

MERCED RIVER, S.F., Section 1
Survey Date: 1999/08/24
Species: Rainbow trout

Number of shockers: 3
Number of passes: 3
Section length: 82.6 meters
Mean width of section: 14.56 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 39 grams
Range of measured lengths: 50 to 265 mm
Range of measured weights: 1 to 179 grams

Number of fish caught in each pass:

Pass	Fish caught
1	62
2	27
3	19

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 125.00 (+/-) 18.02
Upper 95% Confidence Limit: 143.02
Lower 95% Confidence Limit: 108.00

Capture Probability: 48%
Standard Error: 9.10
Error of Population Estimate: 14.42%
Coefficient of Variation: 0.07

Biomass: 4.88 kg 10.73 lbs
Standing Crop: 40.54 kg/ha 36.09 lbs/acre

Fish per Mile, 95% C.I.: 2,435.45 (+/-) 351.11
Fish per Kilometer, 95% C.I.: 1,513.32 (+/-) 218.17

MERCED RIVER, S.F., Section 1
Survey Date: 1999/08/24
Species: Rainbow trout

Length	Weight
50	1
51	1
55	1
55	1
57	1
57	2
60	3
62	2
64	4
66	3
66	3
67	2
67	2
67	3
67	5
68	2
70	2
70	3
71	3
71	4
71	4
71	4
75	3
75	4
76	6
79	5
80	5
80	5
86	5
112	14
120	19
121	16
123	18
124	16
127	20
127	22
128	21
128	21
130	23
133	23
133	24
134	23
135	22
138	26
138	27

MERCED RIVER, S.F., Section 1
Survey Date: 1999/08/24
Species: Rainbow trout

Length	Weight
139	25
141	26
142	29
145	27
145	28
145	29
145	30
145	30
146	31
146	34
147	33
149	31
149	33
150	32
150	33
151	30
152	34
153	39
154	35
155	34
155	35
155	40
156	35
160	43
162	47
163	42
164	42
164	42
165	42
165	44
166	42
166	42
166	43
169	47
169	48
171	54
173	48
173	54
176	51
177	58
180	73
186	64
192	69
197	76
204	71

MERCED RIVER, S.F., Section 1
Survey Date: 1999/08/24
Species: Rainbow trout

Length	Weight
204	83
205	84
206	81
206	88
209	87
210	88
214	111
218	109
219	98
220	94
221	103
226	108
226	111
230	132
231	78
232	140
255	163
265	179

MERCED RIVER, S.F., Section 1
Survey Date: 1999/08/24
Species: Brown trout

Number of shockers: 3
Number of passes: 3
Section length: 82.6 meters
Mean width of section: 14.56 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 44 grams
Range of measured lengths: 71 to 315 mm
Range of measured weights: 4 to 344 grams

Number of fish caught in each pass:

Pass	Fish caught
1	8
2	2
3	1

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 11.00 (+/-) 1.27
Upper 95% Confidence Limit: 12.27
Lower 95% Confidence Limit: 11.00

Capture Probability: 73%
Standard Error: 0.58
Error of Population Estimate: 11.51%
Coefficient of Variation: 0.05

Biomass: 0.48 kg 1.06 lbs
Standing Crop: 4.02 kg/ha 3.58 lbs/acre

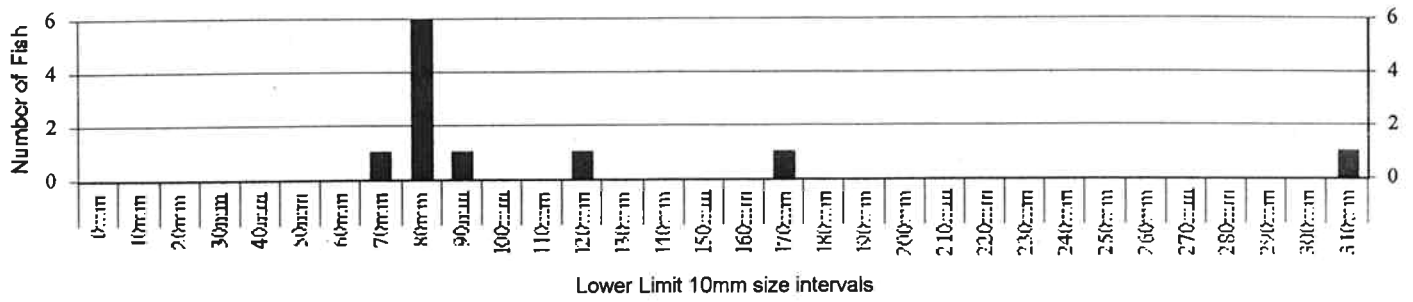
Fish per Mile, 95% C.I.: 214.32 (+/-) 24.67
Fish per Kilometer, 95% C.I.: 133.17 (+/-) 15.33

MERCED RIVER, S.F., Section 1

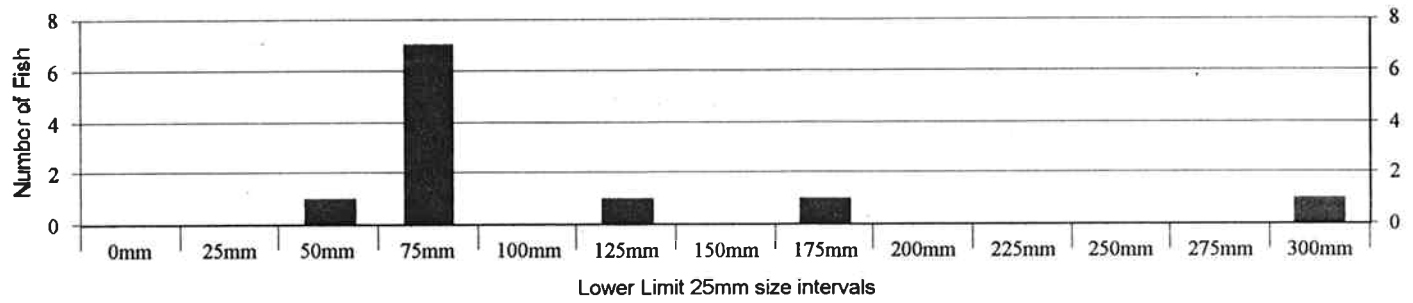
Survey Date: 1999/08/24

Species: Brown trout

10mm Length Distribution



25mm Length Distribution



MERCED RIVER, S.F., Section 2
Survey Date: 1999/08/25
Species: Rainbow trout

Number of shockers: 3
Number of passes: 3
Section length: 87.78 meters
Mean width of section: 12.29 meters

Weight estimation equation: $Weight = Length * 3.088 + 0.000$
Estimation model source: MERCED RIVER, S.F., Section 2, 1999/08/25
Average weight of fish in sample: 46 grams
Range of measured lengths: 56 to 258 mm
Range of measured weights: 1 to 160 grams

Number of fish caught in each pass:

Pass	Fish caught
1	73
2	29
3	12

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 121.00 (+/-) 8.58
Upper 95% Confidence Limit: 129.58
Lower 95% Confidence Limit: 114.00

Capture Probability: 61%
Standard Error: 4.33
Error of Population Estimate: 7.09%
Coefficient of Variation: 0.04

Biomass: 5.57 kg 12.25 lbs
Standing Crop: 51.59 kg/ha 45.93 lbs/acre

Fish per Mile, 95% C.I.: 2,218.39 (+/-) 157.30
Fish per Kilometer, 95% C.I.: 1,378.45 (+/-) 97.74

MERCED RIVER, S.F., Section 2
Survey Date: 1997/08/25
Species: Rainbow trout

Length	Weight
56	1
63	2
68	3
69	3
70	4
71	3
74	3
76	Null
79	4
109	13
116	16
120	15
121	16
125	20
127	18
127	20
128	20
129	20
129	23
130	19
130	20
131	20
131	21
132	21
132	22
133	22
135	25
135	25
136	23
136	26
136	27
137	24
137	25
138	22
138	24
141	25
142	27
142	27
143	30
145	29
145	30
145	33
147	31
148	32
149	31

MERCED RIVER, S.F., Section 2
Survey Date: 1995/08/25
Species: Rainbow trout

Length	Weight
150	33
151	33
152	33
153	34
154	35
154	35
155	34
155	35
156	33
156	35
156	37
156	37
157	34
157	36
158	37
158	38
159	36
159	39
160	39
160	41
160	44
161	36
162	39
162	40
163	39
164	41
165	44
166	44
167	41
169	42
170	44
170	51
171	44
171	51
172	46
172	52
172	53
173	48
173	50
174	47
177	56
180	53
181	60
181	62
185	58

MERCED RIVER, S.F., Section 2

Survey Date: 1995/08/25

Species: Rainbow trout

Length	Weight
195	74
196	73
198	78
198	82
200	75
204	81
208	83
209	88
210	96
211	81
215	91
218	98
220	107
224	102
227	107
229	118
233	130
236	121
238	114
240	128
241	135
256	155
256	160
258	155

MERCED RIVER, S.F., Section 2

Survey Date: 1999/08/25

Species: Brown trout

Number of shockers: 3
Number of passes: 3
Section length: 87.78 meters
Mean width of section: 12.29 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 32 grams
Range of measured lengths: 78 to 310 mm
Range of measured weights: 4 to 288 grams

Number of fish caught in each pass:

Pass	Fish caught
1	14
2	1
3	1

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 16.00 (+/-) 0.58
Upper 95% Confidence Limit: 16.58
Lower 95% Confidence Limit: 16.00

Capture Probability: 84%
Standard Error: 0.27
Error of Population Estimate: 3.64%
Coefficient of Variation: 0.02

Biomass: 0.51 kg 1.13 lbs
Standing Crop: 4.75 kg/ha 4.23 lbs/acre

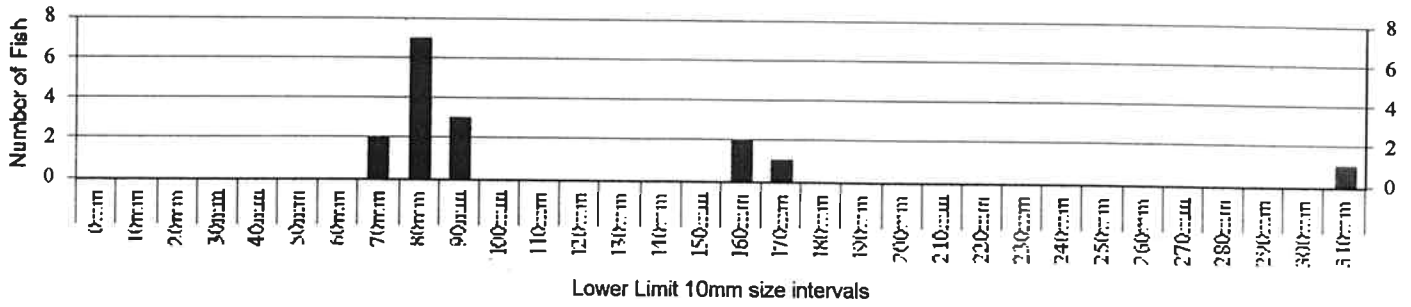
Fish per Mile, 95% C.I.: 293.34 (+/-) 10.67
Fish per Kilometer, 95% C.I.: 182.27 (+/-) 6.63

MERCED RIVER, S.F., Section 2

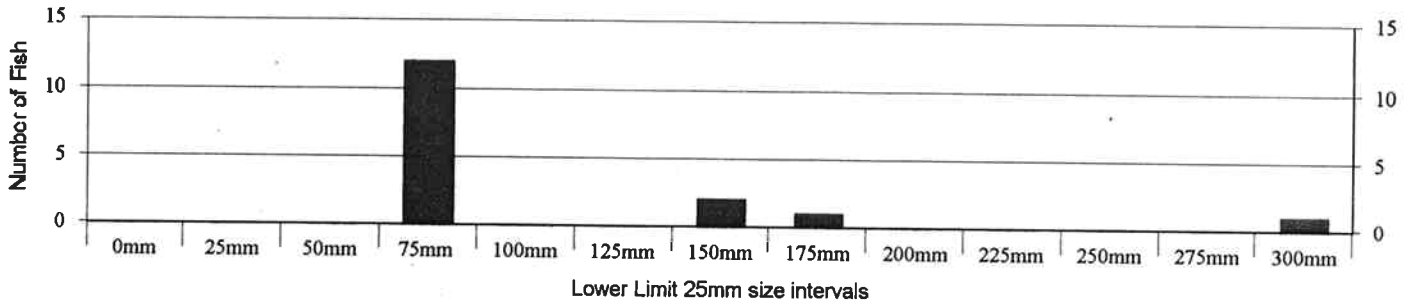
Survey Date: **1999/08/25**

Species: **Brown trout**

10mm Length Distribution



25mm Length Distribution



SAS

8:32 Friday, January 26, 1996

2

FISH POPULATION ESTIMATION.....SURVEY DATE: 21AUG91
STREAM: MERCED RIVER SECT 2 (CLARK'S BRIDGE)
SPECIES:RT

Number of Electroshockers=	4
Number of Removals=	2
Removal Pattern	CATCH
-----	-----
Removal 1	17
Removal 2	7
-----	-----

Total Catch = 24

Population Estimate = 28 STD. Error= 5.83
95% C.I. = + or - 11.43=(24 ,39)

95% Confidence Intervals(Estimates and errors adjusted by section length)
#Fish/Mile= 450.00 +or- 183.94
#Fish/Kilometer= 280.00 +or- 114.30

Capture Probability = 0.59
% Error of Popul. Est. = 40.81
Coefficient of Variation = 0.21

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	90.2 ft. or	27.49 m
Average Weight	34.50 g or	0.08 lb
Biomass	0.97 kg or	2.13 lb
Standing Crop	3.51 kg/ha	3.13 lb./acre

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45		0	0	0.00	0.00
55		0	0	0.00	0.00
65		0	0	0.00	0.00
75		0	0	0.00	0.00
85		0	0	0.00	0.00
95	*****	1	1	4.17	4.17
105		0	1	0.00	4.17
115	*****	3	4	12.50	16.67
125	*****	5	9	20.83	37.50
135	*****	4	13	16.67	54.17
145		0	13	0.00	54.17
155	*****	2	15	8.33	62.50
165	*****	2	17	8.33	70.83
175	*****	2	19	8.33	79.17
185	*****	3	22	12.50	91.67
195		0	22	0.00	91.67
205	*****	1	23	4.17	95.83
215		0	23	0.00	95.83
225	*****	1	24	4.17	100.00
235		0	24	0.00	100.00
245		0	24	0.00	100.00
255		0	24	0.00	100.00
265		0	24	0.00	100.00
275		0	24	0.00	100.00
285		0	24	0.00	100.00
295		0	24	0.00	100.00
305		0	24	0.00	100.00
315		0	24	0.00	100.00
325		0	24	0.00	100.00
335		0	24	0.00	100.00
345		0	24	0.00	100.00
355		0	24	0.00	100.00
365		0	24	0.00	100.00
375		0	24	0.00	100.00
385		0	24	0.00	100.00
395		0	24	0.00	100.00
405		0	24	0.00	100.00

-----+-----+-----+-----+-----+
1 2 3 4 5

FREQUENCY

Fish Population Estimation...Summary Info.

STREAM: MERCED R. SEC. 11 CLARKS B Species: BN

Date of Survey: 21AUG91

Section Length = 328 ft. or = 99.97 m
 Ave. Section Width = 90.2 ft. or = 27.49296 m

Number of Removals: 3

Removal Pattern

Removal 1 66

Removal 2 50

Removal 3 19

Total Catch = 135

Population Estimate = 165

Pop. Est. STD. Error = 14.10

Pop. Est. 95% C.I. = + or - 27.64 (137 , 192)

Capture Probability = 0.43 % Error of Pop. Est. = 16.75

Average Weight = 52.10 g or 0.11 lb
 Biomass = 8.60 kg or 18.96 lb
 Standing Crop = 31.27 kg/ha or 27.90 lb./acre

95% Confidence Intervals

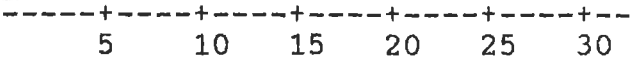
#Fish/Mile = 2656.00 +or- 444.96

#Fish/Kilometer = 1650.00 +or- 276.50

----- SPECIES=Brown trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45		0	0	0.00	0.00
55	*	1	1	0.74	0.74
65	*	1	2	0.74	1.48
75	*	1	3	0.74	2.22
85	*	1	4	0.74	2.96
95		0	4	0.00	2.96
105		0	4	0.00	2.96
115		0	4	0.00	2.96
125	**	2	6	1.48	4.44
135	*****	17	23	12.59	17.04
145	*****	32	55	23.70	40.74
155	*****	25	80	18.52	59.26
165	*****	21	101	15.56	74.81
175	*****	5	106	3.70	78.52
185		0	106	0.00	78.52
195	*****	5	111	3.70	82.22
205	*****	6	117	4.44	86.67
215	*****	5	122	3.70	90.37
225	*	1	123	0.74	91.11
235	**	2	125	1.48	92.59
245	****	4	129	2.96	95.56
255	**	2	131	1.48	97.04
265	**	2	133	1.48	98.52
275	*	1	134	0.74	99.26
285	*	1	135	0.74	100.00
295		0	135	0.00	100.00
305		0	135	0.00	100.00
315		0	135	0.00	100.00
325		0	135	0.00	100.00
335		0	135	0.00	100.00
345		0	135	0.00	100.00
355		0	135	0.00	100.00
365		0	135	0.00	100.00
375		0	135	0.00	100.00
385		0	135	0.00	100.00
395		0	135	0.00	100.00
405		0	135	0.00	100.00



FREQUENCY

STREAM: SEC 11 YOSEMITE VALLEY SEC 2 CLARKS BRIDGE
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 86.4 ft (26.3347 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 13 7 3

TOTAL CATCH = 23
POPULATION EST = 25 +or- 5.45564
POP EST STD ERR = 2.78349
POP EST CONF INTRVL = +or- 5.45564
LOWER CONF LIMIT = 23
UPPER CONF LIMIT = 30.4556
CAPTURE PROB = .547619
% ERROR OF POP EST = 21.8226

AVERAGE WEIGHT = 50 g
BIOMASS = 1.25 kg (2.75625 lb)
STANDING CROP = 4.23468 lb/ac (4.74708 kg/ha)
FISH PER MILE = 402.439 +or- 87.8225
FISH PER KILOMETER = 250.076 +or- 54.573

MTB > NOTE
MTB > NOTE
MTB > NOTE HISTOGRAM FOR
MTB > NOTE MERCED RIVER SECTION: 11
MTB > NOTE SPECIES CODE: RT
MTB > NOTE YEAR OF COLLECTION : 90
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

Histogram of LENGTH N = 23

Midpoint	Count	
37.5	0	
62.5	4	****
87.5	0	
112.5	0	
137.5	6	*****
162.5	3	***
187.5	6	*****
212.5	2	**
237.5	1	*
262.5	1	*

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

STREAM: SEC 11 YOSEMITE VALLEY SEC 2 CLARKS BRIDGE
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 86.4 ft (26.3347 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 86 57 32

TOTAL CATCH = 175
POPULATION EST = 226 \pm 41.6243
POP EST STD ERR = 21.2369
POP EST CONF INTRVL = \pm 41.6243
LOWER CONF LIMIT = 184.376
UPPER CONF LIMIT = 267.624
CAPTURE PROB = .389755
% ERROR OF POP EST = 18.4178

AVERAGE WEIGHT = 54 g
BIOMASS = 12.204 kg (26.9098 lb)
STANDING CROP = 41.344 lb/ac (46.3467 kg/ha)
FISH PER MILE = 3638.05 \pm 670.049
FISH PER KILOMETER = 2260.69 \pm 416.369

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 11
 MTB > NOTE SPECIES CODE: BN
 MTB > NOTE YEAR OF COLLECTION : 90
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 175
 Each * represents 2 obs.

Midpoint	Count	
37.5	0	
62.5	4	**
87.5	56	*****
112.5	2	*
137.5	10	*****
162.5	35	*****
187.5	9	*****
212.5	27	*****
237.5	22	*****
262.5	8	****
287.5	1	*
312.5	1	*

MTB > NOTE

MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Fish Population Estimation...Summary Info.

STREAM: MERCED R. SEC 1(10) P. Species: RT

Date of Survey: 20AUG91

Section Length = 328 ft. or = 99.97 m
Ave. Section Width = 38.4 ft. or = 11.70432 m

Number of Removals: 3

Removal Pattern

Removal 1 40
Removal 2 19
Removal 3 16
Total Catch = 75

Population Estimate = 93

Pop. Est. STD. Error = 11.56

Pop. Est. 95% C.I. = + or - 22.66 (75 , 115)

Capture Probability = 0.42 % Error of Pop. Est. = 24.36

Average Weight = 26.30 g or 0.06 lb
Biomass = 2.45 kg or 5.39 lb
Standing Crop = 20.90 kg/ha or 18.64 lb./acre

95% Confidence Intervals

#Fish/Mile = 1497.00 +or- 364.72

#Fish/Kilometer = 930.00 +or- 226.64

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
12		0	0	0.00	0.00
37	*****	10	10	13.33	13.33
62	*	1	11	1.33	14.67
87	*****	5	16	6.67	21.33
112	*****	25	41	33.33	54.67
137	*****	16	57	21.33	76.00
162	*****	5	62	6.67	82.67
187	*****	9	71	12.00	94.67
212	***	3	74	4.00	98.67
237	*	1	75	1.33	100.00
262		0	75	0.00	100.00
287		0	75	0.00	100.00
312		0	75	0.00	100.00
337		0	75	0.00	100.00
362		0	75	0.00	100.00
387		0	75	0.00	100.00
412		0	75	0.00	100.00
437		0	75	0.00	100.00
462		0	75	0.00	100.00
487		0	75	0.00	100.00
512		0	75	0.00	100.00

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5 10 15 20 25

FREQUENCY

7:25 Monday, August 26, 1991 18

Fish Population Estimation...Summary Info.

STREAM:MERCED R.1(10)HAPISL 199 Species: BN

Date of Survey: 20AUG91

Section Length= 328 ft. or = 99.97 m
Ave. Section Width = 38.4 ft. or =11.70432 m

Number of Removals: 3

Removal Pattern

Removal 1 39
Removal 2 7
Removal 3 4
Total Catch = 50

Population Estimate =50

Pop. Est. STD. Error= 0.94

Pop. Est. 95% C.I. = + or - 1.84 (50 ,51)

Capture Probability =0.77 % Error of Pop. Est. = 3.67

Average Weight = 52.20 g or 0.11 lb
Biomass = 2.61 kg or 5.76 lb
Standing Crop= 22.30 kg/ha or 19.89 lb./acre

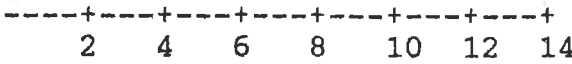
95% Confidence Intervals

#Fish/Mile= 804.00 +or- 29.55
#Fish/Kilometer= 500.00 +or- 18.36

----- SPECIES=Brown trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
12		0	0	0.00	0.00
37	**	1	1	2.00	2.00
62	*****	9	10	18.00	20.00
87	*****	4	14	8.00	28.00
112	****	2	16	4.00	32.00
137	*****	14	30	28.00	60.00
162	*****	4	34	8.00	68.00
187	*****	5	39	10.00	78.00
212	*****	4	43	8.00	86.00
237	****	2	45	4.00	90.00
262	*****	3	48	6.00	96.00
287	**	1	49	2.00	98.00
312		0	49	0.00	98.00
337	**	1	50	2.00	100.00
362		0	50	0.00	100.00
387		0	50	0.00	100.00
412		0	50	0.00	100.00
437		0	50	0.00	100.00
462		0	50	0.00	100.00
487		0	50	0.00	100.00
512		0	50	0.00	100.00



FREQUENCY

STREAM: MERCED RIVER SECTION 10 HAPPY ISLES YOSEMITE SECTION 1
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 33.5 ft (10.2108 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 82 16 14

TOTAL CATCH = 112
POPULATION EST = 116 +or- 5.7372
POP EST STD ERR = 2.92715
POP EST CONF INTRVL = +or- 5.7372
LOWER CONF LIMIT = 112
UPPER CONF LIMIT = 121.737
CAPTURE PROB = .666667
% ERROR OF POP EST = 4.94587

AVERAGE WEIGHT = 26 g
BIOMASS = 3.016 kg (6.65028 lb)
STANDING CROP = 26.3518 lb/ac (29.5404 kg/ha)
FISH PER MILE = 1867.32 +or- 92.355
FISH PER KILOMETER = 1160.35 +or- 57.3895

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MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          MERCED RIVER      SECTION: 10
MTB > NOTE          SPECIES CODE:      RT
MTB > NOTE          YEAR OF COLLECTION : 90
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 112 ✓

Midpoint	Count	
37.5	2	**
62.5	33	*****
87.5	6	*****
112.5	17	*****
137.5	25	*****
162.5	12	*****
187.5	10	*****
212.5	4	****
237.5	3	***

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 112

Midpoint	Count	
45.0	2	**
55.0	13	*****
65.0	16	*****
75.0	9	*****
85.0	0	
95.0	1	*
105.0	5	*****
115.0	7	*****
125.0	10	*****
135.0	13	*****
145.0	7	*****
155.0	5	*****
165.0	5	*****
175.0	3	***
185.0	4	****
195.0	5	*****
205.0	0	
215.0	3	***
225.0	1	*
235.0	1	*
245.0	2	**

MTB > NOOUTFILE

STREAM: MERCED RIVER SECTION 10 HAPPY ISLES YOSEMITE SECTION 1
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 33.5 ft (10.2108 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 40 12 4

TOTAL CATCH = 56
POPULATION EST = 57 +or- 3.04629
POP EST STD ERR = 1.55423
POP EST CONF INTRVL = +or- 3.04629
LOWER CONF LIMIT = 56
UPPER CONF LIMIT = 60.0463
CAPTURE PROB = .708861
% ERROR OF POP EST = 5.34437

AVERAGE WEIGHT = 52 g
BIOMASS = 2.964 kg (6.53562 lb)
STANDING CROP = 25.8975 lb/ac (29.0311 kg/ha)
FISH PER MILE = 917.561 +or- 49.0379
FISH PER KILOMETER = 570.174 +or- 30.4722

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 10
 MTB > NOTE SPECIES CODE: BN
 MTB > NOTE YEAR OF COLLECTION : 90
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 56

Midpoint	Count	
37.5	0	
62.5	0	
87.5	27	*****
112.5	1	*
137.5	2	**
162.5	6	*****
187.5	4	****
212.5	7	*****
237.5	4	****
262.5	2	**
287.5	2	**
312.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm

Histogram of LENGTH N = 56

Midpoint	Count	
45.0	0	
55.0	0	
65.0	0	
75.0	3	***
85.0	14	*****
95.0	10	*****
105.0	1	*
115.0	0	
125.0	0	
135.0	1	*
145.0	1	*
155.0	2	**
165.0	3	***
175.0	1	*
185.0	2	**
195.0	2	**
205.0	7	*****
215.0	0	
225.0	1	*
235.0	1	*
245.0	2	**
255.0	0	
265.0	1	*
275.0	2	**
285.0	0	
295.0	1	*
305.0	1	*

MERCED RIVER, Section 5
Survey Date: 2001/08/15
Species: Rainbow trout

Number of shockers: 5
Number of passes: 3
Section length: 74.67691 meters
Mean width of section: 32.36461 meters

Weight estimation equation: $Weight = Length * 2.996 + 0.000$
Estimation model source: MERCED RIVER, Section 5, 2001/08/15
Average weight of fish in sample: 117 grams
Range of measured lengths: 47 to 332 mm
Range of measured weights: 1 to 340 grams

Number of fish caught in each pass:

Pass	Fish caught
1	19
2	5
3	0

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 24.00 (+/-) 0.80
Upper 95% Confidence Limit: 24.80
Lower 95% Confidence Limit: 24.00

Capture Probability: 83%
Standard Error: 0.39
Error of Population Estimate: 3.35%
Coefficient of Variation: 0.02

Biomass: 2.81 kg 6.18 lbs
Standing Crop: 11.62 kg/ha 10.34 lbs/acre

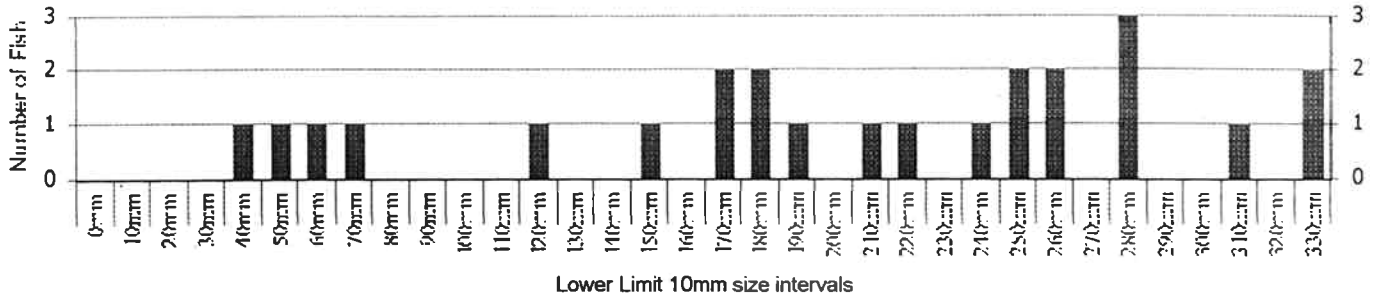
Fish per Mile, 95% C.I.: 517.22 (+/-) 17.33
Fish per Kilometer, 95% C.I.: 321.38 (+/-) 10.77

MERCED RIVER, Section 5

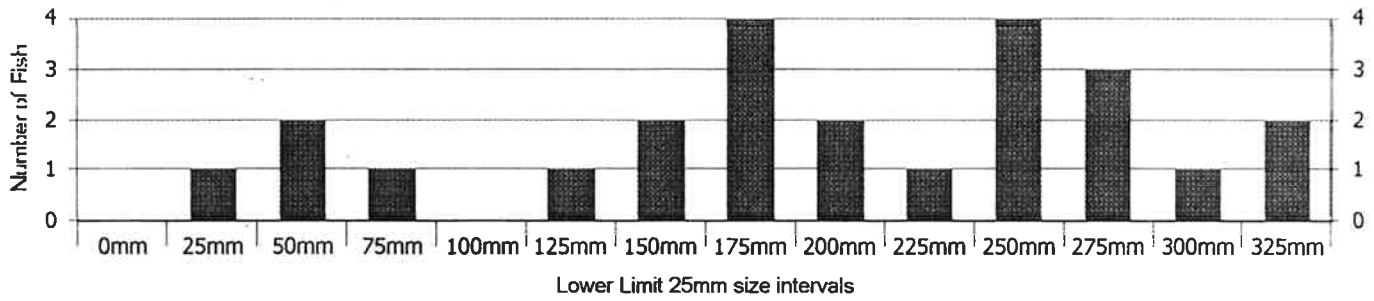
Survey Date: **2001/08/15**

Species: **Rainbow trout**

10mm Length Distribution



25mm Length Distribution



MERCED RIVER, Section 5**Survey Date: 2001/08/15****Species: Brown trout**

Number of shockers: 5
Number of passes: 3
Section length: 74.67691 meters
Mean width of section: 32.36461 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 355 grams
Range of measured lengths: 175 to 388 mm
Range of measured weights: 52 to 586 grams

Number of fish caught in each pass:

Pass	Fish caught
1	5
2	2
3	2

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 9.00 (+/-) 2.78
Upper 95% Confidence Limit: 11.78
Lower 95% Confidence Limit: 9.00

Capture Probability: 60%
Standard Error: 1.23
Error of Population Estimate: 30.86%
Coefficient of Variation: 0.14

Biomass: 3.20 kg 7.03 lbs
Standing Crop: 13.22 kg/ha 11.77 lbs/acre

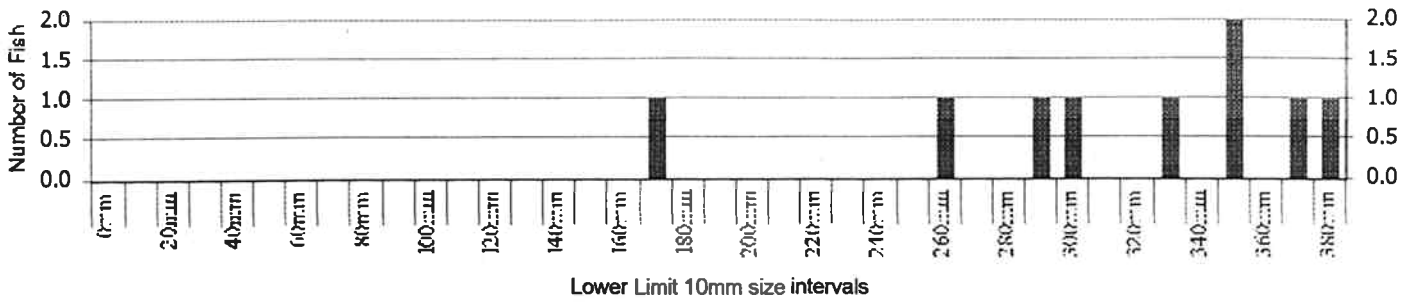
Fish per Mile, 95% C.I.: 193.96 (+/-) 59.85
Fish per Kilometer, 95% C.I.: 120.52 (+/-) 37.19

MERCED RIVER, Section 5

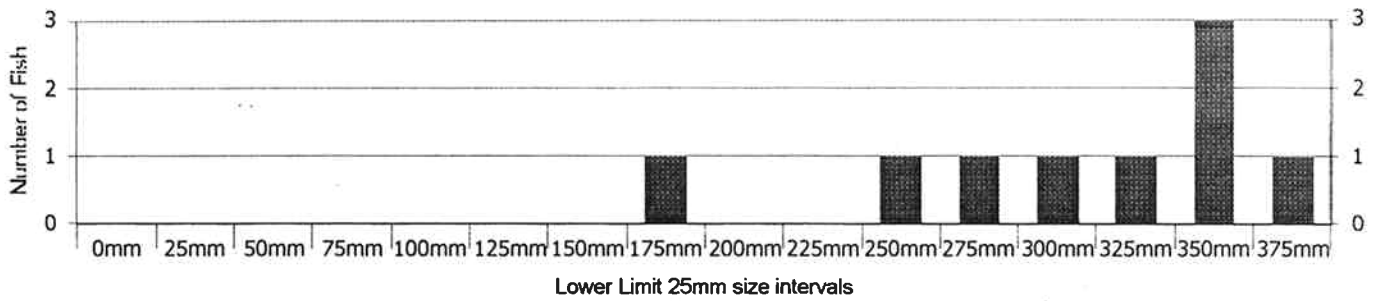
Survey Date: **2001/08/15**

Species: **Brown trout**

10mm Length Distribution



25mm Length Distribution



ELECTROFISHING SURVEY SUMMARY

SURVEY DATE (da/mo/yr) 15 / 08 / 01 (NEW)
STREAM NAME Merced River Section 5

Location Description New section which approximates old section located across from "El Portal Market" and upstream of El Portal Road (between sections 2 & 4)

Section Length 245 ft Average Width 106.2 ft (from Stream Transect Form)
74.676908 m 32.364612 m

AIR TEMPERATURE 25 °C or °F (circle one) at Time: 1230

DATA PACKET CHECKLIST

- Location Map
Fish Population
Water Quality & Electrofishing Conditions
Discharge & Gradient
Stream Transect (Depth/Substrate/Habitat)
Vegetation /Bank Stability/Cover
Habitat Description & Sketch of Section
Volunteer Service Log (Roster)
Volunteer Service Agreements
Other

SECTION ENCLOSURES: (check one for each end)

- Upstream Block: [X] seine [] cascade [] waterfall [] other (describe)
Downstream Block: [X] seine [] cascade [] waterfall [] other (describe)

NOTES & COMMENTS:

Digital camera wasn't cooperating

FISH PROCESSING (check one for each line below)

- Anesthetic used: [X] CO2 [] Other
Oxygen Added? [] YES [X] NO

AMPHIBIANS & REPTILES OBSERVED:

-> aquatic snake seen on rock in middle of stream below section.
-> western rattlesnake seen on riprap on right bank of the section

FISH POPULATION ESTIMATE SUMMARY

(use space below for notes or additional columns, if needed)

Table with columns for Taxon, RT, BN, SKRS, Each Picamurus, RIFFLE, and rows for Pass 1, Pass 2, Pass 3, Pass 4, Total.

