Coho and Steelhead Restoration Project

Annual Section 10 Permit Report July 1, 2000 - June 30, 2001



NATIONAL PARK SERVICE Point Reyes National Seashore Golden Gate National Recreation Area Muir Woods National Monument

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2000-2001 COHO SALMON SECTION 10 PERMIT REPORT PERMIT #1046

GOAL / PURPOSE OF SAMPLING

The National Park Service (NPS) implemented a long term watershed restoration project in response to the Federal Endangered Species Act listing of coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*O. mykiss*) along the central California coast. The Coho and Steelhead Restoration Project (CSRP) is a five year cooperative effort between Golden Gate National Recreation Area, Muir Woods National Monument, and Point Reyes National Seashore in western Marin County. The objectives of the CSRP are:

- Collect baseline data on the abundance and distribution of threatened juvenile, outmigrant, and adult salmonids;
- collect baseline watershed and habitat data;
- identify and implement habitat restoration projects; and
- develop and implement long term habitat and fish abundance monitoring programs.

The CSRP began monitoring trends in fish abundance and distribution to prioritize habitat restoration efforts in the Olema, Lagunitas, Pine Gulch, and Redwood Creek watersheds in 1997 (Figure 1). Field sampling continued during the 2000-2001 period and covered select areas in each watershed (Table 1). To date our efforts have focused on filling gaps in current knowledge and extending existing data sets. Adult spawner surveys are conducted during the fall and winter, juvenile abundance is estimated during summer, and fish distribution is assessed year round in large portions of each watershed. Smolt emigration is monitored in the spring on selected streams. Physical habitat measurements, including water quality and hydrologic characteristics, are collected in conjunction with each survey. In addition, interviews with long time residents and searches in archives have been conducted in an attempt to establish historical trends. Intensive fish sampling will continue for the next year and a long-term monitoring plan will be developed based on the results.

This report presents data from sampling pursuant to permit #1046 for threatened coho salmon. The CSRP has applied to the National Marine Fisheries Service (NMFS) for a section 10 permit to take threatened steelhead trout and this report includes data for both species. The format of the report follows a NMFS document attached to permit #1046 dated August 1, 1997.

SAMPLING ACTIVITIES

Spawner and Carcass Surveys

Coho salmon spawner surveys were conducted December 2000 through March 2000 in the Lagunitas, Olema, Pine Gulch and Redwood Creek watersheds. Occasional steelhead adults were observed and counted incidental to coho observations. Surveys on Redwood Creek occurred approximately every 2 weeks during favorable weather and stream flow

conditions, with less frequent surveys on other creeks and during less favorable conditions. Surveys were conducted by trained volunteers and CSRP staff. Survey protocol involved walking upstream along creek margins and banks where possible and looking for carcasses or live fish. Typically, teams of 2 people surveyed reaches of 2-4 km in length. Live fish were identified to species and assigned to approximate size classes. Salmonid carcasses were handled to collect length, weight, and sex. When possible, scales and tissues from the operculum were collected for future genetic work. Take during spawner surveys consisted of occasional disturbance of adult fish. Particular care was taken not to disturb redds or actively spawning adults.

Smolt Trapping

Smolts and other juvenile salmonids were sampled from March-June 2001 on the John West fork (formerly called Blueline Creek) of Olema Creek using a downstream migrant pipe trap. The pipe traps used by the CSRP are designed to minimize impingement under high flows and in-trap predation of fry by larger juvenile salmonids and other fish. The traps operate by impounding water behind a weir constructed of 13 mm square-mesh metal screen, fence posts, rocks, and sand bags that span the entire width of the stream. Flow is directed into a series of 6.2 m long, 20 cm diameter PVC pipes. To decrease water velocity, the pipe empties onto a slanted, perforated metal ramp. The ramp is connected to a 125 x 74 x 50 cm live box constructed of plywood and 3 mm metal mesh screen. The live box is situated in a shaded pool, and contains rocks, vegetation, and a 13 mm mesh divider screen to provide cover and refugia for fry. In addition, the weir contains a notch that allows any late spawning adult steelhead to migrate upstream unimpeded.

The trap was operated 24 hours per day, flow permitting, and checked once daily. We were primarily interested in salmonid smolts, parr, and fry but the numbers and lengths of all captured fish were recorded. Stream temperature and water level were recorded when the trap was checked. All 1+ salmonids were anesthetized with carbon dioxide, fork length measured to the nearest mm, and weighed to the nearest 0.1 g. Anesthetized fish were allowed to recover fully in an aerated "recovery bucket" before release. Fry were identified to species, counted, and a subsample measured.

Sources of mortality included fish becoming stranded on the ramps, predation of fry by larger fish, and general stress and trauma to fry during trapping and handling. The first source was minimized by carefully checking the traps daily and making adjustments as needed to ensure adequate flows across the ramp to prevent stranding. Fry mortality was minimized by providing adequate refugia in the trap box, and by netting, handling, counting, and releasing them as expeditiously as possible. Fry were also kept in separate aerated holding buckets before and after handling to avoid predation by larger fish Despite the divider screens in each live box, many of the fry remained in the unscreened areas and were subject to predation. Some of the 1+ steelhead captured had distended bellies or regurgitated fry during handling. Since it was not possible to quantify fry mortality due to predation, it is not included in the take figures. Protocols called for suspending trap operations if either smolt or fry mortality exceeded five percent during a one week period. Overall juvenile mortality levels were 0.9% for steelhead and 0.3% for coho. All mortalities were fry except two steelhead parr.

Large numbers of coho fry were captured during spring 2001 pipe trapping activities, accounting for over 92% of the total fish trapped. When it became apparent that the allowable take for juvenile coho might be exceeded, the CSRP contacted NMFS to inform them of the situation. Several options were discussed, including modifying the trap to allow fry to pass through uncaptured, or ceasing trapping activities altogether. It was decided that the value of the information collected (an accurate census of the relative productivity of the creek) merited continued trapping. Altogether 6500 coho fry were trapped on the John West fork, compared to 14 in 2000, none in 1999, and 654 in 1998. This represents a tenfold increase in productivity from the previous run of this year class in 1998, probably due in large part to culvert modifications in 1999 which facilited access to over one kilometer of upstream spawning habitat.

Index Site Electrofishing

During the summer and fall of 2000, the CSRP conducted electrofishing surveys of eight index sites on the Olema Creek mainstem, 3 sites each on the John West Fork and Quarry Gulch (Olema tributaries), and eight sites on the Pine Gulch mainstem. The index sites were established in 1999 (Olema mainstem) and 2000 (all others) for long-term annual monitoring of juvenile salmonids. Each site consists of a 30-100 meter reach, containing from three to 10 contiguous habitat units. After 2000 it was decided to sample the John West Fork and Quarry Gulch sites earlier in the summer, since they are subject to intermittent flows, so in 2001 they were surveyed in June. Two index sites were also established on Redwood Creek in October 2000 and sampled using a combination of snorkeling and electrofishing. The Redwood Creek sites are intended to complement longterm juvenile salmonid monitoring sites established and surveyed by Dr. Jerry Smith of San Jose State University. Index sites were established in the Easkoot Creek watershed (Bolinas Lagoon tributary) to assess effects of instream restoration activities and water appropriation by the local water district on fishery resources.

All electrofishing activities utilized standard multiple pass depletion techniques. Seine nets were used to isolate each habitat unit being sampled. Attempts were made to minimize injuries during electrofishing activities by using new generation electrofishing equipment, accepted sampling and fish handling protocols, and providing adequate training to personnel. CSRP biologists used a state of the art programmable waveform backpack electrofisher (Smith-Root Model 12 B-POW) with an 11-inch ring anode. Fish were captured using either pulsed or straight direct current with the minimum voltage, pulse width, and frequency necessary for immobilization. Under most conditions, a setting of P16 (unpulsed DC) at 200 volts was found to be the most effective while preventing injury to the fish. A log was kept of all settings, pertinent environmental conditions, and fish response (appendix A).

Captured fish were sedated using carbon dioxide, identified to species and age class, measured, and weighed. Some individuals were handled to collect fin clips or scale samples for age and/or genetic analysis. Fish were kept in aerated holding buckets before and after handling, and allowed to recover fully before being released.

Potential sources of mortality or injury included general stress during capture and handling, respiratory failure, and hemorrhaging or spinal injuries associated with shocking. If a pattern of mortality or injury was recognized, techniques were altered to reduce impacts. As during smolt trapping activities, the smaller salmonids were kept in separate buckets from sculpin and other fish to prevent predation. Total mortality rates associated with electrofishing surveys for the reporting period were 0.3% for coho and 0.6% for steelhead.

Intermittent Pool Electrofishing

In addition to the index sites, several of the intermittent tributaries of Olema Creek were electrofished during spring 2001 as they were drying up to determine numbers of potentially stranded fish. Intermittent, isolated pools on the John West Fork yielded nearly 2000 additional coho fry (in addition to those captured in the pipe trap). As of October 2001 NMFS has modified the CSRP's permit to allow for moving stranded salmonid juveniles to stream reaches not subject to dessication.

Snorkel Surveys

The two index sites established by the CSRP on Redwood Creek in October 2000 were sampled with a combination of snorkeling and electrofishing . For the snorkel surveys, a single diver typically made one or more snorkel passes in each selected habitat unit to count the different salmonid species and size or age classes. Standard dive lights were used to search undercut banks and woody debris for fish. Occasional second passes were made in large or complex pools. The potential for injury or mortality from snorkel observations is minimal. No handling of fish occurs from snorkel observations, and only minimal disturbance/ harassment occurs. A single event snorkel survey was conducted in June 2001 on Laurel Creek, a tributary to Easkoot Creek, which drains to Bolinas Lagoon. The snorkel survey identified dead juvenile steelhead that occurred as a result of creek water appropriation activities.

Other Sampling Activities

In June 2001, biologists from NMFS electrofished parts of Olema Creek and the John West Fork to collect steelhead tissue as part of a genetic study of steelhead from three California ESU's. Juvenile steelhead were captured, sampled, and released. Juvenile coho were also captured but were released without further processing. Since these sampling activities were conducted under a separate permit, take numbers are not included in this report.

DATA AND SAMPLE PROCESSING

All field data is entered into a Microsoft Access database, and double checked for accuracy and quality control before and after data entry. Take estimates are derived by querying the database for different species, age, and take categories. The estimates are therefore highly accurate, and in most cases represent exact counts of the actual numbers of fish taken in each category. All tissue and scale samples are air dried, catalogued, and stored in a dessicator. Tissue samples are sent to Dr. Carlos Garza at the NMFS Santa Cruz lab for genetic analysis. Scales will be mounted and read in-house for age analysis.

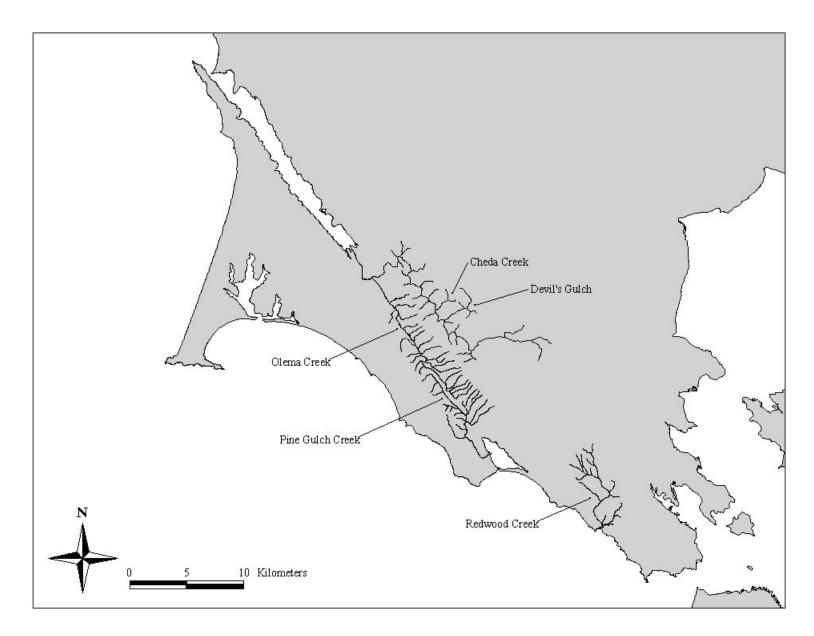


Figure1. Coho and Steelhead Restoration Project watersheds. Marin County, CA.

Watershed	County	Stream	Activities
Lagunitas	Marin	Cheda Creek	Spawner Survey, Index Site Electrofishing Survey
		Olema Creek (mainstem)	Spawner Surveys, Index Site Electrofishing Survey
Lagunitas - Olema		John West Fork (aka Blueline Creek)	Spawner Surveys, Smolt Trapping, Index Site Electrofishing Surveys, Intermittent Pool Electrofishing Surveys
	Marin	Quarry Gulch	Spawner Survey, Index Site Electrofishing Surveys, Intermittent Pool Electrofishing Survey
		Misc. Intermittent Tribs	Spawner Survey, Intermittent Pool Electrofishing Survey
Redwood	Marin	Redwood Creek (mainstem)	Spawner Surveys, Index Site Snorkel/Electrofishing Survey
Kedwood	Iviaim	Fern Creek	Spawner Surveys
Pine Gulch	Marin	Pine Gulch (mainstem)	Spawner Surveys, Index Site Electrofishing Survey
Bolinas Lagoon	Marin	Easkoot Creek	Index Site Snorkel/Electrofishing Survey

Table 1. Streams and sampling activities conducted by the National Park Service CSRP during July 2000-June 2001.

