM: N UTM:	End E UTM: N UTM:	Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA	Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA					
Start Time: End Time: Duration (min):	Water Temp: Air Temp:	Herps Present? <input type="checkbox"/> YES <input type="checkbox"/> NO						
Inlet Outlet (circle one) #	Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>	Stream Currently Dry? <input type="checkbox"/> Y <input type="checkbox"/> N	Intermittent? <input type="checkbox"/> Y <input type="checkbox"/> N					
Start E UTM: N UTM:	End E UTM: N UTM:	Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA	Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA					
Start Time: End Time: Duration (min):	Water Temp: Air Temp:	Herps Present? <input type="checkbox"/> YES <input type="checkbox"/> NO						
Inlet Outlet (circle one) #	Stream Type: Perennial <input type="checkbox"/> Ephemeral <input type="checkbox"/>	Stream Currently Dry? <input type="checkbox"/> Y <input type="checkbox"/> N	Intermittent? <input type="checkbox"/> Y <input type="checkbox"/> N					
Start E UTM: N UTM:	End E UTM: N UTM:	Color: Clear <input type="checkbox"/> Stained <input type="checkbox"/> NA	Turbidity: Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> NA					
Start Time: End Time: Duration (min):	Water Temp: Air Temp:	Herps Present? <input type="checkbox"/> YES <input type="checkbox"/> NO						
Species	In/Outlet #	# adults	# subadults	# metamorphs	larvae	# egg m.	# swabs	Survey Method
	(circle one) # IN							<input type="radio"/> Visual Trapped
Calling? <input type="radio"/> Y <input type="radio"/> N	OUT							<input type="radio"/> Aural Hand Collected
	(circle one) # IN							<input type="radio"/> Amp Net Incidental
Calling? <input type="radio"/> Y <input type="radio"/> N	OUT							<input type="radio"/> Visual Trapped
	(circle one) # IN							<input type="radio"/> Aural Hand Collected
Calling? <input type="radio"/> Y <input type="radio"/> N	OUT							<input type="radio"/> Amp Net Incidental
	(circle one) # IN							<input type="radio"/> Visual Trapped
Calling? <input type="radio"/> Y <input type="radio"/> N	OUT							<input type="radio"/> Aural Hand Collected
	(circle one) # IN							<input type="radio"/> Amp Net Incidental
Calling? <input type="radio"/> Y <input type="radio"/> N	OUT							<input type="radio"/> Visual Trapped
	(circle one) # IN							<input type="radio"/> Aural Hand Collected
Calling? <input type="radio"/> Y <input type="radio"/> N	OUT							<input type="radio"/> Amp Net Incidental
Amphibians: S. Long-toed Salamander (AMMA); Yosemite Toad (ANCA, frmlly BUCA); Sierran Treefrog (HYSI, frmlly PSRE or HYRE); Sierra Nevada Yellow-legged Frog (RASI) Amph. less common in HML: CA Toad (ANBO, frmlly BUBO); Bullfrog (RACT); Cascades Frog (RACA); CA Red-legged Frog (RADR); Sierra Newt (TASI, frmlly TATO) Reptiles: Sierra Gartersnake (THCO); Mountain Gartersnake (THEL); Valley Gartersnake (THSI); Western Pond Turtle (EMMA, frmlly CLMA)								

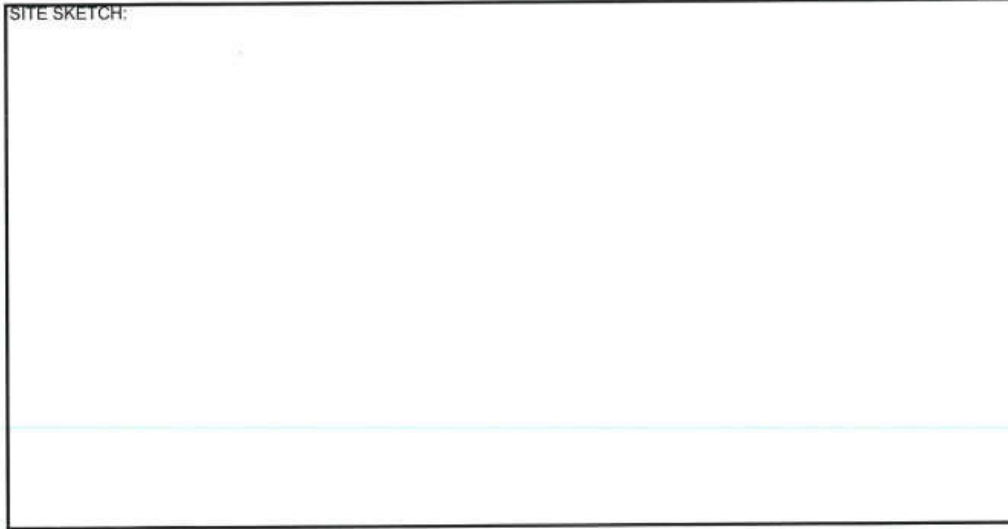
PLEASE Return to: Isaac Chellman, California Department of Fish and Wildlife, (916) 358-4038; 1701 Nimbus Rd., Rancho Cordova, CA 95670

Field review	Copied	Entered	Proofed	Herp Data Sheet, pg. 1 of 2
PHOTOS	Photo Number	Camera	Time	Date (yyyy-mm-dd) UTM E UTM N
				Comments

Figure 5: VES data sheet from a survey conducted Sept. 26, 2019, at Young America Lake, Sierra County.

Overview	1034	Cian	9/26/19		105761295,4385779	Overview
Herps						
Other						

SITE SKETCH:



NOTES:

Outlet flows down to sand pond, but is currently dry. Fish passage not likely. Brook trout present in fill net. No Inlet

Amphibians: S. Long-toed Salamander (AMMA); 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)
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Field review _____ Copied _____ Entered _____ Proofed _____

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