The following formula can be used to calculate the depletion percentage between Pass i+1 (current pass) and Pass i (previous pass): (1 - [N_{i+1} * E_i] / [N_i * E_{i+1}]) * 100 = pass depletion, where N is the number of fish of a given species and E is the total number of seconds shocked (effort). See Electrofishing Conditions form for effort data.

REFERENCE PHOTOGRAPHS

[] Digital (Disk Number:) [X] SLR (Roll Number:)

Table with columns for Frame and Subject Description (please be specific) for Digital and SLR photos.

Stream Name Merced River Section 5 Survey Line (da/mo/yr) 15 / 08 / 01

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	<u>21</u> °C or °F (circle one)	9:10	<input checked="" type="checkbox"/> pocket thermometer <input type="checkbox"/> other (specify) _____	M. Bogan	M. Bogan
Specific Conductivity	<u>30</u> micromhos/cm	9:10	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	↓	↓
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH	<u>7.8</u>	9:10	<input type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	<u>14</u> mg/l	9:10	<input checked="" type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.)
Added 4 bricks of salt first pass; 2 bricks at start of second pass. Conductivity according to Hanna meter was unchanged.

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): SR-12 & RBs

Start Time: 10:30 End Time: 13:00

ELECTROFISHING EFFORT

Operator	GRAVEY	STAN	MILCE	ASTIN	KEN	Total
Shocker	Centron	R-4 #1	Shokulash	Timber (R4)	Complan	Time (sec)
Pass 1	1269	1768	1359	1084	1907	
Pass 2	1378	1401	1105	988	1176	
Pass 3	1103	1099	958	917	983	
Pass 4						

Electrofisher Settings:

Pulse Frequency _____ Hz
 Pulse Duration _____ ms
 Mode G / 5 (SR Type XII only)
 Output Voltage 400 Volts and 500
 Current 0.18 Amps
 Power = Volts x Amps = 72 Watts

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: 60 cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: 0 %

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
Carri Scott	Andrew Branagan	did not process
Kelli Felker		process -
Robb Tibstra		see data sheets
Shawn Shim		
Dave Lentz		

FISH POPULATION ESTIMATION.....SURVEY DATE: 04OCT92
 STREAM: MERCED RIVER SECTION 4
 SPECIES:RAINBOW TROUT

Number of Electroshockers=	4
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	15
Removal 2	3
Removal 3	1

Total Catch =	19

Population Estimate = 19 STD. Error= 0.48
 95% C.I. = + or - 0.94=(19 ,19)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 509.00 +or- 25.25
 #Fish/Kilometer= 316.00 +or- 15.69

Capture Probability = 0.79
 % Error of Popul. Est. = 4.96
 Coefficient of Variation = 0.03

Section Length=	197 ft. or =	60.05 m
Ave. Section Width =	38.9 ft. or	11.86 m
Average Weight	86.20 g or	0.19 lb
Biomass	1.64 kg or	3.61 lb
Standing Crop	23.00 kg/ha	20.52 lb./acre

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT	
13	0	0	0.00	0.00	
38	0	0	0.00	0.00	
63	0	0	0.00	0.00	
88	*****	5	26.32	26.32	
113	*****	4	21.05	47.37	
138		0	9	0.00	47.37
163	*****	1	10	5.26	52.63
188	*****	1	11	5.26	57.89
213	*****	5	16	26.32	84.21
238	*****	1	17	5.26	89.47
263		0	17	0.00	89.47
288		0	17	0.00	89.47
313	*****	2	19	10.53	100.00
338		0	19	0.00	100.00
363		0	19	0.00	100.00
388		0	19	0.00	100.00
413		0	19	0.00	100.00
438		0	19	0.00	100.00
463		0	19	0.00	100.00
488		0	19	0.00	100.00
513		0	19	0.00	100.00

-----+-----+-----+-----+-----+
1 2 3 4 5

FREQUENCY

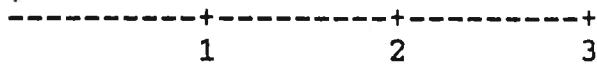
Section:

4 Date:04OCT92

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	0	0	0.00	0.00
65	0	0	0.00	0.00
75	*****	2	10.53	10.53
85	*****	1	5.26	15.79
95	*****	2	10.53	26.32
105	*****	3	15.79	42.11
115	*****	1	5.26	47.37
125		0	0.00	47.37
135		0	0.00	47.37
145		0	0.00	47.37
155		0	0.00	47.37
165		0	0.00	47.37
175	*****	1	5.26	52.63
185		0	0.00	52.63
195	*****	1	5.26	57.89
205	*****	3	15.79	73.68
215	*****	1	5.26	78.95
225	*****	1	5.26	84.21
235	*****	1	5.26	89.47
245		0	0.00	89.47
255		0	0.00	89.47
265		0	0.00	89.47
275		0	0.00	89.47
285		0	0.00	89.47
295		0	0.00	89.47
305	*****	2	10.53	100.00



FREQUENCY

Section:

4 Date:04OCT92

FISH POPULATION ESTIMATION.....SURVEY DATE: 04OCT92
 STREAM: MERCED RIVER SECTION 4
 SPECIES: BROWN TROUT

Number of Electroshockers= 4
 Number of Removals= 3

Removal Pattern	CATCH
-----	-----
Removal 1	2
Removal 2	2
Removal 3	0

Total Catch =	4

Population Estimate = 4 STD. Error= 0.54
 95% C.I. = + or - 1.07=(4 , 5)

95% Confidence Intervals (Estimates and errors adjusted by section length)

#Fish/Mile=	107.00 +or-	28.55
#Fish/Kilometer=	66.00 +or-	17.74

Capture Probability = 0.67
 % Error of Popul. Est. = 26.63
 Coefficient of Variation = 0.14

Section Length=	197 ft. or =	60.05 m
Ave. Section Width =	38.9 ft. or	11.86 m
Average Weight	30.50 g or	0.07 lb
Biomass	0.12 kg or	0.27 lb
Standing Crop	1.71 kg/ha	1.53 lb./acre

ELECTROFISHING CONDITIONS

DATE: 4/10/92 STREAM: Merced River SECTION: 4
 day mo yr

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
 other(describe) _____

Downstream Block: seine X waterfall _____ cascade _____
 other(describe) _____

NUMBER OF ELECTROFISHERS USED: 4 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 10

NUMBER OF REMOVAL PASSES: _____ SALT ADDED:

	^{SE} Timer 1	^V Timer 2	^G Timer 3	^{SS} Timer 4	Timer 5	Average
PASS 1:	<u>939</u>	<u>1376</u>	<u>930</u>	<u>2411 (WASH ZEROED)</u>	_____	_____
PASS 2:	<u>754</u>	<u>858</u>	<u>641</u>	<u>706</u>	_____	_____
PASS 3:	<u>681</u>	<u>960</u>	<u>600</u>	<u>605</u>	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling
 Conditions/ Equipment or other Problems

STREAM: MERCED RIVER SEC. 4 1988
SECTION LENGTH = 172 ft (52.4256 m)
AVE WIDTH OF SECTION = 39.8 ft (12.131 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 9 7 6

TOTAL CATCH = 22
POPULATION EST = 36 +or- 38.693
POP EST STD ERR = 19.7413
POP EST CONF INTRVL = +or- 38.693
LOWER CONF LIMIT = 22
UPPER CONF LIMIT = 74.693
CAPTURE PROB = .26506
% ERROR OF POP EST = 107.48

AVERAGE WEIGHT = 105 g
BIOMASS = 3.78 kg (8.3349 lb)
STANDING CROP = 53.0125 lb/ac (59.4271 kg/ha)
FISH PER MILE = 1105.12 +or- 1187.78
FISH PER KILOMETER = 686.721 +or- 738.091

Complete
11/18/88

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 4
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 88
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 22

Midpoint	Count	
37.5	0	
62.5	4	****
87.5	4	****
112.5	0	
137.5	0	
162.5	2	**
187.5	3	***
212.5	1	*
237.5	4	****
262.5	1	*
287.5	2	**
312.5	0	
337.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 22
7 Obs. above the last class

Midpoint	Count	
45.0	0	
55.0	1	*
65.0	2	**
75.0	2	**
85.0	3	***
95.0	0	
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	0	
155.0	1	*
165.0	0	
175.0	2	**
185.0	0	
195.0	2	**
205.0	0	
215.0	0	

STREAM: MERCED RIVER SEC. 4 1988
SECTION LENGTH = 172 ft (52.4256 m)
AVE WIDTH OF SECTION = 8 ft (12.131 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 2 4 2

TOTAL CATCH = 8
POPULATION EST = 13 +or- 24.5384
POP EST STD ERR = 12.5196
POP EST CONF INTRVL = +or- 24.5384
LOWER CONF LIMIT = 8
UPPER CONF LIMIT = 37.5384
CAPTURE PROB = .258065
% ERROR OF POP EST = 188.757

AVERAGE WEIGHT = 195 g
BIOMASS = 2.535 kg (5.58967 lb)
STANDING CROP = 35.5521 lb/ac (39.8539 kg/ha)
FISH PER MILE = 399.07 +or- 753.272
FISH PER KILOMETER = 247.983 +or- 468.085

Complete
11/18/88
KDM

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 4
 MTB > NOTE SPECIES CODE: BN
 MTB > NOTE YEAR OF COLLECTION : 88
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 8

Midpoint	Count	
37.5	0	
62.5	1	*
87.5	4	****
112.5	0	
137.5	0	
162.5	1	*
187.5	0	
212.5	0	
237.5	0	
262.5	0	
287.5	1	*
312.5	0	
337.5	0	
362.5	0	
387.5	0	
412.5	0	
437.5	0	
462.5	0	
487.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 8
2 Obs. above the last class

Midpoint	Count	
45.0	0	
55.0	0	
65.0	1	*
75.0	2	**
85.0	1	*
95.0	1	*
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	0	
155.0	0	
165.0	1	*

MTB > OUTFILE

DATE: 10 9, 88,
day mo yr

STREAM: Merced River

SECTION: 4

section is 0.1 mi. below El Portal Rd.
upper net located at tail of lg. pool

marker is a edge of willows on bank nearest road
at the upper end - stake pounded in with rock
pile at base

T ___ R ___ S ___ 1/4 of ___ 1/4

USGS QUAD NAME _____

MILEAGE INTO SECTION:
INDICATE TURNS, GENERAL DIRECTIONS

LANDMARKS, ROADS

MILEAGE

- | | |
|---------------------------|-------------|
| 1. _____ (Starting point) | 1. <u>0</u> |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |
| 5. _____ | 5. _____ |
| 6. _____ | 6. _____ |
| 7. _____ | 7. _____ |
| 8. _____ | 8. _____ |
| 9. _____ | 9. _____ |
| 10. _____ | 10. _____ |

DRAW MAP ON REVERSE SIDE

FISH POPULATION ESTIMATION.....SURVEY DATE: 03OCT92
 STREAM: MERCED RIVER SECTION 2
 SPECIES: RAINBOW TROUT

Number of Electroshockers= 4
 Number of Removals= 3

Removal Pattern	CATCH
-----	-----
Removal 1	15
Removal 2	6
Removal 3	4

Total Catch =	25

Population Estimate = 27 STD. Error= 2.76
 95% C.I. = + or - 5.41=(25 ,32)

95% Confidence Intervals (Estimates and errors adjusted by section length)

#Fish/Mile=	486.00 +or-	97.56
#Fish/Kilometer=	302.00 +or-	60.62

Capture Probability = 0.56
 % Error of Popul. Est. = 20.05
 Coefficient of Variation = 0.10

Section Length=	293 ft. or =	89.31 m
Ave. Section Width =	49.7 ft. or	15.15 m
Average Weight	114.20 g or	0.25 lb
Biomass	3.08 kg or	6.80 lb
Standing Crop	22.79 kg/ha	20.33 lb./acre

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER-D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
13		0	0	0.00	0.00
38		0	0	0.00	0.00
63	*****	1	1	4.00	4.00
88	*****	5	6	20.00	24.00
113	*****	6	12	24.00	48.00
138		0	12	0.00	48.00
163		0	12	0.00	48.00
188	*****	1	13	4.00	52.00
213	*****	4	17	16.00	68.00
238	*****	2	19	8.00	76.00
263	*****	1	20	4.00	80.00
288	*****	1	21	4.00	84.00
313	*****	3	24	12.00	96.00
338	*****	1	25	4.00	100.00
363		0	25	0.00	100.00
388		0	25	0.00	100.00
413		0	25	0.00	100.00
438		0	25	0.00	100.00
463		0	25	0.00	100.00
488		0	25	0.00	100.00
513		0	25	0.00	100.00

-----+-----+-----+-----+-----+-----+
 1 2 3 4 5 6

FREQUENCY

S_CODE=MERCED RIVER SPECIES=Brown trout

OBS	SYSTEM	D_CODE	SECTION	PASS	LENGTH	WEIGHT
1	W	2	2	1	79	6.0

$$\frac{x}{5280 \text{ ft/mile}} = \frac{1 \text{ fish}}{293 \text{ ft}}, \quad x = 15.02 \text{ fish/mile}$$

Brookmass = 6g = — lbs

1 lb = 0.454 kg

area = 393 ft x 41.7 ft = 14562.1 ft²

0.3343 (200) —

1 acre = 43,560 ft²

standing crop = < 0.1 lbs/acre

FISH POPULATION DATA

① DATE: 3 / 10 / 92
day mo yr

Species Name: Brown trout

② STREAM: MERCED RIVER

③ SECTION: 2 (Crane Creek)

④ SPECIES CODE: BW

Measured by: Deinhardt +

⑤ PASS #: 1

Recorded by: Erica Cooke

⑧ DRAINAGE CODE: _____

Page 4 of 12

⑥	length (mm)	⑦	weight (g)		length (mm)	weight (g)		length (mm)	weight (g)
01	79		6	21			41		
02				22			42		
03				23			43		
04				24			44		
05				25			45		
06				26			46		
07				27			47		
08				28			48		
09				29			49		
10				30			50		
11				31			51		
12				32			52		
13				33			53		
14				34			54		
15				35			55		
16				36			56		
17				37			57		
18				38			58		
19				39			59		
20				40			60		

ELECTROFISHING CONDITIONS

DATE: 3 / OCT / 92 STREAM: MERCED RIVER SECTION: 2
 day mo yr

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
 other(describe) AT TOP OF CASCADE

Downstream Block: seine X waterfall _____ cascade _____
 other(describe) _____

NUMBER OF ELECTROFISHERS USED: 4 BOAT(S): _____

NUMBER OF NETTERS: 5

TOTAL NUMBER IN ELECTROFISHING CREW: 11

NUMBER OF REMOVAL PASSES: _____ SALT ADDED: X

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	<u>1807</u>	<u>1334</u>	<u>1885</u>	<u>1835</u>	_____	_____
PASS 2:	<u>1535</u>	<u>1171</u>	<u>1507</u>	<u>1537</u>	_____	_____
PASS 3:	<u>1288</u>	<u>1268</u>	<u>1333</u>	<u>1289</u>	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling Conditions/ Equipment or other Problems

STREAM: MERCED RIVER SEC. 2 1988 ✓
SECTION LENGTH = 297 ft 237 (72.2376 m) ✓
AVE WIDTH OF SECTION = 2 ft (15.9106 m) ✓
52.2

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3 ✓
REMOVAL PATTERN: 17 5 2 ✓

TOTAL CATCH = 24 ✓
POPULATION EST = 24 +or- 1.73921
POP EST STD ERR = .887351
POP EST CONF INTRVL = +or- 1.73921
LOWER CONF LIMIT = 24
UPPER CONF LIMIT = 25.7392
CAPTURE PROB = .727273
% ERROR OF POP EST = 7.2467

AVERAGE WEIGHT = 77 g ✓
BIOMASS = 1.848 kg (4.07484 lb)
STANDING CROP = 14.3411 lb/ac (16.0763 kg/ha)
FISH PER MILE = 534.684 +or- 38.7469
FISH PER KILOMETER = 332.253 +or- 24.0774

Complete
11/18/88
KDM

MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE

HISTOGRAM FOR
MERCED RIVER SECTION: 2
SPECIES CODE: RT
YEAR OF COLLECTION : 88

MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

Histogram of LENGTH N = 24

Midpoint	Count	
37.5	1	*
62.5	9	*****
87.5	3	***
112.5	0	
137.5	0	
162.5	2	**
187.5	2	**
212.5	1	*
237.5	4	****
262.5	1	*
287.5	0	
312.5	0	
337.5	0	
362.5	0	
387.5	1	*

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

Histogram of LENGTH N = 24
4 Obs. above the last class

Midpoint	Count	
45.0	1	*
55.0	2	**
65.0	5	*****
75.0	5	*****
85.0	0	
95.0	0	
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	0	
155.0	1	*
165.0	1	*
175.0	0	
185.0	2	**
195.0	0	
205.0	0	
215.0	0	

STREAM: MERCED RIVER SEC. 2 1988
SECTION LENGTH = 237 ft (72.2376 m)
AVE WIDTH OF SECTION = 12 ft (15.9106 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 6 2 1

TOTAL CATCH = 9
POPULATION EST = 9 +or- 1.35295
POP EST STD ERR = .69028
POP EST CONF INTRVL = +or- 1.35295
LOWER CONF LIMIT = 9
UPPER CONF LIMIT = 10.3529
CAPTURE PROB = .692308
% ERROR OF POP EST = 15.0328

AVERAGE WEIGHT = 197 g
BIOMASS = 1.773 kg (3.90946 lb)
STANDING CROP = 13.759 lb/ac (15.4239 kg/ha)
FISH PER MILE = 200.506 +or- 30.1416
FISH PER KILOMETER = 124.595 +or- 18.7301

Complete
11/18/88
KDM

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 2
 MTB > NOTE SPECIES CODE: BN
 MTB > NOTE YEAR OF COLLECTION : 88
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 9

Midpoint	Count	
37.5	0	
62.5	0	
87.5	2	**
112.5	0	
137.5	0	
162.5	1	*
187.5	2	**
212.5	0	
237.5	0	
262.5	0	
287.5	1	*
312.5	1	*
337.5	1	*
362.5	0	
387.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 9
4 Obs. above the last class

Midpoint	Count	
45.0	0	
55.0	0	
65.0	0	
75.0	0	
85.0	1	*
95.0	1	*
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	0	
155.0	0	
165.0	1	*
175.0	0	
185.0	1	*
195.0	1	*

MTB > OUTFILE

STREAM: MERCED RIVER ^{C 1 2}
SECTION LENGTH = 217 ft ²⁷⁷ (84.4296 m)
AVE WIDTH OF SECTION = 55 ft (16.764 m)

SPECIES: RAINBOW TROUT (Combined Hatch. & Wild)
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 35 10 11

TOTAL CATCH = 56
POPULATION EST = 62 ^{tor-} 9.61117
POP EST STD ERR = 4.90366
POP EST CONF INTRVL = ^{tor-} 9.61117
LOWER CONF LIMIT = 56
UPPER CONF LIMIT = 71.6112
CAPTURE PROB = .528302
% ERROR OF POP EST = 15.5019

AVERAGE WEIGHT = 116 g
BIOMASS = 7.192 kg (15.8584 lb)
STANDING CROP = 45.3216 lb/ac (50.8056 kg/ha)
FISH PER MILE = 1181.81 ^{tor-} 183.202
FISH PER KILOMETER = 734.375 ^{tor-} 113.842

Completed
12/2/87
AM

BN

8 2 3 = 13

$\hat{N} = 14$

SKR 202 SCP 107
SQF HITEH

MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 1
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 87
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 56

Midpoint	Count	
37.5	0	
62.5	5	*****
87.5	8	*****
112.5	0	
137.5	1	*
162.5	4	****
187.5	9	*****
212.5	11	*****
237.5	7	*****
262.5	4	****
287.5	1	*
312.5	2	**
337.5	2	**
362.5	1	*
387.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 56
 14 Obs. above the last class

Midpoint	Count	
45.0	0	
55.0	0	
65.0	3	***
75.0	3	***
85.0	3	***
95.0	4	****
105.0	0	
115.0	0	
125.0	0	
135.0	1	*
145.0	0	
155.0	1	*
165.0	3	***
175.0	2	**
185.0	2	**
195.0	5	*****
205.0	6	*****
215.0	4	****

STREAM: MERCED RIVER °C 1 2
SECTION LENGTH = 27 ft (84.4296 m)
AVE WIDTH OF SECTION = 55 ft (16.764 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 8 2 3

TOTAL CATCH = 13
POPULATION EST = 14 +or- 4.22634
POP EST STD ERR = 2.1563
POP EST CONF INTRVL = +or- 4.22634
LOWER CONF LIMIT = 13
UPPER CONF LIMIT = 18.2263
CAPTURE PROB = .541667
% ERROR OF POP EST = 30.1882

AVERAGE WEIGHT = 296 g
BIOMASS = 4.144 kg (9.13752 lb)
STANDING CROP = 26.1141 lb/ac (29.2739 kg/ha)
FISH PER MILE = 266.859 +or- 80.5599
FISH PER KILOMETER = 165.827 +or- 50.0601

Complete
12/2/87
KDM

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 1
 MTB > NOTE SPECIES CODE: BN
 MTB > NOTE YEAR OF COLLECTION : 87
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 13

Midpoint	Count	
37.5	0	
62.5	1	*
87.5	1	*
112.5	1	*
137.5	0	
162.5	0	
187.5	0	
212.5	0	
237.5	1	*
262.5	1	*
287.5	1	*
312.5	3	***
337.5	1	*
362.5	1	*
387.5	0	
412.5	2	**

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 13
9 Obs. above the last class

Midpoint	Count	
45.0	0	
55.0	0	
65.0	1	*
75.0	0	
85.0	0	
95.0	1	*
105.0	1	*
115.0	0	
125.0	0	
135.0	0	
145.0	0	
155.0	0	
165.0	0	
175.0	0	
185.0	0	
195.0	0	
205.0	0	
215.0	0	

MERCED RIVER, Section 1

Survey Date: 2001/08/14

Species: Rainbow trout

Number of shockers: 4
Number of passes: 3
Section length: 94.48915 meters
Mean width of section: 20.04084 meters

Weight estimation equation: $Weight = Length * 2.844 + 0.000$
Estimation model source: MERCED RIVER, Section 1, 2001/08/14
Average weight of fish in sample: 147 grams
Range of measured lengths: 47 to 371 mm
Range of measured weights: 1 to 356 grams

Number of fish caught in each pass:

Pass	Fish caught
1	12
2	6
3	3

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 22.00 (+/-) 4.41
Upper 95% Confidence Limit: 26.41
Lower 95% Confidence Limit: 21.00

Capture Probability: 58%
Standard Error: 2.12
Error of Population Estimate: 20.03%
Coefficient of Variation: 0.10

Biomass: 3.23 kg 7.11 lbs
Standing Crop: 17.08 kg/ha 15.21 lbs/acre

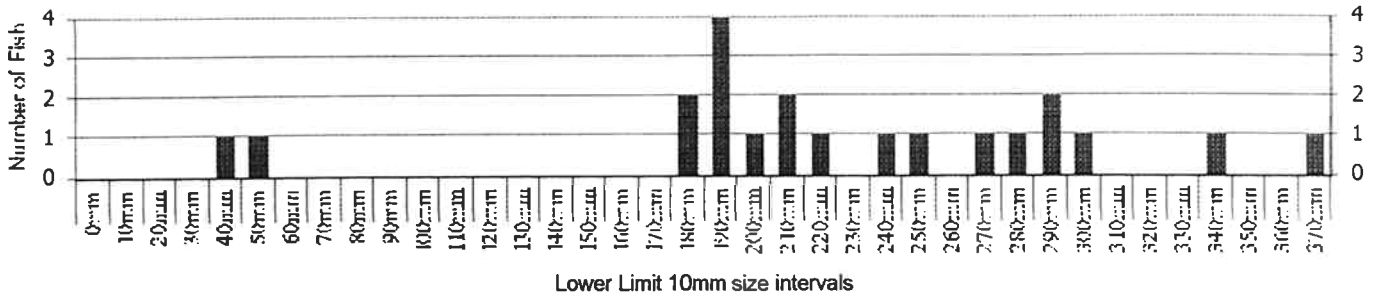
Fish per Mile, 95% C.I.: 374.71 (+/-) 75.06
Fish per Kilometer, 95% C.I.: 232.83 (+/-) 46.64

MERCED RIVER, Section 1

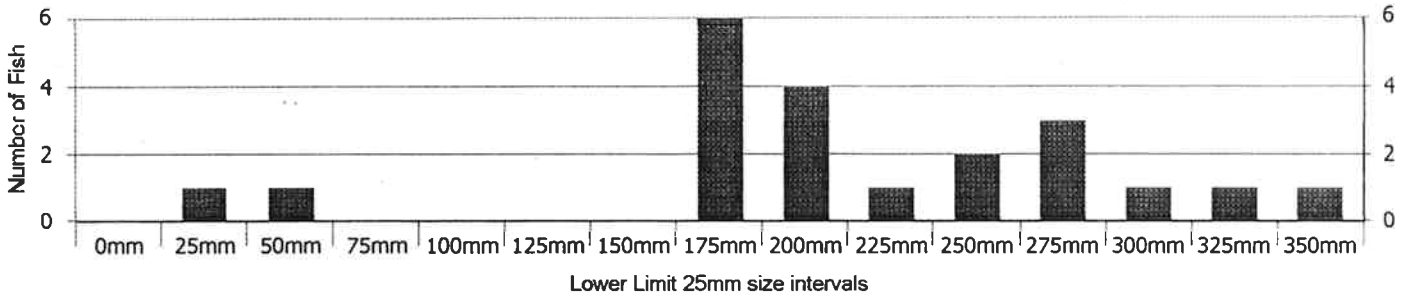
Survey Date: **2001/08/14**

Species: **Rainbow trout**

10mm Length Distribution



25mm Length Distribution



MERCED RIVER, Section 1

Survey Date: 2001/08/14

Species: Hatchery rainbow trout

Number of shockers: 4
Number of passes: 3
Section length: 94.48915 meters
Mean width of section: 20.04084 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 262 grams
Range of measured lengths: 283 to 321 mm
Range of measured weights: 202 to 321 grams

Number of fish caught in each pass:

Pass	Fish caught
1	1
2	0
3	1

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 2.00 (+/-) 4.47
Upper 95% Confidence Limit: 6.47
Lower 95% Confidence Limit: 2.00

Capture Probability: 50%
Standard Error: 1.04
Error of Population Estimate: 223.27%
Coefficient of Variation: 0.52

Biomass: 0.52 kg 1.15 lbs
Standing Crop: 2.77 kg/ha 2.46 lbs/acre

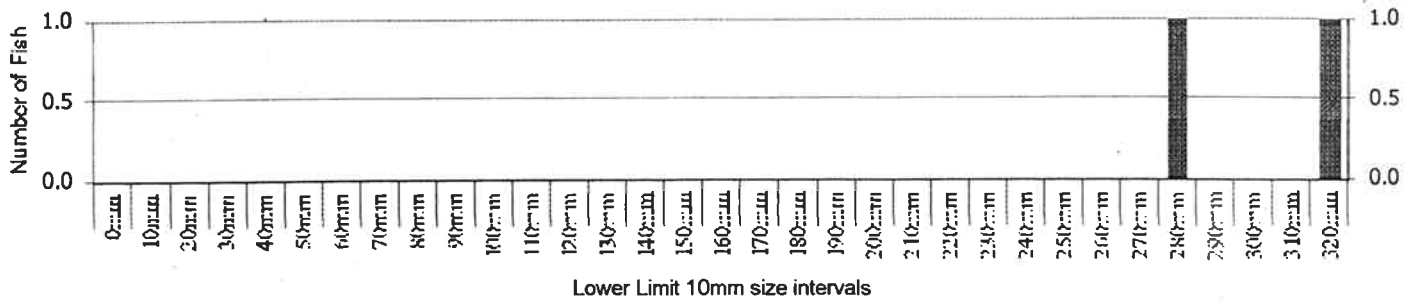
Fish per Mile, 95% C.I.: 34.06 (+/-) 76.06
Fish per Kilometer, 95% C.I.: 21.17 (+/-) 47.26

MERCED RIVER, Section 1

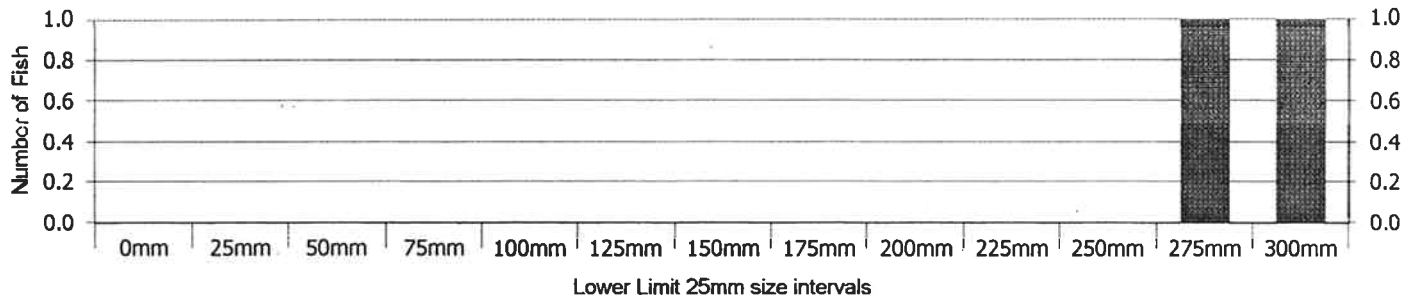
Survey Date: **2001/08/14**

Species: **Hatchery rainbow trout**

10mm Length Distribution



25mm Length Distribution



MERCED RIVER, Section 1

Survey Date: 2001/08/14

Species: Brown trout

Number of shockers: 4
Number of passes: 3
Section length: 94.48915 meters
Mean width of section: 20.04084 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 1628 grams
Range of measured lengths: 549 to 549 mm
Range of measured weights: 1628 to 1628 grams

Number of fish caught in each pass:

Pass	Fish caught
1	0
2	1
3	0

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 1.00 (+/-) 9.32
Upper 95% Confidence Limit: 10.32
Lower 95% Confidence Limit: 1.00

Capture Probability: 50%
Standard Error: 0.73
Error of Population Estimate: 932.37%
Coefficient of Variation: 0.73

Biomass: 1.63 kg 3.58 lbs
Standing Crop: 8.60 kg/ha 7.65 lbs/acre

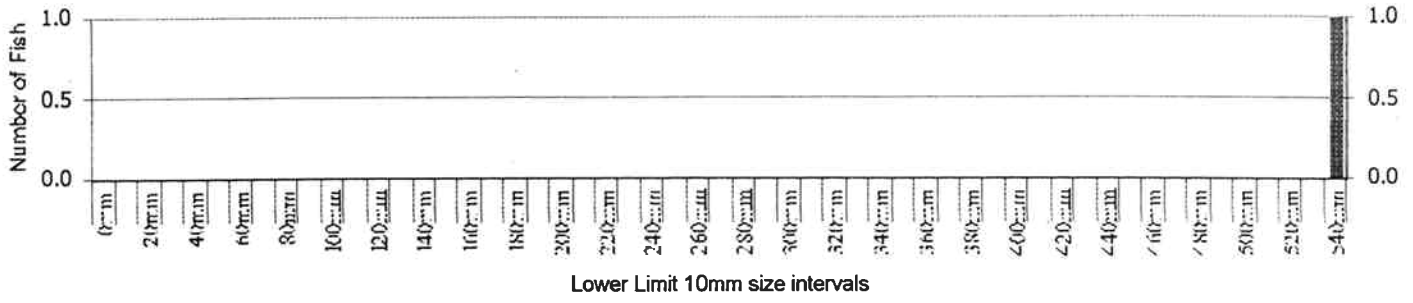
Fish per Mile, 95% C.I.: 17.03 (+/-) 158.80
Fish per Kilometer, 95% C.I.: 10.58 (+/-) 98.67

MERCED RIVER, Section 1

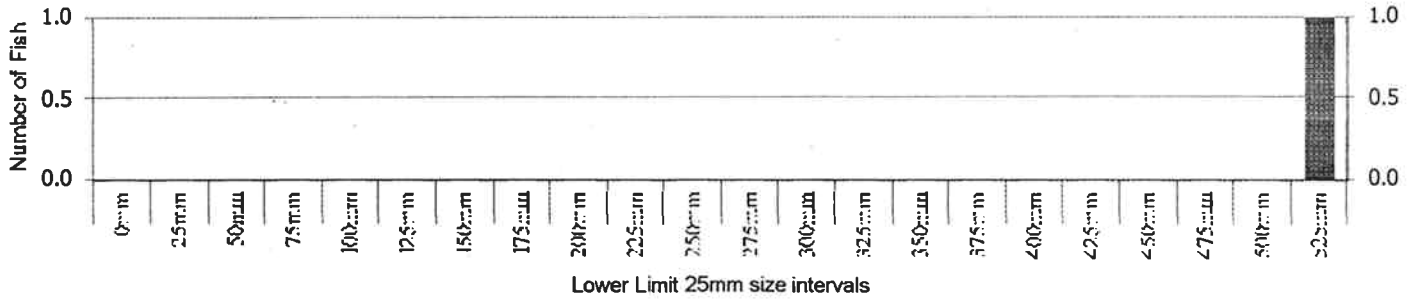
Survey Date: **2001/08/14**

Species: **Brown trout**

10mm Length Distribution



25mm Length Distribution



WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	17* °C or °F (circle one)	950	<input checked="" type="checkbox"/> pocket thermometer <input type="checkbox"/> other (specify) _____	M. Bogan	C. Scott
Specific Conductivity	40 micromhos/cm	950	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	↓	↓
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$	↓	↓
pH	7.9	950	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____	↓	↓
Total Alkalinity	18 mg/l	950	<input checked="" type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____	A. Gaoos	C. Scott

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity least once before each pass, and note time.) Salt added (2 blocks)

Temp at 1300 = 22°C

Temp at 1630 = 26°C

Wd have used 1 or 2 more shockers, plus more netters.