Table 2. Annual allowable versus actual take of ESA listed central California coast ESU coho salmon by age class 7/00-6/01. Permit #1046

		Age Class								
Type of Take	Juve	enile	Ad	ult	Carcass					
Type of Take	Allowable Actual		Allowable	Actual	Allowable	Actual				
Observe/Harass	44,400	47	1,800	273						
Capture/Handle	5,250	9,657*			200	114				
Capture/Handle/Mark	2,625	3								
Indirect Mortality	236	25								

*see discussion p. 3

 Table 3.
 National Park Service CSRP annual take of coho salmon and steelhead trout by stream, sampling activity, and age class on the Lagunitas / Olema Creek Watershed; 7/00-6/01.

			Observe/harass					Captur	e/handle	e	Capture/l	nandle/mark	I	ndirect	mortalit	у
			Co	oho	Stee	lhead	Co	oho	Stee	elhead	Coho	Steelhead	Co	oho	Stee	lhead
Date	Activity	Location	adult	juve	adult	juve	adult	juve	adult	juve	juve	juve	adult	juve	adult	juve
7/20/00-	Index Site															
8/16/00	Electrofishing	Olema mainstem						359		2009				1		18
8/16/00-	Index Site	John West Fork (Olema)														
8/23/00	Electrofishing	(aka Blueline Creek)						25		340				0		0
8/23/00-	Index Site															
8/24/00	Electrofishing	Quarry Gulch (Olema)						5		36				0		0
9/12/00-	Index Site															
9/19/00	Electrofishing	Cheda Creek (Lagunitas)						4		362				0		0
	<u> </u>															
12/21/00-	Spawner Surveys															
2/8/01	(4)	Olema mainstem	127		15		67									
1/15/01-	Spawner Surveys	John West Fork (Olema)	(0)													
2/26/01	(4)	(aka Blueline Creek)	68		3		32									
1/17/01	Spawner Survey	Misc. Olema Tribs	0		0		0									
1/30/01	Spawner Survey	Cheda Creek (Lagunitas)	0		0		0									
3/14/01-		John West Fork (Olema)														
6/6/01	Smolt Trapping	(aka Blueline Creek)						6503		531	3	23		17		5
4/3/01-	Intermittent Pool	Olema Creek intermittent														
4/3/01- 5/5/01	Electrofishing	tributaries						1		168				0		0
4/17/01-	Intermittent Pool	John West Fork (Olema)														
5/21/01	Electrofishing	(aka Blueline Creek)						1968		199				3		3
5/29/01-	Index Site	John West Fork (Olema)														
6/7/01	Electrofishing	(aka Blueline Creek)						763		292				4		3
	Index Site															
6/20/01	Electrofishing	Quarry Gulch (Olema)						2		12				0		1
		Totals	195	0	18	0	*99	9630	0	3949	3	23	0	25	0	40



			Ob	Ca	apture	e/handle	Capture/	handle/mark	Indirect mortality				
			Coho Steelhead		Coho Steelhead		Coho	Steelhead	Coho		Steelhead		
Date	Activity	Location	adult juv	e adult juve	adult j	uve	adult juve	juve	juve	adult	juve	adult	juve
9/6/00-	Index Site												
10/12/00	Electrofishing	Pine Gulch mainstem				0	605				0		1
1/18/01-	Spawner Surveys												
2/16/01	(3)	Pine Gulch mainstem	0	1	*1		0						
		Totals	0	0 1 0	*1	0	0 605	0	0	0	0	0	1

Table 4. National Park Service CSRP annual take of coho salmon and steelhead trout by strream, sampling activity, and age class on the Pine Gulch Watershed; 7/00-6/01.

*carcass

Table 5. National Park Service CSRP annual take of steelhead trout by stream, sampling activity, and age class within Bolinas Lagoon Watershed; 7/00-6/01.

			Observe/harass			Captu	re/handle	Capture/	Capture/handle/mark		Indirect mortality	
			Coho	St	eelhead	Coho	Steelhea	d Coho	Steelhead	Coho	Steel	lhead
Date	Activity	Location	adult ju	ve adu	t juve	adult juve	adult juv	e juve	juve	adult juv	e adult	juve
8/3-4/00	Index Site Electrofishing	Easkoot/Laurel Creeks					2	92				0
6/1/01	Index Site Snorkel	Laurel Creek			34							0
		Totals	0	0	0 34	0 0	0 2	92 0	0	0	0 0	0

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			Observe/harass			Capture/handle				Capture/handle/mark		Indirect mortality			у		
			Co	Coho		oho Steelhead		Coho		Steelhead		Coho	Steelhead	Co	Coho		lhead
Date	Activity	Location	adult	juve	adult	juve	adult	juve	adult juv	/e	juve	juve	adult	juve	adult	juve	
10/18/00- 10/19/00	Index SiteSnorkel/ Electrofishing	Redwood mainstem		47		265		27	2	272				0		3	
	0																
12/21/00- 3/8/01	Spawner Surveys (5)	Redwood mainstem	78		18		14		1								
1/13/01	Spawner Survey	Fern Creek	0		0		0										
		Totals	78	47	18	265	*14	27	*1 2	272	0	0	0	0	0	3	

Table 6. National Park Service CSRP annual take of coho salmon and steelhead trout by strream, sampling activity, and age class on the Redwood Creek Watershed; 7/00-6/01.

*carcasses

Appendix A

Coho and Steelhead Restoration Project Annual Section 10 Permit Report

July 1, 2000– June 30, 2001

Electrofishing Log

Golden Gate National Recreation Area

CSRP Electrofishing Log 1 July 2000 - 30 June 2001

		1	G •4 1					D (00/16/00
Stream B			Site culv				Index Site # 2	Date 08/16/00
Descriptio	n Stream			•		-	Candratinita (nSlam)	
Unit # 1 Comments	Boulders		Type LS		Temp °C		Conductivity (µS/cm)	
comments	Boulders	ure pure or ou		Storation F	, iojeet (uitiiiei)		
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	273	P16	200	8	10	2	CO 0	
Pass 2	334	P16	200	1	1	1	SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream B	lueline C	Creek	Site culv	vert			Index Site # 2	Date 08/16/00
Descriptio	n Strear	n km 0.2, p	ools belo	w Hwy I	l culvert			
Unit # 2		Unit	Type PL	Р	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	72	P16	200	0	5	1	CO 0	
Pass 2	72	P16	200	0	2	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream B	ualina (rook	Site culv	vort			Index Site # 2	Date 08/16/00
Descriptio					l culvert		muck Site # 2	Date 08/10/00
Unit # 3	n Stivu	-	Type PL	-	Temp °C	7	Conductivity (µS/cm)	
Comments			JT -		ľ			
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	140	P16	200	4	55	0	CO 0	
Pass 2	140	P16	200	0	9	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream B	ualina (rook	Site culv	vort			Index Site # 2	Date 08/16/00
Descriptio					l culvert		muck Site # 2	Date 08/10/00
Unit # 4	n Suca		Type PL		Temp °C	7	Conductivity (µS/cm)	
Comments		emt	ijpe i L	1	Temp		Conductivity (μ5/cm)	
		G		<i>c</i>		011.1		
D 4	Time 155	Setting	Volts 200		SH YOY	SH 1+	Total Mortality	
Pass 1 Pass 2	130	P16 P16	200	3	37	3	CO 0	
Pass 2 Pass 3	150	110	200	0		0	SH YOY 0	
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Bl	ueline C	reek	Site low	er			Index Site # 1	Date 08/23/00
Description	n immed	diately abo	ve mouth					
Unit # 1		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	457	P16	200	3	6	3	CO 0	
Pass 2	393	P16	200	0	0	0		
Pass 3							SH YOY 0	
Pass 4							SH 1+ 0	
Stream Bl	ueline C	reek	Site low	er			Index Site # 1	Date 08/23/00
Description	n immed	diately abo	ve mouth					
Unit # 3		Unit	Type LS	R	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	116	P16	200	0	6	0	CO 0	
Pass 2	116	P16	200	0	1	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Bl Description			Site low	er			Index Site # 1	Date 08/23/00
Descriptio		diately abo	ve mouth		Temn °(Date 08/23/00
		diately abo			Temp °C	C	Index Site # 1 Conductivity (μS/cm)	Date 08/23/00
Description Unit # 5	n immed	diately abo Unit	ve mouth Type LS	R			Conductivity (μS/cm)	Date 08/23/00
Description Unit # 5 Comments	n immeo	diately abo Unit Setting	ve mouth Type LS Volts	R CO	SH YOY	SH 1+	Conductivity (μS/cm) Total Mortality	Date 08/23/00
Description Unit # 5 Comments Pass 1	n immed	diately abo Unit	ve mouth Type LS	R			Conductivity (µS/cm) Total Mortality CO 0	Date 08/23/00
Description Unit # 5 Comments Pass 1 Pass 2	n immed Time 559	diately abo Unit Setting	ve mouth Type LS Volts 200	R CO 6	SH YOY	SH 1 +	Conductivity (μS/cm) Total Mortality	Date 08/23/00
Description Unit # 5 Comments Pass 1	n immed Time 559	diately abo Unit Setting	ve mouth Type LS Volts 200	R CO 6	SH YOY	SH 1 +	Conductivity (µS/cm) Total Mortality CO 0	Date 08/23/00
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4	n immed Time 559 475	diately abo Unit Setting P16 P16 0 0	ve mouth Type LS Volts 200 200	R 6 0	SH YOY	SH 1 +	Conductivity (μS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0	
Description Unit # 5 Comments Pass 1 [Pass 2] Pass 3] Pass 4]	n immed Time 559 475 ueline C	diately abo Unit Setting P16 P16 P16	Volts Volts 200 200 Site upp	R 6 0 er	SH YOY	SH 1 +	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0	Date 08/23/00
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description	n immed Time 559 475 ueline C	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a	Volts 200 200 Site upp bove culv	R 6 0 er vert	SH YOY 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 3	
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description Unit # 1	n immed Time 559 475 ueline C	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a	Volts Volts 200 200 Site upp	R 6 0 er vert	SH YOY	SH 1+ 1 0	Conductivity (μS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0	
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description	n immed Time 559 475 ueline C	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a	Volts 200 200 Site upp bove culv	R 6 0 er vert	SH YOY 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 3	
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description Unit # 1 Comments	n immed Time 559 475 ueline C n Stream	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a Unit Setting	Volts 200 200 Site upp bove culv	R CO 6 0 er vert R CO	SH YOY 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 3	
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description Unit # 1 Comments	n immed Time 559 475 475 ueline C n Stream Time 595	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a Unit Setting P16	Volts 200	R CO 6 0 er vert R CO 0	SH YOY 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 3 Conductivity (µS/cm)	
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description Unit # 1 Comments Pass 1 Pass 2	n immed Time 559 475 ueline C n Stream	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a Unit Setting	ve mouth Type LS Volts 200 200 Site upp bove culv Type LS Volts Volts	R CO 6 0 er vert R CO	SH YOY 8 3	SH 1+ 1 0 SH 1+ SH 1+	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 3 Conductivity (µS/cm) Total Mortality	
Description Unit # 5 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Bl Description Unit # 1 Comments	n immed Time 559 475 475 ueline C n Stream Time 595	diately abo Unit Setting P16 P16 P16 Creek n km 0.3, a Unit Setting P16	Volts 200	R CO 6 0 er vert R CO 0	SH YOY 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH YOY 0 SH 1+ 0 Index Site # 3 Conductivity (µS/cm) Total Mortality CO 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Bl			Site upp				Index Site # 3	Date 08/23/00
Descriptio	n Strean							
Unit # 3		Unit	Туре МС	CP	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	10	P16	200	0	2	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Bl			Site upp				Index Site # 3	Date 08/23/00
Description	n Stream							
Unit # 5		Unit '	Type LS	R	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	20	P16	200	0	1	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Bl	ueline C	reek	Site upp	er			Index Site # 3	Date 08/23/00
Description	n Strean							
Unit # 6		Unit '	Type LS	R	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	326	P16	200	0	72	0	CO 0	
Pass 2	317	P16	200	0	12	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Bl	ueline C	reek	Site upp	er			Index Site # 3	Date 08/23/00
Description	n Strean	n km 0.3, a	bove culv	vert				
Unit # 6.5		Unit '	Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	34	P16	200	0	4	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	

NATIONAL SERVICE	Point R	Reyes N CSI			ore ing Log		Golden Gate National Rec y 2000 - 30 June 2001	reation Area
Stream B			Site inte		section		Index Site #	Date 04/17/01
Descriptio	n 3 isola	-		-				
Unit #			Type poo		Temp °		Conductivity (µS/cm)	
Comments					ne numbers of av-lots of frv	potentially	stranded fish; 2nd pool above xing-lots of o	co & sh fry; 3d pool
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	708	p16	100/200	177	12	0	CO 0	
Pass 2								
Pass 3								
Pass 4							SH 1+ 0	
Stream B	lueline C	reek	Site inte	rmittent	section		Index Site #	Date 04/25/01
Descriptio	n 2d poo	ol above ca	attle xing					
Unit #		Unit	Type poo	ol	Temp °C	С	Conductivity (µS/cm)	
Comments	sampled in	ntermittent p	art of creek	to determin	ne numbers of	potentially	stranded fish	
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	272	p16	200	2	16	0	CO 0	
Pass 2								
Pass 3								
Pass 4							SH 1+ 0	
Stream B Descriptio			Site inte	rmittent	section		Index Site #	Date 04/25/01
Unit #	P	1	Type poo	ol	Temp °(C	Conductivity (µS/cm)	
Comments	sampled in		• •		ne numbers of			
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	1107	p16	200	587	6	8	CO 0	
Pass 2								
Pass 3							SH YOY 0	
Pass 4							SH 1+ 0	
Stream B	lueline C	reek	Site inte	rmittent	section		Index Site #	Date 05/02/01
Descriptio	n poison	oak pool	and upper	algae po	ool			
Unit #			Type poo		Temp °C		Conductivity (µS/cm) 118.	4/157.0
Comments	lower alga	ae pool dry a	lready; only	shocked uj	oper algae poo	olpoison o	ak pool just scooped fish out	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	522	p16	100	465	26	0	CO 2	
Pass 2	609	p16	200	238	18	0	SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4							511 1 0	