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): Smith Root Type XII

Start Time: 1020* End Time: 1645 (est)

* did work up in between shading passes

ELECTROFISHING EFFORT

Operator	Ken	Alex	Rob	Bryan	Total
Shocker	EasyClex	Cartman	R4	Shadow	Time (sec)
Pass 1	1612	2299	1296	1981	7188
Pass 2	1664	1819	1149	1737	6349
Pass 3	1407	1268	932	1560	5163
Pass 4					

Electrofisher Settings:

Pulse Frequency _____ Hz

Pulse Duration _____ ms

Mode G / 5 (SR Type XII only)

Output Voltage 400 Volts

Current 0.18 Amps

Power = Volts x Amps = _____ Watts

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
M. Bogan	Shanon Shiba	processed fish
Austin Pearson	Cari Scott	between passes,
Bryan?		see table turn,
Andrew Brannagan		see fish pop data
		charts for personnel

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: ~ 50-70 cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Seed Cover: 0 %

STREAM: MERCED RIVER EC. 1 1988
SECTION LENGTH = 247 ft 247 (75.2856 m)
AVE WIDTH OF SECTION = 76.6 ft (23.3477 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 5 0 0

TOTAL CATCH = 5
POPULATION EST = 5 +or- 0
POP EST STD ERR = 0
POP EST CONF INTRVL = +or- 0
LOWER CONF LIMIT = 5
UPPER CONF LIMIT = 5
CAPTURE PROB = 1
% ERROR OF POP EST = 0

AVERAGE WEIGHT = 109 g
BIOMASS = .545 kg (1.20173 lb)
STANDING CROP = 2.76547 lb/ac (3.10009 kg/ha)
FISH PER MILE = 106.883 +or- 0
FISH PER KILOMETER = 66.417 +or- 0

Complete
11/18/88
FDM

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 1
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 88
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 5

Midpoint	Count
37.5	0
62.5	0
87.5	0
112.5	1 *
137.5	0
162.5	0
187.5	2 **
212.5	1 *
237.5	0
262.5	0
287.5	1 *

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 5
 1 Obs. above the last class

Midpoint	Count
45.0	0
55.0	0
65.0	0
75.0	0
85.0	0
95.0	0
105.0	0
115.0	0
125.0	1 *
135.0	0
145.0	0
155.0	0
165.0	0
175.0	0
185.0	0
195.0	2 **
205.0	0
215.0	1 *

MTB > OUTFILE

STREAM: MERCED RIVER C. 1 1988
SECTION LENGTH = 247 ft (75.2856 m)
AVE WIDTH OF SECTION = 76.6 ft (23.3477 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 1 0 0

TOTAL CATCH = 1
POPULATION EST = 1 +or- 0
POP EST STD ERR = 0
POP EST CONF INTRVL = +or- 0
LOWER CONF LIMIT = 1
UPPER CONF LIMIT = 1
CAPTURE PROB = 1
% ERROR OF POP EST = 0

AVERAGE WEIGHT = 44 g
BIOMASS = .044 kg (.09702 lb)
STANDING CROP = .223267 lb/ac (.250283 kg/ha)
FISH PER MILE = 21.3765 +or- 0
FISH PER KILOMETER = 13.2834 +or- 0

complete
11/18/88
RSM

MTB > NOTE
MTB > NOTE
MTB > NOTE HISTOGRAM FOR
MTB > NOTE MERCED RIVER SECTION: 1
MTB > NOTE SPECIES CODE: BN
MTB > NOTE YEAR OF COLLECTION : 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

Histogram of LENGTH N = 1

Midpoint	Count
37.5	0
62.5	0
87.5	0
112.5	0
137.5	0
162.5	1 *

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

Histogram of LENGTH N = 1

Midpoint	Count
45.0	0
55.0	0
65.0	0
75.0	0
85.0	0
95.0	0
105.0	0
115.0	0
125.0	0
135.0	0
145.0	0
155.0	0
165.0	1 *

MTB > OUTFILE

complete
12/3/87

Except 2 factors

STREAM: MERCED RIVER SEC 2 ✓
SECTION LENGTH = 250 ft (76.2 m)
AVE WIDTH OF SECTION = 74.5 ft (22.7076 m)

SPECIES: RAINBOW TROUT (Wild Trout)
NUMBER OF REMOVALS: 2 ✓
REMOVAL PATTERN: 7 3 ✓

TOTAL CATCH = 10 ✓
POPULATION EST = 12.25 +or- 8.13496
POP EST STD ERR = 4.15049
POP EST CONF INTRVL = +or- 8.13496
LOWER CONF LIMIT = 10
UPPER CONF LIMIT = 20.385
CAPTURE PROB = .571429
% ERROR OF POP EST = 66.4078

AVERAGE WEIGHT = 31 g ✓
BIOMASS = .37975 kg (.837349 lb)
STANDING CROP = 1.95749 lb/ac (2.19435 kg/ha)
FISH PER MILE = 258.72 +or- 171.81
FISH PER KILOMETER = 160.769 +or- 106.763

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 2
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 87
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 10

Midpoint	Count	
37.5	0	
62.5	6	*****
87.5	2	**
112.5	0	
137.5	0	
162.5	0	
187.5	0	
212.5	1	*
237.5	0	
262.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 10
 1 Obs. above the last class

Midpoint	Count	
45.0	0	
55.0	1	*
65.0	4	****
75.0	2	**
85.0	0	
95.0	1	*
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	0	
155.0	0	
165.0	0	
175.0	0	
185.0	0	
195.0	0	
205.0	1	*

MTB > OUTFILE

STREAM: MERCED RIVER
SECTION LENGTH = 250 ft (76.2 m)
AVE WIDTH OF SECTION = 74.5 ft (22.7076 m)

SPECIES: RAINBOW TROUT CATCHABLES
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 1 3

TOTAL CATCH = 4
POPULATION EST = - .5 +or- 2.94
POP EST STD ERR = 1.5
POP EST CONF INTRVL = +or- 2.94
LOWER CONF LIMIT = 4
UPPER CONF LIMIT = 2.44
CAPTURE PROB = -2
% ERROR OF POP EST = -588

AVERAGE WEIGHT = 180 g
BIOMASS = - .09 kg (-.19845 lb)
STANDING CROP = -.463922 lb/ac (-.520056 kg/ha)
FISH PER MILE = -10.56 +or- 62.0928
FISH PER KILOMETER = -6.562 +or- 38.5846

STREAM: SEC 12 YOSEMITE VALLEY SEC 3 TENAYA CREEK
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 46.7 ft (14.2342 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 97 54 33

TOTAL CATCH = 184
POPULATION EST = 225 +or- 32.3546
POP EST STD ERR = 16.5074
POP EST CONF INTRVL = +or- 32.3546
LOWER CONF LIMIT = 192.645
UPPER CONF LIMIT = 257.355
CAPTURE PROB = .430913
% ERRDR OF POP EST = 14.3798

AVERAGE WEIGHT = 7 g
BIOMASS = 1.575 kg (3.47287 lb)
STANDING CROP = 9.87161 lb/ac (11.0661 kg/ha)
FISH PER MILE = 3621.95 +or- 520.83
FISH PER KILOMETER = 2250.69 +or- 323.644

MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE

HISTOGRAM FOR
MERCED RIVER SECTION: 12
SPECIES CODE: RT
YEAR OF COLLECTION : 90

MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

Histogram of LENGTH N = 184
Each * represents 5 obs.

Midpoint	Count	
37.5	2	*
62.5	129	*****
87.5	10	**
112.5	23	*****
137.5	16	****
162.5	0	
187.5	2	*
212.5	2	*

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

Histogram of LENGTH N = 184
Each * represents 2 obs.

Midpoint	Count	
45.0	2	*
55.0	25	*****
65.0	77	*****
75.0	34	*****
85.0	1	*
95.0	2	*
105.0	6	***
115.0	11	*****
125.0	13	*****
135.0	7	****
145.0	2	*
155.0	0	
165.0	0	
175.0	0	
185.0	1	*
195.0	1	*
205.0	2	*

STREAM: SEC 12 YOSEMITE VALLEY SEC 3 TENAYA CREEK-----
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 46.7 ft (14.2342 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 132 57 31

TOTAL CATCH = 220
POPULATION EST = 244 +or- 18.3104
POP EST STD ERR = 9.34206
POP EST CONF INTRVL = +or- 18.3104
LOWER CONF LIMIT = 225.69
UPPER CONF LIMIT = 262.31
CAPTURE PROB = .53528
% ERROR OF POP EST = 7.50427

AVERAGE WEIGHT = 25 g
BIOMASS = 6.1 kg (13.4505 lb)
STANDING CROP = 38.2329 lb/ac (42.8591 kg/ha)
FISH PER MILE = 3927.8 +or- 294.753
FISH PER KILOMETER = 2440.74 +or- 183.16

Histogram of LENGTH N = 220
Each * represents 2 obs.

Midpoint	Count	
45.0	0	
55.0	0	
65.0	2	*
75.0	10	*****
85.0	53	*****
95.0	62	*****
105.0	15	*****
115.0	0	
125.0	0	
135.0	2	*
145.0	8	****
155.0	17	*****
165.0	9	*****
175.0	4	**
185.0	6	***
195.0	15	*****
205.0	11	*****
215.0	4	**

225.0	0	
235.0	1	*
245.0	0	
255.0	1	*

MTB > NDOUTFILE

STREAM: MERCED RIVER COMPUTER SEC 13
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 101.7 ft (30.9982 m)

YOSEMITE VALLEY SEC 4 AHWAHNEE I
BRIDGE

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 82 22 13

TOTAL CATCH = 117
POPULATION EST = 121 +or- 6.07352
POP EST STD ERR = 3.09874
POP EST CONF INTRVL = +or- 6.07352
LOWER CONF LIMIT = 117
UPPER CONF LIMIT = 127.074
CAPTURE PROB = .661017
% ERROR OF POP EST = 5.01944

AVERAGE WEIGHT = 4 g
BIOMASS = .484 kg (1.06722 lb)
STANDING CROP = 1.39299 lb/ac (1.56155 kg/ha)
FISH PER MILE = 1947.8 +or- 97.7689
FISH PER KILOMETER = 1210.37 +or- 60.7537

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 13
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 90
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 117
 Each * represents 2 obs.

Midpoint	Count	
37.5	0	
62.5	86	*****
87.5	28	*****
112.5	2	*
137.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 117
 Each * represents 2 obs.

Midpoint	Count	
45.0	0	
55.0	6	***
65.0	50	*****
75.0	52	*****
85.0	6	***
95.0	0	
105.0	0	
115.0	2	*
125.0	0	
135.0	0	
145.0	1	*

STREAM: MERCED RIVER COMPUTER SEC 13
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 101.7 ft (30.9982 m)

YOSEMITE VALLEY SEC 4 AHWAHNEE B
BRIDGE

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 139 54 30

TOTAL CATCH = 223
POPULATION EST = 243 +or- 15.6679
POP EST STD ERR = 7.99381
POP EST CONF INTRVL = +or- 15.6679
LOWER CONF LIMIT = 227.332
UPPER CONF LIMIT = 258.668
CAPTURE PROB = .561713
% ERROR OF POP EST = 6.44768

AVERAGE WEIGHT = 15 g
BIOMASS = 3.645 kg (8.03722 lb)
STANDING CROP = 10.4906 lb/ac (11.76 kg/ha)
FISH PER MILE = 3911.71 +or- 252.214
FISH PER KILOMETER = 2430.74 +or- 156.726

Histogram of LENGTH N = 223
Each * represents 2 obs.

Midpoint	Count	
45.0	1	*
55.0	0	
65.0	1	*
75.0	22	*****
85.0	64	*****
95.0	73	*****
105.0	23	*****
115.0	10	*****
125.0	0	
135.0	1	*
145.0	2	*
155.0	5	***
165.0	1	*
175.0	5	***
185.0	1	*
195.0	4	**
205.0	4	**
215.0	2	*

225.0	1	*
235.0	1	*
245.0	0	
255.0	1	*
265.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER MPUTER SEC 14 YOSEMITE VA EY SEC 5 HOUSEKEEPING
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 83.9 ft (25.5727 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 44 7 11

TOTAL CATCH = 62
POPULATION EST = 65 +or- 5.73522
POP EST STD ERR = 2.92613
POP EST CONF INTRVL = +or- 5.73522
LOWER CONF LIMIT = 62
UPPER CONF LIMIT = 70.7352
CAPTURE PROB = .62
% ERROR OF POP EST = 8.82342

AVERAGE WEIGHT = 4 g
BIOMASS = .26 kg (.5733 lb)
STANDING CROP = .90706 lb/ac (1.01681 kg/ha)
FISH PER MILE = 1046.34 +or- 92.3231
FISH PER KILOMETER = 650.198 +or- 57.3697

```
MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          MERCED RIVER   SECTION: 14
MTB > NOTE          SPECIES CODE:   RT
MTB > NOTE          YEAR OF COLLECTION : 90
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25
```

Histogram of LENGTH N = 62
Each * represents 2 obs.

Midpoint	Count	
37.5	0	
62.5	51	*****
87.5	9	*****
112.5	1	*
137.5	1	*

```
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10
```

Histogram of LENGTH N = 62

Midpoint	Count	
45.0	0	
55.0	12	*****
65.0	25	*****
75.0	20	*****
85.0	2	**
95.0	1	*
105.0	0	
115.0	0	
125.0	1	*
135.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER COMPUTER SEC 14 YOSEMITE VALLEY SEC 5 HOUSEKEEPING
SECTION LENGTH = 8 ft³⁰ (99.9744 m)
AVE WIDTH OF SECTION = 83.9 ft (25.5727 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 136 38 16

TOTAL CATCH = 190
POPULATION EST = 196 +or- 6.69239
POP EST STD ERR = 3.41448
POP EST CONF INTRVL = +or- 6.69239
LOWER CONF LIMIT = 190
UPPER CONF LIMIT = 202.692
CAPTURE PROB = .683453
% ERROR OF POP EST = 3.41448

AVERAGE WEIGHT = 14 g
BIOMASS = 2.744 kg (6.05052 lb)
STANDING CROP = 9.57297 lb/ac (10.7313 kg/ha)
FISH PER MILE = 3155.12 +or- 107.731
FISH PER KILOMETER = 1960.6 +or- 66.9443

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 14
 MTB > NOTE SPECIES CODE: BN
 MTB > NOTE YEAR OF COLLECTION : 90
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 190
 Each * represents 5 obs.

Midpoint	Count	
37.5	0	
62.5	2	*
87.5	130	*****
112.5	35	*****
137.5	1	*
162.5	8	**
187.5	8	**
212.5	5	*
237.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

STREAM: MERCED RIVER COMPUTER SEC 15 YOSEMITE VALLEY SEC 6 SWINGING BRIDGE
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 52.2 ft (15.9106 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 4 0 0

TOTAL CATCH = 4
POPULATION EST = 4 +or- 0
POP EST STD ERR = 0
POP EST CONF INTRVL = +or- 0
LOWER CONF LIMIT = 4
UPPER CONF LIMIT = 4
CAPTURE PROB = 1
% ERROR OF POP EST = 0

AVERAGE WEIGHT = 8 g
BIOMASS = .032 kg (.07056 lb)
STANDING CROP = .179434 lb/ac (.201145 kg/ha)
FISH PER MILE = 64.3902 +or- 0
FISH PER KILOMETER = 40.0122 +or- 0

ARTIFICIAL
VALUES
Removal pattern
actual 0, 2, 2

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 15
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 90
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 4

Midpoint	Count	
37.5	0	
62.5	3	***
87.5	0	
112.5	0	
137.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 4

Midpoint	Count	
45.0	0	
55.0	0	
65.0	3	***
75.0	0	
85.0	0	
95.0	0	
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	1	*

STREAM: MERCED RIVER COMPUTER SEC 15 YOSEMITE VA EY SEC 6 SWINGING BRIDGE
SECTION LENGTH = 328 ft ³²⁸ (99.9744 m)
AVE WIDTH OF SECTION = 52.2 ft (15.9106 m)

§

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 81 48 39

TOTAL CATCH = 168
POPULATION EST = 240 +or- 63.1759
POP EST STD ERR = 32.2326
POP EST CONF INTRVL = +or- 63.1759
LOWER CONF LIMIT = 176.824
UPPER CONF LIMIT = 303.176
CAPTURE PROB = .329412
% ERROR OF POP EST = 26.3233

AVERAGE WEIGHT = 27 g
BIOMASS = 6.48 kg (14.2884 lb)
STANDING CROP = 36.3353 lb/ac (40.7319 kg/ha)
FISH PER MILE = 3863.41 +or- 1016.98
FISH PER KILOMETER = 2400.73 +or- 631.951

MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE
 MTB > HIST C1 37.5 25

HISTOGRAM FOR
 MERCED RIVER SECTION: 15
 SPECIES CODE: BN
 YEAR OF COLLECTION : 90

Histogram of LENGTH N = 168
 Each * represents 2 obs.

Midpoint	Count	
37.5	0	
62.5	30	*****
87.5	88	*****
112.5	1	*
137.5	8	****
162.5	19	*****
187.5	4	**
212.5	5	***
237.5	3	**
262.5	8	****
287.5	1	*
312.5	0	
337.5	0	
362.5	0	
387.5	1	*

Fish Population Estimation... Summary Info.
STREAM: MERCED R. SEC 6 SWING BR. Species: RT

Date of Survey: 20AUG91

Section Length = 328 ft. or = 99.97 m
Avg. Section Width = 55.3 ft. or = 16.85544 m

Number of Removals: 3
Removal Pattern

Removal 1 3
Removal 2 0 }
Removal 3 0 }
Total Catch = 3

2 - capture periods = Zippin
3 - or More = ML ESTIMATE

Population Estimate = 2
Pop. Est. STD. Error = .
Pop. Est. 95% C.I. = + or - . (3 , .)

Capture Probability = . % Error of Pop. Est. = .

Average Weight = 23.30 g or 0.05 lb
Biomass = 0.05 kg or 0.10 lb
Standing Crop = 0.28 kg/ha or 0.25 lb./acre *re-calculated as 0.37 lbs/acre*

95% Confidence Intervals
#Fish/Mile = 32.00 + or - .
#Fish/Kilometer = 20.00 + or - .

*10/18
16 Feb 2000*

IF POPN EST. = 3 THEN 48 FISH/MILE

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	0	0	0.00	0.00
65	0	0	0.00	0.00
75	0	0	0.00	0.00
85	0	0	0.00	0.00
95	0	0	0.00	0.00
105	0	0	0.00	0.00
115	0	0	0.00	0.00
125	1	1	33.33	33.33
135	1	2	33.33	66.67
145	1	3	33.33	100.00
155	0	3	0.00	100.00
165	0	3	0.00	100.00
175	0	3	0.00	100.00
185	0	3	0.00	100.00
195	0	3	0.00	100.00
205	0	3	0.00	100.00
215	0	3	0.00	100.00
225	0	3	0.00	100.00
235	0	3	0.00	100.00
245	0	3	0.00	100.00
255	0	3	0.00	100.00
265	0	3	0.00	100.00
275	0	3	0.00	100.00
285	0	3	0.00	100.00
295	0	3	0.00	100.00
305	0	3	0.00	100.00
315	0	3	0.00	100.00
325	0	3	0.00	100.00
335	0	3	0.00	100.00
345	0	3	0.00	100.00
355	0	3	0.00	100.00
365	0	3	0.00	100.00
375	0	3	0.00	100.00
385	0	3	0.00	100.00
395	0	3	0.00	100.00
405	0	3	0.00	100.00

1

FREQUENCY

Fish Population Estimation... Summary Info.

STREAM: MERCED R. SEC. 6 SWING BR Species: BN

Date of Survey: 20AUG91

(15)
 Section Length = 328 ft. or = 99.97 m
 Ave. Section Width = 55.3 ft. or = 16.85544 m

Number of Removals: 3

Removal Pattern

 Removal 1 78
 Removal 2 25
 Removal 3 10
 Total Catch = 113

Population Estimate = 117

Pop. Est. STD. Error = 2.98

Pop. Est. 95% C.I. = + or - 5.83 (113 , 122)

Capture Probability = 0.66 % Error of Pop. Est. = 4.99

 Average Weight = 27.50 g or 0.06 lb
 Biomass = 3.22 kg or 7.09 lb
 Standing Crop = 19.09 kg/ha or 17.03 lb./acre

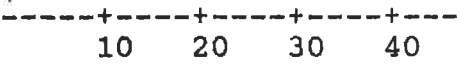
95% Confidence Intervals

#Fish/Mile = 1883.00 +or- 93.92
 #Fish/Kilometer = 1170.00 +or- 58.36

----- SPECIES=Brown trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45		0	0	0.00	0.00
55	*****	12	12	10.62	10.62
65	*****	45	57	39.82	50.44
75	*****	19	76	16.81	67.26
85	*	1	77	0.88	68.14
95		0	77	0.00	68.14
105		0	77	0.00	68.14
115		0	77	0.00	68.14
125	*	1	78	0.88	69.03
135	***	5	83	4.42	73.45
145	***	5	88	4.42	77.88
155	***	6	94	5.31	83.19
165	**	3	97	2.65	85.84
175		0	97	0.00	85.84
185	*	1	98	0.88	86.73
195	**	3	101	2.65	89.38
205	*	2	103	1.77	91.15
215	*	1	104	0.88	92.04
225	*	2	106	1.77	93.81
235	*	2	108	1.77	95.58
245	*	1	109	0.88	96.46
255	*	1	110	0.88	97.35
265	*	1	111	0.88	98.23
275	*	1	112	0.88	99.12
285		0	112	0.00	99.12
295		0	112	0.00	99.12
305		0	112	0.00	99.12
315		0	112	0.00	99.12
325		0	112	0.00	99.12
335		0	112	0.00	99.12
345		0	112	0.00	99.12
355		0	112	0.00	99.12
365		0	112	0.00	99.12
375		0	112	0.00	99.12
385		0	112	0.00	99.12
395	*	1	113	0.88	100.00
405		0	113	0.00	100.00



FREQUENCY

STREAM: MERCED RIVER SEC 16 YOSEMITE VALLEY SEC 7 THE ISLAND
SECTION LENGTH = 3 ft (99.9744 m)
AVE WIDTH OF SECTION = 48.3 ft (14.7218 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3

REMOVAL PATTERN: 21 11 2

TOTAL CATCH = 34

POPULATION EST = 35 +or- 3.41735

POP EST STD ERR = 1.74354

POP EST CONF INTRVL = +or- 3.41735

LOWER CONF LIMIT = 34

UPPER CONF LIMIT = 38.4173

CAPTURE PROB = .653846

% ERROR OF POP EST = 9.76384

AVERAGE WEIGHT = 20.4 g

BIOMASS = .714 kg (1.57437 lb)

STANDING CROP = 4.32689 lb/ac (4.85044 kg/ha)

FISH PER MILE = 563.415 +or- 55.0109

FISH PER KILOMETER = 350.107 +or- 34.1839

```

MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          MERCED RIVER      SECTION: 16
MTB > NOTE          SPECIES CODE:    RT
MTB > NOTE          YEAR OF COLLECTION : 90
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 34

Midpoint	Count	
37.5	0	
62.5	20	*****
87.5	1	*
112.5	0	
137.5	2	**
162.5	5	*****
187.5	4	****
212.5	2	**

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 34

Midpoint	Count	
45.0	0	
55.0	2	**
65.0	16	*****
75.0	2	**
85.0	1	*
95.0	0	
105.0	0	
115.0	0	
125.0	0	
135.0	1	*
145.0	1	*
155.0	3	***
165.0	1	*
175.0	4	****
185.0	0	
195.0	1	*
205.0	1	*
215.0	0	
225.0	1	*

STREAM: MERCED RIVER SEC 16 YOSEMITE VALLEY SEC 7 THE ISLAND
SECTION LENGTH = 3 ft 328 (99.9744 m)
AVE WIDTH OF SECTION = 48.3 ft 48.3 (14.7218 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 94 40 21

TOTAL CATCH = 155
POPULATION EST = 170 +or- 14.0599
POP EST STD ERR = 7.17339
POP EST CONF INTRVL = +or- 14.0599
LOWER CONF LIMIT = 155.94
UPPER CONF LIMIT = 184.06
CAPTURE PROB = .549645
% ERROR OF POP EST = 8.2705

AVERAGE WEIGHT = 49.5 g
BIOMASS = 8.415 kg (18.5551 lb)
STANDING CROP = 50.9955 lb/ac (57.1659 kg/ha)
FISH PER MILE = 2736.59 +or- 226.329
FISH PER KILOMETER = 1700.52 +or- 140.641

MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > HIST C1 37.5 25

HISTOGRAM FOR
MERCED RIVER SECTION: 16
SPECIES CODE: BN
YEAR OF COLLECTION : 90

Histogram of LENGTH N = 155
Each * represents 2 obs.

Midpoint	Count	
37.5	0	
62.5	25	*****
87.5	70	*****
112.5	4	**
137.5	2	*
162.5	20	*****
187.5	9	*****
212.5	9	*****
237.5	8	****
262.5	3	**
287.5	0	
312.5	1	*
337.5	1	*
362.5	0	
387.5	0	
412.5	2	*
437.5	0	
462.5	1	*

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

RECOMPUTED W/NEW AVE. WIDTH OF SECTION

10:45 Tuesday, ~~January~~ 23, 1996 10
APR

FISH POPULATION ESTIMATION.....SURVEY DATE: 22AUG91
STREAM: MERCED RIVER, SECT 7 (ISLAND), 22 AUG 1991, BROWN TROUT
SPECIES: BROWN TROUT

Number of Electroshockers=	4
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	37
Removal 2	27
Removal 3	12

Total Catch =	76

Population Estimate = 94 STD. Error= 11.40
95% C.I. = + or - 22.34=(76 , 116)

95% Confidence Intervals (Estimates and errors adjusted by section length)
#Fish/Mile= 1513.00 +or- 359.63
#Fish/Kilometer= 940.00 +or- 223.47

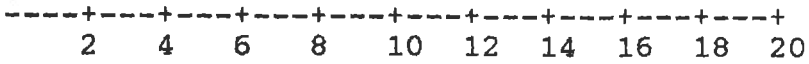
Capture Probability = 0.42
Error of Popul. Est. = 23.77
Coefficient of Variation = 0.12

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	46.6 ft. or	14.20 m
Average Weight	68.50 g or	0.15 lb
Biomass	6.44 kg or	14.20 lb
Standing Crop	45.34 kg/ha	40.44 lb./acre

----- SPECIES=Brown trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45		0	0	0.00	0.00
55		0	0	0.00	0.00
65	*****	4	4	5.26	5.26
75	*****	20	24	26.32	31.58
85	*****	8	32	10.53	42.11
95	**	1	33	1.32	43.42
105		0	33	0.00	43.42
115		0	33	0.00	43.42
125		0	33	0.00	43.42
135	**	1	34	1.32	44.74
145	****	2	36	2.63	47.37
155	*****	7	43	9.21	56.58
165	*****	10	53	13.16	69.74
175	*****	3	56	3.95	73.68
185	****	2	58	2.63	76.32
195		0	58	0.00	76.32
205		0	58	0.00	76.32
215	*****	3	61	3.95	80.26
225	*****	3	64	3.95	84.21
235	**	1	65	1.32	85.53
245	**	1	66	1.32	86.84
255	**	1	67	1.32	88.16
265	****	2	69	2.63	90.79
275	****	2	71	2.63	93.42
285	**	1	72	1.32	94.74
295		0	72	0.00	94.74
305	**	1	73	1.32	96.05
315		0	73	0.00	96.05
325	**	1	74	1.32	97.37
335		0	74	0.00	97.37
345		0	74	0.00	97.37
355		0	74	0.00	97.37
365	**	1	75	1.32	98.68
375		0	75	0.00	98.68
385		0	75	0.00	98.68
395		0	75	0.00	98.68
405	**	1	76	1.32	100.00



FREQUENCY

RECOMPUTED W/ NEW AVE. WIDTH OF SECTION

10:45 Tuesday, ~~January~~ 23, 1996 8
APR

FISH POPULATION ESTIMATION.....SURVEY DATE: 22AUG91
STREAM: MERCED RIVER, SECT 7 (ISLAND), 22 AUG 1991, RAINBOW TROUT
SPECIES:RAINBOW TROUT

Number of Electroshockers=	4
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	5
Removal 2	7
Removal 3	3

Total Catch =	15

Population Estimate = 22 STD. Error= 11.44
95% C.I. = + or - 22.43=(15 ,44)

95% Confidence Intervals(Estimates and errors adjusted by section length)
#Fish/Mile= 354.00 +or- 361.01
#Fish/Kilometer= 220.00 +or- 224.33

Capture Probability = 0.31
Error of Popul. Est. = 101.94
Coefficient of Variation = 0.52

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	46.6 ft. or	14.20 m
Average Weight	36.30 g or	0.08 lb
Biomass	0.80 kg or	1.76 lb
Standing Crop	5.62 kg/ha	5.02 lb./acre

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT	
5	0	0	0.00	0.00	
15	0	0	0.00	0.00	
25	0	0	0.00	0.00	
35	0	0	0.00	0.00	
45	*****	5	33.33	33.33	
55		5	0.00	33.33	
65		5	0.00	33.33	
75		5	0.00	33.33	
85		5	0.00	33.33	
95		5	0.00	33.33	
105		5	0.00	33.33	
115		5	0.00	33.33	
125		5	0.00	33.33	
135	*****	3	8	20.00	53.33
145	*****	2	10	13.33	66.67
155	*****	1	11	6.67	73.33
165	*****	1	12	6.67	80.00
175		0	12	0.00	80.00
185		0	12	0.00	80.00
195	*****	1	13	6.67	86.67
205		0	13	0.00	86.67
215		0	13	0.00	86.67
225		0	13	0.00	86.67
235	*****	1	14	6.67	93.33
245	*****	1	15	6.67	100.00
255		0	15	0.00	100.00
265		0	15	0.00	100.00
275		0	15	0.00	100.00
285		0	15	0.00	100.00
295		0	15	0.00	100.00
305		0	15	0.00	100.00
315		0	15	0.00	100.00
325		0	15	0.00	100.00
335		0	15	0.00	100.00
345		0	15	0.00	100.00
355		0	15	0.00	100.00
365		0	15	0.00	100.00
375		0	15	0.00	100.00
385		0	15	0.00	100.00
395		0	15	0.00	100.00
405		0	15	0.00	100.00

-----+-----+-----+-----+-----+
 1 2 3 4 5

STREAM: MERCED RIVER SEC 17 YOSEMITE VALLEY SEC 8 EL CAPITAN PICNIC AREA
SECTION LENGTH = 208 ft (99.9744 m)
AVE WIDTH OF SECTION = 157 ft (33.2232 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 1 0 0

TOTAL CATCH = 1
POPULATION EST = 1 +or- 0
POP EST STD ERR = 0
POP EST CONF INTRVL = +or- 0
LOWER CONF LIMIT = 1
UPPER CONF LIMIT = 1
CAPTURE PROB = 1
% ERROR OF POP EST = 0

AVERAGE WEIGHT = 49 g
BIOMASS = .049 kg (.108045 lb)
STANDING CROP = .131581 lb/ac (.147503 kg/ha)
FISH PER MILE = 16.0976 +or- 0
FISH PER KILOMETER = 10.003 +or- 0

MTB > NOTE
MTB > NOTE
MTB > NOTE HISTOGRAM FOR
MTB > NOTE MERCED RIVER SECTION: 17
MTB > NOTE SPECIES CODE: RT
MTB > NOTE YEAR OF COLLECTION : 90
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

Histogram of LENGTH N = 1

Midpoint	Count
37.5	0
62.5	0
87.5	0
112.5	0
137.5	0
162.5	1 *

STREAM: MERCED RIVER SEC 17 YOSEMITE VALLEY SEC 8 EL CAPITAN PICNIC AREA
SECTION LENGTH = 328 ft ³²⁸ (99.9744 m)
AVE WIDTH OF SECTION = 7 ft ¹⁰⁹ (33.2232 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 73 27 18

TOTAL CATCH = 118
POPULATION EST = 130 +or- 12.7216
POP EST STD ERR = 6.49064
POP EST CONF INTRVL = +or- 12.7216
LOWER CONF LIMIT = 118
UPPER CONF LIMIT = 142.722
CAPTURE PROB = .543779
% ERROR OF POP EST = 9.78588

AVERAGE WEIGHT = 53.4 g
BIOMASS = 6.942 kg (15.3071 lb)
STANDING CROP = 18.6416 lb/ac (20.8972 kg/ha)
FISH PER MILE = 2092.68 +or- 204.787
FISH PER KILOMETER = 1300.4 +or- 127.255

MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > NOTE
MTB > HIST C1 37.5 25

HISTOGRAM FOR
MERCED RIVER SECTION: 17
SPECIES CODE: BN
YEAR OF COLLECTION : 90

Histogram of LENGTH N = 118

Midpoint	Count	
37.5	0	
62.5	22	*****
87.5	50	*****
112.5	0	
137.5	0	
162.5	17	*****
187.5	4	****
212.5	9	*****
237.5	6	*****
262.5	4	****
287.5	1	*
312.5	0	
337.5	2	**
362.5	1	*
387.5	1	*
412.5	0	
437.5	1	*

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

RECOMPUTED WITH NEW AVE WIDTH OF SECTION
ws

10:45 Tuesday, ~~January~~ 23, 1996 12
APR

FISH POPULATION ESTIMATION.....SURVEY DATE: 22AUG91
STREAM: MERCED RIVER, SECT.8 (EL CAP PICNIC), 22 AUG 1991, RAINBOW TROUT
SPECIES:RAINBOW TROUT

Number of Electroshockers= 4	
Number of Removals= 3	
Removal Pattern	CATCH
-----	-----
Removal 1	2
Removal 2	2
Removal 3	0

Total Catch = 4

Population Estimate = 4 STD. Error= 0.54
95% C.I. = + or - 1.07=(4 ,5)

95% Confidence Intervals(Estimates and errors adjusted by section length)
#Fish/Mile= 64.00 +or- 17.15
#Fish/Kilometer= 40.00 +or- 10.66

Capture Probability = 0.67
Error of Popul. Est. = 26.63
Coefficient of Variation = 0.14

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	111.2 ft. o	33.89 m
Average Weight	78.70 g or	0.17 lb
Biomass	0.31 kg or	0.69 lb
Standing Crop	0.93 kg/ha	0.83 lb./acre

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	0	0	0.00	0.00
65	0	0	0.00	0.00
75	0	0	0.00	0.00
85	0	0	0.00	0.00
95	0	0	0.00	0.00
105	0	0	0.00	0.00
115	0	0	0.00	0.00
125	0	0	0.00	0.00
135	*****	1	25.00	25.00
145	*****	3	75.00	100.00
155		4	0.00	100.00
165		4	0.00	100.00
175		4	0.00	100.00
185		4	0.00	100.00
195		4	0.00	100.00
205		4	0.00	100.00
215		4	0.00	100.00
225		4	0.00	100.00
235		4	0.00	100.00
245		4	0.00	100.00
255		4	0.00	100.00
265		4	0.00	100.00
275		4	0.00	100.00
285		4	0.00	100.00
295		4	0.00	100.00
305		4	0.00	100.00
315		4	0.00	100.00
325		4	0.00	100.00
335		4	0.00	100.00
345		4	0.00	100.00
355		4	0.00	100.00
365		4	0.00	100.00
375		4	0.00	100.00
385		4	0.00	100.00
395		4	0.00	100.00
405		4	0.00	100.00

-----+-----+-----+

FREQUENCY

RECALCULATED w/NEW AVE WIDTH OF SECTION *DB*

10:45 Tuesday, ~~January~~ ^{APR} 23, 1996 11

FISH POPULATION ESTIMATION.....SURVEY DATE: 22AUG91
STREAM: MERCED RIVER, SECT.8 (EL CAP PICNIC), 22 AUG 1991, BROWN TROUT
SPECIES: BROWN TROUT

Number of Electroshockers=	4
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	89
Removal 2	38
Removal 3	8

Total Catch = 135

Population Estimate = 140 STD. Error= 3.32
95% C.I. = + or - 6.50=(135 ,146)

95% Confidence Intervals(Estimates and errors adjusted by section length)
#Fish/Mile= 2253.00 +or- 104.67
#Fish/Kilometer= 1400.00 +or- 65.04

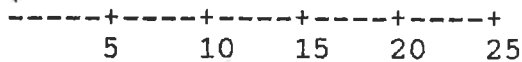
Capture Probability = 0.66
Error of Popul. Est. = 4.64
Coefficient of Variation = 0.02

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	111.2 ft. o	33.89 m
Average Weight	52.00 g or	0.11 lb
Biomass	7.28 kg or	16.05 lb
Standing Crop	21.48 kg/ha	19.16 lb./acre

----- SPECIES=Brown trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45		0	0	0.00	0.00
55	*	1	1	0.74	0.74
65	*****	25	26	18.52	19.26
75	*****	19	45	14.07	33.33
85	*****	9	54	6.67	40.00
95		0	54	0.00	40.00
105		0	54	0.00	40.00
115		0	54	0.00	40.00
125		0	54	0.00	40.00
135	**	2	56	1.48	41.48
145	*****	14	70	10.37	51.85
155	*****	19	89	14.07	65.93
165	*****	18	107	13.33	79.26
175	*****	6	113	4.44	83.70
185	*	1	114	0.74	84.44
195	*	1	115	0.74	85.19
205	**	2	117	1.48	86.67
215	*****	5	122	3.70	90.37
225	*	1	123	0.74	91.11
235	*	1	124	0.74	91.85
245	*	1	125	0.74	92.59
255	***	3	128	2.22	94.81
265	**	2	130	1.48	96.30
275	*	1	131	0.74	97.04
285		0	131	0.00	97.04
295		0	131	0.00	97.04
305		0	131	0.00	97.04
315		0	131	0.00	97.04
325		0	131	0.00	97.04
335	*	1	132	0.74	97.78
345	*	1	133	0.74	98.52
355		0	133	0.00	98.52
365		0	133	0.00	98.52
375		0	133	0.00	98.52
385		0	133	0.00	98.52
395	*	1	134	0.74	99.26
405	*	1	135	0.74	100.00



FREQUENCY

STREAM: MERCED RIVER SEC 18 YOSEMITE VALLEY SEC 9 EL CAPITAN BRIDGE
SECTION LENGTH = 9 ft (99.9744 m)
AVE WIDTH OF SECTION = 76.7 ft (23.3782 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 6 1 2

TOTAL CATCH = 9
POPULATION EST = 9 +or- 1.85565
POP EST STD ERR = .94676
POP EST CONF INTRVL = +or- 1.85565
LOWER CONF LIMIT = 9
UPPER CONF LIMIT = 10.8557
CAPTURE PROB = .642857
% ERROR OF POP EST = 20.6183

AVERAGE WEIGHT = 10.7 g
BIOMASS = .0963 kg (.212341 lb)
STANDING CROP = .367498 lb/ac (.411966 kg/ha)
FISH PER MILE = 144.878 +or- 29.8714
FISH PER KILOMETER = 90.0274 +or- 18.5622

MTB > NOTE
 MTB > NOTE
 MTB > NOTE HISTOGRAM FOR
 MTB > NOTE MERCED RIVER SECTION: 18
 MTB > NOTE SPECIES CODE: RT
 MTB > NOTE YEAR OF COLLECTION : 90
 MTB > NOTE
 MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 25mm
 MTB > HIST C1 37.5 25

Histogram of LENGTH N = 9

Midpoint	Count	
37.5	1	*
62.5	5	*****
87.5	0	
112.5	0	
137.5	2	**
162.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 9

Midpoint	Count	
45.0	1	*
55.0	0	
65.0	5	*****
75.0	0	
85.0	0	
95.0	0	
105.0	0	
115.0	0	
125.0	0	
135.0	0	
145.0	2	**
155.0	0	
165.0	0	
175.0	1	*

STREAM: MERCED RIVER SEC 18 YOSEMITE VALLEY SEC 9 EL CAPITAN BRIDGE
SECTION LENGTH = 8 ft 328 (99.9744 m)
AVE WIDTH OF SECTION = 76.7 ft 76.7 (23.3782 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 82 57 37

TOTAL CATCH = 176
POPULATION EST = 249 +or- 62.161
POP EST STD ERR = 31.7148
POP EST CONF INTRVL = +or- 62.161
LOWER CONF LIMIT = 186.839
UPPER CONF LIMIT = 311.161
CAPTURE PROB = .334601
% ERROR OF POP EST = 24.9643

AVERAGE WEIGHT = 19.3 g
BIOMASS = 4.8057 kg (10.5966 lb)
STANDING CROP = 18.3394 lb/ac (20.5585 kg/ha)
FISH PER MILE = 4008.29 +or- 1000.64
FISH PER KILOMETER = 2490.76 +or- 621.799

Histogram of LENGTH N = 176
 Each * represents 2 obs.

Midpoint	Count	
37.5	1	*
62.5	62	*****
87.5	73	*****
112.5	0	
137.5	8	****
162.5	10	*****
187.5	2	*
212.5	10	*****
237.5	2	*
262.5	7	****
287.5	0	
312.5	1	*

MTB > F
 MTB > F
 MTB > F
 MTB > F
 MTB > F
 MTB > F
 MTB > F
 MTB > F

MTB > NOTE

MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 176
 Each * represents 2 obs.

Midpoint	Count	
45.0	1	*
55.0	5	***
65.0	32	*****
75.0	57	*****
85.0	37	*****
95.0	4	**
105.0	0	
115.0	0	
125.0	1	*
135.0	2	*
145.0	5	***
155.0	5	***
165.0	5	***
175.0	0	
185.0	1	*
195.0	1	*
205.0	3	**
215.0	7	****
225.0	0	
235.0	2	*
245.0	0	
255.0	3	**
265.0	3	**
275.0	1	*
285.0	0	
295.0	0	
305.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER SEC 19 YOSEMITE VALLEY SEC 10 BRIDALVEIL MORaine
SECTION LENGTH = 8 ft ³²⁸ (99.9744 m)
AVE WIDTH OF SECTION = 91 ft ₉₁ (27.7368 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 91 31 16

TOTAL CATCH = 138
POPULATION EST = 146 +or- 8.94827
POP EST STD ERR = 4.56545
POP EST CONF INTRVL = +or- 8.94827
LOWER CONF LIMIT = 138
UPPER CONF LIMIT = 154.948
CAPTURE PROB = .613333
% ERROR OF POP EST = 6.12895

AVERAGE WEIGHT = 34 g
BIOMASS = 4.964 kg (10.9456 lb)
STANDING CROP = 15.9667 lb/ac (17.8987 kg/ha)
FISH PER MILE = 2350.24 +or- 144.045
FISH PER KILOMETER = 1460.45 +or- 89.51

Histogram of LENGTH N = 138

Midpoint	Count	
37.5	0	
62.5	26	*****
87.5	28	*****
112.5	1	*
137.5	33	*****
162.5	27	*****
187.5	6	*****
212.5	8	*****
237.5	7	*****
262.5	1	*
287.5	1	*

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 138

Midpoint	Count	
45.0	0	
55.0	1	*
65.0	11	*****
75.0	24	*****
85.0	15	*****
95.0	3	***
105.0	1	*
115.0	0	
125.0	2	**
135.0	15	*****
145.0	16	*****
155.0	13	*****
165.0	11	*****
175.0	4	****
185.0	2	**
195.0	3	***
205.0	3	***
215.0	3	***
225.0	3	***

235.0	5	*****
245.0	1	*
255.0	1	*
265.0	0	
275.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER () 19 YOSEMITE VALLEY SEC 1 BRIDALVEIL MORaine
SECTION LENGTH = 328 ft (99.9744 m)
AVE WIDTH OF SECTION = 91 ft (27.7368 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 70 16 7

TOTAL CATCH = 93
POPULATION EST = 94 +or- 3.18489
POP EST STD ERR = 1.62494
POP EST CONF INTRVL = +or- 3.18489
LOWER CONF LIMIT = 93
UPPER CONF LIMIT = 97.1849
CAPTURE PROB = .738095
% ERROR OF POP EST = 3.38818

AVERAGE WEIGHT = 77 g
BIOMASS = 7.238 kg (15.9598 lb)
STANDING CROP = 23.281 lb/ac (26.098 kg/ha)
FISH PER MILE = 1513.17 +or- 51.2689
FISH PER KILOMETER = 940.287 +or- 31.8586

Histogram of LENGTH N = 93

Midpoint	Count	
45.0	0	
55.0	0	
65.0	0	
75.0	0	
85.0	4	****
95.0	12	*****
105.0	9	*****
115.0	1	*
125.0	0	
135.0	0	
145.0	3	***
155.0	2	**
165.0	5	*****
175.0	4	****
185.0	0	
195.0	10	*****
205.0	11	*****
215.0	11	*****
225.0	1	*

235.0	11	*****
245.0	3	***
255.0	2	**
265.0	0	
275.0	0	
285.0	1	*
295.0	0	
305.0	1	*
315.0	0	
325.0	1	*
335.0	0	
345.0	0	
355.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER SFC 20 YOSEMITE VALLEY SEC 11 BRIDALVEIL FALLS VIEW
SECTION LENGTH = 99.9744 ft (99.9744 m)
AVE WIDTH OF SECTION = 60.04 ft (18.3002 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 30 13 6

TOTAL CATCH = 49
POPULATION EST = 52 +or- 6.12474
POP EST STD ERR = 3.12486
POP EST CONF INTRVL = +or- 6.12474
LOWER CONF LIMIT = 49
UPPER CONF LIMIT = 58.1247
CAPTURE PROB = .590361
% ERROR OF POP EST = 11.7783

AVERAGE WEIGHT = 23.6 g
BIOMASS = 1.2272 kg (2.70598 lb)
STANDING CROP = 5.98273 lb/ac (6.70664 kg/ha)
FISH PER MILE = 837.073 +or- 98.5933
FISH PER KILOMETER = 520.159 +or- 61.266

Histogram of LENGTH N = 49

Midpoint	Count	
37.5	0	
62.5	9	*****
87.5	19	*****
112.5	0	
137.5	5	*****
162.5	10	*****
187.5	5	*****
212.5	0	
237.5	0	
262.5	1	*

MTB > N
MTB > N
MTB > N
MTB > N
MTB > N
MTB > N
MTB > N
MTB > N
MTB > N
MTB > N

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

Histogram of LENGTH N = 49

Midpoint	Count	
45.0	0	
55.0	0	
65.0	3	***
75.0	14	*****
85.0	10	*****
95.0	1	*
105.0	0	
115.0	0	
125.0	1	*
135.0	2	**
145.0	2	**
155.0	5	*****
165.0	3	***
175.0	3	***
185.0	1	*
195.0	3	***
205.0	0	
215.0	0	
225.0	0	

235.0	0	
245.0	0	
255.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER SEC 20 YOSEMITE VALLEY SEC 11 BRIDALVEIL FALLS VIEW
SECTION LENGTH = 3 ft ³²⁰ (99.9744 m)
AVE WIDTH OF SECTION = 60.04 ft ^{60.04} (18.3002 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 58 27 14

TOTAL CATCH = 99
POPULATION EST = 110 +or- 12.7198
POP EST STD ERR = 6.48972
POP EST CONF INTRVL = +or- 12.7198
LOWER CONF LIMIT = 99
UPPER CONF LIMIT = 122.72
CAPTURE PROB = .529412
% ERROR OF POP EST = 11.5635

AVERAGE WEIGHT = 32.5 g
BIOMASS = 3.575 kg (7.88287 lb)
STANDING CROP = 17.4285 lb/ac (19.5373 kg/ha)
FISH PER MILE = 1770.73 +or- 204.758
FISH PER KILOMETER = 1100.34 +or- 127.237

Histogram of LENGTH N = 99
 Each * represents 2 obs.

Midpoint	Count	
37.5	0	
62.5	1	*
87.5	58	*****
112.5	15	*****
137.5	0	
162.5	5	***
187.5	5	***
212.5	4	**
237.5	8	****
262.5	2	*
287.5	0	
312.5	1	*

MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

MTB > NOTE

Histogram of LENGTH N = 99

Midpoint	Count	
45.0	0	
55.0	0	
65.0	0	
75.0	5	*****
85.0	21	*****
95.0	33	*****
105.0	13	*****
115.0	2	**
125.0	0	
135.0	0	
145.0	0	
155.0	3	***
165.0	2	**
175.0	1	*
185.0	2	**
195.0	2	**
205.0	1	*
215.0	2	**
225.0	1	*
235.0	2	**
245.0	6	*****
255.0	1	*
265.0	1	*
275.0	0	
285.0	0	
295.0	0	
305.0	0	
315.0	0	
325.0	1	*

MTB > NOOUTFILE

RECOMPUTED w/ NEW AVE. WIDTH OF SECTION
RB

10:45 Tuesday, January 23, 1996 3
APR

FISH POPULATION ESTIMATION.....SURVEY DATE: 21AUG91
STREAM: MERCED RIVER, SECTION 11(BRIDL FALLS), 21 AUG 1991, RAINBOW TROUT
SPECIES:RAINBOW TROUT

Number of Electroshockers = ~~3~~ 4 ?

Number of Removals = 3

Removal Pattern CATCH

Removal 1 9
Removal 2 6
Removal 3 2

Total Catch = 17

Population Estimate = 18 STD. Error = 2.11
95% C.I. = + or - 4.14 = (17 , 22)

95% Confidence Intervals (Estimates and errors adjusted by section length)

#Fish/Mile = 289.00 + or - 66.68
#Fish/Kilometer = 180.00 + or - 41.44

Capture Probability = 0.57

^ Error of Popul. Est. = 23.01

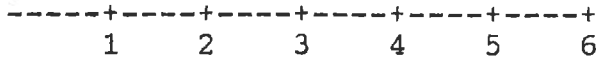
Coefficient of Variation = 0.12

Section Length = 328 ft. or = 99.97 m
Ave. Section Width = 69.2 ft. or 21.09 m
Average Weight 56.50 g or 0.12 lb
Biomass 1.02 kg or 2.24 lb
Standing Crop 4.82 kg/ha 4.30 lb./acre

----- SPECIES=Rainbow trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
12		0	0	0.00	0.00
37		0	0	0.00	0.00
62		0	0	0.00	0.00
87		0	0	0.00	0.00
112	*****	1	1	5.88	5.88
137	*****	4	5	23.53	29.41
162	*****	6	11	35.29	64.71
187	*****	2	13	11.76	76.47
212	*****	3	16	17.65	94.12
237	*****	1	17	5.88	100.00
262		0	17	0.00	100.00
287		0	17	0.00	100.00
312		0	17	0.00	100.00
337		0	17	0.00	100.00
362		0	17	0.00	100.00
387		0	17	0.00	100.00
412		0	17	0.00	100.00
437		0	17	0.00	100.00
462		0	17	0.00	100.00
487		0	17	0.00	100.00
512		0	17	0.00	100.00



FREQUENCY

RECOMPUTED ~~WINDOW~~ AVE. WIDTH OF SECTION
APR

10:45 Tuesday, ~~January~~ 23, 1996 6

FISH POPULATION ESTIMATION.....SURVEY DATE: 21AUG91
STREAM: MERCED RIVER, SECT.11(BRIDAL FALLS),21 AUG 1991, BROWN TROUT
SPECIES:BROWN TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	25
Removal 2	18
Removal 3	13

Total Catch =	56

Population Estimate = 83 STD. Error= 21.72
95% C.I. = + or - 42.58=(56 ,125)

95% Confidence Intervals(Estimates and errors adjusted by section length)
#Fish/Mile= 1336.00 +or- 685.44
#Fish/Kilometer= 830.00 +or- 425.94

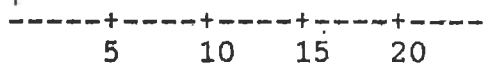
Capture Probability = 0.31
Error of Popul. Est. = 51.30
Coefficient of Variation = 0.26

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	69.2 ft. or	21.09 m
Average Weight	48.20 g or	0.11 lb
Biomass	4.00 kg or	8.82 lb
Standing Crop	18.97 kg/ha	16.92 lb./acre

----- SPECIES=Brown trout S_CODE=MERCED RIVER D_CODE=12 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
12		0	0	0.00	0.00
37	**	2	2	3.57	3.57
62	*****	5	7	8.93	12.50
87	*****	9	16	16.07	28.57
112		0	16	0.00	28.57
137	***	3	19	5.36	33.93
162	*****	24	43	42.86	76.79
187	****	4	47	7.14	83.93
212	****	4	51	7.14	91.07
237		0	51	0.00	91.07
262	****	4	55	7.14	98.21
287	*	1	56	1.79	100.00
312		0	56	0.00	100.00
337		0	56	0.00	100.00
362		0	56	0.00	100.00
387		0	56	0.00	100.00
412		0	56	0.00	100.00
437		0	56	0.00	100.00
462		0	56	0.00	100.00
487		0	56	0.00	100.00
512		0	56	0.00	100.00



FREQUENCY

STREAM: MERCED RIVER SEC 21 YOSEMITE VALLEY SEC 12 BRIDALVEIL CREEK
SECTION LENGTH = 3 ft ³²⁰ (99.9744 m)
AVE WIDTH OF SECTION = 47.8 ft ^{47.8} (14.5694 m)

SPECIES: RAINBOW TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 109 41 31

TOTAL CATCH = 181
POPULATION EST = 205 +or- 19.6104
POP EST STD ERR = 10.0053
POP EST CONF INTRVL = +or- 19.6104
LOWER CONF LIMIT = 185.39
UPPER CONF LIMIT = 224.61
CAPTURE PROB = .508427
% ERROR OF POP EST = 9.56604

AVERAGE WEIGHT = 13.8 g
BIOMASS = 2.829 kg (6.23794 lb)
STANDING CROP = 17.3233 lb/ac (19.4194 kg/ha)
FISH PER MILE = 3300 +or- 315.679
FISH PER KILOMETER = 2050.63 +or- 196.164

Histogram of LENGTH N = 181
 Each * represents 2 obs.

Midpoint	Count		
37.5	6	***	MTB > NOT
62.5	85	*****	MTB > NOT
87.5	44	*****	MTB > NOT
112.5	3	**	MTB > NOT
137.5	18	*****	MTB > NOT
162.5	12	*****	MTB > NOT
187.5	6	***	MTB > NOT
212.5	5	***	MTB > NOT
237.5	1	*	MTB > NOT
262.5	1	*	MTB > HIS

MTB > NOTE
 MTB > NOTE LENGTH INTERVAL IS 10 mm
 MTB > HIST C1 45 10

Histogram of LENGTH N = 181

Midpoint	Count	
45.0	6	*****
55.0	22	*****
65.0	48	*****
75.0	37	*****
85.0	20	*****
95.0	2	**
105.0	0	
115.0	0	
125.0	6	*****
135.0	5	*****
145.0	10	*****
155.0	8	*****
165.0	4	****
175.0	1	*
185.0	1	*
195.0	4	****
205.0	0	
215.0	3	***
225.0	2	**
235.0	0	
245.0	1	*
255.0	0	
265.0	1	*

MTB > NOOUTFILE

STREAM: MERCED RIVER SEC 21 YOSEMITE VALLEY SEC 12 BRIDALVEIL CREEK
SECTION LENGTH = () ft (99.9744 m)
AVE WIDTH OF SECTION = 47.8 ft (14.5694 m)

SPECIES: BROWN TROUT

NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 66 30 14

TOTAL CATCH = 110
POPULATION EST = 120 +or- 11.413
POP EST STD ERR = 5.82295
POP EST CONF INTRVL = +or- 11.413
LOWER CONF LIMIT = 110
UPPER CONF LIMIT = 131.413
CAPTURE PROB = .555556
% ERROR OF POP EST = 9.51081

.145694

AVERAGE WEIGHT = 30 g
BIOMASS = 3.6 kg (7.938 lb)
STANDING CROP = 22.0444 lb/ac (24.7118 kg/ha)
FISH PER MILE = 1931.71 +or- 183.721
FISH PER KILOMETER = 1200.37 +or- 114.165

Histogram of LENGTH N = 110

Midpoint	Count	
37.5	0	
62.5	7	*****
87.5	48	*****
112.5	25	*****
137.5	0	
162.5	8	*****
187.5	8	*****
212.5	3	***
237.5	6	*****
262.5	5	*****

MT
MT
MT
MT
MT
MT
MT
MT

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

Histogram of LENGTH N = 110

Midpoint	Count	
45.0	0	
55.0	2	**
65.0	1	*
75.0	8	*****
85.0	13	*****
95.0	31	*****
105.0	20	*****
115.0	5	*****
125.0	0	
135.0	0	
145.0	0	
155.0	1	*
165.0	6	*****
175.0	1	*
185.0	5	*****
195.0	3	***
205.0	2	**
215.0	0	
225.0	3	***
235.0	3	***
245.0	1	*
255.0	1	*
265.0	3	***
275.0	1	*

MTB > NOOUTFILE

FISH POPULATION ESTIMATION.....SURVEY DATE: 28JUL92
 STREAM: MARBLE FORK KAWEAH RIVER SECTION 4
 SPECIES: RAINBOW TROUT

Number of Electroshockers= 0
 Number of Removals= 3

Removal Pattern	CATCH
-----	-----
Removal 1	38
Removal 2	20
Removal 3	10

Total Catch =	68

Population Estimate = 77 STD. Error= 6.30
 95% C.I. = + or - 12.35=(68 ,89)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 1274.00 +or- 204.45
 #Fish/Kilometer= 791.00 +or- 127.05

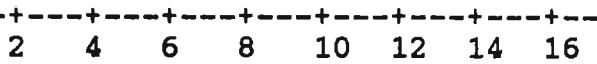
Capture Probability = 0.50
 % Error of Popul. Est. = 16.04
 Coefficient of Variation = 0.08

Section Length=	319 ft. or =	97.23 m
Ave. Section Width =	41.6 ft. or	12.68 m
Average Weight	29.40 g or	0.06 lb
Biomass	2.26 kg or	4.99 lb
Standing Crop	18.36 kg/ha	16.38 lb./acre

----- SPECIES=Rainbow trout S_CODE=MARBLE FORK_D_CODE=9 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5.00		0	0	0.00	0.00
15.00		0	0	0.00	0.00
25.00		0	0	0.00	0.00
35.00	**	1	1	1.47	1.47
45.00	****	2	3	2.94	4.41
55.00	*****	7	10	10.29	14.71
65.00	**	1	11	1.47	16.18
75.00		0	11	0.00	16.18
85.00		0	11	0.00	16.18
95.00	*****	3	14	4.41	20.59
105.00	*****	4	18	5.88	26.47
115.00	*****	17	35	25.00	51.47
125.00	*****	9	44	13.24	64.71
135.00	*****	6	50	8.82	73.53
145.00	*****	5	55	7.35	80.88
155.00	*****	6	61	8.82	89.71
165.00	*****	3	64	4.41	94.12
175.00	**	1	65	1.47	95.59
185.00	**	1	66	1.47	97.06
195.00		0	66	0.00	97.06
205.00		0	66	0.00	97.06
215.00	**	1	67	1.47	98.53
225.00	**	1	68	1.47	100.00
235.00		0	68	0.00	100.00
245.00		0	68	0.00	100.00
255.00		0	68	0.00	100.00
265.00		0	68	0.00	100.00
275.00		0	68	0.00	100.00
285.00		0	68	0.00	100.00
295.00		0	68	0.00	100.00
305.00		0	68	0.00	100.00
315.00		0	68	0.00	100.00
325.00		0	68	0.00	100.00
335.00		0	68	0.00	100.00
345.00		0	68	0.00	100.00
355.00		0	68	0.00	100.00
365.00		0	68	0.00	100.00
375.00		0	68	0.00	100.00
385.00		0	68	0.00	100.00
395.00		0	68	0.00	100.00
405.00		0	68	0.00	100.00



Section:

4 Date:28JUL92

FISH POPULATION ESTIMATION.....SURVEY DATE: 28JUL92
 STREAM: MARBLE FORK KAWEAH RIVER SECTION 4
 SPECIES: BROWN TROUT

Number of Electroshockers=	0
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	66
Removal 2	22
Removal 3	4

Total Catch =	92

Population Estimate =	93	STD. Error=	1.64
95% C.I. = + or -	3.22	(92 , 96)	

95% Confidence Intervals (Estimates and errors adjusted by section length)

#Fish/Mile=	1539.00	+or-	53.24
#Fish/Kilometer=	956.00	+or-	33.08

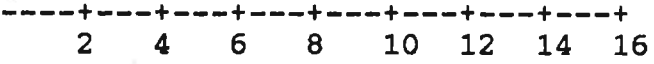
Capture Probability =	0.74
% Error of Popul. Est. =	3.46
Coefficient of Variation =	0.02

Section Length=	319 ft. or =	97.23 m
Ave. Section Width =	41.6 ft. or	12.68 m
Average Weight	77.60 g or	0.17 lb
Biomass	7.22 kg or	15.91 lb
Standing Crop	58.53 kg/ha	52.21 lb./acre

----- SPECIES=Brown trout S_CODE=MARBLE FORK D_CODE=9 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	*****	4	4.35	4.35
45	*****	7	7.61	11.96
55	*****	16	17.39	29.35
65	****	2	2.17	31.52
75	**	1	1.09	32.61
85		0	0.00	32.61
95		0	0.00	32.61
105		0	0.00	32.61
115	*****	7	7.61	40.22
125	*****	6	6.52	46.74
135	*****	5	5.43	52.17
145	*****	7	7.61	59.78
155	****	2	2.17	61.96
165	*****	6	6.52	68.48
175	*****	5	5.43	73.91
185	*****	3	3.26	77.17
195	****	2	2.17	79.35
205	*****	6	6.52	85.87
215	*****	3	3.26	89.13
225	*****	4	4.35	93.48
235		0	0.00	93.48
245	****	2	2.17	95.65
255		0	0.00	95.65
265		0	0.00	95.65
275	**	1	1.09	96.74
285		0	0.00	96.74
295		0	0.00	96.74
305		0	0.00	96.74
315		0	0.00	96.74
325		0	0.00	96.74
335		0	0.00	96.74
345		0	0.00	96.74
355		0	0.00	96.74
365	**	1	1.09	97.83
375		0	0.00	97.83
385	**	1	1.09	98.91
395		0	0.00	98.91
405	**	1	1.09	100.00



FREQUENCY

Section:

4 Date:28JUL92

STREAM: MARBLE FORK SECTION 4 *AUG 88*
SECTION LENGTH = 300 ft (91.44 m)
AVE WIDTH OF SECTION = 32.1 ft (9.78408 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 133 27

TOTAL CATCH = 160
POPULATION EST = 166.877 +or- 7.92355
POP EST STD ERR = 4.04263
POP EST CONF INTRVL = +or- 7.92355
LOWER CONF LIMIT = 160
UPPER CONF LIMIT = 174.801
CAPTURE PROB = .796992
% ERROR OF POP EST = 4.74813

AVERAGE WEIGHT = 17 g
BIOMASS = 2.83692 kg (6.2554 lb)
STANDING CROP = 28.2825 lb/ac (31.7047 kg/ha)
FISH PER MILE = 2937.04 +or- 139.454
FISH PER KILOMETER = 1825.08 +or- 86.6572

```

MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          MARBLE FORK      SECTION: 4
MTB > NOTE          SPECIES CODE:    RT
MTB > NOTE          YEAR OF COLLECTION : 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 160
Each * represents 2 obs.

Midpoint	Count	
37.5	12	*****
62.5	65	*****
87.5	7	****
112.5	39	*****
137.5	19	*****
162.5	7	****
187.5	5	***
212.5	4	**
237.5	2	*

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 160
1 Obs. below the first class
1 Obs. above the last class

Midpoint	Count	
45.0	11	*****
55.0	18	*****
65.0	36	*****
75.0	12	*****
85.0	1	*
95.0	5	*****
105.0	14	*****
115.0	20	*****
125.0	14	*****
135.0	6	*****
145.0	4	****
155.0	3	***
165.0	4	****
175.0	1	*
185.0	1	*
195.0	3	***
205.0	1	*

215.0	1	*
225.0	3	***

MTB > OUTFILE

STREAM: MARBLE FORK SECTION 4 *AUG 88*
SECTION LENGTH = 300 ft (91.44 m)
AVE WIDTH OF SECTION = 32.1 ft (9.78408 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 170 51

TOTAL CATCH = 221
POPULATION EST = 242.857 +or- 17.8393
POP EST STD ERR = 9.10168
POP EST CONF INTRVL = +or- 17.8393
LOWER CONF LIMIT = 225.018
UPPER CONF LIMIT = 260.696
CAPTURE PROB = .7
% ERROR OF POP EST = 7.34559

AVERAGE WEIGHT = 35 g
BIOMASS = 8.5 kg (18.7425 lb)
STANDING CROP = 84.7405 lb/ac (94.9941 kg/ha)
FISH PER MILE = 4274.29 +or- 313.971
FISH PER KILOMETER = 2656.05 +or- 195.102

```

MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          MARBLE FORK      SECTION: 4
MTB > NOTE          SPECIES CODE     BN
MTB > NOTE          YEAR OF COLLECTION 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 221
Each * represents 2 obs.

Midpoint	Count	
37.5	1	*
62.5	55	*****
87.5	8	****
112.5	31	*****
137.5	96	*****
162.5	8	****
187.5	3	**
212.5	0	
237.5	9	*****
262.5	8	****
287.5	1	*
312.5	0	
337.5	0	
362.5	0	
387.5	1	*

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 221
Each * represents 2 obs.
16 Obs. above the last class

Midpoint	Count	
45.0	1	*
55.0	16	*****
65.0	25	*****
75.0	21	*****
85.0	1	*
95.0	0	
105.0	3	**
115.0	15	*****
125.0	25	*****
135.0	51	*****
145.0	33	*****
155.0	4	**
165.0	4	**
175.0	1	*
185.0	0	
195.0	2	*
205.0	0	
215.0	0	
225.0	0	
235.0	3	**

MTB > OUTFILE

STREAM: MARBLE FORK SEC 2 *AUG 88*
SECTION LENGTH = 295 ft (89.916 m)
AVE WIDTH OF SECTION = 20.7 ft (6.30936 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 198 34

TOTAL CATCH = 232
POPULATION EST = 239.049 \pm 7.47234
POP EST STD ERR = 3.81242
POP EST CONF INTRVL = \pm 7.47234
LOWER CONF LIMIT = 232
UPPER CONF LIMIT = 246.521
CAPTURE PROB = .828283
% ERROR OF POP EST = 3.12586

AVERAGE WEIGHT = 23 g
BIOMASS = 5.49812 kg (12.1234 lb)
STANDING CROP = 86.4411 lb/ac (96.9005 kg/ha)
FISH PER MILE = 4278.57 \pm 133.742
FISH PER KILOMETER = 2658.71 \pm 83.1076

```

MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          MARBLE FORK      SECTION: 2
MTB > NOTE          SPECIES CODE:    RT
MTB > NOTE          YEAR OF COLLECTION : 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 232
Each * represents 2 obs.