NATIONAL PARK Service	Point F	Reyes Na CSI			ore ing Log		Golden Gate National Recr y 2000 - 30 June 2001	eation Area
Stream B	lueline Ci	reek	Site inte	rmittent	section		Index Site #	Date 05/02/01
Descriptio	n isolate	d pool @	1st meand	ler above	cattle xing			
Unit #		Unit	Type po	ol	Temp °C	C 13.2	Conductivity (µS/cm) 118.5	5/153.5
Comments	sampled in	ntermittent p	art of creek	to determin	ne numbers of	potentially	stranded fish	
		at						
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	405	p16	200	72	56	0	CO 0	
Pass 2							SH YOY 1	
Pass 3						-	SH 1 + 0	
Pass 4								
Stream B	lueline C	reek	Site inte	rmittent	section		Index Site #	Date 05/04/01
Descriptio	n 1st poo	ol below c	attle xing					
Unit #		Unit	Type po	ol	Temp °C	C 14.7	Conductivity (µS/cm) 124.9	9/156.2
Comments	sampled in	ntermittent p	art of creek	to determine	ne numbers of	potentially	stranded fish	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	332	p16	200	28	10	4	CO 0	
Pass 2								
Pass 3							SH YOY 0	
Pass 4							SH 1 + 0	
	L		L	I I				
Stream B			Site inte				Index Site #	Date 05/05/01
-	n isolate	-			ison oak po			
Unit #			Type po		Temp °C		Conductivity (µS/cm) 143/	
Comments	sampled in	ntermittent p	art of creek	to determine	ne numbers of	potentially	stranded fish; pool almost gone, prob dry up	p this weekend
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	608	p16	200	139	3	1	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream B			Site inte	rmittent	section		Index Site #	Date 05/05/01
Descriptio	n 1st poo		-					
Unit #			Type po		Temp °C		Conductivity (µS/cm) 126.4	
Comments	sampled in survev	ntermittent p	art of creek	to determin	ne numbers of	potentially	stranded fish; still a few fish left in this isol	ated pool after 5/3
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	267	p16	200	10	10	0	CO 0	
Pass 2							SH YOY 1	
Pass 3								
Pass 4							SH 1 + 0	

NATIONAL SERVICE	Point F	Reyes N CSI			ore ing Log		olden Gate National Rec y 2000 - 30 June 2001	reation Area
Stream B	ueline C	reek	Site inte	rmittent	section		Index Site #	Date 05/21/01
Descriptio	n 1st po	ol above c	urrent dry	section				
Unit #			Type po		Temp °C		Conductivity (µS/cm)	
Comments	co total in	cl. 2 smolts	trapped in p	ool at top o	of dry section-	-pool later w	vent dry	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	373	p16	200	250	13	16	CO 1	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream B	ueline C	reek	Site culv	vert			Index Site # 2	Date 05/29/01
Descriptio	n Stream	n km 0.2, p	ools belo	w Hwy 1	culvert			
Unit # 1		Unit	Type LS	Во	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	511	P16	200	48	2	1	CO 0	
Pass 2	389	P16	200	6	0	0		
Pass 3							SH YOY 0	
Pass 4							SH 1 + 0	
Stream B	ueline C	reek	Site culv	vert			Index Site # 2	Date 05/29/01
Descriptio					culvert		muck one # 2	Date 03/29/01
Unit # 2	n Stream		Type LG		Temp °(n	Conductivity (µS/cm)	
Comments		emt	Type Le		Temp	0		
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	130	P16	200	1	4	0	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1+ 0	
Pass 4								
Stream Bl	ueline C	reek	Site culv	vert			Index Site # 2	Date 05/29/01
Descriptio	n Stream	n km 0.2, p	ools belo	w Hwy 1	culvert			
Unit # 3		Unit	Type PL	P	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	359	P16	200	17	5	2	CO 0	
Pass 2	255	P16	200	2	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream B	lueline C	reek	Site culv	vert			Index Site # 2	Date 05/29/01
Descriptio	n Stream	n km 0.2, p	ools belo	w Hwy 1	culvert			
Unit # 5		Unit '	Type DP	L	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	464	P16	200	35	9	12	CO 0	
Pass 2	359	P16	200	6	3	1	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream B			Site culv				Index Site # 2	Date 05/29/01
Descriptio	n Stream			•				
Unit # 6	[Unit '	Type DP	L	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	330	P16	200	39	13	8	CO 0	
Pass 2	471	P16	200	16	15	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream B	lueline C	reek	Site upp	er			Index Site # 3	Date 06/05/01
Descriptio	n Stream	n km 0.3, a	bove culv	rert				
Unit # 1		Unit '	Type LS	R	Temp °C	0	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	1001	P16	200	118	34	28	CO 1	
Pass 2	1036	P16	200	20	11	3	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 2	
Stream B	lueline C	reek	Site upp	er			Index Site # 3	Date 06/05/01
Descriptio								
Unit # 2			Type LG		Temp °C	2	Conductivity (µS/cm)	
Comments	This unit	was DRY	JT		- 1			
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1		,		0	0	0	-	
rass 1	0	P16	200	0		v	CO 0	
Pass 1 Pass 2	0	P16 P16	200	0				
							CO 0 SH YOY 0 SH 1+ 0	

Golden Gate National Recreation Area

oint Reyes	National	Seashore
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CSRP Electrofishing Log

Stream Bl	ueline C	reek	Site upp	er			Index Site # 3	Date 06/05/01
Description	n Stream	n km 0.3, a	bove culv	vert				
Unit # 3		Unit	Туре МО	СР	Temp °C	C 13.1	Conductivity (µS/cm) 133	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	333	P16	200	48	27	0		
Pass 2	263	P16	200	3	4	0	CO 0	
Pass 3	205	110	200				SH YOY 0	
ļ							SH 1 + 0	
Pass 4								
Stream Bl	ueline C	reek	Site upp	er			Index Site # 3	Date 06/05/01
Description								
Unit # 5	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		Type LS		Temp °C	7	Conductivity (µS/cm)	
Comments		0	-jpv 25		Temp			
-	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	80	P16	200	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Bl			Site upp				Index Site # 3	Date 06/05/01
Description	n Stream							
Unit # 6	[Unit	Type LS	R	Temp °C	2	Conductivity (µS/cm)	l.
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	797	P16	200	177	52	5	CO 2	
Pass 2	1001	P16	200	58	21	0	SH YOY 1	
Pass 3								
Pass 4							SH 1 + 0	
Stream Bl	ueline C	reek	Site upp	er			Index Site # 3	Date 06/05/01
Description	n Stream	n km 0.3, a	bove culv	/ert				
Unit # 7		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	342	P16	200	67	23	0	CO 0	
Pass 2	265	P16	200	2	1	0		
Pass 3								
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Bl			Site lowe	er			Index Site # 1	Date 06/07/01
Description	n immed	•						
Unit # 1		Unit	Type LSI	R	Temp °C	C 13.9	Conductivity (µS/cm) 157	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	560	P16	200	29	1	2	CO 0	
Pass 2	551	P16	200	4	1	0	SH YOY 0	
Pass 3					Ì			
Pass 4							SH 1 + 0	
Stream Bl			Site lowe	er			Index Site # 1	Date 06/07/01
Description	n mmee	•		D	T 00	r		
Unit # 3		Unit	Type LSI	K	Temp °C	ر.	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	340	P16	200	13	1	0	CO 0	
Pass 2	343	P16	200	9	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Bl			Site lowe	er			Index Site # 1	Date 06/07/01
Description	n immed	•						
Unit # 5		Unit	Type LSI	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	691	P16	200	38	2			
Pass 2					2	0	CO 1	
	758	P16	200	7	1	0		
Pass 3	758	P16	200				SH YOY 0	
Pass 3 Pass 4	758	P16	200					
Pass 4				7			SH YOY 0 SH 1+ 0	Date 04/04/01
Pass 4	oundary	Gulch	Site lowe	7	d pools		SH YOY 0	Date 04/04/01
Pass 4	oundary	Gulch culvert po	Site lowe	7 er isolate	d pools mainstem	0	SH YOY 0 SH 1+ 0 Index Site #	
Pass 4	oundary n Hwy 1	Gulch culvert po Unit	Site lowe	7 er isolate tream to	d pools mainstem	0 	SH YOY 0 SH 1+ 0	
Pass 4 Stream Bo Description Unit #	oundary (n Hwy 1 Olema Ci	Gulch culvert po Unit reek tributary	Site lowe ool downst Type poor -sampled int	7 er isolate tream to bl ermittent p	ed pools mainstem Temp °C	0 C 10.9 O determine nu	SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm) 108.9 umbers of potentially stranded fish	
Pass 4 Stream Bo Description Unit # Comments	oundary n Hwy 1	Gulch culvert po Unit	Site lowe	7 er isolate tream to	d pools mainstem	0 	SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm) 108.9 Imbers of potentially stranded fish Total Mortality	
Pass 4 Stream Bo Description Unit #	oundary o n Hwy 1 Olema Cr Time	Gulch culvert po Unit eek tributary Setting	Site lowe ool downst Type poor -sampled int Volts	7 er isolate tream to bl ermittent p CO	ed pools mainstem Temp °C part of creek to SH YOY	0 C 10.9 o determine nu SH 1+	SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm) 108.9 Imbers of potentially stranded fish Total Mortality CO 0	
Pass 4 Stream Bo Description Unit # Comments Pass 1	oundary o n Hwy 1 Olema Cr Time	Gulch culvert po Unit eek tributary Setting	Site lowe ool downst Type poor -sampled int Volts	7 er isolate tream to bl ermittent p CO	ed pools mainstem Temp °C part of creek to SH YOY	0 C 10.9 o determine nu SH 1+	SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm) 108.9 Imbers of potentially stranded fish Total Mortality	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Cl	neda Cre	ek	Site lowe	er			Index Site # 1	Date 09/12/00
Description	n Stream	n km 0.5, n	near stop s	ign				
Unit # 1		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	395	P16	200	2	40	3	-	
Pass 2	488	P16	200	1	22	2	CO 0	
Pass 3	400	110	200	1			SH YOY 0	
Pass 4							SH 1 + 0	
r ass 4								
Stream Cl	neda Cre	ek	Site lowe	er			Index Site # 1	Date 09/12/00
Description	n Stream	n km 0.5, n	near stop s	ign				
Unit # 2		Unit	Type GL	D	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	452	P16	200	0	50	0	CO 0	
Pass 2	418	P16	200	0	17	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Ch Description			Site lowe				Index Site # 1	Date 09/12/00
		,	iour stop s	0				
Unit # 3			Type LG		Temp °C	2	Conductivity (µS/cm)	
Unit # 3 Comments	No Micro		Type LG		Temp °C	2	Conductivity (µS/cm)	
	No Micro Time	Unit	Type LG		Temp °C	C SH 1+	Conductivity (μS/cm) Total Mortality	
		Unit ofish numbers	Type LG available	R				
Comments	Time	Unit ofish numbers Setting	Type LG available Volts	R CO	SH YOY	SH 1+	Total Mortality CO 0	
Comments Pass 1	Time	Unit ofish numbers Setting	Type LG available Volts	R CO	SH YOY	SH 1+	Total MortalityCO0SH YOY0	
Comments Pass 1 Pass 2	Time	Unit ofish numbers Setting	Type LG available Volts	R CO	SH YOY	SH 1+	Total Mortality CO 0	
Comments Pass 1 Pass 2 Pass 3 Pass 4	Time 341	Unit fish numbers	Type LG savailable Volts 200	R CO 0	SH YOY	SH 1+	Total MortalityCO0SH YOY0SH 1+0	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch	Time 341	Unit fish numbers Setting P16 D10 C10 P16 P16 P16 P16 P16 P16 P16 P16	Type LG available Volts 200 Site lowe	R CO 0	SH YOY	SH 1+	Total Mortality CO 0 SH YOY 0	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description	Time 341	Unit offish numbers Setting P16 Control Contro	Type LG savailable Volts 200 Site lowe near stop s	R CO 0 CO	SH YOY 6	SH 1+ 0	Total Mortality CO 0 SH YOY 0 0 SH 1+ 0 0 Index Site # 1 1	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description Unit # 4	Time 341	Unit offish numbers Setting P16 Control Contro	Type LG available Volts 200 Site lowe	R CO 0 CO	SH YOY	SH 1+ 0	Total MortalityCO0SH YOY0SH 1+0	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description	Time 341	Unit offish numbers Setting P16 Control Contro	Type LG savailable Volts 200 Site lowe near stop s	R CO 0 CO	SH YOY 6	SH 1+ 0	Total Mortality CO 0 SH YOY 0 0 SH 1+ 0 0 Index Site # 1 1	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description Unit # 4 Comments	Time 341 neda Cre n Stream Time	Unit offish numbers Setting P16 P16 ek n km 0.5, m Unit Setting	Type LG savailable Volts 200 Site lowe near stop s Type MC	R CO 0 cr ign CP CO	SH YOY 6 Composition Temp °C SH YOY	SH 1+ 0 	Total Mortality CO 0 SH YOY 0 0 SH 1+ 0 0 Index Site # 1 1	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description Unit # 4 Comments Pass 1	Time 341 neda Cre n Stream Time 319	Unit offish numbers Setting P16 ek n km 0.5, m Unit Setting P16	Type LG savailable Volts 200 Site lowe hear stop s Type MC Volts 200	R CO 0 CO CO 0	SH YOY 6	SH 1+ 0 C SH 1+ 1	Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 1 Conductivity (µS/cm)	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description Unit # 4 Comments Pass 1 Pass 2	Time 341 neda Cre n Stream Time	Unit offish numbers Setting P16 P16 ek n km 0.5, m Unit Setting	Type LG savailable Volts 200 Site lowe near stop s Type MC	R CO 0 cr ign CP CO	SH YOY 6 Composition Temp °C SH YOY	SH 1+ 0 	Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 1 1 Conductivity (μS/cm) Total Mortality	Date 09/12/00
Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ch Description Unit # 4 Comments Pass 1	Time 341 neda Cre n Stream Time 319	Unit offish numbers Setting P16 ek n km 0.5, m Unit Setting P16	Type LG savailable Volts 200 Site lowe hear stop s Type MC Volts 200	R CO 0 CO CO 0	SH YOY 6	SH 1+ 0 C SH 1+ 1	Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 1 Conductivity (µS/cm) Total Mortality CO 0	Date 09/12/00