Midpoint	Count	
37.5	19	*****
62.5	24	*****
87.5	22	*****
112.5	65	*****
137.5	49	*****
162.5	36	*****
187.5	14	*****
212.5	3	**

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 232

Midpoint	Count	
45.0	19	*****
55.0	19	*****
65.0	5	*****
75.0	0	
85.0	8	*****
95.0	14	*****
105.0	33	*****
115.0	23	*****
125.0	18	*****
135.0	17	*****
145.0	23	*****
155.0	18	*****
165.0	11	*****
175.0	12	*****
185.0	5	*****
195.0	4	****
205.0	0	
215.0	3	***

```

MTB > OUTFILE

```


STREAM: MARBLE FORK SEC 2 *AUG 88*
SECTION LENGTH = 295 ft (89.916 m)
AVE WIDTH OF SECTION = 20.7 ft (6.30936 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 5 0

TOTAL CATCH = 5
POPULATION EST = 5 +or- 0
POP EST STD ERR = 0
POP EST CONF INTRVL = +or- 0
LOWER CONF LIMIT = 5
UPPER CONF LIMIT = 5
CAPTURE PROB = 1
% ERROR OF POP EST = 0

AVERAGE WEIGHT = 56 g
BIOMASS = .28 kg (.6174 lb)
STANDING CROP = 4.40214 lb/ac (4.9348 kg/ha)
FISH PER MILE = 89.4915 +or- 0
FISH PER KILOMETER = 55.6102 +or- 0

SPECIES CODE	PASS NO	LENGTH MM	WEIGHT G	REC STATUS	DRAINAGE
BN	1	0211	0100	1	09
BN	1	0118	0019	1	09
BN	1	0190	0091	1	09
BN	1	0177	0066	1	09
BN	1	0071	0002	1	09

CLARK FORK, Section 6

Survey Date: 2001/10/11

Species: Rainbow trout

Number of shockers: 3
Number of passes: 3
Section length: 93.87954 meters
Mean width of section: 8.997252 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 16 grams
Range of measured lengths: 46 to 292 mm
Range of measured weights: 1 to 245 grams

Number of fish caught in each pass:

Pass	Fish caught
1	49
2	26
3	18

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 115.00 (+/-) 24.82
Upper 95% Confidence Limit: 139.82
Lower 95% Confidence Limit: 93.00

Capture Probability: 42%
Standard Error: 12.54
Error of Population Estimate: 21.59%
Coefficient of Variation: 0.11

Biomass: 1.84 kg 4.05 lbs
Standing Crop: 21.78 kg/ha 19.39 lbs/acre

Fish per Mile, 95% C.I.: 1,971.40 (+/-) 425.55
Fish per Kilometer, 95% C.I.: 1,224.97 (+/-) 264.42

CLARK FORK, Section 6

Survey Date: 20 /10/11

Species: Rainbow trout

Length	Weight
46	1
46	1
47	1
47	1
49	1
49	1
52	1
54	1
55	1
55	1
55	1
56	1
56	2
57	1
57	1
57	1
58	1
59	1
59	1
59	1
59	1
59	2
60	1
60	1
60	3
61	2
61	2
62	1
62	1
62	2
62	2
62	3
63	1
64	2
64	3
65	2
65	2
65	3
66	1
66	2
66	2
66	2
66	2
66	3
67	2

CLARK FORK, Section 6

Survey Date: 20 /10/11

Species: Rainbow trout

Length	Weight
67	3
67	3
68	2
68	2
68	2
68	2
68	2
69	2
69	3
71	2
71	3
71	3
71	4
72	4
72	4
72	4
73	3
73	4
74	2
75	3
76	5
77	2
106	8
107	12
115	18
116	15
116	16
116	19
123	18
125	24
134	28
135	24
136	26
140	25
141	24
144	29
149	33
149	34
165	43
171	45
172	53
173	56
182	54
187	70
195	79

CLARK FORK, Section 6

Survey Date: 20 /10/11

Species: Rainbow trout

Length	Weight
209	103
273	245
292	245

CLARK FORK, Section 6

Survey Date: 2001/10/11

Species: Brown trout

Number of shockers: 3
Number of passes: 3
Section length: 93.87954 meters
Mean width of section: 8.997252 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 3 grams
Range of measured lengths: 85 to 85 mm
Range of measured weights: 3 to 3 grams

Number of fish caught in each pass:

Pass	Fish caught
1	1
2	0
3	0

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 1.00 (+/-) 0.00
Upper 95% Confidence Limit: 1.00
Lower 95% Confidence Limit: 1.00

Capture Probability: 100%
Standard Error: 0.00
Error of Population Estimate: .00%
Coefficient of Variation: 0.00

Biomass: 0.00 kg 0.01 lbs
Standing Crop: 0.04 kg/ha 0.03 lbs/acre

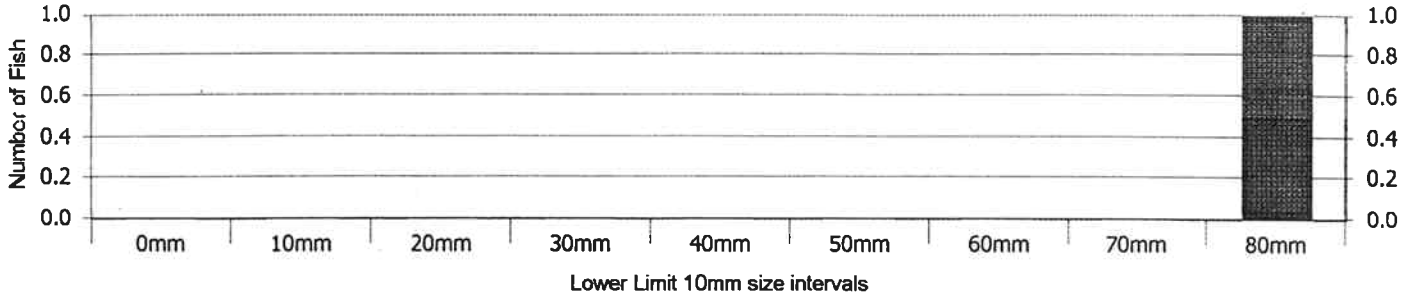
Fish per Mile, 95% C.I.: 17.14 (+/-) 0.00
Fish per Kilometer, 95% C.I.: 10.65 (+/-) 0.00

CLARK FORK, Section 6

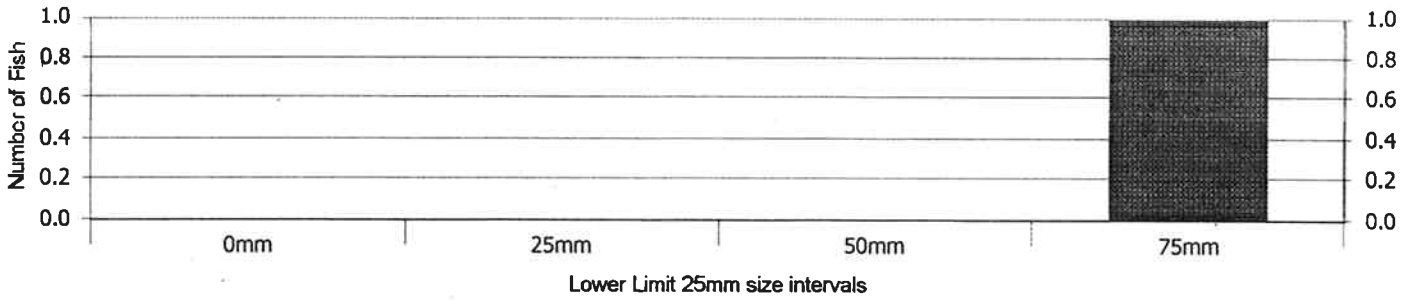
Survey Date: **2001/10/11**

Species: **Brown trout**

10mm Length Distribution



25mm Length Distribution



CLARK FORK, Section 6

Survey Date: 2001/10/11

Species: Brook trout

Number of shockers: 3
Number of passes: 3
Section length: 93.87954 meters
Mean width of section: 8.997252 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 23 grams
Range of measured lengths: 75 to 185 mm
Range of measured weights: 2 to 68 grams

Number of fish caught in each pass:

Pass	Fish caught
1	17
2	10
3	2

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 30.00 (+/-) 3.82
Upper 95% Confidence Limit: 33.82
Lower 95% Confidence Limit: 29.00

Capture Probability: 63%
Standard Error: 1.87
Error of Population Estimate: 12.72%
Coefficient of Variation: 0.06

Biomass: 0.69 kg 1.52 lbs
Standing Crop: 8.17 kg/ha 7.27 lbs/acre

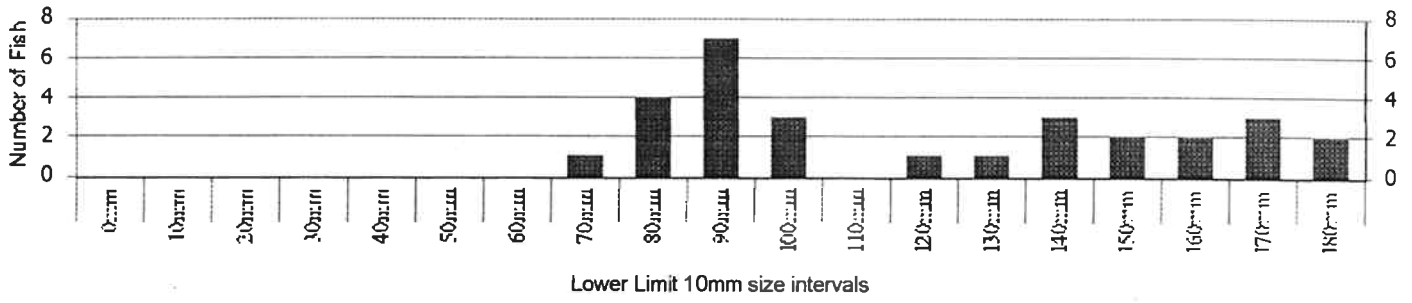
Fish per Mile, 95% C.I.: 514.28 (+/-) 65.41
Fish per Kilometer, 95% C.I.: 319.56 (+/-) 40.64

CLARK FORK, Section 6

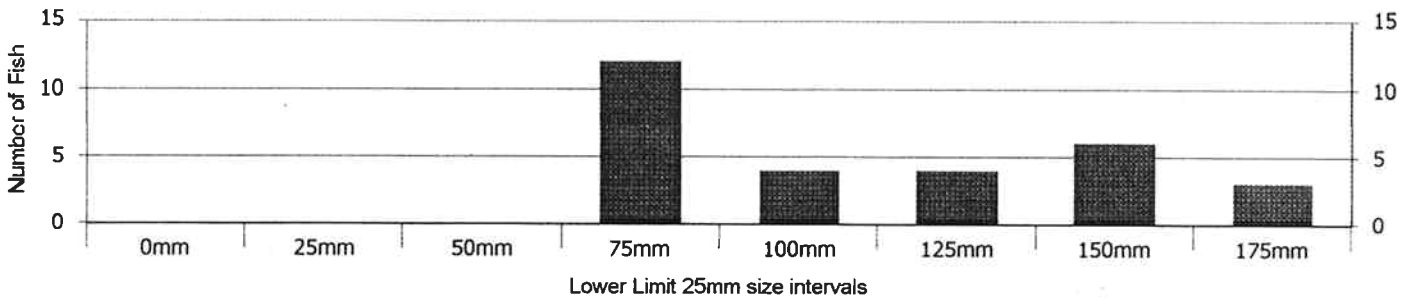
Survey Date: **2001/10/11**

Species: **Brook trout**

10mm Length Distribution



25mm Length Distribution



Stream Name CLARK'S FORK STANIS 2 River Section 6 Survey Date (da/mo/yr) 11 / OCT / 01

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	<u>5</u> °C or °F (circle one)	09:00	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>YSI meter</u>	M. Bogan	M. Bogan
Specific Conductivity	<u>45</u> micromhos/cm	09:00	<input type="checkbox"/> Hanna Waterchek meter <input checked="" type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	M. Bogan	M. Bogan
Ambient Conductivity	micromhos/cm	same as above	Ambient Conductivity = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH			<input type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	mg/l		<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.) Salt added before 1st pass

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): SR TYPE 12 B

Start Time: 09:30

End Time: 10:55

Electrofisher Settings:

Pulse Frequency _____ Hz

Pulse Duration _____ ms

Mode H / S (SR Type XII only)

Output Voltage 400 Volts

Current 0.12 Amps

Power = Volts x Amps = 48 Watts

ELECTROFISHING EFFORT

Operator	ALEX	MIKE	BRIAN B	Total
Shocker	001 WOV	SHADOW	001 WOV	Time (sec)
Pass 1	1468	1543	1408	
Pass 2	1032	1159	1097	
Pass 3	1010	872	899	
Pass 4				

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
Jody Seals	Jason Phillips	Sharon Shiba
Alec Strachan		
Dawn Carlton		
Brian Auelvog		

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: 50 measurements cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: 0 %

CLARK FORK, Section 3

Survey Date: 2001/10/12

Species: Rainbow trout

Number of shockers: 3
Number of passes: 3
Section length: 86.86906 meters
Mean width of section: 7.265412 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 15 grams
Range of measured lengths: 46 to 234 mm
Range of measured weights: 1 to 138 grams

Number of fish caught in each pass:

Pass	Fish caught
1	27
2	15
3	6

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 53.00 (+/-) 8.81
Upper 95% Confidence Limit: 61.81
Lower 95% Confidence Limit: 48.00

Capture Probability: 53%
Standard Error: 4.40
Error of Population Estimate: 16.62%
Coefficient of Variation: 0.08

Biomass: 0.80 kg 1.75 lbs
Standing Crop: 12.60 kg/ha 11.21 lbs/acre

Fish per Mile, 95% C.I.: 981.88 (+/-) 163.16
Fish per Kilometer, 95% C.I.: 610.11 (+/-) 101.38

CLARK FORK, Section 3

Survey Date: 20 /10/12

Species: Rainbow trout

Length	Weight
46	1
52	1
55	1
56	1
56	1
56	2
57	1
57	1
57	1
57	1
57	2
59	2
60	1
60	1
61	1
61	3
70	3
95	7
96	8
100	8
100	11
102	9
102	10
106	9
107	9
111	11
112	14
115	16
116	11
119	13
119	15
119	19
120	15
120	17
121	16
121	17
122	17
123	18
125	19
126	18
127	18
128	26
134	27
138	28
147	30

CLARK FORK, Section 3

Survey Date: 20 /10/12

Species: Rainbow trout

Length

Weight

174

48

184

64

234

138

CLARK FORK, Section 3

Survey Date: 2001/10/12

Species: Brook trout

Number of shockers: 3
Number of passes: 3
Section length: 86.86906 meters
Mean width of section: 7.265412 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 35 grams
Range of measured lengths: 82 to 199 mm
Range of measured weights: 4 to 60 grams

Number of fish caught in each pass:

Pass	Fish caught
1	4
2	2
3	1

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 7.00 (+/-) 2.06
Upper 95% Confidence Limit: 9.06
Lower 95% Confidence Limit: 7.00

Capture Probability: 64%
Standard Error: 0.87
Error of Population Estimate: 29.36%
Coefficient of Variation: 0.12

Biomass: 0.25 kg 0.54 lbs
Standing Crop: 3.88 kg/ha 3.46 lbs/acre

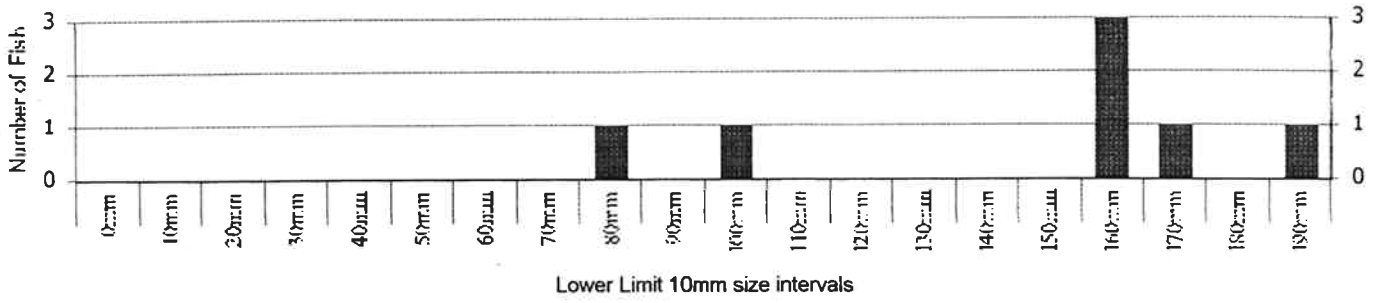
Fish per Mile, 95% C.I.: 129.68 (+/-) 38.08
Fish per Kilometer, 95% C.I.: 80.58 (+/-) 23.66

CLARK FORK, Section 3

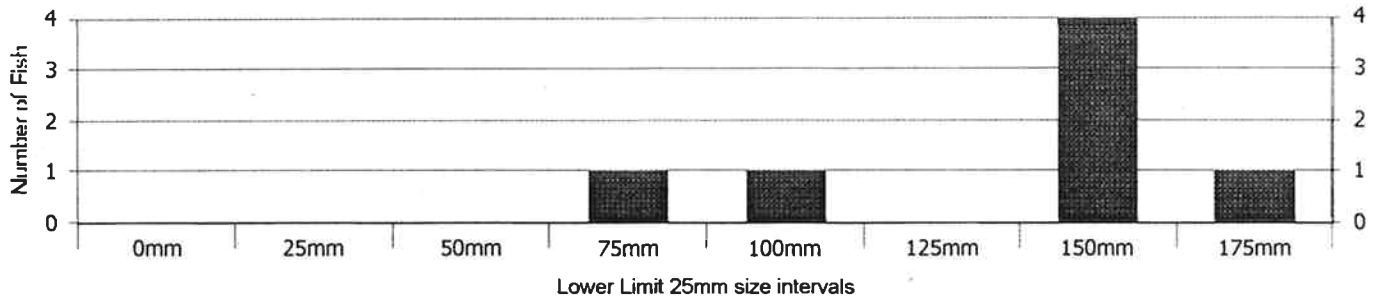
Survey Date: **2001/10/12**

Species: **Brook trout**

10mm Length Distribution



25mm Length Distribution



Stream Name CLARKS FORK STANISLAUS R. Section 3 Survey Date (da/mo/yr) 12 / OCT / 01

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	⁶ °C or °F (circle one)	~ 11:15	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>YSI METER</u>	<u>MS</u>	<u>MS</u>
Specific Conductivity	<u>41</u> micromhos/cm	~ 11:15	<input type="checkbox"/> Hanna Waterchek meter <input checked="" type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	<u>MS</u>	<u>MS</u>
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH			<input type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	mg/l		<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.) SALT ADDED BEFORE 1ST PASS

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): SR TYPE 12B

Start Time: 1055 End Time: 1224

ELECTROFISHING EFFORT

Operator	<u>Michael</u>	<u>Alex</u>	<u>Brian Beal</u>	Total
Shocker	<u>EASY CHARGE</u>	<u>OBIWON</u>	<u>SHADOWWATER</u>	Time (sec)
Pass 1	<u>1169</u>	<u>1206</u>	<u>1220</u>	
Pass 2	<u>1005</u>	<u>1044</u>	<u>1116</u>	
Pass 3	<u>996</u>	<u>1007</u>	<u>1020</u>	
Pass 4				

Electrofisher Settings:

Pulse Frequency _____ Hz

Pulse Duration _____ ms

Mode G / 4 (SR Type XII only)

Output Voltage 300 Volts

Current 0.10 Amps

Power = Volts x Amps = 30 Watts

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
<u>Dawn Carlton *</u>	<u>Dave Compadrino</u>	<u>Shawn Shira</u>
<u>Jason Phillips</u>		<u>Dawn Carlton</u>
<u>Alec Strachan</u>		

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: ~8-9 cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: 0 %

* 1st pass only

KINGS RIVER, S.F., Section 3
Survey Date: 2002/09/19
Species: Rainbow trout

Number of shockers: 4
Number of passes: 3
Section length: 57.9127 meters
Mean width of section: 15 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 40 grams
Range of measured lengths: 55 to 244 mm
Range of measured weights: 2 to 138 grams

Number of fish caught in each pass:

Pass	Fish caught
1	20
2	10
3	4

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 36.00 (+/-) 5.39
Upper 95% Confidence Limit: 41.39
Lower 95% Confidence Limit: 34.00

Capture Probability: 59%
Standard Error: 2.66
Error of Population Estimate: 14.96%
Coefficient of Variation: 0.07

Biomass: 1.44 kg 3.17 lbs
Standing Crop: 16.58 kg/ha 14.76 lbs/acre

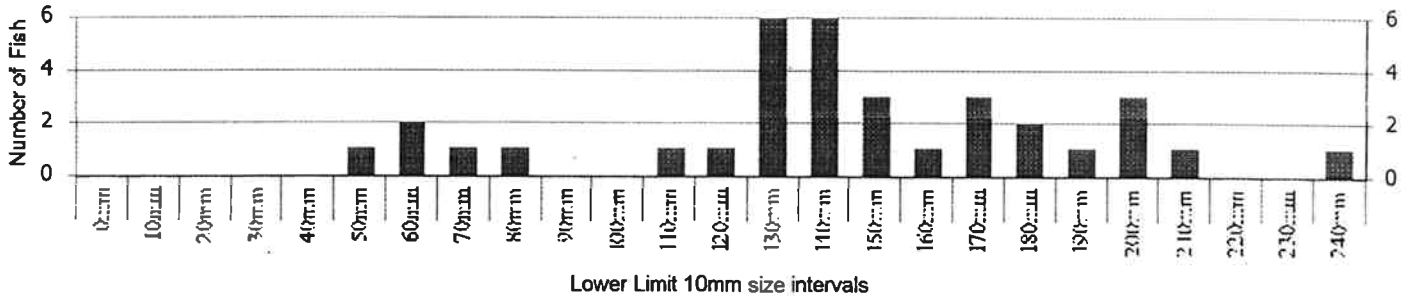
Fish per Mile, 95% C.I.: 1,000.41 (+/-) 149.66
Fish per Kilometer, 95% C.I.: 621.63 (+/-) 92.99

KINGS RIVER, S.F., Section 3

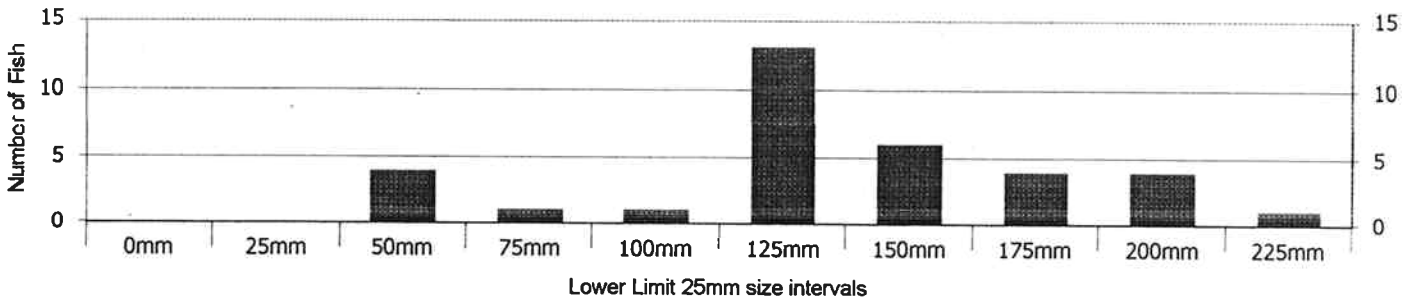
Survey Date: **2002/09/19**

Species: **Rainbow trout**

10mm Length Distribution



25mm Length Distribution



KINGS RIVER, S.F., Section 3
Survey Date: 2002/09/19
Species: Brown trout

Number of shockers: 4
Number of passes: 3
Section length: 57.9127 meters
Mean width of section: 15 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 93 grams
Range of measured lengths: 82 to 376 mm
Range of measured weights: 5 to 579 grams

Number of fish caught in each pass:

Pass	Fish caught
1	31
2	9
3	5

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 46.00 (+/-) 3.57
Upper 95% Confidence Limit: 49.57
Lower 95% Confidence Limit: 45.00

Capture Probability: 67%
Standard Error: 1.79
Error of Population Estimate: 7.76%
Coefficient of Variation: 0.04

Biomass: 4.28 kg 9.41 lbs
Standing Crop: 49.25 kg/ha 43.85 lbs/acre

Fish per Mile, 95% C.I.: 1,278.30 (+/-) 99.24
Fish per Kilometer, 95% C.I.: 794.30 (+/-) 61.66

KINGS RIVER, S.F., Section 3
Survey Date: 20/09/19
Species: Brown trout

PAGE

	Length	Weight
3	82	5
1	88	7
1	94	8
1	95	8
1	105	12
1	134	25
3	149	33
1	156	36
1	156	38
1	158	55
1	164	38
2	175	53
1	176	44
3	181	55
1	184	70
1	190	63
2	199	75
1	201	80
1	202	76
2	203	88
2	209	85
1	209	88
1	211	99
2	212	94
1	216	102
1	217	105
1	220	109
1	220	115
1	221	82
1	221	109
2	222	107
2	223	120
1	225	106
1	225	110
2	226	122
1	227	119
1	229	130
1	230	130
2	230	134
3	232	108
1	232	130
1	232	132
3	241	112
1	262	187
1	376	579

KINGS RIVER, S.F., Section 1
Survey Date: 2002/09/18
Species: Rainbow trout

*entries
 verified 03/02/03
 JBY*

Number of shockers: 4
 Number of passes: 3
 Section length: 85.345 meters
 Mean width of section: 21.0833 meters

Weight estimation equation: N/A
 Estimation model source: N/A
 Average weight of fish in sample: 22 grams
 Range of measured lengths: 47 to 231 mm
 Range of measured weights: 1 to 118 grams

Number of fish caught in each pass:

Pass	Fish caught
1	61
2	22
3	17

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 112.00 (+/-) 13.63
 Upper 95% Confidence Limit: 125.63
 Lower 95% Confidence Limit: 100.00

Capture Probability: 52%
 Standard Error: 6.88
 Error of Population Estimate: 12.17%
 Coefficient of Variation: 0.06

Biomass: 2.46 kg 5.42 lbs
 Standing Crop: 13.69 kg/ha 12.19 lbs/acre

Fish per Mile, 95% C.I.: 2,111.98 (+/-) 256.96
 Fish per Kilometer, 95% C.I.: 1,312.32 (+/-) 159.67

KINGS RIVER, S.F., Section 1
Survey Date: 20('09/18
Species: Rainbow trout

<i>Pack</i>	Length	Weight
1	47	1
1	49	1
1	49	1
3	50	1
3	53	1
1	54	1
1	55	1
2	56	2
2	58	2
1	59	2
1	60	2
1	62	2
1	63	2
2	63	3
2	63	3
1	65	3
3	65	3
1	65	4
1	70	4
3	73	3
1	78	6
1	92	9
2	94	7
3	94	8
2	97	9
2	97	9
1	100	8
1	101	7
1	101	9
2	102	10
1	102	11
1	104	10
3	104	10
1	105	9
1	105	17
2	106	12
1	108	12
1	108	12
2	109	12
3	109	14
1	109	17
1	110	12
2	111	14
3	112	14
1	112	20

KINGS RIVER, S.F., Section 1
Survey Date: 20/ '09/18
Species: Rainbow trout

PAGE 5

	Length	Weight
1	113	14
2	113	14
1	114	13
1	114	14
1	118	14
2	118	15
3	118	16
1	118	17
1	119	15
1	120	15
2	120	17
3	120	17
1	120	18
1	121	21
1	122	18
1	122	20
3	123	19
1	125	18
1	125	19
3	126	18
1	126	21
1	127	20
2	127	22
1	131	24
1	132	20
2	134	24
1	136	22
3	138	26
2	140	30
2	141	27
3	141	29
1	142	31
1	143	27
1	145	29
3	149	31
1	154	36
1	154	40
1	156	33
2	159	36
3	160	39
1	165	40
1	166	40
1	166	45
2	169	47
1	173	51

KINGS RIVER, S.F., Section 1
Survey Date: 2009/18
Species: Rainbow trout

<i>DKF</i>	Length	Weight
1	175	49
2	177	50
1	177	53
1	182	62
1	186	64
1	188	62
2	221	103
1	223	113
3	230	113
1	231	118

KINGS RIVER, S.F., Section 1
Survey Date: 2002/09/18
Species: Brown trout

Number of shockers: 4
Number of passes: 3
Section length: 85.345 meters
Mean width of section: 21.0833 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 76 grams
Range of measured lengths: 71 to 435 mm
Range of measured weights: 4 to 926 grams

Number of fish caught in each pass:

Pass	Fish caught
1	8
2	20
3	1

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 38.00 (+/-) 19.92
Upper 95% Confidence Limit: 57.92
Lower 95% Confidence Limit: 29.00

Capture Probability: 37%
Standard Error: 9.74
Error of Population Estimate: 52.42%
Coefficient of Variation: 0.26

Biomass: 2.89 kg 6.35 lbs
Standing Crop: 16.05 kg/ha 14.29 lbs/acre

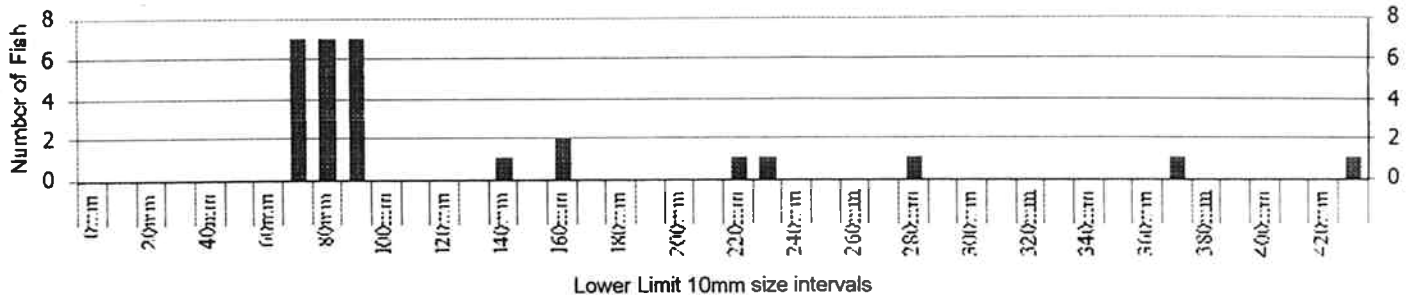
Fish per Mile, 95% C.I.: 716.56 (+/-) 375.65
Fish per Kilometer, 95% C.I.: 445.25 (+/-) 233.42

KINGS RIVER, S.F., Section 1

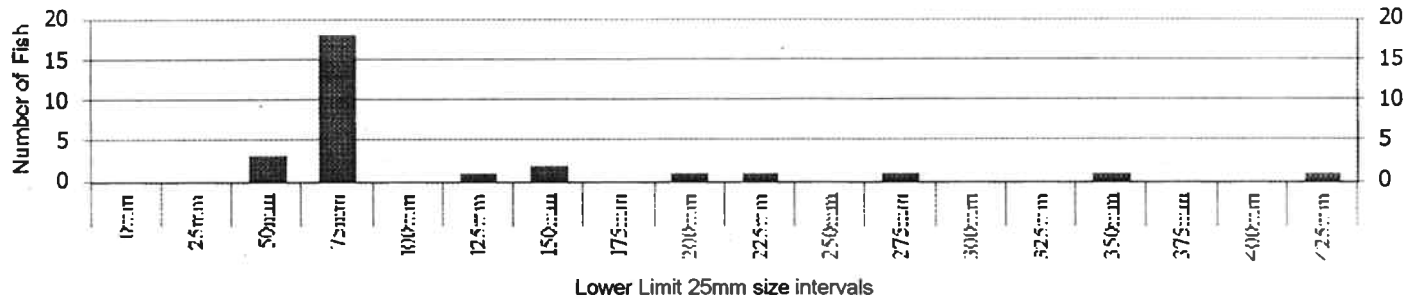
Survey Date: **2002/09/18**

Species: **Brown trout**

10mm Length Distribution



25mm Length Distribution



KERN RIVER, S.F., Section 4
Survey Date: ~~2004/09/04~~
Species: **Golden trout**

29 SEP 2004

Number of shockers: 2
Number of passes: 4
Section length: 116.44 meters
Mean width of section: 5.13 meters

Weight estimation equation: $Weight = Length * 3.023 + 0.000$
Estimation model source: KERN RIVER, S.F., Section 4, 2004/09/04
Average weight of fish in sample: 16 grams
Range of measured lengths: 52 to 225 mm
Range of measured weights: 1 to 94 grams

Number of fish caught in each pass:

Pass	Fish caught
1	448
2	318
3	144
4	75

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 1,095.00 (+/-) 38.05
Upper 95% Confidence Limit: 1,133.05
Lower 95% Confidence Limit: 1,056.95

Capture Probability: 44%
Standard Error: 19.41
Error of Population Estimate: 3.47%
Coefficient of Variation: 0.02

Biomass: 17.52 kg 38.54 lbs
Standing Crop: 293.30 kg/ha 261.13 lbs/acre

Fish per Mile, 95% C.I.: 15,134.25 (+/-) 525.89
Fish per Kilometer, 95% C.I.: 9,403.98 (+/-) 326.77

KERN RIVER, S.F., Section 4
Survey Date: 20^r /09/04
Species: Golden trout

Length	Weight
148	38
148	40
149	27
149	29
149	32
150	24
150	24
150	25
150	25
150	26
150	26
150	29
150	30
150	30
150	31
150	31
150	32
150	33
150	33
150	34
150	35
150	37
150	37
151	25
151	29
151	32
151	33
152	29
152	31
152	33
152	33
154	26
154	36
154	36
154	37
154	48
155	26
155	27
155	28
155	30
155	32
155	32
155	33
155	35
155	36

Only Copied Adult Lengths

KERN RIVER, S.F., Section 4
Survey Date: 20 / 09/04
Species: Golden trout

Length	Weight
155	37
155	38
155	45
156	33
157	30
157	37
158	33
158	35
158	35
159	37
160	32
160	34
160	36
160	40
160	41
160	41
160	42
160	48
160	51
161	42
162	48
165	35
167	41
168	34
168	38
168	50
168	53
169	50
170	39
170	42
170	48
175	36
178	43
178	47
180	60
185	57
185	65
190	51
196	71
225	94