Golden Gate National Recreation Area

CSRP Electrofishing Log

1 July 2000 - 30 June 2001 Stream Cheda Creek Site middle Index Site # 2 Date 09/13/00 **Description** Stream km 0.9, at fish passage project site **Unit #** 1 Unit Type LSR Temp °C Conductivity (µS/cm) units 1-5 are below former headcut Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 319 P16 Pass 1 200 0 39 1 0 СО 0 3 0 Pass 2 0 SH YOY Pass 3 0 SH 1+ Pass 4 Stream Cheda Creek Site middle Index Site # 2 Date 09/13/00 Description Stream km 0.9, at fish passage project site **Unit #** 2 Unit Type LGR Conductivity (µS/cm) Temp °C Comments units 1-5 are below former headcut Time СО SH 1+ **Total Mortality** Setting Volts SH YOY 301 P16 200 Pass 1 0 2 0 СО 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Cheda Creek Index Site # 2 Date 09/13/00 Site middle Description Stream km 0.9, at fish passage project site Unit # 3 Unit Type Temp °C Conductivity (µS/cm) units 1-5 are below former headcyt Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 641 P16 200 Pass 1 1 26 8 0 СО 449 P16 200 0 3 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Cheda Creek Site middle Index Site # 2 Date 09/13/00 Description Stream km 0.9, at fish passage project site Unit # 4 Unit Type LGR Temp °C Conductivity (µS/cm) units 1-5 are below former headcut Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** Pass 1 300 P16 200 0 0 0 СО 0 Pass 2 0 SH YOY Pass 3 0 SH 1+ Pass 4

Golden Gate National Recreation Area

CSRP Electrofishing Log 1 July 2000 - 30 June 2001

Stream C	heda Cre	ek	Site mid	dle			Index Site # 2	Date 09/13/00
Descriptio	n Stream	n km 0.9, a	t fish pass	sage proj	ect site			
Unit # 5		Unit	Type PL	Р	Temp °C	С	Conductivity (µS/cm)	
Comments	PLUNGE	E POOL DIRE	ECTLY BEL	OW FORM	MER HEADC	UT, units 1	-5 are below former headcut	
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	401	P16	200	0	21	4	CO 0	
Pass 2	418	P16	200	0	2	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream C	heda Cre	ek	Site mid	dle			Index Site # 2	Date 09/13/00
Descriptio					ect site			
Unit # 6			Type GL	• • •	Temp °(2	Conductivity (µS/cm)	
Comments	at road xi	ng just above	• 1		p			
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	325	P16	200	0	0	1	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
		1	G •4 · 1	11				D (00/12/00
Stream C			Site mid		ant aita		Index Site # 2	Date 09/13/00
Descriptio	n Stream		-			a	Conductivity (vS/cm)	
Unit # 7 Comments	flat water		Type FW		Temp °C		Conductivity (µS/cm)	
Comments		above new re	oad crossing	, to upper t	cheminark poo	51		
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	211	P16	200	0	0	1	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream C	heda Cre	ek	Site mid	dle			Index Site # 2	Date 09/13/00
Descriptio	n Stream	n km 0.9, a	t fish pass	sage proj	ect site			
Unit # 8		· · · ·	Type LS	013	Temp °C	С	Conductivity (µS/cm)	
Comments			vi					
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	147	P16	200	0	1	5	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Ch	neda Cre	ek	Site upp	er			Index Site # 3	Date 09/19/00
Description	n Stream	n km 1.2, a			ect site			
Unit # 1			Type LSI		Temp °C	ŗ	Conductivity (µS/cm)	
Comments	EQUIPM	ENT FAILUI			-	-		
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	250	P16	200	0	4	0	CO 0	
Pass 2	367	P16	200	0	23	0	SH YOY 0	
Pass 3	252	P16	200	0	9	0		
Pass 4							SH 1+ 0	
Stream Ch	neda Cre	ek	Site upp	er			Index Site # 3	Date 09/19/00
Description					ect site			
Unit # 2			Type LG	• • •	Temp °C	2	Conductivity (µS/cm)	
Comments		•	JF - 20		····r 、			
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	391	P16	200	0	9	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Ch Description			Site uppo bove pass		ect site		Index Site # 3	Date 09/19/00
Unit # 3			Type LS		Temp °C	2	Conductivity (µS/cm)	
Comments							• • •	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	96	P16	200	0	5	0	CO 0	
Pass 2	90	P16	200	0	1	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Cl	neda Cre	ek	Site upp	er			Index Site # 3	Date 09/19/00
Description	n Stream	n km 1.2, a			ect site			
Unit # 4		· · · ·	Type LG	0 1 5	Temp °C	C	Conductivity (µS/cm)	
Comments			vi		*		• • • •	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	50	P16	100	0	0	0	CO 0	
Pass 2								
Pass 3								
Pass 4							SH 1 + 0	

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Stream Cl	neda Cre	ek	Site upp	er			Index Site # 3	Date 09/19/00
Descriptio	n Stream	n km 1.2, a	bove pass	sage proj	ect site			
Unit # 5		Unit	Type PL	Р	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	160	P16	200	0	14	1	CO 0	
Pass 2	255	P16	200	0	2	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Ea	iskoot Ci	reek	Site N.lo	ot			Index Site #	Date 08/03/00
Descriptio	n							
Unit # 1		Unit	Туре МС	C	Temp °C	C 15.1	Conductivity (µS/cm) 340) sp cond
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	249	P16	200	0	7	0	CO 0	
Pass 2	166	P16	200	0	6	0	SH YOY 0	
Pass 3	136	P16	200	0	0	0		
Pass 4							SH 1 + 0	
Stream Ea	iskoot Ci	reek	Site N.L	ot			Index Site #	Date 08/03/00
Descriptio	n							
Unit # 2	_	Unit	Type SC		Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	107	P16	200	0	2	0	CO 0	
Pass 2	93	P16	200	0	0	0	SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4							SH 1+ 0	
Stream Ea	iskoot Ci	reek	Site N.L	ot			Index Site #	Date 08/03/00
Descriptio	n							
Unit # 3		Unit	Туре МС	2	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	264	P16	200	0	24	1	CO 0	
Pass 2		P16	200	0	4	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	

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Stream Ea	uskoot Ci	reek	Site N.L.	ot			Index Site #	Date 08/03/00
Description	n							
Unit # 4		Unit	Туре МС	2	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY S	SH 1+	Total Mortality	
Pass 1	216	P16	200	0	13	0	CO 0	
Pass 2	153	P16	200	0	1	3	SH YOY 0	
Pass 3							SH 1+ 0	
Pass 4								
Stream Ea	uskoot Ci	reek	Site N.L.	ot			Index Site #	Date 08/03/00
Description	n							
Unit # 5		Unit	Type FW	r	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY S	SH 1+	Total Mortality	
Pass 1	320	P16	200	0	17	0	CO 0	
Pass 2	176	P16	200	0	1	0	SH YOY 0	
Pass 3							SH 1+ 0	
Pass 4								
Stream Ea	askoot Ci	reek	Site Abo	ve H1			Index Site #	Date 08/04/00
								Date 00/04/00
Description	n							Date 00/04/00
Description Unit # 1	n		Type FW		Temp °C 1	4.3	Conductivity (µS/cm) 320 s	
-	n		Type FW		Temp °C 1	4.3		
Unit # 1	n Time		Type FW Volts		-	14.3 6H 1+		
Unit # 1		Unit		,	-		Conductivity (µS/cm) 320 s	
Unit # 1 Comments	Time	Unit	Volts	СО	SH YOY S	SH 1+	Conductivity (µS/cm) 320 s Total Mortality CO 0	
Unit # 1 Comments Pass 1 Pass 2 Pass 3	Time 381	Unit Setting	Volts 200	CO 0	SH YOY S 26	SH 1 +	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0	
Unit # 1 Comments Pass 1 [Pass 2]	Time 381	Unit Setting	Volts 200	CO 0	SH YOY S 26	SH 1 +	Conductivity (µS/cm) 320 s Total Mortality CO 0	
Unit # 1 Comments Pass 1 Pass 2 Pass 3	Time 381 110	Unit Setting P16 P16	Volts 200	CO 0	SH YOY S 26	SH 1 +	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0	
Unit # 1 Comments Pass 1 Pass 2 Pass 3 Pass 4	Time 381 110 askoot Cr	Unit Setting P16 P16	Volts 200 200	CO 0	SH YOY S 26	SH 1 +	Conductivity (μS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH 1+ 0	sp cond
Unit # 1 Comments Pass 1 [Pass 2 [Pass 3] Pass 4 [Stream Ea	Time 381 110 askoot Cr	Unit Setting P16 P16	Volts 200 200	CO 0 0 ve H1	SH YOY S 26	SH 1 +	Conductivity (μS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH 1+ 0	sp cond
Unit # 1 Comments Pass 1 [Pass 2 [Pass 3] Pass 4 [Stream Ea Description	Time 381 110 askoot Cr	Unit Setting P16 P16	Volts 200 200 Site Abo	CO 0 0 ve H1	SH YOY S 26	SH 1 +	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site #	sp cond
Unit # 1 Comments Pass 1 [Pass 2 [Pass 3] Pass 4 [Stream Ea Description Unit # 2	Time 381 110 askoot Cr	Unit Setting P16 P16	Volts 200 200 Site Abo	CO 0 0 ve H1	SH YOY S 26 4 4 - - - Temp °C	SH 1 +	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site #	sp cond
Unit # 1 Comments Pass 1 [Pass 2 [Pass 3] Pass 4 [Stream Ea Description Unit # 2	Time 381 110 askoot Cr n	Unit Setting P16 P16 P16 Comparent reek	Volts 200 200 Site Abo Type FW	CO 0 0 ve H1	SH YOY S 26 4 4 - - - Temp °C	SH 1+ 0 0	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm)	sp cond
Unit # 1 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Ea Description Unit # 2 Comments	Time 381 110 askoot Cr n Time	Unit Setting P16 P16 P16 Construction reek Unit	Volts 200 200 Site Abo Type FW Volts	CO 0 0 ve H1	SH YOY S 26 4 4 1 1 1	SH 1+ 0 0 SH 1+	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm) Total Mortality CO 0	sp cond
Unit # 1 Comments Pass 1 [Pass 2 [Pass 3] Pass 4 [Stream Ea Description Unit # 2 Comments Pass 1 [Time 381 110 askoot Cr n Time	Unit Setting P16 P16 P16 Construction reek Unit	Volts 200 200 Site Abo Type FW Volts	CO 0 0 ve H1	SH YOY S 26 4 4 1 1 1	SH 1+ 0 0 SH 1+	Conductivity (µS/cm) 320 s Total Mortality CO 0 SH YOY 0 SH YOY 0 SH 1+ 0 Index Site # Conductivity (µS/cm) Total Mortality CO 0	sp cond

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Stream Ea	askoot Ci	reek	Site Abo	ove H1			Index Site #	Date 08/04/00
Descriptio	n							
Unit # 3		Unit	Type ST	Р	Temp °C	0	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	60	P16	200	0	43	4	CO 0	
Pass 2	73	P16	200	0	7	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Ea	askoot Ci	reek	Site Abc	ove H1			Index Site #	Date 08/04/00
Descriptio	n	TL- •4	T	D	T 04	n		
Unit # 4		Unit	Type ST	P	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	49	P16	200	0	19	0	CO 0	
Pass 2	41	P16	200	0	1	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
<u> </u>	1 + 0	1	C ¹ (A1	111				D 4 00/04/00
Stream Ea Descriptio		геек	Site Abo	ove HI			Index Site #	Date 08/04/00
Unit # 5	11	∐nit	Type ST	р	Temp °C	n	Conductivity (µS/cm)	
Comments		Unit	Type 51		Temp			
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	121	P16	200	0	29	18	CO 0	
Pass 2	91	P16	200	0	7	2	SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Ea	askoot Ci	reek	Site Abo	ove H1			Index Site #	Date 08/04/00
Descriptio	n							
Unit # 6		Unit	Type ST	Р	Temp °C	C	Conductivity (µS/cm)	
~								
Comments								
Comments	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Comments Pass 1	Time 222	Setting P16	Volts 200	CO	SH YOY 22	SH 1+ 14	Total Mortality CO 0	
				r			CO 0	
Pass 1	222	P16	200	0	22	14	CO 0	