KERN RIVER, S.F., Section 23
Survey Date: 2003/09/25
Species: Golden trout

Number of shockers: 2
Number of passes: 3
Section length: 91.44 meters
Mean width of section: 2.6 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 10 grams
Range of measured lengths: 39 to 167 mm
Range of measured weights: 1 to 40 grams

Number of fish caught in each pass:

Pass	Fish caught
1	110
2	50
3	51

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 286.00 (+/-) 56.88
Upper 95% Confidence Limit: 342.88
Lower 95% Confidence Limit: 229.12

Capture Probability: 36%
Standard Error: 29.02
Error of Population Estimate: 19.89%
Coefficient of Variation: 0.10

Biomass: 2.86 kg 6.29 lbs
Standing Crop: 120.30 kg/ha 107.10 lbs/acre

Fish per Mile, 95% C.I.: 5,033.60 (+/-) 1,001.03
Fish per Kilometer, 95% C.I.: 3,127.73 (+/-) 622.01

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/25
Species: Golden trout

	Length	Weight
3	39	1
3	40	1
2	44	1
3	44	1
1	51	1
3	54	1
1	55	1
1	57	2
1	58	2
3	68	3
2	74	3
1	75	3
2	75	4
2	76	4
3	76	4
1	77	4
1	77	4
1	78	4
2	78	4
3	78	4
1	79	4
3	79	4
1	79	5
1	80	5
2	80	5
1	81	5
2	81	5
2	81	5
1	82	5
1	82	5
2	82	5
2	82	5
3	82	5
3	82	5
3	82	6
1	83	5
2	83	5
2	83	5
1	84	5
3	84	5
1	84	6
1	84	6
1	84	6
1	85	6
3	85	6

KERN RIVER, S.F., Section 2

Survey Date: 20 /09/25

Species: Golden trout

	Length	Weight
3	85	6
3	86	5
1	86	6
1	86	6
3	86	6
1	87	6
1	87	6
1	87	6
3	87	6
3	87	6
2	88	5
1	88	6
1	89	6
1	89	6
3	89	6
3	89	7
3	89	7
1	90	6
3	90	8
1	91	7
1	91	7
1	91	7
2	91	7
3	91	7
3	91	7
1	92	7
1	92	7
3	92	7
2	92	8
1	93	7
1	93	7
1	93	7
2	93	7
3	93	7
1	93	8
1	94	7
1	94	8
3	95	7
1	95	8
1	95	8
1	95	8
3	95	8
1	95	9
1	95	9
2	95	9

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/25
Species: Golden trout

Length	Weight
2 96	7
1 96	8
1 96	8
1 96	8
2 96	8
2 96	8
1 97	8
3 97	8
1 97	9
2 97	9
2 97	9
3 98	9
1 99	9
2 99	9
3 99	9
3 99	9
1 100	8
1 100	9
1 100	9
1 100	10
3 100	10
3 100	10
2 101	9
1 101	11
2 101	11
1 102	9
1 102	10
2 103	9
1 103	10
3 103	11
1 103	12
1 104	8
2 104	10
3 104	10
2 104	11
1 105	8
1 105	10
1 105	10
3 105	11
1 106	11
1 107	10
2 107	10
1 107	11
1 107	12
3 108	11

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/25
Species: Golden trout

	Length	Weight
2	108	11
1	109	11
2	109	11
1	109	12
1	109	12
2	109	12
1	109	13
2	110	11
2	110	11
1	110	12
2	110	12
3	110	12
1	110	13
1	110	13
2	110	13
3	110	13
2	111	12
3	111	12
1	111	13
2	111	13
2	111	15
1	112	12
1	112	12
1	112	12
1	112	12
1	112	12
1	112	13
1	112	13
2	112	13
1	112	14
1	112	15
1	113	13
1	113	13
1	113	13
1	113	13
3	113	16
2	114	13
1	114	14
3	114	14
1	115	10
3	115	11
2	118	14
2	118	15
1	119	13
1	119	13
3	119	13

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/25
Species: Golden trout

	Length	Weight
2	119	14
1	119	15
1	119	16
1	119	16
1	120	16
1	120	16
2	120	17
1	122	16
1	122	17
3	122	18
1	124	18
1	125	16
2	126	20
1	127	19
1	128	18
1	128	19
2	128	21
1	129	17
1	131	19
1	131	21
1	131	23
1	132	20
2	132	20
2	132	21
3	136	21
5	140	26
3	141	24
2	143	30
1	144	26
3	148	27
3	167	40

KERN RIVER, S.F., Section 2
Survey Date: 2001/09/27
Species: Golden trout

Number of shockers: 1
Number of passes: 3
Section length: 328.08 meters
Mean width of section: ~~1 meters~~

ACTUAL NUMBER UNKNOWN
NO WIDTHS MEASURED - DEFAULTED AS 1 TO GET THIS SUMMARY TO RUN

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 9 grams
Range of measured lengths: 65 to 170 mm
Range of measured weights: 1 to 42 grams

Number of fish caught in each pass:

Pass	Fish caught
1	136 + 3
2	58 + 3
3	24

6 YOY NOT MEASURED & NOT INCLUDED IN TOTAL COUNTS
SO TOTAL EST & EST/MI WILL BE SLIGHTLY HIGHER

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 234.00 (+/-) 13.33
Upper 95% Confidence Limit: 247.33
Lower 95% Confidence Limit: 220.67

Capture Probability: 59%
Standard Error: 6.80
Error of Population Estimate: 5.70%
Coefficient of Variation: 0.03

Biomass: 2.11 kg 4.63 lbs
Standing Crop: ~~64.19 kg/ha~~ ~~57.15 lbs/acre~~

1300 FT
HENCE NO STANDING CROP

Fish per Mile, 95% C.I.: 1,147.85 (+/-) 65.39
Fish per Kilometer, 95% C.I.: 713.24 (+/-) 40.63

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/27
Species: Golden trout

Length	Weight
65	1
65	2
70	2
70	3
70	4
70	4
75	2
75	2
75	2
75	2
75	2
75	3
75	3
75	3
75	3
75	3
75	3
75	4
75	4
75	4
75	6
80	2
80	2
80	2
80	3
80	3
80	3
80	3
80	3
80	3
80	3
80	3
80	3
80	3
80	3
80	4
80	4
80	4
80	4
80	5
80	5
85	2
85	2
85	2
85	2

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/27
Species: Golden trout

Length	Weight
95	8
95	8
95	8
95	8
95	8
95	8
95	8
100	2
100	3
100	5
100	6
100	6
100	6
100	6
100	6
100	7
100	8
100	8
100	8
100	8
100	9
100	9
100	9
100	9
100	9
100	9
100	9
100	9
100	9
100	10
100	10
105	6
105	6
105	6
105	6
105	6
105	7
105	8
105	9
105	9
105	9
105	10
105	10
105	10
105	12

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/27
Species: Golden trout

Length	Weight
105	12
110	3
110	6
110	7
110	8
110	8
110	8
110	9
110	9
110	10
110	10
110	10
110	10
110	10
110	10
110	10
110	11
110	11
110	12
110	13
110	13
110	14
110	14
115	2
115	4
115	8
115	8
115	8
115	10
115	10
115	11
115	12
115	12
115	13
115	13
115	13
120	6
120	6
120	10
120	11
120	13
120	13
120	15
120	15
125	10
125	12

KERN RIVER, S.F., Section 2
Survey Date: 20 /09/27
Species: Golden trout

Length	Weight
125	13
125	14
125	14
125	15
125	16
125	16
125	18
125	18
130	6
130	7
130	8
130	9
130	16
130	16
130	16
130	18
130	18
130	20
130	21
130	21
135	10
135	21
135	23
135	24
135	28
140	21
140	21
140	22
140	22
140	24
145	11
145	17
145	25
145	25
150	33
150	34
160	37
170	42

STREAM: KERN RIVER SEC 4 SEP 88
SECTION LENGTH = 148 ft (45.1104 m)
AVE WIDTH OF SECTION = 63.7 ft (19.4158 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 26 12 13

TOTAL CATCH = 51
POPULATION EST = 69 +or- 28.3342
POP EST STD ERR = 14.4562
POP EST CONF INTRVL = +or- 28.3342
LOWER CONF LIMIT = 51
UPPER CONF LIMIT = 97.3342
CAPTURE PROB = .356643
% ERROR OF POP EST = 41.0641

AVERAGE WEIGHT = 15 g
BIOMASS = 1.035 kg (2.28217 lb)
STANDING CROP = 10.5399 lb/ac (11.8153 kg/ha)
FISH PER MILE = 2461.62 +or- 1010.84
FISH PER KILOMETER = 1529.66 +or- 628.139

```

MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          KERN RIVER    SECTION: 4
MTB > NOTE          SPECIES CODE:   RT
MTB > NOTE          YEAR OF COLLECTION : 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 51

Midpoint	Count	
1-2 37.5	0	
2-3 62.5	12	*****
3-4 87.5	27	*****
4-5 112.5	4	****
5-6 137.5	2	**
6-7 162.5	2	**
7-8 187.5	3	***
8-9 212.5	1	*

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 51

Midpoint	Count	
45.0	0	
55.0	1	*
65.0	8	*****
75.0	11	*****
85.0	9	*****
95.0	10	*****
105.0	1	*
115.0	2	**
125.0	1	*
135.0	0	
145.0	2	**
155.0	0	
165.0	1	*
175.0	2	**
185.0	2	**
195.0	0	
205.0	0	
215.0	1	*

```

MTB > OUTFILE

```

STREAM: KERN RIVER SEC 4 SEP 88
SECTION LENGTH = 148 ft (45.1104 m)
AVE WIDTH OF SECTION = 63.7 ft (19.4158 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 2 0 2

TOTAL CATCH = 4
POPULATION EST = 4 +or- 2.87649
POP EST STD ERR = 1.4676
POP EST CONF INTRVL = +or- 2.87649
LOWER CONF LIMIT = 4
UPPER CONF LIMIT = 6.87649
CAPTURE PROB = .5
% ERROR OF POP EST = 71.9123

AVERAGE WEIGHT = 13 g
BIOMASS = .052 kg (.11466 lb)
STANDING CROP = .529542 lb/ac (.593617 kg/ha)
FISH PER MILE = 142.703 +or- 102.621
FISH PER KILOMETER = 88.6757 +or- 63.7688

MTB > NOTE
MTB > NOTE
MTB > NOTE HISTOGRAM FOR
MTB > NOTE KERN RIVER SECTION: 4
MTB > NOTE SPECIES CODE: BN
MTB > NOTE YEAR OF COLLECTION : 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

Histogram of LENGTH N = 4

Midpoint	Count
37.5	0
62.5	0
87.5	0
112.5	4 ****

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

Histogram of LENGTH N = 4

Midpoint	Count
45.0	0
55.0	0
65.0	0
75.0	0
85.0	0
95.0	0
105.0	0
115.0	3 ***
125.0	1 *

MTB > OUTFILE

FISH POPULATION ESTIMATION.....SURVEY DATE: 28AUG92
 STREAM: KERN RIVER SEQUOIA N.P. SECTION 3
 SPECIES:RAINBOW TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	37
Removal 2	11
Removal 3	6
-----	-----
Total Catch =	54

Population Estimate = 56 STD. Error= 2.25
 95% C.I. = + or - 4.41=(54 ,60)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 622.00 +or- 49.03
 #Fish/Kilometer= 386.00 +or- 30.47

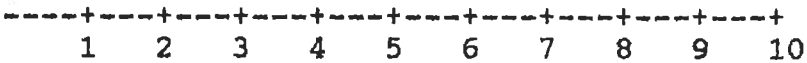
Capture Probability = 0.65
 % Error of Popul. Est. = 7.88
 Coefficient of Variation = 0.04

Section Length=	475 ft. or =	144.78 m
Ave. Section Width =	41 ft. or =	12.50 m
Average Weight	29.70 g or	0.07 lb
Biomass	1.66 kg or	3.67 lb
Standing Crop	9.19 kg/ha	8.20 lb./acre

----- SPECIES=Rainbow trout S_CODE=KERN RIVER D_CODE=7 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	*****	5	9.26	9.26
55	*****	10	18.52	27.78
65	*****	8	14.81	42.59
75		0	0.00	42.59
85		0	0.00	42.59
95	*****	4	7.41	50.00
105	*****	4	7.41	57.41
115	*****	5	9.26	66.67
125	*****	4	7.41	74.07
135	*****	3	5.56	79.63
145		0	0.00	79.63
155		0	0.00	79.63
165		0	0.00	79.63
175	*****	4	7.41	87.04
185	****	1	1.85	88.89
195		0	0.00	88.89
205		0	0.00	88.89
215	****	1	1.85	90.74
225	****	1	1.85	92.59
235		0	0.00	92.59
245	****	1	1.85	94.44
255		0	0.00	94.44
265	****	1	1.85	96.30
275	****	1	1.85	98.15
285		0	0.00	98.15
295		0	0.00	98.15
305	****	1	1.85	100.00



FREQUENCY

Section:

3 Date:28AUG92

FISH POPULATION ESTIMATION.....SURVEY DATE: 28AUG92
 STREAM: KERN RIVER SEQUOIA N.P. SECTION3
 SPECIES: BROWN TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	3
Removal 2	0
Removal 3	2

Total Catch =	5

Population Estimate = 5 STD. Error= 1.19
 95% C.I. = + or - 2.33=(5 , 7)

95% Confidence Intervals (Estimates and errors adjusted by section length)
 #Fish/Mile= 55.00 +or- 25.90
 #Fish/Kilometer= 34.00 +or- 16.09

Capture Probability = 0.56
 % Error of Popul. Est. = 46.59
 Coefficient of Variation = 0.24

Section Length=	475 ft. or =	144.78 m
Ave. Section Width =	41 ft. or =	12.50 m
Average Weight	28.20 g or	0.06 lb
Biomass	0.14 kg or	0.31 lb
Standing Crop	0.78 kg/ha	0.70 lb./acre

Stream Code:

224/Section:

3/Species:BN/Date:28AUG92

----- S_CODE=KERN RIVER SPECIES=Brown trout -----

OBS	SYSTEM	D_CODE	SECTION	PASS	LENGTH	WEIGHT
1	W	7	3	1	145	23.0
2	W	7	3	1	212	81.0
3	W	7	3	1	78	5.0
4	W	7	3	3	72	4.0
5	W	7	3	3	137	28.0

STREAM: KERN RIVER 3 SEP 88
SECTION LENGTH = 389 ft (118.567 m)
AVE WIDTH OF SECTION = 81 ft (24.6888 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 36 16 12

TOTAL CATCH = 64
POPULATION EST = 75 +or- 15.0812
POP EST STD ERR = 7.6945
POP EST CONF INTRVL = +or- 15.0812
LOWER CONF LIMIT = 64
UPPER CONF LIMIT = 90.0812
CAPTURE PROB = .467153
% ERROR OF POP EST = 20.1083

AVERAGE WEIGHT = 16 g
BIOMASS = 1.2 kg (2.646 lb)
STANDING CROP = 3.65633 lb/ac (4.09874 kg/ha)
FISH PER MILE = 1017.99 +or- 204.701
FISH PER KILOMETER = 632.584 +or- 127.202

```

MTB > NOTE
MTB > NOTE
MTB > NOTE          HISTOGRAM FOR
MTB > NOTE          KERN RIVER    SECTION: 3
MTB > NOTE          SPECIES CODE:   RT
MTB > NOTE          YEAR OF COLLECTION : 88
MTB > NOTE
MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 25mm
MTB > HIST C1 37.5 25

```

Histogram of LENGTH N = 64

Midpoint	Count	
37.5	0	
62.5	15	*****
87.5	34	*****
112.5	3	***
137.5	0	
162.5	3	***
187.5	8	*****
212.5	1	*

```

MTB > NOTE
MTB > NOTE LENGTH INTERVAL IS 10 mm
MTB > HIST C1 45 10

```

Histogram of LENGTH N = 64

Midpoint	Count	
45.0	0	
55.0	1	*
65.0	10	*****
75.0	15	*****
85.0	11	*****
95.0	12	*****
105.0	2	**
115.0	1	*
125.0	0	
135.0	0	
145.0	0	
155.0	1	*
165.0	0	
175.0	5	*****
185.0	4	****
195.0	1	*
205.0	0	
215.0	1	*