Point Reyes National Seashore Golden Gate National Recreation Area CSRP Electrofishing Log 1 July 2000 - 30 June 2001 Stream Giacomini Creek Index Site # Date 05/04/01 Site culvert pool **Description** isolated pool at Hwy 1 culvert outflow Unit # Unit Type PLP Temp °C 13.1 Conductivity (µS/cm) 178.6/228.5 Olema Creek tributary-sampled intermittent part of creek to determine numbers of potentially stranded fish Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** p16 200 0 20 11 Pass 1 0 СО Pass 2 0 SH YOY Pass 3 SH 1+ 0 Pass 4 Stream Horse Camp Cree Index Site # Date 04/03/01 Site culvert pool Description isolated pool at Hwy 1 culvert outflow Unit # Unit Type PLP Conductivity (µS/cm) **Temp °C** 11.5 Comments Olema Creek tributary-sampled intermittent part of creek to determine numbers of potentially stranded fish; rest of lower creek mostly drv. 1 co smolt Time Setting Volts СО SH YOY SH 1+ **Total Mortality** 295 p16 200 59 Pass 1 1 0 СО 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Index Site # Date 04/04/01 Stream Horse Camp Cree Site lower isolated pools Description lower 100 meters, isolated from mainstem Temp °C Unit # Unit Type pool Conductivity (µS/cm) Olema Creek tributary-sampled intermittent part of creek to determine numbers of potentially stranded fish Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 372 p16 200/100 Pass 1 0 0 9 0 СО Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Olema Creek Site Lower Stewart's Pasture Index Site # 1 Date 07/18/00 Description Stream km 1.2 **Unit** # 1 Unit Type LSR Temp °C Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 518 P16 200 0 23 2 Pass 1 СО 0 435 P16 200 0 7 0 Pass 2 SH YOY 0 521 P16 200 0 3 Pass 3 0 0 SH 1+ Pass 4

Point Reyes National Seashore Golden Gate National Recreation Area CSRP Electrofishing Log 1 July 2000 - 30 June 2001 Stream Olema Creek Site Lower Stewart's Pasture Index Site # 1 Date 07/18/00 **Description** Stream km 1.2 **Unit #** 2 Unit Type CRP Temp °C Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** Pass 1 521 P16 200 0 10 4 СО 381 0 Pass 2 P16 200 3 3 0 SH YOY Pass 3 214 P16 200 0 6 0 0 SH 1+ Pass 4 Stream Olema Creek Site Lower Stewart's Pasture Index Site # 1 Date 07/18/00 Description Stream km 1.2 **Unit #** 3 Unit Type LGR Conductivity (µS/cm) Temp °C Comments Time СО SH 1+ **Total Mortality** Setting Volts SH YOY 157 P16 200 Pass 1 0 4 0 СО 0 93 P16 200 0 0 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Index Site # 1 Date 07/18/00 Stream Olema Creek Site Lower Stewart's Pasture Description Stream km 1.2 Temp °C Unit # 4 Unit Type LSR Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 624 P16 200 0 19 0 Pass 1 0 СО 646 P16 0 Pass 2 200 5 1 SH YOY 0 496 P16 200 0 4 0 Pass 3 SH 1+ 0 Pass 4 Stream Olema Creek Site Lower Stewart's Pasture Index Site # 1 Date 07/18/00 **Description** Stream km 1.2 Unit # 5 Unit Type LSR Temp °C Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 962 P16 200 13 4 Pass 1 1 СО 0 981 P16 200 0 11 Pass 2 1 0 SH YOY Pass 3 0 SH 1+

Pass 4

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CSRP Electrofishing Log

Stream Ol			Site Ved	Index Site # 2	Date 07/20/00			
Description	n Stream		— — — —	D	~			
Unit # 1	Unit Type LSR			ĸ	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	685	P16	200	3	50	7	CO 0	
Pass 2	680	P16	200	4	22	1	SH YOY 0	
Pass 3	481	P16	200	2	15	0		
Pass 4							SH 1 + 0	
Stream O	ema Cre	ek	Site Vec	lanta			Index Site # 2	Date 07/20/00
Description	n Stream	n km 3.7						
Unit # 2		Unit	Type LG	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	312	P16	200	0	13	1	CO 0	
Pass 2	388	P16	200	0	4	0		
Pass 3							SH YOY	
Pass 4							SH 1+ 0	
Stream Ol	ema Cre	ek	Site Ved	lanta			Index Site # 2	Date 07/20/00
Description	n Stream	n km 3.7						
Unit # 3		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	874	P16	200	10	86	0	CO 0	
Pass 2	817	P16	200	3	23	0	SH YOY 1	
Pass 3	949	P16	200	3	12	0		
Pass 4							SH 1+ 0	
Stream Ol	ema Cre	ek	Site Ved	lanta			Index Site # 2	Date 07/20/00
Description	n Stream	n km 3.7						
Unit # 4			Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments					-		• • • •	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	1101	P16	200	26	56	6	CO 0	
Pass 2	1100	P16	200	9	42	2		
Pass 3	1053	P16	200	4	19	1		
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

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Stream O	ema Cre	eek	Site Vec	lanta			Index Site # 2	Date 07/20/00
Description	n Stream	n km 3.7						
Unit # 5		Unit	Type LG	ìR	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	191	P16	200	0		0		
Pass 2	222	P16	200	0	0	0	CO 0	
Pass 3							SH YOY 0	
Pass 4							SH 1 + 0	
Stream O			Site Cen	netary Pc	ond/Upper S	Stewart's 1	Pasture Index Site # 3	Date 07/26/00
Description	n Stream		m to	D	TE OV	-		
Unit # 1		Unit	Type LS	К	Temp °C		Conductivity (µS/cm)]
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	1284	P16	200	9	124	5	CO 1	
Pass 2	1171	P16	200	1	18	0		
Pass 3	568	P16	200	0	5	0		
Pass 4							SH 1 + 0	
Stream Ol Description Unit # 2 Comments		n km 4.9	Type GL	-	ond/Upper S		Pasture Index Site # 3 Conductivity (µS/cm)	Date 07/26/00
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	820	P16	200	1	110	1	$\mathbf{CO} 0$	
Pass 2	1208	P16	200	0	20	2		
Pass 3	784	P16	200	0	4	0	SH YOY 3	
Pass 4							SH 1+ 0	
Stream Ol Description Unit # 4 Comments		n km 4.9	Site Cen Type LS	-	ond/Upper S		Pasture Index Site # 3 Conductivity (µS/cm)	Date 07/26/00
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	786	P16	200	8	74	3	CO 0	
Pass 2	816	P16	200	1	13	1		
Pass 3	737	P16	200	1	7	0	SH YOY 3	
Pass 4							SH 1 + 0	

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Stream Olema Creek Site Five Brooks							Index Site # 7	Date 07/31/00
Descriptio	n Stream	n km 10.8						
Unit # 1	1 Unit Type PLP					2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	793	P16	200	2	19	8	CO 0	
Pass 2	584	P16	200	2	10	0	SH YOY 0	
Pass 3	464	P16	200	0	2	0	SH 1+ 0	
Pass 4							SH 1+ 0	
Stream O	lema Cre	ek	Site Five	e Brooks			Index Site # 7	Date 07/31/00
Descriptio	n Stream	n km 10.8						
Unit # 2		Unit	Type LG	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	708	P16	200	0	36	1	CO 0	
Pass 2	791	P16	200	0	11	0	SH YOY 1	
Pass 3	719	P16	200	0	4	0		
Pass 4							SH 1 + 0	
Stream O	ema Cra	ak	Site Five	Brooks			Index Site # 7	Date 07/31/00
Descriptio			Site Pive	DIUUKS			Index Site # /	Date 07/31/00
Unit # 3	n Suca		Type LS	R	Temp °C	ч	Conductivity (µS/cm)	
Comments		Omt	Type Do		Temp	<i></i>		
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	611	P16	200		25	1	-	
Pass 2	555	P16	200	1	2	0	CO 0	
Pass 3	433	P16	200	0	1	0	SH YOY 0	
Pass 4							SH 1+ 0	
				L				
Stream O			Site Five	e Brooks			Index Site # 7	Date 07/31/00
Descriptio	n Stream							
Unit # 4		Unit	Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	215	P16	200	0	12	0	CO 0	
Pass 2	298	P16	200	0	4	0	SH YOY 1	
Pass 3	240	P16	200	0	1	1	SH 101 SH 1+ 0	
Pass 4							50 1+ 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log 1

Stream Ol	ema Cre	ek	Site Five	e Brooks			Index Site # 7	Date 07/31/00
Description	n Stream	n km 10.8						
Unit # 5	nit # 5 Unit Type LGR Temp °C						Conductivity (µS/cm)	
Comments	mments							
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	120	P16	200	0	2		-	
Pass 2	120	110	200				CO 0	
Pass 3							SH YOY 0	
Ļ							SH 1 + 0	
Pass 4								
Stream Ol	ema Cre	ek	Site Five	e Brooks			Index Site # 7	Date 07/31/00
Description								
Unit # 6			Type LS	R	Temp °C	7	Conductivity (µS/cm)	
Comments			-, -, -, -, -, -, -, -, -, -, -, -, -, -		r			
[Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	937	P16	200	6	19	5	CO 0	
Pass 2	1403	P16	200	7	11	3	SH YOY 0	
Pass 3	729	P16	200	5	9	0	SH 1 + 0	
Pass 4								
Stream Ol	ema Cre	ek	Site Hor	se Camp			Index Site # 6	Date 08/02/00
			Site Hor	se Camp			Index Site # 6	Date 08/02/00
Description		n km 9.4		-		C		Date 08/02/00
Description		n km 9.4	Site Hor Type LS	-	Temp °C	C	Index Site # 6 Conductivity (µS/cm)	Date 08/02/00
Description Unit # 1	n Stream	n km 9.4 Unit	Type LS	R	Temp °C		Conductivity (µS/cm)	Date 08/02/00
Description Unit # 1		n km 9.4		-		C SH 1+	Conductivity (µS/cm) Total Mortality	Date 08/02/00
Description Unit # 1 Comments Pass 1	n Stream	n km 9.4 Unit Setting	Type LS	R CO	Temp °C	SH 1+	Conductivity (µS/cm) Total Mortality CO 0	Date 08/02/00
Description Unit # 1 Comments Pass 1 [Pass 2]	Time 1149 973	n km 9.4 Unit Setting P16 P16	Type LS Volts 200 200 200	R CO 12	Temp °C SH YOY 42 14	SH 1+	Conductivity (µS/cm) Total Mortality	Date 08/02/00
Pass 1	n Stream 	n km 9.4 Unit Setting	Type LS: Volts	R CO 12 3	Temp °C SH YOY	SH 1+ 4 0	Conductivity (µS/cm) Total Mortality CO 0	Date 08/02/00
Description Unit # 1 Comments Pass 1 Pass 2 Pass 3	Time 1149 973	n km 9.4 Unit Setting P16 P16	Type LS Volts 200 200 200	R CO 12 3	Temp °C SH YOY 42 14	SH 1+ 4 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0	Date 08/02/00
Description Unit # 1 Comments Pass 1 Pass 2 Pass 3 Pass 4	Time 1149 973 1172	n km 9.4 Unit Setting P16 P16 P16	Type LS Volts 200 200 200	R CO 12 3 6 	Temp °C SH YOY 42 14 6	SH 1+ 4 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0	Date 08/02/00
Description Unit # 1 Comments Pass 1 [Pass 2] Pass 3] Pass 4 [Stream O]	Time 1149 973 1172 ema Cre	n km 9.4 Unit Setting P16 P16 P16 P16 P16	Type LS Volts 200 200 200 200 200	R CO 12 3 6 	Temp °C SH YOY 42 14 6	SH 1+ 4 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0	
Description Unit # 1 Comments Pass 1 Pass 2 Pass 3	Time 1149 973 1172 ema Cre	n km 9.4 Unit Setting P16 P16 P16 P16 P16 eek n km 9.4	Type LS Volts 200 200 200 200 200	R 200 12 3 6 2 5 5 6 2 5 6 2 5 6 2 6 2 5 6 2 5 6 2 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6	Temp °C SH YOY 42 14 6	SH 1+ 4 0 0 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0	
Description Unit # 1 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream Of Description	Time 1149 973 1172 ema Cre	n km 9.4 Unit Setting P16 P16 P16 P16 P16 eek n km 9.4	Type LS Volts 200 200 200 Site Hor	R 200 12 3 6 2 5 5 6 2 5 6 2 5 6 2 6 2 5 6 2 5 6 2 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6	Temp °C SH YOY 42 14 6	SH 1+ 4 0 0 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 6	
Description Unit # 1 Comments Pass 1 [Pass 2] Pass 3] Pass 4 [Stream OI Description Unit # 2	Time 1149 973 1172 ema Cre	n km 9.4 Unit Setting P16 P16 P16 P16 P16 eek n km 9.4	Type LS Volts 200 200 200 Site Hor	R 200 12 3 6 2 5 5 6 2 5 6 2 5 6 2 6 2 5 6 2 5 6 2 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6	Temp °C SH YOY 42 14 6	SH 1+ 4 0 0 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 6	
Description Unit # 1 Comments Pass 1 [Pass 2] Pass 3] Pass 4 [Stream OI Description Unit # 2	Time Time 1149 973 1172 ema Cre n Stream	n km 9.4 Unit Setting P16 P16 P16 P16 P16 P16 P16 Unit	Type LS Volts 200 200 200 Site Hor Type LS	R CO 12 3 6 See Camp R	Temp °C SH YOY 42 14 6	SH 1+ 4 0 0 C	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 6 Conductivity (µS/cm) Total Mortality	
Description Unit # 1 Comments Pass 1 [Pass 2 [Pass 3] Pass 4 [Stream Of Description Unit # 2 Comments	n Stream Time 1149 973 1172 ema Crean Stream	n km 9.4 Unit Setting P16 P16 P16 P16 P16 P16 Setting	Type LS Volts 200 200 Site Hor Type LS Volts	R CO 12 3 6 CO R CO	Temp °C SH YOY 42 14 6 Temp °C SH YOY	SH 1+ 4 0 0 C SH 1+	Conductivity (μS/cm) Total Mortality CO 0 SH YOY 0 SH YOY 0 SH 1+ 0 Index Site # 6 Conductivity (μS/cm) Total Mortality CO 0	
Description Unit # 1 Comments Pass 1 [Pass 2] Pass 3] Pass 4 [Stream Ol Description Unit # 2 Comments	n Stream Time 1149 973 1172 ema Crean Stream Time 1921	n km 9.4 Unit Setting P16 P16 P16 P16 P16 Setting P16	Type LS Volts 200 200 200 Site Hor Type LS Volts 200	R 20 12 3 6 5 5 6 2 9 29	Temp °C 42 42 14 6 Temp °C SH YOY 53	SH 1+ 4 0 0 C SH 1+ 1	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 6 Conductivity (µS/cm) Total Mortality	

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Stream Olema Creek Site Horse Camp Index Site # 6 Date 08/02/00 **Description** Stream km 9.4 **Unit #** 3 Temp °C Conductivity (µS/cm) Unit Type LGR Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 408 P16 200 0 17 0 Pass 1 0 СО Pass 2 0 SH YOY Pass 3 0 SH 1+ Pass 4 Stream Olema Creek Site Horse Camp Index Site # 6 Date 08/02/00 Description Stream km 9.4 **Unit #** 4 Unit Type Conductivity (µS/cm) Temp °C Comments Time СО SH 1+ **Total Mortality** Setting Volts SH YOY 235 P16 200 2 Pass 1 8 0 СО 0 115 P16 1 5 0 200 Pass 2 SH YOY 0 79 P16 200 0 1 0 Pass 3 SH 1+ 0 Pass 4 Stream Olema Creek Index Site # 6 Date 08/02/00 Site Horse Camp **Description** Stream km 9.4 Unit # 5 Unit Type SCP Temp °C Conductivity (µS/cm) This was an isolated pool, was part of Unit 4 in 1999 Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 362 P16 200 2 0 0 Pass 1 0 СО 234 P16 200 0 0 Pass 2 1 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Olema Creek Site Horse Camp Index Site # 6 Date 08/02/00 Description Stream km 9.4 Unit# 6 Unit Type Temp °C Conductivity (µS/cm) This was an isolated pool just outside of the Index Section Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** Pass 1 301 P16 200 8 14 0 СО 0 Pass 2 0 SH YOY Pass 3 0 SH 1+ Pass 4

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Stream Olema Creek Site Truttman							Index Site # 4	Date 08/09/00	
Description Stream km 6.2									
Unit # 1	Unit Type LSBk			Bk	Temp °C		Conductivity (µS/cm)		
Comments	ts All Index Section 4 units were surveyed with 2 electrofishing teams in the water (NPS and SCWDA)								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality		
Pass 1	2304	P16	200	52	96	9	CO 0		
Pass 2	2158	P16	200	13	21	2			
Pass 3	1917	P16	200	6	11	0			
Pass 4							SH 1 + 0		
Stream O			Site Tru	ttman			Index Site # 4	Date 08/09/00	
Descriptio	n Stream	n km 6.2							
Unit # 2			Type LG		Temp °C		Conductivity (µS/cm)		
Comments	All Index	Section 4 un	its were sur	veyed with	2 electrofishi	ng teams in	the water (NPS and SCWDA)		
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality		
Pass 1	560	P16	200	0	29	1	CO 0		
Pass 2	460	P16	200	0	8	0	SH YOY 1		
Pass 3									
Pass 4							SH 1 + 0		
Stream O	ema Cre	ek	Site Tru	ttman			Index Site # 4	Date 08/09/00	
Descriptio	n Stream	n km 6.2							
Unit # 3		Unit	Type LS	Bk	Temp °C	C	Conductivity (µS/cm)		
Comments	All Index	Section 4 un	its were sur	veyed with	2 electrofishin	ng teams in	the water (NPS and SCWDA)		
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality		
Pass 1	3183	P16	200	55	51	11	CO 0		
Pass 2	2390	P16	200	13	13	1	SH YOY 0		
Pass 3	1926	P16	200	1	3	0	SH 1 + 0		
Pass 4									
Stream O			Site Sho	ook's Hou	se		Index Site # 5	Date 08/14/00	
Descriptio	n Strean								
Unit # 1		Unit	Type LS	Bk	Temp °C	2	Conductivity (µS/cm)]	
Comments									
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality		
Pass 1	1185	P16	200	24	73	18	CO 0		
Pass 2	1215	P16	200	5	35	4	SH YOY 1		
Pass 3	909	P16	200	5	11	0	SH 1+ 0		
Pass 4							50 1+ 0		

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Stream O			Site Sho	ok's Hou	ise		Index Site # 5	Date 08/14/00
Descriptio	n Stream		T CI	D	TE Of	7		
Unit # 2 Comments		Unit	Type GL	,D	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	377	P16	200	0	24	0	CO 0	
Pass 2	284	P16	200	0	3	0	SH YOY 0	
Pass 3	288	P16	200	0	2	0		
Pass 4							SH 1 + 0	
Stream O			Site Sho	ok's Hou	ise		Index Site # 5	Date 08/14/00
Descriptio	n Stream			_				
Unit # 3		Unit	Type LG	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	431	P16	200	0	39	0	CO 0	
Pass 2	392	P16	200	0	9	0		
Pass 3							SH YOY 2	
Pass 4							SH 1 + 0	
			,i	F				
Stream O			Site Sho	ok's Hou	ise		Index Site # 5	Date 08/14/00
Descriptio	n Stream							
Unit # 4		Unit	Type GL	D	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	769	P16	200	0	28	0	CO 0	
Pass 2	577	P16	200	0	6	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream O	lema Cre	ek	Site Sho	ok's Hou	ise		Index Site # 5	Date 08/14/00
Descriptio								
Unit # 5			Type LG	R	Temp °C	7	Conductivity (µS/cm)	
Comments		•	JF 0		····r			
_	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	470	P16	200	0	23	0	CO 0	
Pass 2	345	P16	200	0	3	0	SH YOY 0	
Pass 3				<u> </u>			SH 1 + 0	
Pass 4								

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	lema Cre		Site Lim	e Kilns		Index Site # 8	Date 08/16/00	
Descriptio	n Stream		Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	163	P16	200	0	37	0	CO 0	
Pass 2	174	P16	200	0	6	0	SH YOY 0	
Pass 3	150	P16	200	0	3	0	SH 1 + 0	
Pass 4								
Stream O			Site Lim	e Kilns			Index Site # 8	Date 08/16/00
Descriptio	n Strean							
Unit # 2		Unit '	Туре МС	CP	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	116	P16	100	0	4	0	CO 0	
Pass 2	97	P16	100	0	2	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream O	lema Cre	ek	Site Lim	e Kilns			Index Site # 8	D (00/1//00
				e renno			Index Site # 6	Date 08/16/00
Descriptio	n Strean							Date 08/16/00
Descriptio Unit # 3	n Strean	n km 13.0 Unit '			Temp °C	2	Conductivity (µS/cm)	Date 08/16/00
Unit # 3	n Stream				Temp °C	2		Date 08/16/00
Unit # 3	n Strean			CO	Temp °C	SH 1+		Date 08/16/00
Unit # 3		Unit '	Гуре				Conductivity (μS/cm)	Date 08/16/00
Unit # 3 Comments	Time	Unit ' Setting	Type Volts	СО	SH YOY	SH 1+	Conductivity (µS/cm) Total Mortality CO 0	Date 08/16/00
Unit # 3 Comments Pass 1	Time 416	Unit ⁷ Setting P16	Type Volts 200	CO	SH YOY 36	SH 1 +	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0	Date 08/16/00
Unit # 3 Comments Pass 1 Pass 2	Time 416 424	Unit 7 Setting P16 P16 P16	Volts 200 200	CO 0 0	SH YOY 36 8	SH 1+ 1	Conductivity (µS/cm) Total Mortality CO 0	Date 08/16/00
Unit # 3 Comments Pass 1 Pass 2 Pass 3	Time 416 424 358	Unit 7 Setting P16 P16 P16 P16	Volts 200 200	CO 0 0	SH YOY 36 8	SH 1+ 1	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0	Date 08/16/00
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4	Time 416 424 358 lema Cree	Unit 7	Volts 200 200 200	CO 0 0	SH YOY 36 8	SH 1+ 1	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0	
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream O	Time 416 424 358 lema Cree	Unit 7 Setting P16 P16 P16 P16 P16 ek n km 13.0	Volts 200 200 200	CO 0 0 e Kilns	SH YOY 36 8	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0	
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream O Descriptio	Time 416 424 358 lema Cree	Unit 7 Setting P16 P16 P16 P16 P16 ek n km 13.0	Volts 200 200 200 Site Lim	CO 0 0 e Kilns	SH YOY 36 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 8	
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream O Descriptio Unit # 4	Time 416 424 358 lema Cree	Unit 7 Setting P16 P16 P16 P16 P16 ek n km 13.0	Volts 200 200 200 Site Lim	CO 0 0 e Kilns	SH YOY 36 8 3	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 8	
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream O Descriptio Unit # 4	Time 416 424 358 lema Cree n Stream	Unit 7 Setting P16 P16 P16 P16 P16 ek n km 13.0 Unit 7	Type Volts 200 200 200 Site Lim Type LSI	CO 0 0 e Kilns R	SH YOY 36 8 3 C Temp °C	SH 1+ 1 0	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 8 Conductivity (µS/cm)	
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream O Descriptio Unit # 4 Comments	Time 416 424 358 lema Crean n Strean	Unit ' Setting P16 P16 P16 P16 P16 P16 Setting	Type Volts 200 200 200 Site Lim Type LS Volts	CO 0 0 e Kilns R CO	SH YOY 36 8 3 1 Temp °C SH YOY	SH 1+ 1 0 SH 1+	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH YOY 0 SH 1+ 0 Index Site # 8 Conductivity (µS/cm) Total Mortality CO 0	
Unit # 3 Comments Pass 1 Pass 2 Pass 3 Pass 4 Stream O Descriptio Unit # 4 Comments Pass 1	Time 416 424 358 lema Cree n Stream	Unit ' Setting P16 P16 P16 P16 eek n km 13.0 Unit ' Setting P16	Volts 200 200 200 Site Lim Type LSI Volts 200	CO 0 0 e Kilns R CO 0	SH YOY 36 8 3 3 Temp °C SH YOY 68	SH 1+ 1 0 	Conductivity (µS/cm) Total Mortality CO 0 SH YOY 0 SH 1+ 0 Index Site # 8 Conductivity (µS/cm) Total Mortality	

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Stream O	lema Cre	ek	Site Lin	ne Kilns	Index Site # 8	Date 08/16/00			
Descriptio	n Stream	n km 13.0							
Unit # 5		Unit	Туре		Temp °C	С	Conductivity (µS/cm)		
Comments									
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality		
Pass 1	411	P16	200	0	35	0	CO 0		
Pass 2	330	P16	200	0	1	0	SH YOY 0		
Pass 3									
Pass 4							SH 1 + 0		
Stream Pi	ne Gulcł	1	Site Go	rge			Index Site # 3	Date 09/06/00	
Descriptio	n Stream	n km 3.9							
Unit # 1		Unit	Type LS	R	Temp °C	С	Conductivity (µS/cm)		
Comments									
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality		
Pass 1	565	P16	200	0	20	5	CO 0		
Pass 2	540	P16	200	0	4	1	SH YOY 0		
Pass 3	398	P16	200	0	0	0			
Pass 4							SH 1+ 0		
Stream Pi	ne Gulch	1	Site Go	rge			Index Site # 3	Date 09/06/00	
Descriptio	n Stream	n km 3.9		-					
Unit # 2		Unit	Type LS	L	Temp °C	С	Conductivity (µS/cm)		
Comments									
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality		
Pass 1	710	P16	200	0	24	1	CO 0		
Pass 2	736	P16	200	0	4	0	SH YOY 0		
Pass 3	541	P16	200	0	0	0	SH 1+ 0		
Pass 4							5111		
Stream Pi	ne Gulch	1	Site Go	rge			Index Site # 3	Date 09/06/00	
Descriptio	n Strean	n km 3.9		-					
Unit # 3		Unit	Type LC	θR	Temp °C	С	Conductivity (µS/cm)		
Comments			••						
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality		
Pass 1	359	P16	200	0	2	0	CO 0		
Pass 2	348	P16	200	0	1	0	SH YOY 0		
Pass 3									
Pass 4							SH 1+ 0		