```

MTB > OUTFILE

```

STREAM: KERN RIVER () 3 SEP 88
SECTION LENGTH = 389 ft (118.567 m)
AVE WIDTH OF SECTION = 81 ft (24.6888 m)

SPECIES: BROWN TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 0 0 1

TOTAL CATCH = 1
POPULATION EST = 1 +or- 3.97262
POP EST STD ERR = 2.02685
POP EST CONF INTRVL = +or- 3.97262
LOWER CONF LIMIT = 1
UPPER CONF LIMIT = 4.97262
CAPTURE PROB = .333333
% ERROR OF POP EST = 397.262

AVERAGE WEIGHT = 13 g
BIOMASS = .013 kg (.028665 lb)
STANDING CROP = .396102E-01 lb/ac (.044403 kg/ha)
FISH PER MILE = 13.5733 +or- 53.9214
FISH PER KILOMETER = 8.43445 +or- 33.5069

FISH POPULATION DATA

① DATE: 16/9/88
day mo yr

Species Name: BROWN

② STREAM:

K	e	r	n	R	i	v	e	r											
---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--

③ SECTION: 3

④ SPECIES CODE:

--	--	--	--

Measured by: _____

⑤ PASS #: 1

Recorded by: _____

⑧ DRAINAGE CODE: _____

Page 1 of 1

Brown

	⑥	length (mm)	⑦	weight (g)		length (mm)		weight (g)		length (mm)		weight (g)
01		106		13	21				41			
02					22				42			
03					23				43			
04					24				44			
05					25				45			
06					26				46			
07					27				47			
08					28				48			
09					29				49			
10					30				50			
11					31				51			
12					32				52			
13					33				53			
14					34				54			
15					35				55			
16					36				56			
17					37				57			
18					38				58			
19					39				59			
20					40				60			

FISH POPULATION ESTIMATION.....SURVEY DATE: 27AUG92
 STREAM: KERN RIVER SEQUOIA PARK SECTION 2
 SPECIES:RAINBOW TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	47
Removal 2	16
Removal 3	8

Total Catch =	71

Population Estimate = 74 STD. Error= 2.87
 95% C.I. = + or - 5.62=(71 ,79)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 1053.00 +or- 80.01
 #Fish/Kilometer= 654.00 +or- 49.72

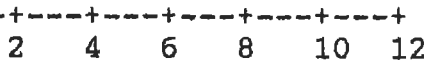
Capture Probability = 0.63
 % Error of Popul. Est. = 7.60
 Coefficient of Variation = 0.04

Section Length=	371 ft. or =	113.08 m
Ave. Section Width =	42.3 ft. or	12.89 m
Average Weight	36.60 g or	0.08 lb
Biomass	2.71 kg or	5.97 lb
Standing Crop	18.57 kg/ha	16.57 lb./acre

----- SPECIES=Rainbow trout S_CODE=KERN RIVER D_CODE=7 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	*****	7	9.86	9.86
55	*****	12	16.90	26.76
65	****	2	2.82	29.58
75	**	1	1.41	30.99
85	**	1	1.41	32.39
95	*****	5	7.04	39.44
105	*****	6	8.45	47.89
115	*****	5	7.04	54.93
125	****	2	2.82	57.75
135	****	2	2.82	60.56
145	*****	3	4.23	64.79
155	*****	3	4.23	69.01
165	*****	4	5.63	74.65
175	*****	3	4.23	78.87
185	*****	3	4.23	83.10
195	****	2	2.82	85.92
205	**	1	1.41	87.32
215	**	1	1.41	88.73
225	****	2	2.82	91.55
235		0	0.00	91.55
245	*****	3	4.23	95.77
255		0	0.00	95.77
265	**	1	1.41	97.18
275		0	0.00	97.18
285		0	0.00	97.18
295	**	1	1.41	98.59
305	**	1	1.41	100.00



FREQUENCY

Section:

2 Date:27AUG92

FISH POPULATION ESTIMATION.....SURVEY DATE: 27AUG92
 STREAM: KERN RIVER SEQUOIA PARK SECTION 2
 SPECIES: BROWN TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	1
Removal 2	1
Removal 3	0

Total Catch =	2

Population Estimate = 2 STD. Error= 0.38
 95% C.I. = + or - 0.75=(2 ,2)

95% Confidence Intervals (Estimates and errors adjusted by section length)
 #Fish/Mile= 28.00 +or- 10.72
 #Fish/Kilometer= 17.00 +or- 6.66

Capture Probability = 0.67
 % Error of Popul. Est. = 37.67
 Coefficient of Variation = 0.19

Section Length=	371 ft. or =	113.08 m
Ave. Section Width =	42.3 ft. or	12.89 m
Average Weight	61.00 g or	0.13 lb
Biomass	0.12 kg or	0.27 lb
Standing Crop	0.84 kg/ha	0.75 lb./acre

Stream Code:

2./Section:

2/Specs:BN/Date:27AUG92

----- S_CODE=KERN RIVER SPECIES=Brown trout -----

OBS	SYSTEM	D_CODE	SECTION	PASS	LENGTH	WEIGHT
1	W	7	2	1	75	5.0
2	W	7	2	2	233	117.0

FISH POPULATION ESTIMATION.....SURVEY DATE: 26AUG92
 STREAM: KERN RIVER SEQUOIA PARK SECTION 1
 SPECIES:RAINBOW TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	39
Removal 2	16
Removal 3	7
-----	-----
Total Catch =	62

Population Estimate = 66 STD. Error= 3.40
 95% C.I. = + or - 6.67=(62 ,72)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 1405.00 +or- 141.94
 #Fish/Kilometer= 873.00 +or- 88.20

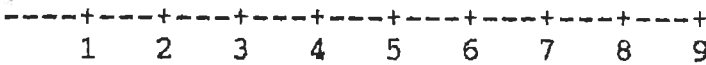
Capture Probability = 0.60
 % Error of Popul. Est. = 10.10
 Coefficient of Variation = 0.05

Section Length=	248 ft. or =	75.59 m
Ave. Section Width =	47.4 ft. or	14.45 m
Average Weight	63.10 g or	0.14 lb
Biomass	4.16 kg or	9.18 lb
Standing Crop	38.13 kg/ha	34.01 lb./acre

----- SPECIES=Rainbow trout S_CODE=KERN RIVER D_CODE=7 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5.00	0	0	0.00	0.00
15.00	0	0	0.00	0.00
25.00	0	0	0.00	0.00
35.00	0	0	0.00	0.00
45.00	*****	3	4.84	4.84
55.00	*****	5	8.06	12.90
65.00	*****	3	4.84	17.74
75.00		0	0.00	17.74
85.00	****	1	1.61	19.35
95.00	*****	9	14.52	33.87
105.00	*****	8	12.90	46.77
115.00	*****	7	11.29	58.06
125.00		0	0.00	58.06
135.00	****	1	1.61	59.68
145.00	*****	2	3.23	62.90
155.00	*****	2	4.1	66.13
165.00	*****	2	4.1	69.35
175.00	****	1	1.61	70.97
185.00	*****	2	3.23	74.19
195.00	****	1	1.61	75.81
205.00	****	1	1.61	77.42
215.00	****	1	1.61	79.03
225.00	*****	2	3.23	82.26
235.00	*****	3	4.84	87.10
245.00		0	0.00	87.10
255.00	*****	2	3.23	90.32
265.00	****	1	1.61	91.94
275.00	****	1	1.61	93.55
285.00		0	0.00	93.55
295.00		0	0.00	93.55
305.00	*****	4	6.45	100.00



FREQUENCY

FISH POPULATION ESTIMATION.....SURVEY DATE: 26AUG92
 STREAM: KERN RIVER SEQUOIA PARK SECTION 1
 SPECIES: BROWN TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	8
Removal 2	4
Removal 3	0
-----	-----
Total Catch =	12

Population Estimate = 12 STD. Error= 0.53
 95% C.I. = + or - 1.04=(12 ,13)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 255.00 +or- 22.19
 #Fish/Kilometer= 158.00 +or- 13.79

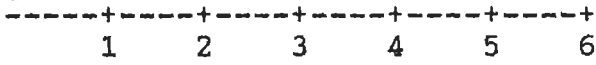
Capture Probability = 0.75
 % Error of Popul. Est. = 8.69
 Coefficient of Variation = 0.04

Section Length=	248 ft. or =	75.59 m
Ave. Section Width =	47.4 ft. or	14.45 m
Average Weight	3.00 g or	0.01 lb
Biomass	0.04 kg or	0.08 lb
Standing Crop	0.33 kg/ha	0.29 lb./acre

----- SPECIES=Brown trout S_CODE=KERN RIVER D_CODE=7 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5.00	0	0	0.00	0.00
15.00	0	0	0.00	0.00
25.00	0	0	0.00	0.00
35.00	0	0	0.00	0.00
45.00	*****	1	8.33	8.33
55.00	*****	2	16.67	25.00
65.00	*****	2	16.67	41.67
75.00	*****	6	50.00	91.67
85.00	*****	1	8.33	100.00
95.00		0	0.00	100.00
105.00		0	0.00	100.00
115.00		0	0.00	100.00
125.00		0	0.00	100.00
135.00		0	0.00	100.00
145.00		0	0.00	100.00
155.00		0	0.00	100.00
165.00		0	0.00	100.00
175.00		0	0.00	100.00
185.00		0	0.00	100.00
195.00		0	0.00	100.00
205.00		0	0.00	100.00
215.00		0	0.00	100.00
225.00		0	0.00	100.00
235.00		0	0.00	100.00
245.00		0	0.00	100.00
255.00		0	0.00	100.00
265.00		0	0.00	100.00
275.00		0	0.00	100.00
285.00		0	0.00	100.00
295.00		0	0.00	100.00
305.00		0	0.00	100.00



FREQUENCY

Section:

1 Date:26AUG92

FISH POPULATION ESTIMATION.....SURVEY DATE: 10OCT96
 STREAM: CLAVEY RIVER, SECT 9
 SPECIES: RAINBOW TROUT

Number of Electroshockers=	2
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	82
Removal 2	26
Removal 3	10
-----	-----
Total Catch =	118

Population Estimate = 122 STD. Error= 2.93
 95% C.I. = + or - 5.74=(118 ,127)

95% Confidence Intervals (Estimates and errors adjusted by section length)
 #Fish/Mile= 1840.00 +or- 86.64
 #Fish/Kilometer= 1143.00 +or- 53.84

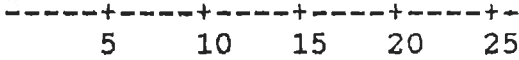
Capture Probability = 0.67
 % Error of Popul. Est. = 4.71
 Coefficient of Variation = 0.02

Section Length=	350 ft. or =	106.68 m
Ave. Section Width =	15.6 ft. or	4.75 m
Average Weight	14.10 g or	0.03 lb
Biomass	1.72 kg or	3.79 lb
Standing Crop	33.91 kg/ha	30.25 lb./acre

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	**	2	1.69	1.69
65	*****	26	22.03	23.73
75	*****	24	20.34	44.07
85	***	3	2.54	46.61
95	***	3	2.54	49.15
105	*****	8	6.78	55.93
115	*****	19	16.10	72.03
125	*****	10	8.47	80.51
135	*****	6	5.08	85.59
145	*****	6	5.08	90.68
155	**	2	1.69	92.37
165	*****	6	5.08	97.46
175	*	1	0.85	98.31
185	*	1	0.85	99.15
195	*	1	0.85	100.00
205	0	118	0.00	100.00
215	0	118	0.00	100.00
225	0	118	0.00	100.00
235	0	118	0.00	100.00
245	0	118	0.00	100.00
255	0	118	0.00	100.00
265	0	118	0.00	100.00
275	0	118	0.00	100.00
285	0	118	0.00	100.00
295	0	118	0.00	100.00
305	0	118	0.00	100.00
315	0	118	0.00	100.00
325	0	118	0.00	100.00
335	0	118	0.00	100.00
345	0	118	0.00	100.00
355	0	118	0.00	100.00
365	0	118	0.00	100.00
375	0	118	0.00	100.00
385	0	118	0.00	100.00
395	0	118	0.00	100.00
405	0	118	0.00	100.00



FREQUENCY

Section:

9 Date:10OCT96

FISH POPULATION ESTIMATION.....SURVEY DATE: 09OCT96
 STREAM: CLAVEY RIVER SECTION 8
 SPECIES: RAINBOW TROUT

Number of Electroshockers= 3
 Number of Removals= 3
 Removal Pattern CATCH

 Removal 1 157
 Removal 2 52
 Removal 3 23

Total Catch = 232

Population Estimate = 243 STD. Error= 5.03
 95% C.I. = + or - 9.87=(233 ,252)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 3911.00 +or- 158.84
 #Fish/Kilometer= 2430.00 +or- 98.70

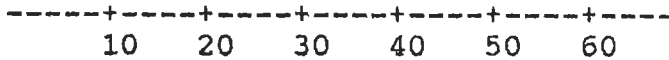
Capture Probability = 0.64
 % Error of Popul. Est. = 4.06
 Coefficient of Variation = 0.02

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	31.9 ft. or	9.72 m
Average Weight	23.80 g or	0.05 lb
Biomass	5.78 kg or	12.75 lb
Standing Crop	59.49 kg/ha	53.07 lb./acre

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	*****	11	4.74	4.74
65	*****	67	28.88	33.62
75	*****	63	27.16	60.78
85	*****	18	7.76	68.53
95	*	1	0.43	68.97
105	**	4	1.72	70.69
115	*****	14	6.03	76.72
125	*****	18	7.76	84.48
135	*****	9	3.88	88.36
145	****	7	3.02	91.38
155	**	4	1.72	93.10
165	**	4	1.72	94.83
175	**	4	1.72	96.55
185	*	1	0.43	96.98
195	**	4	1.72	98.71
205	*	1	0.43	99.14
215	*	1	0.43	99.57
225	*	1	0.43	100.00
235		0	0.00	100.00
245		0	0.00	100.00
255		0	0.00	100.00
265		0	0.00	100.00
275		0	0.00	100.00
285		0	0.00	100.00
295		0	0.00	100.00
305		0	0.00	100.00
315		0	0.00	100.00
325		0	0.00	100.00
335		0	0.00	100.00
345		0	0.00	100.00
355		0	0.00	100.00
365		0	0.00	100.00
375		0	0.00	100.00
385		0	0.00	100.00
395		0	0.00	100.00
405		0	0.00	100.00



FREQUENCY

Section:

8 Date:09OCT96

STREAM: CLAVEY RIVER SEC. 8 1989
SECTION LENGTH = 318 ft (96.9264 m)
AVE WIDTH OF SECTION = 25 ft (7.62 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 181 37 22

TOTAL CATCH = 240
POPULATION EST = 245 +or- 6.0849
POP EST STD ERR = 3.10454
POP EST CONF INTRVL = +or- 6.0849
LOWER CONF LIMIT = 240
UPPER CONF LIMIT = 251.085
CAPTURE PROB = .714286
% ERROR OF POP EST = 2.48363

AVERAGE WEIGHT = 15 g
BIOMASS = 3.675 kg (8.10337 lb)
STANDING CROP = 44.3801 lb/ac (49.7501 kg/ha)
FISH PER MILE = 4067.92 +or- 101.032
FISH PER KILOMETER = 2527.81 +or- 62.7816

Histogram of LENGTH N = 240
Each * represents 2 obs.

Midpoint	Count	
45.0	1	*
55.0	10	*****
65.0	43	*****
75.0	54	*****
85.0	13	*****
95.0	4	**
105.0	10	*****
115.0	27	*****
125.0	31	*****
135.0	12	*****
145.0	11	*****
155.0	12	*****
165.0	6	***
175.0	5	***
185.0	0	
195.0	1	*

FISH POPULATION ESTIMATION.....SURVEY DATE: 07OCT97
 STREAM: CLAVEY RIVER SECTION 7
 SPECIES:RAINBOW TROUT

Number of Electroshockers=	4
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	177
Removal 2	98
Removal 3	28

Total Catch =	303

Population Estimate = 330 STD. Error= 9.24
 95% C.I. = + or - 18.10=(311 ,348)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 5312.00 +or- 291.38
 #Fish/Kilometer= 3301.00 +or- 181.06

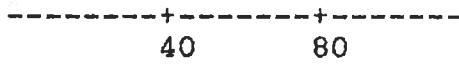
Capture Probability = 0.56
 % Error of Popul. Est. = 5.49
 Coefficient of Variation = 0.03

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	34.2 ft. or	10.42 m
Average Weight	4.70 g or	0.01 lb
Biomass	1.55 kg or	3.42 lb
Standing Crop	14.88 kg/ha	13.27 lb./acre

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45		0	0	0.00	0.00
55	****	18	18	5.94	5.94
65	*****	105	123	34.65	40.59
75	*****	113	236	37.29	77.89
85	*****	34	270	11.22	89.11
95		2	272	0.66	89.77
105	*	6	278	1.98	91.75
115	*	4	282	1.32	93.07
125	**	8	290	2.64	95.71
135		1	291	0.33	96.04
145		1	292	0.33	96.37
155	*	3	295	0.99	97.36
165		1	296	0.33	97.69
175	*	3	299	0.99	98.68
185		2	301	0.66	99.34
195		1	302	0.33	99.67
205		0	302	0.00	99.67
215		0	302	0.00	99.67
225		1	303	0.33	100.00
235		0	303	0.00	100.00
245		0	303	0.00	100.00
255		0	303	0.00	100.00
265		0	303	0.00	100.00
275		0	303	0.00	100.00
285		0	303	0.00	100.00
295		0	303	0.00	100.00
305		0	303	0.00	100.00
315		0	303	0.00	100.00
325		0	303	0.00	100.00
335		0	303	0.00	100.00
345		0	303	0.00	100.00
355		0	303	0.00	100.00
365		0	303	0.00	100.00
375		0	303	0.00	100.00
385		0	303	0.00	100.00
395		0	303	0.00	100.00
405		0	303	0.00	100.00



FREQUENCY

FISH POPULATION ESTIMATION.....SURVEY DATE: 09OCT96
 STREAM: CLAVEY RIVER, SECTION 7
 SPECIES:RAINBOW TROUT

Number of Electroshockers=	3
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	205
Removal 2	48
Removal 3	35

Total Catch =	288

Population Estimate = 300 STD. Error= 5.18
 95% C.I. = + or - 10.15=(289 ,310)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 4829.00 +or- 163.35
 #Fish/Kilometer= 3000.00 +or- 101.51

Capture Probability = 0.65
 % Error of Popul. Est. = 3.38
 Coefficient of Variation = 0.02

Section Length=	328 ft. or =	99.97 m
Ave. Section Width =	34.5 ft. or	10.52 m
Average Weight	10.20 g or	0.02 lb
Biomass	3.06 kg or	6.75 lb
Standing Crop	29.10 kg/ha	25.96 lb./acre

ELECTROFISHING CONDITIONS

DATE: 9 11 196 STREAM: CLAVEY RIVER SECTION 7

SECTION CLOSURE

Upstream Block: seine X cascade waterfall other(describe)

Downstream Block: seine X cascade waterfall other(describe)

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S)

NUMBER OF NETTERS: 3

TOTAL NUMBER IN ELECTROFISHING CREW:

NUMBER OF REMOVAL PASSES: SALT ADDED ?:

SPECIES PRESENT

SPECIES CODE

Table with 2 columns: Species Code (RT) and Species Name. Rows for PASS 1 (145), PASS 2 (48), PASS 3 (35), and PASS 4.

AMPHIBIANS AND/OR REPTILES OBSERVED:

COMMENTS

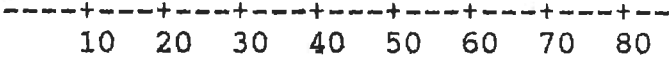
(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

SALT NECESSARY 4 BUCKS ADDED

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT		FREQ	CUM FREQ	PERCENT	CUM PERCENT
5		0	0	0.00	0.00
15		0	0	0.00	0.00
25		0	0	0.00	0.00
35		0	0	0.00	0.00
45	*	3	3	1.04	1.04
55	*****	16	19	5.56	6.60
65	*****	67	86	23.26	29.86
75	*****	85	171	29.51	59.38
85	*****	27	198	9.38	68.75
95	***	7	205	2.43	71.18
105	*****	16	221	5.56	76.74
115	*****	16	237	5.56	82.29
125	*****	20	257	6.94	89.24
135	**	6	263	2.08	91.32
145	**	5	268	1.74	93.06
155		1	269	0.35	93.40
165	**	5	274	1.74	95.14
175	**	4	278	1.39	96.53
185	**	5	283	1.74	98.26
195	**	4	287	1.39	99.65
205		1	288	0.35	100.00
215		0	288	0.00	100.00
225		0	288	0.00	100.00
235		0	288	0.00	100.00
245		0	288	0.00	100.00
255		0	288	0.00	100.00
265		0	288	0.00	100.00
275		0	288	0.00	100.00
285		0	288	0.00	100.00
295		0	288	0.00	100.00
305		0	288	0.00	100.00
315		0	288	0.00	100.00
325		0	288	0.00	100.00
335		0	288	0.00	100.00
345		0	288	0.00	100.00
355		0	288	0.00	100.00
365		0	288	0.00	100.00
375		0	288	0.00	100.00
385		0	288	0.00	100.00
395		0	288	0.00	100.00
405		0	288	0.00	100.00



Section: 7 Date:09OCT96

STREAM: CLAVEY RIVER SEC. 7 1989
SECTION LENGTH = 329 ft (100.279 m)
AVE WIDTH OF SECTION = 36.4 ft (11.0947 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 256 63

TOTAL CATCH = 319
POPULATION EST = 339.565 +or- 15.1571
POP EST STD ERR = 7.73324
POP EST CONF INTRVL = +or- 15.1571
LOWER CONF LIMIT = 324.408
UPPER CONF LIMIT = 354.722
CAPTURE PROB = .753906
% ERROR OF POP EST = 4.4637

AVERAGE WEIGHT = 14 g
BIOMASS = 4.75391 kg (10.4824 lb)
STANDING CROP = 38.1111 lb/ac (42.7226 kg/ha)
FISH PER MILE = 5449.55 +or- 243.251
FISH PER KILOMETER = 3386.36 +or- 151.157

Histogram of LENGTH N = 319
Each * represents 2 obs.

Midpoint	Count	
45.0	1	*
55.0	20	*****
65.0	55	*****
75.0	82	*****
85.0	28	*****
95.0	2	*
105.0	8	****
115.0	30	*****
125.0	30	*****
135.0	18	*****
145.0	15	*****
155.0	13	*****
165.0	9	*****
175.0	5	***
185.0	2	*
195.0	0	
205.0	0	
215.0	1	*

CLAVEY RIVER, Section 6

Survey Date: 2000/09/14

Species: Rainbow trout

Number of shockers: 2
Number of passes: 3
Section length: 99.671 meters
Mean width of section: 7.846 meters

Weight estimation equation: $Weight = Length * 3.242 + 0.000$
Estimation model source: CLAVEY RIVER, Section 6, 2000/09/14
Average weight of fish in sample: 18 grams
Range of measured lengths: 50 to 198 mm
Range of measured weights: 1 to 70 grams

Number of fish caught in each pass:

Pass	Fish caught
1	139
2	19
3	17

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 178.00 (+/-) 4.37
Upper 95% Confidence Limit: 182.37
Lower 95% Confidence Limit: 175.00

Capture Probability: 74%
Standard Error: 2.23
Error of Population Estimate: 2.46%
Coefficient of Variation: 0.01

Biomass: 3.20 kg 7.05 lbs
Standing Crop: 40.97 kg/ha 36.48 lbs/acre

Fish per Mile, 95% C.I.: 2,874.09 (+/-) 70.61
Fish per Kilometer, 95% C.I.: 1,785.88 (+/-) 43.88

CLAVEY RIVER, Section 6

Survey Date: 2000/09/14

Species: Rainbow trout

Length	Weight
50	1
51	1
51	1
52	1
52	1
53	1
53	1
53	1
55	1
55	1
56	1
57	1
57	2
59	1
59	1
59	2
60	1
60	1
60	2
60	2
60	3
61	1
61	1
61	2
62	2
62	2
62	2
62	2
63	1
63	1
63	2
63	2
63	2
64	2
64	2
64	2
64	3
65	2
65	2
65	3
65	3
66	1
66	2
66	2
66	2
66	3

CLAVEY RIVER, Sectir 6
Survey Date: 2000/09/14
Species: Rainbow trout

Length	Weight
67	2
67	2
67	2
68	1
68	2
70	1
70	4
71	3
73	2
75	2
95	8
98	8
98	9
98	9
101	10
102	8
108	10
108	10
108	11
108	11
108	12
108	12
109	12
109	12
109	13
110	11
110	15
111	11
111	11
111	14
112	13
113	13
113	13
114	12
114	13
115	13
116	11
116	14
117	15
117	16
118	12
118	14
118	14
119	14
119	15

CLAVEY RIVER, Section 6
Survey Date: 2000/09/14
Species: Rainbow trout

Length	Weight
120	14
120	14
120	17
121	13
121	15
121	18
122	14
122	14
122	16
122	16
125	16
126	16
127	16
127	17
128	16
128	19
128	19
130	18
130	19
130	21
131	20
131	21
134	18
134	23
135	20
136	16
136	26
137	22
137	24
137	24
139	21
139	23
140	23
141	25
141	25
143	21
143	22
143	23
143	31
144	27
146	28
146	30
148	30
150	33
151	29

CLAVEY RIVER, Sectir 6**Survey Date: 2000/09/14****Species: Rainbow trout**

Length	Weight
151	33
152	29
152	31
153	30
153	38
159	35
160	33
161	37
161	38
161	38
161	39
162	Null
162	34
162	35
163	29
164	39
164	40
166	40
168	38
168	44
171	46
173	53
174	52
175	45
176	47
177	46
177	49
177	49
180	49
180	52
181	49
184	61
185	53
185	53
186	58
190	47
190	57
192	62
194	70
198	56

FISH POPULATION ESTIMATION.....SURVEY DATE: 06OCT97
 STREAM: CLAVEY RIVER SECTION 6
 SPECIES: RAINBOW TROUT

Number of Electroshockers= 2
 Number of Removals= 3
 Removal Pattern CATCH

Removal 1 72
 Removal 2 25
 Removal 3 10

Total Catch = 107

Population Estimate = 111 STD. Error= 3.13
 95% C.I. = + or - 6.14=(107 ,117)

95% Confidence Intervals (Estimates and errors adjusted by section length)
 #Fish/Mile= 1953.00 +or- 108.06
 #Fish/Kilometer= 1213.00 +or- 67.15

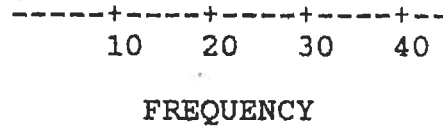
Capture Probability = 0.65
 % Error of Popul. Est. = 5.53
 Coefficient of Variation = 0.03

Section Length= 300 ft. or = 91.44 m
 Ave. Section Width = 14.3 ft. or 4.36 m
 Average Weight 13.40 g or 0.03 lb
 Biomass 1.49 kg or 3.28 lb
 Standing Crop 37.31 kg/ha 33.29 lb./acre

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	0	0	0.00	0.00
65	****	7	6.54	6.54
75	*****	43	40.19	46.73
85	*****	23	21.50	68.22
95		0	0.00	68.22
105	*	1	0.93	69.16
115	*	2	1.87	71.03
125	*****	10	9.35	80.37
135	***	5	4.67	85.05
145	****	7	6.54	91.59
155	*	2	1.87	93.46
165	*	1	0.93	94.39
175	**	3	2.80	97.20
185		0	0.00	97.20
195		0	0.00	97.20
205	*	2	1.87	99.07
215	*	1	0.93	100.00
225		0	0.00	100.00
235		0	0.00	100.00
245		0	0.00	100.00
255		0	0.00	100.00
265		0	0.00	100.00
275		0	0.00	100.00
285		0	0.00	100.00
295		0	0.00	100.00
305		0	0.00	100.00
315		0	0.00	100.00
325		0	0.00	100.00
335		0	0.00	100.00
345		0	0.00	100.00
355		0	0.00	100.00
365		0	0.00	100.00
375		0	0.00	100.00
385		0	0.00	100.00
395		0	0.00	100.00
405		0	0.00	100.00



Section:

6 Date:06OCT97

FISH POPULATION ESTIMATION.....SURVEY DATE: 07OCT96
 STREAM: CLAVEY RIVER, SECTION 6
 SPECIES: RAINBOW TROUT

Number of Electroshockers=	2
Number of Removals=	3
Removal Pattern	CATCH
-----	-----
Removal 1	117
Removal 2	13
Removal 3	0
-----	-----
Total Catch =	130

Population Estimate = 130 STD. Error= 0.32
 95% C.I. = + or - 0.63=(130 ,130)

95% Confidence Intervals(Estimates and errors adjusted by section length)
 #Fish/Mile= 2288.00 +or- 11.13
 #Fish/Kilometer= 1421.00 +or- 6.92

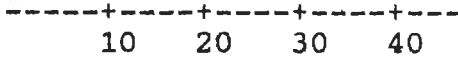
Capture Probability = 0.91
 % Error of Popul. Est. = 0.49
 Coefficient of Variation = 0.00

Section Length=	300 ft. or =	91.44 m
Ave. Section Width =	22.4 ft. or	6.83 m
Average Weight	11.30 g or	0.02 lb
Biomass	1.47 kg or	3.24 lb
Standing Crop	23.53 kg/ha	20.99 lb./acre

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	*	1	0.77	0.77
55	****	8	6.15	6.92
65	*****	45	34.62	41.54
75	*****	37	28.46	70.00
85	*****	9	6.92	76.92
95		0	0.00	76.92
105	*	1	0.77	77.69
115	****	7	5.38	83.08
125	**	4	3.08	86.15
135	*	2	1.54	87.69
145	**	3	2.31	90.00
155		0	0.00	90.00
165	***	5	3.85	93.85
175	*	1	0.77	94.62
185	*	2	1.54	96.15
195	**	3	2.31	98.46
205	*	2	1.54	100.00
215		0	0.00	100.00
225		0	0.00	100.00
235		0	0.00	100.00
245		0	0.00	100.00
255		0	0.00	100.00
265		0	0.00	100.00
275		0	0.00	100.00
285		0	0.00	100.00
295		0	0.00	100.00
305		0	0.00	100.00
315		0	0.00	100.00
325		0	0.00	100.00
335		0	0.00	100.00
345		0	0.00	100.00
355		0	0.00	100.00
365		0	0.00	100.00
375		0	0.00	100.00
385		0	0.00	100.00
395		0	0.00	100.00
405		0	0.00	100.00



FREQUENCY

Section:

6 Date:07OCT96

STREAM: CLAVEY RIVER SEC. 3 1989
SECTION LENGTH = 207 ft (63.0936 m)
AVE WIDTH OF SECTION = 36.9 ft (11.2471 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 3
REMOVAL PATTERN: 93 29 25

TOTAL CATCH = 147
POPULATION EST = 162 +or- 14.3126
POP EST STD ERR = 7.30235
POP EST CONF INTRVL = +or- 14.3126
LOWER CONF LIMIT = 147.687
UPPER CONF LIMIT = 176.313
CAPTURE PROB = .542435
% ERROR OF POP EST = 8.83495

AVERAGE WEIGHT = 12 g
BIOMASS = 1.944 kg (4.28652 lb)
STANDING CROP = 24.4342 lb/ac (27.3907 kg/ha)
FISH PER MILE = 4132.17 +or- 365.075
FISH PER KILOMETER = 2567.74 +or- 226.858

Histogram of LENGTH N = 147

Midpoint	Count	
45.0	2	**
55.0	37	*****
65.0	37	*****
75.0	12	*****
85.0	3	***
95.0	0	
105.0	3	***
115.0	18	*****
125.0	11	*****
135.0	6	*****
145.0	9	*****
155.0	5	*****
165.0	3	***
175.0	0	
185.0	0	
195.0	1	*

FISH POPULATION ESTIMATION.....SURVEY DATE: 08OCT96
 STREAM: CLAVEY RIVER, SECT 2, 1N01 BRIDGE
 SPECIES:RAINBOW TROUT

Number of Electroshockers= 3
 Number of Removals= 3

Removal Pattern	CATCH
-----	-----
Removal 1	44
Removal 2	11
Removal 3	9
-----	-----

Total Catch = 64

Population Estimate = 67 STD. Error= 2.84
 95% C.I. = + or - 5.57=(64 ,72)

95% Confidence Intervals(Estimates and errors adjusted by section length)

#Fish/Mile=	940.00 +or-	78.15
#Fish/Kilometer=	584.00 +or-	48.56

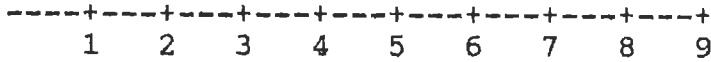
Capture Probability = 0.63
 % Error of Popul. Est. = 8.31
 Coefficient of Variation = 0.04

Section Length=	376 ft. or =	114.60 m
Ave. Section Width =	33.9 ft. or	10.33 m
Average Weight	42.20 g or	0.09 lb
Biomass	2.83 kg or	6.23 lb
Standing Crop	23.87 kg/ha	21.30 lb./acre

----- SPECIES=Rainbow trout S_CODE=CLAVEY RIVER D_CODE=13 -----

FREQUENCY OF LENGTH

LENGTH MIDPOINT	FREQ	CUM FREQ	PERCENT	CUM PERCENT
5	0	0	0.00	0.00
15	0	0	0.00	0.00
25	0	0	0.00	0.00
35	0	0	0.00	0.00
45	0	0	0.00	0.00
55	0	0	0.00	0.00
65	0	0	0.00	0.00
75	0	0	0.00	0.00
85	*****	5	7.81	7.81
95	*****	7	10.94	18.75
105	*****	3	4.69	23.44
115	****	0	0.00	23.44
125	****	1	1.56	25.00
135	*****	1	1.56	26.56
145	*****	5	7.81	34.38
155	*****	9	14.06	48.44
165	*****	6	9.38	57.81
175	*****	6	9.38	67.19
185	*****	6	9.38	76.56
195	*****	5	7.81	84.37
205	*****	6	9.38	93.75
215	*****	2	3.12	96.87
225	****	0	0.00	96.87
235	****	1	1.56	98.44
245	****	1	1.56	100.00
255		0	0.00	100.00
265		0	0.00	100.00
275		0	0.00	100.00
285		0	0.00	100.00
295		0	0.00	100.00
305		0	0.00	100.00
315		0	0.00	100.00
325		0	0.00	100.00
335		0	0.00	100.00
345		0	0.00	100.00
355		0	0.00	100.00
365		0	0.00	100.00
375		0	0.00	100.00
385		0	0.00	100.00
395		0	0.00	100.00
405		0	0.00	100.00



Section:

2 Date:08OCT96

STREAM: CLAVEY RIVER SEC. 2 1989
SECTION LENGTH = 344 ft (104.851 m)
AVE WIDTH OF SECTION = 38.9 ft (11.8567 m)

SPECIES: RAINBOW TROUT
NUMBER OF REMOVALS: 2
REMOVAL PATTERN: 47 12

TOTAL CATCH = 59
POPULATION EST = 63.1143 +or- 6.93147
POP EST STD ERR = 3.53646
POP EST CONF INTRVL = +or- 6.93147
LOWER CONF LIMIT = 59
UPPER CONF LIMIT = 70.0458
CAPTURE PROB = .744681
% ERROR OF POP EST = 10.9824

AVERAGE WEIGHT = 12 g
BIOMASS = .757371 kg (1.67 lb)
STANDING CROP = 5.43374 lb/ac (6.09123 kg/ha)
FISH PER MILE = 968.731 +or- 106.39
FISH PER KILOMETER = 601.971 +or- 66.1109

Histogram of LENGTH N = 59

Midpoint	Count	
45.0	7	*****
55.0	22	*****
65.0	10	*****
75.0	1	*
85.0	0	
95.0	0	
105.0	1	*
115.0	0	
125.0	2	**
135.0	7	*****
145.0	4	****
155.0	2	**
165.0	0	
175.0	2	**
185.0	1	*

CLAVEY RIVER, Section 7
Survey Date: 2004/09/04
Species: Rainbow trout

Number of shockers: 3
Number of passes: 3
Section length: 91.44 meters
Mean width of section: 9.32 meters

Weight estimation equation: $Weight = Length * 3.120 + 0.000$
Estimation model source: CLAVEY RIVER, Section 7, 2004/09/04
Average weight of fish in sample: 8 grams
Range of measured lengths: 46 to 225 mm
Range of measured weights: 1 to 94 grams

Number of fish caught in each pass:

Pass	Fish caught
1	188
2	69
3	28

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 300.00 (+/-) 11.85
Upper 95% Confidence Limit: 311.85
Lower 95% Confidence Limit: 288.15

Capture Probability: 63%
Standard Error: 6.05
Error of Population Estimate: 3.95%
Coefficient of Variation: 0.02

Biomass: 2.40 kg 5.28 lbs
Standing Crop: 28.16 kg/ha 25.07 lbs/acre

Fish per Mile, 95% C.I.: 5,280.00 (+/-) 208.63
Fish per Kilometer, 95% C.I.: 3,280.84 (+/-) 129.63

Stream Name Clavey Section 7 Survey Date (da/mo/yr) 03 / 09 / 04

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	<u>11.1</u> °C or °F (circle one)	<u>10:00</u>	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>Hanna</u>	<u>cm</u>	<u>cm</u>
Specific Conductivity	<u>75</u> micromhos/cm		<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	<u>1</u>	<u>1</u>
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$	<u>1</u>	<u>1</u>
pH	<u>6.87</u>		<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____	<u>1</u>	<u>1</u>
Total Alkalinity	mg/l		<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.) 2 salt blocks added before 1st pass

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): _____

Start Time: 10:00 End Time: 15:00

Electrofisher Settings:

Pulse Frequency 4 Hz
 Pulse Duration 4 ms
 Mode 1 (SR Type XII only)
 Output Voltage 400 Volts
 Current _____ Amps
 Power = Volts x Amps = _____ Watts

ELECTROFISHING EFFORT

Operator	Colleen	Margaret	Brian		Total
Shocker	Cartman	Obi Wan	Brewski		Time (sec)
Pass 1	<u>1585</u>	<u>1603</u>	<u>1717</u>		
Pass 2	<u>1670</u>	<u>1741</u>			
Pass 3	<u>1515</u>	<u>1564</u>	<u>1448</u>		
Pass 4					

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: _____ %

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
<u>Alex Hunter</u>	<u>Cauch Nguyen</u>	
<u>Russ Marshall</u>	<u>Breck McAlexander</u>	
<u>Shari Heitkotter</u>		
<u>Deana Gonzalez</u>		<u>Whistle</u>

CLAVEY RIVER, Section 7

Survey Date: 20 /09/04

Species: Rainbow trout

Length	Weight
62	2
62	2
62	3
62	3
63	1
63	1
63	2
63	2
63	2
63	4
64	2
64	2
64	2
64	3
65	2
65	3
65	3
65	3
65	3
65	3
66	1
66	2
66	2
66	2
66	3
66	3
66	3
66	3
66	3
66	3
66	3
66	3
66	4
67	2
67	2
67	3
67	3
68	2
68	2
68	2
68	3
68	3
68	3
68	3
68	3
68	4
68	4

CLAVEY RIVER, Section 7

Survey Date: 20 /09/04

Species: Rainbow trout

Length	Weight
74	4
74	4
74	4
74	4
74	4
75	3
75	3
75	4
75	4
75	4
75	4
75	4
75	4
75	4
76	3
76	3
76	4
76	4
76	4
76	4
76	4
76	4
76	4
76	5
76	5
76	5
76	5
76	5
76	5
77	4
77	4
77	4
77	4
77	4
77	4
77	4
77	4
77	5
77	5
77	5
78	4
78	4
78	4
78	4
78	5
78	5
79	4

CLAVEY RIVER, Section 7**Survey Date: 20 /09/04****Species: Rainbow trout**

Length	Weight
85	7
86	5
86	6
86	6
86	6
86	6
86	7
87	6
87	6
88	6
88	6
89	7
89	7
89	7
90	7
93	8
95	8
104	11
110	14
118	15
119	17
122	19
126	19
127	Null
128	18
130	21
131	20
131	21
131	21
132	20
134	22
134	23
135	21
136	23
136	24
137	23
139	24
139	24
140	25
142	26
143	27
144	30
145	25
147	28
147	30

CLAVEY RIVER, Section 7
Survey Date: 20 /09/04
Species: Rainbow trout

Length	Weight
147	31
155	35
159	42
164	44
174	52
175	46
175	50
179	61
180	57
183	61
184	57
188	59
197	72
201	74
225	94

CLAVEY RIVER, Section 2
Survey Date: 2004/09/01
Species: Rainbow trout

Number of shockers: 3
Number of passes: 3
Section length: 128.32 meters
Mean width of section: 9.81 meters

Weight estimation equation: N/A
Estimation model source: N/A
Average weight of fish in sample: 5 grams
Range of measured lengths: 42 to 188 mm
Range of measured weights: 1 to 77 grams

Number of fish caught in each pass:

Pass	Fish caught
1	34
2	24
3	14

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 95.00 (+/-) 30.26
Upper 95% Confidence Limit: 125.26
Lower 95% Confidence Limit: 72.00

Capture Probability: 37%
Standard Error: 15.28
Error of Population Estimate: 31.85%
Coefficient of Variation: 0.16

Biomass: 0.48 kg 1.04 lbs
Standing Crop: 3.77 kg/ha 3.36 lbs/acre

Fish per Mile, 95% C.I.: 1,191.46 (+/-) 379.45
Fish per Kilometer, 95% C.I.: 740.34 (+/-) 235.78

Stream Name Clavey River Section 2 Survey Date (da/mo/yr) 01/09/04

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	22.7 °C or °F (circle one)	11:40	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>Hanna</u>	cm	cm
Specific Conductivity	55 micromhos/cm	11:40	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____		
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$ Conductivity		
pH	6.98	11:40	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	mg/l		<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.) Salt added - 5 blocks added

2 blocks at 150 up (midpoint)

3 blocks at 300 up (top of section)

Water Conductivity 2nd pass
14:30: 66 micromhos
Temp 23.3°C
ppm 34
pH 6.98

Water Conductivity 3rd Pass
15:45: micromhos/cm: 62
temp: 23.6°C
ppm: 32
pH: 6.98

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebag boat

Make & Model(s): _____

Start Time: 12:15 End Time: 17:30

ELECTROFISHING EFFORT

Operator	Colleen	Alex	Brian B	Total
Shocker	Obilbon	easy cheese	Shadon Easter	Time (sec)
Pass 1	1741	1592	not reset	
Pass 2	1901	1914	2278	6093
Pass 3	1540	1273	1939	4752
Pass 4				

Electrofisher Settings:

Pulse Frequency F Hz

Pulse Duration 5 ms

Mode / (SR Type XII only)

Output Voltage 400 Volts

Current _____ Amps

Power = Volts x Amps = _____ Watts

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
<u>Cash Norman</u>	<u>Steve Tsao</u>	
<u>Shane Heitkotter</u>	<u>Shelley Shupert</u>	
<u>Russ Marshall</u>		
<u>Brock Alexander</u>		
		<u>Wanda Green</u>

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: _____ %

CLAVEY RIVER, Section 2

Survey Date: 20 /09/01

Species: Rainbow trout

	Length	Weight
2	64	2
1	65	3
2	65	3
3	65	3
1	65	7
1	66	2
2	66	3
3	66	3
1	66	4
1	66	5
2	67	3
1	68	4
2	69	3
2	69	4
1	70	2
2	70	2
1	70	3
1	70	3
1	70	3
1	70	5
3	71	2
2	72	4
3	73	6
1	143	24
2	153	32
1	160	35
1	188	77

CLAVEY RIVER, Section 2

Survey Date: 20/09/01

Species: Rainbow trout

	Length	Weight
1	42	1
3	42	1
1	45	1
3	46	1
1	48	1
1	48	1
3	48	1
3	48	1
2	49	1
1	49	2
2	50	1
2	50	2
1	51	2
1	53	1
2	53	1
2	53	2
2	54	2
1	55	1
2	55	1
3	55	2
2	55	3
1	56	1
3	57	2
3	57	2
2	57	3
1	58	1
1	58	1
1	58	2
1	59	2
2	59	2
1	60	1
1	60	4
1	60	5
2	61	2
1	61	4
1	61	8
2	62	2
1	62	3
1	62	3
2	62	3
2	62	3
3	62	3
3	62	3
3	63	2
2	63	3

CLAVEY RIVER, Section 5
Survey Date: 2004/08/31
Species: Rainbow trout

Number of shockers: 2
Number of passes: 3
Section length: 91.44 meters
Mean width of section: 3.99 meters

Weight estimation equation: $Weight = Length * 3.006 + 0.000$
Estimation model source: CLAVEY RIVER, Section 6, 2004/08/31
Average weight of fish in sample: 19 grams
Range of measured lengths: 40 to 230 mm
Range of measured weights: 1 to 126 grams

Number of fish caught in each pass:

Pass	Fish caught
1	147
2	58
3	25

Maximum Likelihood Model (Burnham)

Population Estimate, 95% C. I.: 245.00 (+/-) 12.52
Upper 95% Confidence Limit: 257.52
Lower 95% Confidence Limit: 232.48

Capture Probability: 60%
Standard Error: 6.39
Error of Population Estimate: 5.11%
Coefficient of Variation: 0.03

Biomass: 4.66 kg 10.24 lbs
Standing Crop: 127.59 kg/ha 113.59 lbs/acre

Fish per Mile, 95% C.I.: 4,312.00 (+/-) 220.28
Fish per Kilometer, 95% C.I.: 2,679.35 (+/-) 136.87

Stream Name Clawey Section 6 Survey Date (da/mo/yr) 31 / 08 / 04

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	13.2 °C or °F (circle one)	09:40	<input type="checkbox"/> pocket thermometer <input type="checkbox"/> other (specify) <u>Hanna</u>	CM	CM
Specific Conductivity	30 micromhos/cm	09:40	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____		
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH	6.87	09:40	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	mg/l		<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.) salt added - 2 blocks

3rd pass
37 micromhos/cm
17.4 °C
16 ppm
6.67 pH

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

- backpack totebarge boat
Make & Model(s): 12 B

Start Time: 10:00 End Time: 14:30

ELECTROFISHING EFFORT

Operator	Canh	Brian	Total
Shocker	Chi Won	Easy Chase	Time (sec)
Pass 1	1280	1402	2682
Pass 2	919	1248	2167
Pass 3	774	914	1688
Pass 4			

Electrofisher Settings:

Pulse Frequency I Hz
Pulse Duration 5 ms
Mode _____ / _____ (SR Type XII only)
Output Voltage 500 Volts
Current _____ Amps
Power = Volts x Amps = _____ Watts

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
Alex Hunter	Colleen Mullikin	
Russ Marshall	Shari Heitkotter	
Steve Tsao		
		whole crew

General Fish Response: (check all that apply)

- Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

- 0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: _____ %

CLAVEY RIVER, Section 6
Survey Date: 20 /08/31
Species: All Species

Length	Weight
40	1
40	1
41	1
42	1
46	1
46	1
48	1
48	1
50	1
50	1
50	1
50	1
51	1
51	1
51	1
51	1
51	1
52	1
52	1
53	1
53	1
53	1
54	1
55	1
55	1
55	1
55	2
55	2
55	2
56	1
56	3
57	1
57	2
58	2
58	2
58	2
58	2
58	2
58	2
58	3
59	2
60	1
60	2
60	2
60	2
60	2

CLAVEY RIVER, Section 6

Survey Date: 20 /08/31

Species: All Species

Length	Weight
60	2
60	3
61	1
61	2
61	2
61	2
61	2
61	2
61	2