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Stream Pi	ne Gulcł	1	Site Gor	ge			Index Site # 3	Date 09/06/00
Descriptio	n Stream	n km 3.9						
Unit # 4		Unit	Type LS	Bk	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	895	P16	200	0	6	4	CO 0	
Pass 2	932	P16	200	0	9	3		
Pass 3	777	P16	200	0	6	0	SH YOY 0	
Pass 4							SH 1+ 0	
Stream Pi			Site Para	adise Va	lley		Index Site # 2	Date 09/07/00
Descriptio	n Stream							
Unit # 1		Unit	Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	927	P16	200	0	21	6	CO 0	
Pass 2	778	P16	200	0	4	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Pi Descriptio			Site Para	adise Va	lley		Index Site # 2	Date 09/07/00
Unit # 2		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	1036	P16	200	0	16	3	CO 0	
Pass 2	632	P16	200	0	2	0	SH YOY 0	
Pass 3							SH 1+ 0	
Pass 4							SH 1+ 0	
Stream Pi			Site Para	adise Va	lley		Index Site # 2	Date 09/07/00
Descriptio			Tura IC	D	Town 04	7	Conductivity (8/)	
Unit # 2.5		Unit	Type LG	Л	Temp °C	~	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	269	P16	100	0	4	0	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4				1			VII I ' '	

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Stream Pi	ne Gulch	1	Site Par	Index Site # 2	Date 09/07/00			
Description	n Strean	n km 2.8						
Unit # 3		Unit	Type LS	R	Temp °C	Conductivity (µS/cm)		
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	1228	P16	200	0	22	8	CO 0	
Pass 2	1212	P16	200	0	5	3	SH YOY 0	
Pass 3	869	P16	200	0	1	1	SH 1+ 0	
Pass 4							5111+ 0	
Stream Pi	ne Gulch	1	Site Mu	rch			Index Site # 1B	Date 09/26/00
Description	n Strean	n km 0.4, a	t Murch's	s foot brid	lge			
Unit # 1		Unit	Type GI	LD	Temp °C	С	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	897	P16	200	0	9	1	CO 0	
Pass 2	599	P16	200	0	1	0	SH YOY 0	
Pass 3							SH 1+ 0	
Pass 4							5111	
Stream Pi	ne Gulch	1	Site Mu	rch			Index Site # 1B	Date 09/26/00
Description	n Strean	n km 0.4, a	t Murch's	s foot brid	lge			
Unit # 2		Unit	Type LC	GR	Temp °C	С	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	319	P16	200	0	1	1	CO 0	
Pass 2	319	P16	200	0	0	0	SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Pi	ne Gulch	1	Site Mu	rch			Index Site # 1B	Date 09/26/00
Description	n Strean	n km 0.4, a	t Murch's	s foot brid	lge			
Unit # 3		Unit	Type GI	LD	Temp °C	С	Conductivity (µS/cm)	
Comments							·* ·	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	436	P16	200	0	18	3	CO 0	
Pass 2	358	P16	200	0	0	0	SH YOY 0	
Pass 3							SH 1+ 0	
Pass 4							5fl 1 ⁺ 0	

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Stream Pi	ne Gulch	l	Site Mu	rch		Index Site # 1B	Date 09/26/00	
Descriptio	n Strean	n km 0.4, a	t Murch's	foot bric	lge			
Unit # 4		Unit '	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	944	P16	200	0	40	11	CO 0	
Pass 2	765	P16	200	0	2	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Pi			Site Ope	-			Index Site # 1A	Date 10/04/00
-	n Strean			• •	on MCOSI			
Unit # 1			Type LG	R	Temp °C	0	Conductivity (µS/cm)	
Comments	THIS IS I	NDEX SECT	TON 1A					
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	201	P16	200	0	1	0	CO 0	
Pass 2	210	P16	200	0	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Pi	ne Gulch	l	Site Ope	en Space			Index Site # 1A	Date 10/04/00
Descriptio	n Strean	n km 0.3, b	elow dree	dge pool	on MCOSI) land		
Unit # 2		Unit '	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	391	P16	200	0	4	1	CO 0	
Pass 2	339	P16	200	0	0	0	SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Pi	ne Gulch	l	Site Ope	en Space			Index Site # 1A	Date 10/04/00
Descriptio	n Strean	n km 0.3, b	elow dree	dge pool	on MCOSI) land		
Unit # 3		Unit '	Type GL	D	Temp °C	2	Conductivity (µS/cm)	
Comments	No Micro	fish Data Av	ailable					
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	284	P16	200	0	1	0	CO 0	
Pass 2	318	P16	200	0	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	

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Stream Pi	ne Gulch	1	Site Ope	en Space			Index Site # 1A	Date 10/04/00
Descriptio	n Stream	n km 0.3, t	below dree	dge pool	on MCOSI) land		
Unit # 4		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments	no microf	fish data avai	lable					
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	494	P16	200	0	10	2	· · · · · · · · · · · · · · · · · · ·	
Pass 2	439	P16	200	0	0	0	CO 0	
Pass 3	-57	110	200				SH YOY 0	
Pass 4							SH 1 + 0	
1 455 4								
Stream Pi	ne Gulch	1	Site Upp	oer Teixe	eira		Index Site # 6	Date 10/10/00
Descriptio	n Stream	n km 7.8						
Unit # 1		Unit	Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	540	P16	200	0	14	2	CO 0	
Pass 2	459	P16	200	0	3	0		
Pass 3							SH YOY 0	
Pass 4							SH 1 + 0	
			ļi	ŀ		ļ		
Stream Pi			Site Upp	per Teixe	eira		Index Site # 6	Date 10/10/00
Descriptio	n Stream		m to	D	TE OA	-		
Unit # 2		Unit	Type LS	K	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	554	P16	200	0	6	1	CO 0	
Pass 2	478	P16	200	0	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
			<u></u>	- ·				
Stream Pi			Site Upp	per Teixe	eira		Index Site # 6	Date 10/10/00
Descriptio	n Stream		— — —		-	~		
Unit # 3	[Unit	Type LG	iR	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	171	P16	100	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								

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Stream Pi	ne Gulcł	1	Site Upp	oer Teixe	eira		Index Site # 6	Date 10/10/00
Descriptio	n Stream	n km 7.8						
Unit # 4		Unit	Type LG	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	563	P16	200	0	6	3	CO 0	
Pass 2	444	P16	200	0	1	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Pi	ne Gulcł	1	Site Lov	ver Teixe	eira		Index Site # 5	Date 10/11/00
Descriptio	n Stream	n km 6.8						
Unit # 1		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	619	P16	200	0	12	3	CO 0	
Pass 2	536	P16	200	0	0	1	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Pi Descriptio Unit # 2		n km 6.8	Site Lov Type LG		eira Temp °C	٦	Index Site # 5 Conductivity (µS/cm)	Date 10/11/00
Comments	Unit 2B				-		$\frac{\text{Conductivity (µS/cm)}}{\text{oth=0.069, % cobb=57, % LG + SA + Fi} = 1000}$	14.29
comments								
Dawn 1	Time 443	Setting P16	Volts 200	CO	SH YOY	SH 1+	Total Mortality	
Pass 1 Pass 2	445	PIO	200	0		0	CO 0	
Pass 2 Pass 3							SH YOY 0	
Pass 4							SH 1 + 0	
1 455 4								
Stream Pi	ne Gulcł	1	Site Lov	ver Teixe	eira		Index Site # 5	Date 10/11/00
Descriptio	n Stream	n km 6.8						
Unit # 3		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	1130	P16	200	0	17	7	CO 0	
Pass 2	906	P16	200	0	1	1	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log 1 July 2000 - 30 June 2001 Stream Pine Gulch Site Lower Teixeira Index Site # 5 Date 10/11/00 **Description** Stream km 6.8 **Unit #** 4 Temp °C Conductivity (µS/cm) Unit Type LGR riffle - no fish caught Comments Time Setting Volts СО SH YOY SH 1+ **Total Mortality** 117 P16 Pass 1 200 0 0 0 0 СО Pass 2 0 SH YOY Pass 3 0 SH 1+ Pass 4 Stream Pine Gulch Index Site # 5 Date 10/11/00 Site Lower Teixeira Description Stream km 6.8 **Unit #** 5 Unit Type LSR Conductivity (µS/cm) Temp °C Comments СО SH 1+ **Total Mortality** Time Setting Volts SH YOY 649 P16 200 7 Pass 1 0 20 СО 0 520 P16 200 0 0 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Site BPUD Index Site # 4 Date 10/12/00 Stream Pine Gulch Description Stream km 5.1, at downstream end of BPUD pasture **Unit #** 1 Unit Type LSR Temp °C Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 913 P16 200 0 24 13 Pass 1 0 СО 792 P16 200 0 1 Pass 2 6 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Pine Gulch Site BPUD Index Site # 4 Date 10/12/00 Description Stream km 5.1, at downstream end of BPUD pasture **Unit # 2** Unit Type LGR Temp °C Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** Pass 1 771 P16 200 0 5 0 СО 0 Pass 2 0 SH YOY Pass 3 0 SH 1+ Pass 4

Point Reyes National Seashore Golden Gate National Recreation Area CSRP Electrofishing Log 1 July 2000 - 30 June 2001 Stream Pine Gulch Site BPUD Index Site # 4 Date 10/12/00 **Description** Stream km 5.1, at downstream end of BPUD pasture Unit # 3 Unit Type GLD Temp °C Conductivity (µS/cm) NO LENGTH MEASUREMENT TAKEN IN FIELD Comments Time Setting Volts СО SH YOY SH 1+ **Total Mortality** 1108 P16 Pass 1 200 0 33 7 0 СО 956 0 15 Pass 2 P16 200 0 0 SH YOY Pass 3 730 P16 200 0 1 0 0 SH 1+ Pass 4 Stream Pine Gulch Site Weber Index Site # 1C Date 10/15/00 Description Stream km 0.7 **Unit #** 1 Unit Type LSR Conductivity (µS/cm) Temp °C Comments Time СО SH 1+ **Total Mortality** Setting Volts SH YOY 618 P16 200 9 Pass 1 0 17 СО 0 580 P16 200 0 1 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Pine Gulch Index Site # 1C Date 10/15/00 Site Weber Description Stream km 0.7 Conductivity (µS/cm) **Unit # 2** Unit Type LGR Temp °C Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 215 P16 200 0 0 Pass 1 0 0 СО Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Pine Gulch Site Weber Index Site # 1C Date 10/15/00 Description Stream km 0.7 **Unit #** 3 Unit Type LSR Temp °C Conductivity (µS/cm) Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 882 P16 200 0 26 7 Pass 1 СО 0 660 P16 200 0 7 2 Pass 2 0 SH YOY 671 P16 200 0 0 0 Pass 3 0 SH 1+ Pass 4

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Pi	ne Gulcł	1	Site Wel	ber			Index Site # 1C	Date 10/15/00
Descriptio	n Stream	n km 0.7						
Unit # 4		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	235	P16	200	0	2	2	CO 0	
Pass 2	239	P16	200	0	0	0		
Pass 3							SH YOY 0	
Pass 4							SH 1 + 0	
Stream Pi Descriptio			Site Wel	Index Site # 1C	Date 10/15/00			
Unit # 5	n Stream		Type LG	R	Temp °C	-	Conductivity (µS/cm)	
Comments		Unit	The ro		Temp	<i></i>	Conductivity (μο/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	150	P16	200	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Pi	ne Gulcł	1	Site Wel	ber			Index Site # 1C	Date 10/15/00
Descriptio	n Stream	n km 0.7						
Unit# 6		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	702	P16	200	0	19	8	CO 0	
Pass 2	713	P16	200	0	2	0	SH YOY 1	
Pass 3								
Pass 4							SH 1+ 0	
Stream Q	uarrv Gu	lch	Site mid	dle ripar	ian		Index Site # 3	Date 08/23/00
Descriptio	•			-				
	1 ·		Type LS		Temp °C	C	Conductivity (µS/cm)	
Unit # 1		Unit					/	
Comments		Unit	- , P					
	Time		Volts	СО	SH YOY	SH 1+	Total Mortality	
	Time 211	Setting P16		CO	SH YOY 5	SH 1 +	Total Mortality	
Comments		Setting	Volts				CO 0	
Comments Pass 1	211	Setting P16	Volts 200	4	5	3		

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Q	•		Site mid	-		Index Site # 3	Date 08/23/00	
Descriptio	n riparia				-			
Unit # 2		Unit	Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	110	P16	200	0	8	0	CO 0	
Pass 2	107	P16	200	0	1	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Q	uarry Gu	ılch	Site mid	dle ripar	ian		Index Site # 3	Date 08/23/00
Descriptio	n riparia	·			•			
Unit # 3		Unit	Type LS	R	Temp °C		Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	123	P16	200	0	9	0	CO 0	
Pass 2	108	P16	200	1	3	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Q	uarry Gu	ılch	Site low	er riparia	an		Index Site # 1	Date 08/24/00
Descriptio	n near n	nouth						
Unit # 11		Unit	Type LS	R	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	267	P16	200	0	2	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Q	uarry Gu	ılch	Site low	er riparia	an		Index Site # 1	Date 08/24/00
Descriptio	•			1				
Unit # 3			Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments							• • •	
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	69	P16	100	0	3	0	\mathbf{CO} 0	
Pass 2								
Pass 3								
Pass 4		i					SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log 1 Ju

Stream Q	uarry Gu	lch	Site low	Index Site # 1	Date 08/24/00			
Descriptio	n near n	nouth						
Unit # 5		Unit	Type LS	L	Temp °C	С	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	53	P16	100	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Q	uarry Gu	lch	Site low	er riparia	n		Index Site # 1	Date 08/24/00
Descriptio	n near n	nouth						
Unit # 7		Unit	Type LS	L	Temp °C	С	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	14	P16	100	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Q	uarry Gu	lch	Site low	er riparia	n		Index Site # 1	Date 08/24/00
Descriptio	n near n	nouth						
Unit # 9		Unit	Туре МС	СР	Temp °C	С	Conductivity (µS/cm)	
Comments	numerous	s stickleback						
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	32	P16	100	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Q	uarry Gu	lch	Site oper	n pasture	1		Index Site # 2	Date 08/24/00
Descriptio	•		area west	of Hwy	1			
Unit # 1			Туре МС		Temp °C	С	Conductivity (µS/cm)	
Comments					-		- • /	
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	181	P16	200	0	2	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Q	•		Site ope	-			Index Site # 2	Date 08/24/00
Descriptio	n denud	ed pasture	area west	of Hwy	1			
Unit # 2		Unit '	Туре МС	СР	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	176	P16	200	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Q	uarry Gu	lch	Site ope	n pasture	;		Index Site # 2	Date 08/24/00
Descriptio	n denud	ed pasture	area west	of Hwy	1			
Unit#4		Unit '	Туре МС	СР	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	109	P16	200	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Q	uarry Gu	lch	Site culv	/ert pool			Index Site #	Date 04/11/01
Descriptio	n isolate	ed pool at H	Hwy 1 cul	vert inflo				
Unit #	[Type poo		Temp °C		Conductivity (µS/cm)	
Comments	Olema Cı stinkv wa		-sampled in	termittent j	oart of creek to	determine nu	umbers of potentially stranded fish; dryin	ng up-lots of algae,
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	677	p16	200	0	0	34	CO 0	
Pass 2							SH YOY 0	
Pass 3							SH 1 + 0	
Pass 4								
Stream Q	uarry Gu	lch	Site low	er riparia	n		Index Site # 1	Date 06/20/01
Descriptio	n near n	nouth						
Unit # 1		Unit '	Туре МС	СР	Temp °C	2	Conductivity (µS/cm)	
Comments	Isolated p	ool with rust	ed refrigerat	or enhance	d scour.			
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	151	P16	200	0	4	0	CO 0	
Pass 2	142	P16	200	0	0	0	SH YOY 1	
Pass 3								
Pass 4							SH 1 + 0	

NATIONAL PARK SRIVER	Point I	Reyes N CSI				olden Gate National Recr 7 2000 - 30 June 2001	reation Area
Stream Q	-		Site lowe	er riparia	n	Index Site # 1	Date 06/20/01
Descriptio	n near n			ND.	T AC		
Unit # 2	Isolated p		Туре МС	Р	Temp °C	Conductivity (µS/cm)	
Comments	isolateu p						
	Time	Setting	Volts	CO	SH YOY SH 1+	Total Mortality	
Pass 1	30	P16	200	0	0 0	CO 0	
Pass 2						SH YOY 0	
Pass 3						SH 1 + 0	
Pass 4							
Stream Q Descriptio	•		Site lowe	er riparia	in	Index Site # 1	Date 06/20/01
Unit # 4			Type LS	R	Temp °C	Conductivity (µS/cm)	
Comments	Staff gua	ge pool. Read			-		
	Time	Setting	Volts	СО	SH YOY SH 1+	Total Mortality	
Pass 1	179	P16	200	0	4 0	CO 0	
Pass 2	157	P16	200	0	0 0		
Pass 3						SH YOY 0	
Pass 4						SH 1 + 0	
Stream Q Descriptio	•		Site lowe	er riparia	ın	Index Site # 1	Date 06/20/01
Unit # 6		Unit	Туре		Temp °C	Conductivity (µS/cm)	
Comments							
	Time	Setting	Volts	СО	SH YOY SH 1+	Total Mortality	
Pass 1	163	P16	200	0	1 0	CO 0	
Pass 2						SH YOY 0	
Pass 3							
Pass 4						SH 1+ 0	
Stream Q	uarry Gu	ılch	Site lowe	er riparia	in	Index Site # 1	Date 06/20/01
Descriptio	n near n	nouth					
Unit # 7	_	Unit	Туре		Temp °C	Conductivity (µS/cm)	
Comments							
	Time	Setting	Volts	СО	SH YOY SH 1+	Total Mortality	
Pass 1	171	P16	200	0	0 0	CO 0	
Pass 2						SH YOY 0	
Pass 3							
Pass 4						SH 1 + 0	

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Quarry Gulch Site lower riparian							Index Site # 1	Date 06/20/01
Descriptio	n near n	nouth						
Unit # 9		Unit	Туре		Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	441	P16	200	0	0	0	CO 0	
Pass 2								
Pass 3								
Pass 4							SH 1+ 0	
Stream Q	uarry Gu	ılch	Site mid	dle ripar	ian		Index Site # 3	Date 06/20/01
Descriptio	n riparia	an area just	t downstre	am of H	wy 1			
Unit # 1		Unit	Type LS	R	Temp °C	C	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	439	P16	200	1	0	1	CO 0	
Pass 2	391	P16	200	0	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1 + 0	
Stream Q	uarry Gu	lch	Site mid	dle ripar	ian		Index Site # 3	Date 06/20/01
Descriptio	-			-			inuca site ii s	Date 00/20/01
Unit # 2	- npun	·	Туре МС		Temp °C	7	Conductivity (µS/cm)	
Comments			<u>- , r</u>		F	-		
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	390	P16	200	0	0	0	CO 0	
Pass 2								
Pass 3								
Pass 4							SH 1 + 0	
Stream Q	uarry Gu	ilch	Site mid	dle ripar	ian		Index Site # 3	Date 06/20/01
Descriptio	•			-				
Unit # 3	1		Type LS		Temp °C	C	Conductivity (µS/cm)	
Comments	Did not s	hock. Red leg						
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1							CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	

NATIONAL PARR SERVICE	Point R	Reyes N CSI			ore ing Log	_	Golden Gate National Recre y 2000 - 30 June 2001	eation Area
Stream Q	uarry Gul	lch	Site ope	n pasture	•		Index Site # 2	Date 06/20/01
Descriptio	n denude	ed pasture	area west	of Hwy	1			
Unit # 1		Unit	Type CR	Р	Temp °C	C	Conductivity (µS/cm)	
Comments		neasured: all ity in creek		ım; most S	TK larval; mo	st tadpoles	bullfrog(RLF?), though possibly few treefrog	Signs of recent
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	500	P16	200	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Q	-		Site ope	-			Index Site # 2	Date 06/20/01
Descriptio	n denude			2				
Unit # 2	[Unit	Type CR	Р	Temp °C	2	Conductivity (µS/cm)	
Comments								
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	448	P16	200	0	0	0	CO 0	
Pass 2							SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream Q Descriptio Unit # 4	•	ed pasture	Site ope area west Type M(of Hwy		7	Index Site # 2 Conductivity (µS/cm)	Date 06/20/01
Comments	Pass 2 sto RO/12 ST	pped due to	• •		-		easured: 111 RO/63 STK, in addition to mea	sures above. (12
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality	
Pass 1	490	P16	200	1	0	2	CO 0	
Pass 2	228	P16	200	0	0	0	SH YOY 0	
Pass 3								
Pass 4							SH 1+ 0	
Stream R	edwood (reek	Site MU	WO par	king lot		Index Site # 2a	Date 10/18/00
				-	parking lot		index Site # 24	Dute 10/10/00
Unit # 42			Type LS		Temp °C	7	Conductivity (µS/cm)	
Comments		0	- , pe 25					
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality	
Pass 1	1154	P16	200	7	23	6	CO 0	
Pass 2	922	P16	200	1	6	1		
Pass 3	<u> </u>					l	SH YOY 0	
Pass 4	<u> </u>					l	SH 1 + 0	
- 465 -	<u> </u>					L	1	

Golden Gate National Recreation Area

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CSRP	Electrofishin	ig Log

Point Reyes National Seashore

Stream Re			Site MU	Index Site # 2a Date 10/18						
Description Unit # 44	n Stream					~	Conductivity (uS/cm)			
Comments		Unit	Туре МС	JP	Temp °C	0	Conductivity (µS/cm)			
comments										
Г	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality			
Pass 1	676	P16	200	2	22	3	CO 0			
Pass 2	572	P16	200	1	5	0	SH YOY 0			
Pass 3							SH 1 + 0			
Pass 4										
Stream Re			Site MU	-	-		Index Site # 2a	Date 10/18/00		
Description	n Stream									
Unit # 45		Unit	Type ST	Р	Temp °C	0	Conductivity (µS/cm)			
Comments										
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality			
Pass 1	826	P16	200	0	19	2	CO 0			
Pass 2							SH YOY 0			
Pass 3										
Pass 4							SH 1+ 0			
Stream Re	edwood (Creek	Site MU	WO par	king lot		Index Site # 2a	Date 10/18/00		
Description	n Stream	n km 5.2, N	Auir Woo	ds main	parking lot					
Unit # 46		Unit	Туре		Temp °C	С	Conductivity (µS/cm)			
Comments										
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality			
Pass 1	518	P16	200	0	3	0	CO 0			
Pass 2							SH YOY 0			
Pass 3										
Pass 4							SH 1 + 0			
Stream Re	edwood (Creek	Site MU	WO par	king lot		Index Site # 2a	Date 10/18/00		
Description				-	-					
Unit # 47		· · ·	Туре МС		Temp °	С	Conductivity (µS/cm)			
Comments					•					
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality			
Pass 1	762	P16	200	3	25	9	CO 0			
Pass 2	744	P16	200	0	2	1				
Pass 3										
Pass 4							SH 1+ 0			

Point Reyes National Seashore Golden Gate National Recreation Area CSRP Electrofishing Log 1 July 2000 - 30 June 2001 Stream Redwood Creek Site MUWO parking lot Index Site # 2a Date 10/18/00 Description Stream km 5.2, Muir Woods main parking lot Unit # 48 Unit Type LGR Temp °C Conductivity (µS/cm) ~30% capture rate, tough to net fish among cobbly bottom Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 752 P16 Pass 1 100 0 15 0 0 СО Pass 2 1 SH YOY Pass 3 0 SH 1+ Pass 4 Stream Redwood Creek Site MUWO parking lot Index Site # 2a Date 10/18/00 Description Stream km 5.2, Muir Woods main parking lot Unit # 49 Temp °C Conductivity (µS/cm) Unit Type Comments СО SH 1+ **Total Mortality** Time Setting Volts SH YOY 1556 P16 200 2 Pass 1 39 3 СО 0 1689 P16 200 1 13 0 Pass 2 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Redwood Creek Index Site # 1a Date 10/19/00 Site Muir Woods **Description** Stream km 6.2 Conductivity (µS/cm) Unit # 105 Unit Type MCP Temp °C Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** 500 P16 200 Pass 1 3 8 1 0 СО 419 P16 200 0 0 Pass 2 1 SH YOY 0 Pass 3 SH 1+ 0 Pass 4 Stream Redwood Creek Site Muir Woods Index Site # 1c Date 10/19/00 Description Stream km Unit # 62 Unit Type LSR Temp °C Conductivity (µS/cm) difficult to electrofish due to root structures and interruptions by public Comments Time Setting Volts CO SH YOY SH 1+ **Total Mortality** Pass 1 663 P16 200 3 14 4 СО 0 606 P16 200 0 0 0 Pass 2 SH YOY 0 Pass 3 1 SH 1+ Pass 4

Golden Gate National Recreation Area

CSRP Electrofishing Log

Stream Redwood Creek Site Muir Woods							Index Site # 1b	Date 10/19/00	
Description	n Stream	ı km 6.1, jı	ust upstrea	am of bri	dge 3				
Unit # 96		Unit '	Type LSI	R	Temp °C		Conductivity (µS/cm)		
Comments									
	Time	Setting	Volts	CO	SH YOY	SH 1+	Total Mortality		
Pass 1	693	P16	200	4	18	1	CO 0		
Pass 2	454	P16	200	0	4	0	SH YOY 1		
Pass 3									
Pass 4							SH 1 + 0		
Stream Redwood Creek Site MUWO parking lot Index Site # 2a Date 1									
Description	n Stream	1 km 5.2, N	luir Woo	ds main j	Ū				
Unit # 43	Unit Type GLD				Temp °C	2	Conductivity (µS/cm)		
Comments									
_	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality		
Pass 1	557	P16	200	0	22	0	CO 0		
Pass 2	464	P16	200	0	2	0	SH YOY 0		
Pass 3									
Pass 4							SH 1 + 0		
Stream W	ater Tanl	c Gulc	Site lowe	er interm	ittent sectio	on	Index Site #	Date 05/04/01	
Description	n from H	wy 1 culv	ert down	to overgi	own dry se	ction befo	ore mainstem		
Unit #		Unit '	Гуре рос	ol	Temp °C		Conductivity (µS/cm)		
Comments	Olema Cre	eek tributary-	sampled int	ermittent p	art of creek to	determine	numbers of potentially stranded fish		
	Time	Setting	Volts	СО	SH YOY	SH 1+	Total Mortality		
Pass 1		p16	200	0	0	13	CO 0		
Pass 2							SH YOY 0		
Pass 3									
Pass 4							SH 1 + 0		