61	3
61	3
61	3
61	3
61	3
61	4
62	2
62	2
62	2
62	2
62	2
62	3
62	3
62	3
62	3
63	1
63	2
63	2
63	2
63	3
64	2
64	3
64	4
65	2
65	3
65	3
65	4
66	2
66	2
66	2
66	3
66	3
66	3
66	3
66	3
67	4
68	2
68	3

CLAVEY RIVER, Section 6

Survey Date: 20 /08/31

Species: All Species

Length	Weight
68	3
68	3
68	3
68	3
68	3
68	4
68	4
69	3
69	3
69	4
70	1
70	2
70	2
70	2
70	3
70	3
70	3
71	3
71	3
71	3
71	3
71	3
71	3
72	3
72	4
72	4
72	4
72	5
73	3
73	3
73	4
73	5
74	3
74	4
75	4
77	3
80	4
80	6
114	15
116	16
120	15
120	16
120	17
120	19
121	18
122	20

CLAVEY RIVER, Section 6**Survey Date:** 20 /08/31**Species:** All Species

Length	Weight
123	20
124	17
124	18
124	19
125	17
125	17
126	18
129	20
129	20
129	22
130	19
130	19
130	20
130	21
130	22
132	20
132	22
132	25
132	25
135	23
135	23
135	25
135	25
136	22
136	23
137	22
137	23
137	24
138	26
139	28
140	26
141	23
144	23
144	31
145	31
145	31
152	32
154	34
154	35
155	36
157	38
157	38
157	41
158	38
159	41

CLAVEY RIVER, Section 6

Survey Date: 20 /08/31

Species: All Species

Length	Weight
160	43
162	41
163	37
163	40
164	48
164	55
165	43
166	41
167	43
168	42
168	47
168	47
168	48
169	40
169	44
170	38
171	47
172	54
173	50
174	Null
174	56
178	50
178	55
179	49
180	52
181	55
182	52
182	57
182	58
182	61
183	62
184	63
184	64
184	66
184	71
187	65
189	60
190	63
190	70
191	63
193	60
194	72
194	79
195	65
197	73

CLAVEY RIVER, Section 6

Survey Date: 20 /08/31

Species: All Species

Length	Weight
197	73
197	75
198	74
202	83
230	126

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2 X 100 =

Total = _____ (ft)

_____ %

COVER

Type

Relative Abundance

Overall Rating

<u>BOULDERS</u>
<u>ROOTS ON BANK (UNABSCUT)</u>
<u>WOODY DEBRIS / LOGS</u>

90%
3%
7%

100%

Excellent _____
Good _____
Fair X
Poor ↓
Negligible _____

Comments: TROUT IN COVER OF DOWNED TREE AND ROOTS OF STANDING TREE
ALONG SOUTH BANK. BOULDER INTERSTICES PROVIDE REMAINING COVER

WATER QUALITY

Temperature 17° @ 1730 C or _____ F at 1730 Time

pH 7.4

Conductivity 32 micromhos/cm

Total Alkalinity:

Hach Kit

#drops 2

Titrets

drops / 2.5 = _____ grains / gallon

AT EDGE OF RANGE

drops X 17.12 = 13.7 mg / l

LESS THAN 10 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

Day No yr

Stream: MERCED RIVER

Section: 1

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2

X 100 =

Total = _____ (ft)

%

OVER

Type

Relative Abundance

Overall Rating

Excellent

Good

Fair

Poor

Negligible

100%

Comments:

WATER QUALITY

Temperature 18° C or _____ F at 1530 Time

pH 6.9

Conductivity 18 micromhos/cm

Total Alkalinity:

22 AT LOWER SEINE WITH NaCl

Hach Kit

Titrets

#drops 1.5

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

BELOW SENSITIVITY

_____ mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

ELECTROFISHING CONDITIONS

DATE: 20 / 08 / 91 STREAM: MERCED (YOSEMITE) SECTION: 1
 day mo yr

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
other(describe) _____

Downstream Block: seine X waterfall _____ cascade _____
other(describe) _____

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S): _____

NUMBER OF NETTERS: 3

TOTAL NUMBER IN ELECTROFISHING CREW: 7

NUMBER OF REMOVAL PASSES: _____

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	<u>1823</u>	<u>1411</u>	<u>1655</u>	_____	_____	_____
PASS 2:	<u>1327</u>	<u>1090</u>	<u>1198</u>	_____	_____	_____
PASS 3:	<u>1040</u>	<u>1023</u>	<u>—</u>	_____	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling
Conditions/ Equipment or other Problems

SALT

HABITAT DESCRIPTION

STREAM Hexad River SECTION 1

Fast end of gradient dropping to valley level
RAIN, TOPOGRAPHY, GRADIENT: Fairly straight channel - moderate gradient - boulder lined banks - East bank fairly steep - West bank more sloping
Excised, boulder lined channel

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Mixed oak conifer forest

STREAM HABITAT: ^{and pocket water} Predominately boulder runs ^{connected} by ^{very} short riffles breaking between runs
Stream narrows in lower 1/2 with one long riffle connecting the upper series of runs ^{with one lower run}

STRATE: Large boulder - less cobble - little sand and gravel

TERRESTRIAL VEGETATION/BANK STABILITY: Only distinctive riparian species is western azalea - boulder lined banks may preclude normal riparian zone. Channel with boulder lined banks appear stable

ALGAL VEGETATION: Only small amount of algae & diatoms on the rocks

WATER QUALITY: Fair to good boulder cover - Little or no woody debris - Some turbulence

THREATS (cattle, water development, fishing pressure, etc.):
None evident

Merced

Section 10 1990

Day 15 Yr

Stream: Merced River

Section: 1

ERODING BANK (ft):

% Eroding Banks =

Total

Section Length X 2

X 100 =

Total = _____ (ft)

_____ %

COVER

Type

Relative Abundance

Overall Rating

BOULDER

90%

Excellent

BUBBLE/TURBULENCE

10%

Good

Fair

Poor

Negligible

100%

Comments: SOME COVER FOR SMALLER FISH IN RIFFLE TRANSITIONS

WATER QUALITY

Temperature 10° C or _____ F at 10:10am Time

pH 7.2 Conductivity 28 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 2

drops / 2.5 = _____ grains / gallon

drops X 17.12 = 13.7 mg / l

LESS THAN 10 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

Merced R Section 1 1988

BRIEF CONDITIONS AND SAMPLING QUALITY

STREAM: Merced River

SECTION: Foresta Bridge

TIME BEGINNING: 10:00 hrs Ending 1300 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 4

NUMBER OF NETTERS: 5

TOTAL NUMBER IN CREW: 11

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS: upper seine lower seine waterfall _____ cascade _____ other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 22° C or _____ F Time _____ hrs

b. pH = 7.5

c. Conductivity = 45 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

Merced River Section 4 1992

MERCED RIVER

Section 4

ERODING BANKS (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks = **NONE**

Total _____
Section Length X 2 _____ X 100 =

Total = _____ (ft)

BANKS CONSIST OF LARGE BOULDERS

COVER

Type

Relative Abundance

Overall Rating

BOULDER

Excellent

DEPTH

Good

BUBBLE SCREEN

Fair

Poor

Negligible

100%

Comments:

WATER QUALITY

16° AT 11:30

Temperature 13° C or _____ F at 9:00 Time

pH 7.3 Conductivity 32 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 3-4

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

Water Quality Comment (Appearance, Turbidity, etc.)

ELECTROFISHING CONDITIONS

DATE: 4/10/92 STREAM: Merced River SECTION: 4
day mo yr

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
 other(describe) _____

Downstream Block: seine X waterfall _____ cascade _____
 other(describe) _____

NUMBER OF ELECTROFISHERS USED: 4 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 10

NUMBER OF REMOVAL PASSES: _____ SALT ADDED:

	^{SE} Timer 1	^V Timer 2	^G Timer 3	^{SS} Timer 4	Timer 5	Average
PASS 1:	<u>939</u>	<u>1376</u>	<u>930</u>	<u>2411 (WASNT ZEROED)</u>	_____	_____
PASS 2:	<u>754</u>	<u>858</u>	<u>641</u>	<u>706</u>	_____	_____
PASS 3:	<u>681</u>	<u>960</u>	<u>600</u>	<u>605</u>	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling
 Conditions/ Equipment or other Problems

SURVEY CONDITIONS AND SAMPLING QUALITY

DATE: 10, 9, 88,
day mo yr

STREAM: Merced River

SECTION: 2 (new) ⁴

TIME BEGINNING: 9:30 hrs Ending 1:30 hrs

NUMBER OF PASSES: 4

NUMBER OF SHOCKERS USED: 4

NUMBER OF NETTERS: 5

TOTAL NUMBER IN CREW: 13

COMMENTS, PROBLEMS, etc.

SECTION BLOCKS: upper seine lower seine waterfall cascade other

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 23° C or _____ F Time 2:45 hrs

b. pH = 7.9

c. Conductivity = 38 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

HABITAT DESCRIPTION

4

STREAM Merced River

SECTION 2 (new)

day no yr

ERRAIN, TOPOGRAPHY, GRADIENT: The stream is bordered on the north & south by fairly steep slopes. The north slope is characterized by numerous rocky outcroppings with an oak-chaparral dominant plant community. The south slope also has spots of rocky outcroppings, here oak-chaparral, and conifers dominate.

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: The north slope consists primarily of white oak in the overstory and chaparral type plants in the understory. On the north slope, white oak dominates the overstory with Digger & Ponderosa pines popping periodically. Moss, in the gametophytic stage, are also visible on the south slope.

INSTREAM HABITAT: The uppermost portion of our section displays a rather high gradient run and then leads to a series of cascade, plunge pool, and riffle. Also, it should be mentioned that pocket water dominates both sides of the stream.

SUBSTRATE: In order of their abundancies, boulders dominate this section, especially in the cascade, run, and riffle portions. There are some cobble and even less gravel & fines in this section. In the pocket water, not many fines could be found, it was rather boulders.

RIPARIAN VEGETATION/BANK STABILITY: Willow is definitely the major riparian plant. It borders the entire section with White oak, Ponderosa, and Digger pines following in those respective abundancies. The bank seems to be fairly stable as evident of the rich riparian growth (willow) & boulders.

AQUATIC VEGETATION: Algae seems to be the major aquatic veg. Moss also exists but no rooted aquatics or emergents.

COVER: The major cover in this section is instream boulders followed by surface turbulence, and water depth.

IMPACTION (cattle, water development, fishing pressure, etc.): Fishing pressure would be the upmost interpretation of this stream due to the following:

2 miles from Yosemite Nat'l. Park ② Road-side stream ③ Beer cans & various refuse scattered along the bank.

ISC.: _____

1992

Merced River

Section 2

% Eroding Banks =

Total

X 100 =

Section Length X 2

%

Total = (ft)

BOULDER CHANNEL

COVER

Type	Relative Abundance	Overall Rating
BOULDER	80	Excellent
POOL DEPTH	15	Good
BUBBLE SCREEN	5	Fair <input checked="" type="checkbox"/>
		Poor
		Negligible
	100%	

Comments: BOULDER POINTS AND DEEP RUN/POOL

WATER QUALITY

Temperature 12.5 C or F at 9:00 Time

pH 7.3 Conductivity 33 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 4

drops / 2.5 = grains / gallon

drops X 17.12 = mg / l

Water Quality Comments: (Appearance, Turbidity, etc.)

ELECTROFISHING CONDITIONS

DATE: 3, OCT, 92
 day mo yr

STREAM: MERCED RIVER

SECTION: 2

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
 other(describe) AT TOP OF CASCADE

Downstream Block: seine X waterfall _____ cascade _____
 other(describe) _____

NUMBER OF ELECTROFISHERS USED: 4

BOAT(S): _____

NUMBER OF NETTERS: 5

TOTAL NUMBER IN ELECTROFISHING CREW: 11

NUMBER OF REMOVAL PASSES: _____

SALT ADDED: X

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	<u>1807</u>	<u>1334</u>	<u>1885</u>	<u>1835</u>	_____	_____
PASS 2:	<u>1535</u>	<u>1171</u>	<u>1507</u>	<u>1537</u>	_____	_____
PASS 3:	<u>1288</u>	<u>1268</u>	<u>1333</u>	<u>1289</u>	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling
 Conditions/ Equipment or other Problems

WATER CONDITIONS AND SAMPLING QUALITY

9, 9, 88,
day mo yr

STREAM: Merced River

SECTION: EL Part 1 2

TIME BEGINNING: 11:00am hrs Ending 4:45 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 4

NUMBER OF NETTERS: 5

TOTAL NUMBER IN CREW: 11

COMMENTS, PROBLEMS, etc.

SECTION BLOCKS:
upper seine lower seine waterfall cascade other

.....

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 18 C or F Time 09:00 hrs

b. pH = 7.3

c. Conductivity = 150 micromhos/cc

d. Total alkalinity: # drops 3

-- 2.5 = grains/gallon

X 17.12 = mg/l

Water Quality Comments:

SURVEY CONDITIONS AND SAMPLING METHODS

DATE: 11/09/87
day mo yr

STREAM: MERCED RIVER

SECTION: El Portal

Section 2

TIME BEGINNING: 1100 hrs Ending 1500 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 4

NUMBER OF NETTERS: 4

TOTAL NUMBER IN CREW: 9

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:

upper seine _____ lower seine waterfall _____ ^{upper} cascade other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 16° c or _____ F Time 0930 hrs

b. pH = 7.5

c. Conductivity = 30 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

FLOW: UNOBTAINABLE

Call El Portal Sewage treatment plant.
They take daily flow readings

WATER CONDITIONS AND SAMPLING QUALITY

11/9/88
day mo yr

STREAM: Merced River

SECTION: Foresta Bridge
Section 1

TIME BEGINNING: 10:00 hrs Ending 1300 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 4

NUMBER OF NETTERS: 5

TOTAL NUMBER IN CREW: 11

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS: upper seine lower seine waterfall _____ cascade _____ other _____

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 22° C or _____ F Time _____ hrs

b. pH = 7.5

c. Conductivity = 45 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

Merced
Merced

DATE, CONDITIONS AND SAMPLING QUALITY

DATE: 10/09/87/
day mo yr

STREAM: MERCED RIVER

SECTION: 1

TIME BEGINNING: 1100 hrs Ending 1415 hrs

NUMBER OF PASSES: 2

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 8

COMMENTS, PROBLEMS, etc. Needed at least 1 more shocker, 1 more netter and another line car. Volunteers and district biologist didn't show up as expected, grossly short of personnel needed to get adequate data for fish population.

SECTION BLOCKS:
upper seine lower seine waterfall cascade other

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 17° C or F Time 0900 hrs

b. pH = 7.9

c. Conductivity = 45 micromhos/cc

d. Total alkalinity: # drops 3

-- 2.5 = grains/gallon

X 17.12 = mg/l

Water Quality Comments:

FLOW: UNATTAINABLE

We can call El Portal Sewage Treatment Plant - they take daily flow readings

WATER CHEMISTRY AND QUALITY

1

Date: 09 / 25 / 85 Stream: Kern R. (South Fork) Section: 07
mo day yr

A. Water Chemistry:

1. Field data

a. Temperature = 11.5 °C or 52.7 °F Time _____ hrs

b. pH = 8.0

c. Conductance = 138 micromhos /cc

d. Total alkalinity: #drops 7

÷ 2.5 = 2.8 grains/gallon

X 17.12 = 47.9 mg/l

e. Nitrate/Nitrogen = _____ mg/l

B. Water Quality Comments: _____

SURVEY CONDITIONS AND SAMPLING QUALITY

DATE: 17, 9, 88,
day mo yr

STREAM: KERN RIVER

SECTION: 4

TIME BEGINNING: _____ hrs Ending _____ hrs

NUMBER OF PASSES: _____

NUMBER OF SHOCKERS USED: 5

NUMBER OF NETTERS: 8

TOTAL NUMBER IN CREW: 15

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:

upper seine lower seine _____ waterfall _____ cascade _____ other _____

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 14 C or _____ F Time 10:20 hrs

b. pH = 7.1

c. Conductivity = 99 micromhos/cc

d. Total alkalinity: # drops 8

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

HABITAT DESCRIPTION

DATE 11/9/88
day mo yr

STREAM Kern River

SECTION 4

ERRAIN, TOPOGRAPHY, GRADIENT: Both east and west slopes have moderately steep gradients. The east slope possesses slightly more vegetation than the west slope both being of the oak-sage type. Rocky outcroppings appear to be common in quantity to both sides

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: The east slope shows a more heavily oak-type vegetated community with some moss and grasses and a few Ponderosa pines and Digger spotted. The west is almost identical in veg. type, though its quantity is less. Rocky outcroppings are common on both slopes.

INSTREAM HABITAT: For the most part, the section seems to be consisted of deep runs and intermittent riffles. A cascade tops the section off upstream, all in all the section seems to be of a moderate gradient with heavy flow.

SUBSTRATE: Instream boulders dominate the instream with a good number of cobble stones in the riffle areas. Fines seem to dominate the pocket areas and gravel appears to jut behind the eddies.

TERRESTRIAL VEGETATION/BANK STABILITY: The east bank shows a very stable bank due to the heavy population of Willow, alders, and boulders. The west bank also appears to be very stable due to an intense density of grass. There are a few patches of eroding dirt though.

AQUATIC VEGETATION: On the whole, moss is evidently a major member of the aquatic veg. There appears to be very little moss, but no rooted or emergent plants.

REMARKS:

IMPACT (cattle, water development, fishing pressure, etc.): There is actually no immediate impact on the stream rather than the trail that fishermen use to fish. This section is 1 mile upstream by trail (not by road) therefore not so accessible.

REMARKS:

ERODING BANKS (ft)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total _____ X 100 =
 Section Length X 2 _____ %

Total = 0 (ft)

COVER

Type	Relative Abundance	Overall Rating
<u>Woody Debris</u>	<u>35</u>	Excellent _____
<u>Depth</u>	<u>20</u>	Good _____
<u>Undercut Banks</u>	<u>20</u>	Fair <u>✓</u>
<u>Boulders</u>	<u>15</u>	Poor _____
<u>Turbulence</u>	<u>10</u>	Negligible _____
	100%	

Comments: Low water reduced area of woody debris & undercut cover

WATER QUALITY

Temperature _____ C or 60° F at 1500 Time

pH 7.4 Conductivity _____ micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 3

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

Water Quality Comments: (Appearance, Turbidity, etc.)

HABITAT DESCRIPTION

STREAM Kern R.SECTION 3

TERRAIN, TOPOGRAPHY, GRADIENT: Flat-bottomed valley w/ steep, rugged granitic walls and massive talus slopes; low gradient

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: mixed conifer/cottonwood/willow and meadow

INSTREAM HABITAT: low to high gradient riffles separating broad runs and shallow pools

SUBSTRATE: boulder/cobble w/ thin layer of silt on top; pockets of fines/sand between rocks + along margins

RIPARIAN VEGETATION/BANK STABILITY: mixed conifers (sparse), willows, cottonwoods, meadow grasses + annuals - mostly sparse comes to water's edge along east bank; Banks stable, mostly armored w/ boulders, cobble, + tree roots

AQUATIC VEGETATION: none

COVER: sparse - mostly woody debris/undercuts along margins, along with deep water areas, turbulence, and some boulders

IMPACTION (cattle, water development, fishing pressure, etc.): light fishing pressure, pack stock grazing, beaver work, drought, fires

ELECTROFISHING CONDITIONS

DATE: 28 / AUG / 92 STREAM: KERN R. SQ. N.P. SECTION: 3
day mo yr

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
other(describe) _____

Downstream Block: seine X waterfall _____ cascade _____
other(describe) _____

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 8

NUMBER OF REMOVAL PASSES: 3 SALT ADDED: X

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	_____	_____	_____	_____	_____	_____
PASS 2:	_____	_____	_____	_____	_____	_____
PASS 3:	_____	_____	_____	_____	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling Conditions/ Equipment or other Problems

very high velocity, depth, + turbulence made shocking very difficult at top of section

Shocker in midstream began to lose battery power + output during 2nd + 3rd passes

SURVEY CONDITIONS AND SAMPLING QUALITY

DATE: 16/9/88
day mo yr

STREAM: KERN RIVER

SECTION: 3

TIME BEGINNING: 1030 hrs Ending 1530 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 6

NUMBER OF NETTERS: 6

TOTAL NUMBER IN CREW: 15

COMMENTS, PROBLEMS, etc. shocked this section in a downstream
rather than upstream direction. No upper seine
required

SECTION BLOCKS:
upper seine lower seine waterfall cascade other

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 16.1 C or F Time 1204 hrs

b. pH = 7.8

c. Conductivity = 100 micromhos/cc

d. Total alkalinity: # drops 10

-- 2.5 = grains/gallon

X 17.12 = mg/l

Water Quality Comments:

HABITAT DESCRIPTION

STREAM

KERN RIVER

SECTION

3

1619188
DAY NO YR

RAIN, TOPOGRAPHY, GRADIENT: SECTION located in a very steep, rocky
 galled canyon. SECTION of stream is of steep gradient
 on walls are extremely rocky

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Live oak dominates both
 sides, east bank has some pine west bank has some
 asp. Spp. (tree), cedar.

STREAM HABITAT: Consists mostly of runs broken up by large
 boulders. Surface turb. caused by large instream boulders
 all pools formed behind some exposed instream boulders.
 Wet water formed along stream banks.

SEDIMENT RATE: Stream predominated by small boulders and large cobble,
 mixed throughout stream, silt & sand found along margins as
 as pockets in main stream. Gravel scattered throughout

TERRESTRIAL VEGETATION/BANK STABILITY: Mostly alder with lots of grass
 along the west bank. Willow scattered all along with
 various plants. Spp. (tree), equisetum, and pine making up
 of riparian zone.

AQUATIC VEGETATION: No emergents or rooted aquatics present. Abundant
 algae with moderate amounts of moss on rocks

STRUCTURE: Consists mostly of instream boulders w/ lots of surface
 turbulence. Pool depth provided some cover as well as
 wet water along stream margins

THREATS (cattle, water development, fishing pressure, etc.):

heavy fishing pressure, many tourists from L.A.

ERODING BANK (ft):

% Eroding Banks =

Total

Section Length X 2 X 100 =

Total = 0 (ft)

COVER

Type	Relative Abundance	Overall Rating
<u>Upstream Woody Debris</u>	<u>45</u>	Excellent
<u>Undercut Banks</u>	<u>30</u>	Good <u>X</u>
<u>Turbulence</u>	<u>10</u>	Fair
<u>Boulders</u>	<u>5</u>	Poor
<u>Overhanging Vegetation</u>	<u>5</u>	Negligible
<u>Depth</u>	<u>5</u>	
	100%	

Comments: Almost all of cover is along West bank

WATER QUALITY

Temperature _____ C or 52 F at 1030 Time

pH 7.4 Conductivity 62 42 micromhos/cm
at 1030

Total Alkalinity:

Hach Kit

Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l _____ mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)
Water clear, but thin layer of fines covers much of substrate

HABITAT DESCRIPTION

STREAM

Lone R.

SECTION

2

TERRAIN, TOPOGRAPHY, GRADIENT: Flat bottomed valley with steep, rugged granitic walls and massive talus slopes - west bank is lightly forested and "meadowy"; east bank is boulder/cobble bar

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: mixed conifer/willow/cottonwood meadow

INSTREAM HABITAT: shallow run + riffle w/ a shallow pool at the upper end of section

SUBSTRATE: small boulders and cobble, pockets of fines along margins

RIPARIAN VEGETATION/BANK STABILITY: West bank has overhanging meadow grasses and willows w/ scattered conifers; East bank has thin patches of willows and annuals on boulder/cobble bar

AQUATIC VEGETATION: none

COVER: primarily undercut banks and instream woody debris, some depth/boulder/turbulence cover, some beaver tunnels

IMPACTION (cattle, water development, fishing pressure, etc.): light fishing pressure; pack stock grazing; beaver work - has killed trees, flooded meadows, probably caused river to braid + jump channel

SC.:

ELECTROFISHING CONDITIONS

DATE: 27, AUG, 92 STREAM: KERN R. SQ. N.P. SECTION: 2
day mo yr

SECTION BLOCKS

Upstream Block: seine waterfall _____ cascade _____
other(describe) IN CASCADE-RIFPLE

Downstream Block: seine waterfall _____ cascade _____
other(describe) _____

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 8

NUMBER OF REMOVAL PASSES: 3 SALT ADDED:

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	_____	_____	_____	_____	_____	_____
PASS 2:	_____	_____	_____	_____	_____	_____
PASS 3:	_____	_____	_____	_____	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling Conditions/ Equipment or other Problems

Large amounts of submerged + overhanging woody debris (many large logs) combined with undercutts and high current velocity to make shocking difficult

day no yr

92

Stream: Tom River

Section: 1

ERODING BANK (ft):

<u>35</u>	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total

 Section Length X 2 X 100 =
 _____ %

Section 1

Total = 35 (ft)

COVER

Type

Relative Abundance

Overall Rating

<u>Boulder</u>	<u>50</u>	Excellent	_____
<u>Turbulence</u>	<u>10</u>	Good	_____
<u>Woody Debris</u>	<u>5</u>	Fair	<u>X</u>
<u>Depth</u>	<u>35</u>	Poor	_____
_____	_____	Negligible	_____

100%

Comments: Rounded
Boulders cover most of bottom, little space beneath them; most of section open - few fish held to cover in shallower 1/3 as shockers approached, most fish run up to cascade and deeper pool head alongside old bridge abutment at top of section.

WATER QUALITY

Temperature _____ C or 49° F at 0900 Time
 pH 7.4
 Conductivity 42.6 ¹⁰³⁵ micromhos/cm

Total Alkalinity:

Hach Kit

#drops 3
 # drops / 2.5 = _____ grains / gallon
 # drops X 17.12 = _____ mg / l

Titrets

_____ mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

HABITAT DESCRIPTION

More opportunities
Meadow

DATE 26/08/92
day mo yr

STREAM Kern R.

SECTION 1

TERRAIN, TOPOGRAPHY, GRADIENT: Flat, low gradient valley floor of shallow topsoil over boulder base; steep, granitic valley walls - extremely rugged w/ massive talus slopes below to valley floor

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Mixed conifer/ Cottonwood woodland with wet meadow interspersed

INSTREAM HABITAT: Shallow pool/run habitat - no overhanging vegetation - open round-boulder bottom - cascade/high gradient riddle at head of pool

SUBSTRATE: Rounded boulders (11-24") + cobble, with silt/sand/gravel pockets behind boulders + along margins

RIPARIAN VEGETATION/BANK STABILITY: ^{cottonwoods} sparse willows/conifers/grasses banks mainly boulder armoured except for left bank at lower end, where upper 2 ft. of topsoil is eroding away

AQUATIC VEGETATION: none

COVER: mainly boulders, deep water, + turbulence; with some woody debris

THREATS (cattle, water development, fishing pressure, etc.): light fishing pressure, pack stock in meadow areas

HABITAT DESCRIPTION

DATE 23/8/88
day mo yr

STREAM Marble F Kaweah SECTION 04

TERRAIN, TOPOGRAPHY, GRADIENT: terrain - highly mountainous, steep slopes
densely forested river is in steep-sided canyon
moderate gradient - long smooth-surfaced pools w/ 1-5' drop cascades
between

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Mixed conifer (ponderosa pine/
alder? Pine/Cedar) w/ thimbleberry, Fern, Dogwood understorey

STREAM HABITAT: lg. plunge pool at sect. head, tails out into
rocky cascade, middle water, followed by long, relatively
flat stretch of pool/run/pocket water, broken by
a few small cascades

SUBSTRATE: lg. boulders + cobble in high velocity areas (upper end)
boulders farther apart in lower stretch w/ more gravel
and fines forming the pool + pocket water bottoms

RIPIARIAN VEGETATION/BANK STABILITY: moderately dense riparian veg.
primarily alder/willow w/ some Fern, conifer + annuals
little overhang at low flow - banks mainly boulder
with sandy soil held in place with roots - will erode if flow

ALGAL VEGETATION: small patches of moss on boulders (at higher
flow line), algal film instream, algal mats in backwaters

BIOTIC RESOURCES: primarily boulders (both submerged + overhanging)
with some bubble screens and deep pool areas - good
for yox and fish in 100-300mm classes, fair for
larger fish (not as many deepholes and/or lg. boulders)

THREATS (cattle, water development, fishing pressure, etc.): fishing
pressure is probably light

DATE: 23/8/88
day no yr

STREAM: North Fork

SECTION: 4

TIME BEGINNING: 9:45 hrs
Ending 12:45 hrs

NUMBER OF PASSES: _____
NUMBER OF SHOCKERS USED: 2
NUMBER OF NETTERS: 3
TOTAL NUMBER IN CREW: 6
COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS: upper seine lower seine waterfall cascade other

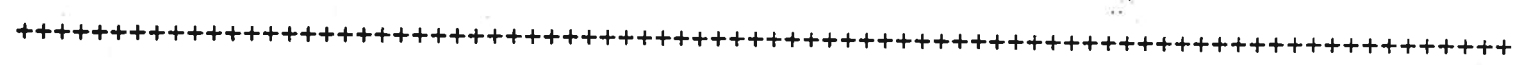
WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 16.0 C or F
b. pH = 7.4
c. Conductivity = 35 micromhos/cc
d. Total alkalinity: # drops 3

-- 2.5 = _____ grains/gallon
X 17.12 = _____ mg/l

Water Quality Comments:



TERRAIN, TOPOGRAPHY, GRADIENT: Boulder stream step-sidial valley steep gradient - is cascades from pool to pool

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Mixed conifer of manzanita + thorn scrub ground cover

INSTREAM HABITAT: plunge pools with steep cascades and falls, very short miles (2-4 ft) - some short sections may be classed as runs

SUBSTRATE: boulder 2-12 ft dia. cobble/gravel/silts in crevices, silt/clay, and pool bottoms

RIPARIAN VEGETATION/BANK STABILITY: willows and sm. clumps of annuals along channel - very little overhanging banks of boulders and bedrock forming a stable channel

AQUATIC VEGETATION: very little - light float film on boulders some patches of moss - mostly exposed by local flow

COVER: good - large numbers of submerged and overhanging boulders of sizes under 100 mm several deep plunge pools w/ bubble screens

IMPACTION (cattle, water development, fishing pressure, etc.): fishing pressure is probably light to moderate - relatively near to lake level camping area

MISC.: There is a minor channel to the right side (looking upstream) for ~ 2/3 of the section that will carry some water during higher flow years - but will not contribute much more to available habitat

SURVEY CONDITIONS AND SAMPLING QUALITY

DATE: 24, 8 88,
day mo yr

STREAM: Marble Fork

SECTION: 2

TIME BEGINNING: 09:30 hrs Ending 1245 hrs

NUMBER OF PASSES: 2

NUMBER OF SHOCKERS USED: 2

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 6

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine _____ lower seine waterfall _____ cascade other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 15° C or _____ F Time 09:10 hrs

b. pH = 7.3

c. Conductivity = 20 micromhos/cc

d. Total alkalinity: # drops 3

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

WATER QUALITY

DATE: 10/10/96

RECORDER: RB

STREAM: Clavey River

SECTION: _____

WATER TEMPERATURE

12 C or _____ F recorded at 0900

_____ C or _____ F recorded at _____

CONDUCTIVITY

45 micromhos/cm

recorded at 0900

pH

6.9

TOTAL ALKALINITY

Hach Kit

Titrets

of drops 2

of drops / 2.5 = .8 grains/gal

(grains/gal) X 17.12 = 13.7 mg/l

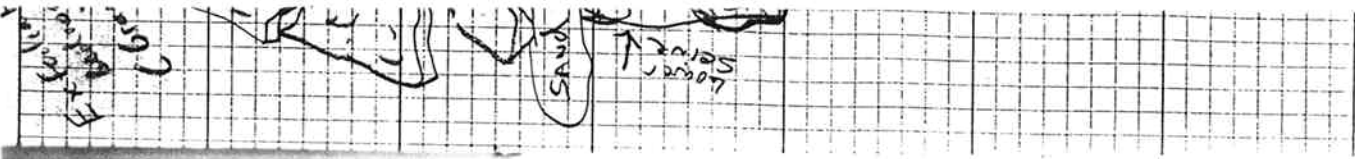
13.7 mg/l

COMMENTS

(Appearance, Turbidity, Etc.)

✓ CLEAR VISIBILITY GOOD

↓ CONDUCTIVITY NECESSITATES SALT BLOCKS



B =

ELECTROFISHING CONDITIONS

DATE: 10 1 10 196 STREAM: CHAVEY R. SECTION 9

SECTION CLOSURE

Upstream Block: seine X cascade _____ waterfall _____
other (describe) _____
Downstream Block: seine X cascade _____ waterfall _____
other (describe) _____

NUMBER OF ELECTROFISHERS USED: 2 BOAT(S) NO
NUMBER OF NETTERS: 2
TOTAL NUMBER IN ELECTROFISHING CREW: 5
NUMBER OF REMOVAL PASSES: 3 SALT ADDED?: YES

SPECIES PRESENT

	SPECIES CODE
PASS 1:	<u>RT</u>
PASS 2:	<u>82</u>
PASS 3:	<u>26</u>
PASS 4:	<u>10</u>

AMPHIBIANS AND/OR REPTILES OBSERVED: None seen.

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

CLAVEY RIVER

STREAM LENGTH:

STUDY AREA DATA

LOCATION: SECTION 8

UPSTREAM OF TWO MILE CREEK

DATE: 09 OCT 96

CHARACTERISTICS

PHYSICAL

LENGTH: (ft) 330'
 MEAN WIDTH: (ft) 31.9'
 ELEVATION: (ft)
 FLOW: (cfs) .9891
 GRADIENT: (%)
 ERODING BANK: (%)
 10% ACTIVE EROSION

BIOLOGICAL

INSTREAM VEGETATION:
 SPARSE FILAMENTOUS
 ALGAE AND MODERATE
 DIATOMS / PERIPHYTON

RIPARIAN VEGETATION:
 (type/relative %)

WILLOW 40%
 ALDER 40
 MIXED CONIFER 10
 FERNS 2
 INDIAN RHUBARB 8

COVER:
 (type/relative %)

BOULDER/POCKETS 80%
 POOL 15%
 BUBBLE CURTAINS 5%

WATER QUALITY

TEMP: (F) 10°C AT 10:40
 pH: 6.8
 CONDUCTIVITY: 50 μ mhos
 ALKALINITY: 6.848 mg/l
 * H₂O QUALITY FROM SECTION 7 BELOW TWO MILE CREEK

FISH POPULATIONS

F.L. (mm) # OF FISH CAPTURED

F.L. (mm)	# OF FISH CAPTURED
0-24	
25-49	
50-74	
75-99	
100-124	
125-149	
150-174	
175-199	
200-224	
225-249	
250-274	
275-299	
300-324	
325-349	
350-374	
375-399	
>400	
TOTAL	
POP EST	
BIOMASS (kg)	
ST. CROP (lb/ac)	
(kg/ha)	
FISH/MI	
FISH/KM	

INSTREAM HABITAT:

FW
 POOL RIFFLE RUN POCKET CASCADE

PERCENT : 17.1 : 9.2 : 73.7 : _____

x DEPTH (ft) : .52 : .51 : .52 : _____

% FINES : 7.7 : 0 : 10.7 : _____

% GRAVEL : 7.7 : 0 : 5.3 : _____

% COBBLE : 7.7 : 0 : 3.6 : _____

% BOULDER : 76.9 : 100 : 80.4 : _____

TOTAL TROUT POPULATIONS:

LB/AC:
 KG/HA:
 FISH/MI:
 FISH/KM:

ELECTROFISHING CONDITIONS

DATE: 09 / Oct / 96 STREAM: CLAUBY RIVER SECTION 9

SECTION CLOSURE

Upstream Block: seine X cascade _____ waterfall _____
other (describe) _____

Downstream Block: seine X cascade _____ waterfall _____
other (describe) _____

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S) _____

NUMBER OF NETTERS: 3

TOTAL NUMBER IN ELECTROFISHING CREW: 7 + 2 BANK

NUMBER OF REMOVAL PASSES: 3 SALT ADDED?: YES

SPECIES PRESENT

SPECIES CODE

	<u>RT</u>	_____
PASS 1:	<u>157</u>	
PASS 2:	<u>52</u>	
PASS 3:	<u>23</u>	
PASS 4:		

AMPHIBIANS AND/OR REPTILES OBSERVED: NO

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

11/10/89
DAY NO YE

STREAM: Clawey River

SECTION: 8

TIME BEGINNING: 1015 hrs Ending 1210 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 7

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine lower seine waterfall _____ cascade _____ other _____

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 10.5°C or _____ F Time 1300 hrs

b. pH = 7.4

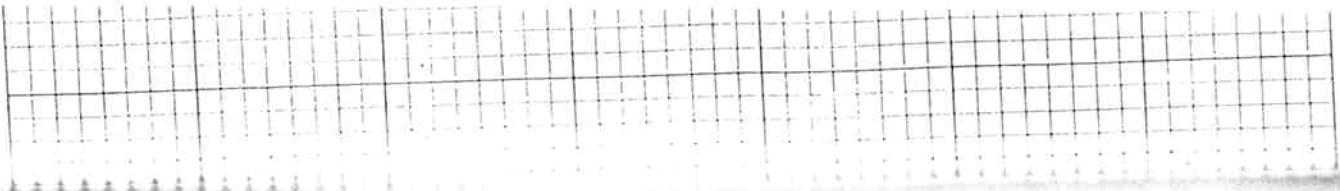
c. Conductivity = 30 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:



DATE: 97 3/21/02
 LOCATION: Clay River SECTION: 7

WATER TEMPERATURE 3 C or _____ F recorded at _____
 _____ C or _____ F recorded at _____

CONDUCTIVITY 102 micromhos/cm recorded at 103

pH 8.1

TOTAL ALKALINITY

Hach Kit	Titrets
# of drops _____	
# of drops / 2.5 = _____ grains/gal	
(grains/gal) X 17.12 = _____ mg/l	<u>1.6</u> mg/l

COMMENTS

(Appearance, Turbidity, Etc.) Clear and cool

ELECTROFISHING CONDITIONS

DATE: 10 / 07 / 97 STREAM: Clavey River SECTION 7

SECTION CLOSURE

Upstream Block: seine [checked] cascade waterfall other(describe)

Downstream Block: seine [checked] cascade waterfall other(describe)

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S)

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 8

NUMBER OF REMOVAL PASSES: 3 SALT ADDED?: Yes 4 BLOCKS

SPECIES PRESENT

SPECIES CODE

RT

PASS 1: 177
PASS 2: 98
PASS 3: 28
PASS 4:

AMPHIBIANS AND/OR REPTILES OBSERVED:

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

[Blank lines for comments]

WATER QUALITY

DATE: ^{oct.} 7/10/196

RECORDER: Erik Helgoth

STREAM: Clavey River (516' below Creek) SECTION: 7

WATER TEMPERATURE 10 C or _____ F recorded at 10:40
_____ C or _____ F recorded at _____

CONDUCTIVITY 50 micromhos/cm recorded at 10:40

pH 6.8

TOTAL ALKALINITY

Hach Kit

Titrets

of drops 5

of drops / 2.5 = .4 grains/gal

(grains/gal) X 17.12 = 6.848 mg/l 6.848 mg/l

COMMENTS

(Appearance, Turbidity, Etc.) 4 salt blocks added.

Water clear.

STREAM: Clifty

SECTION: 7

TIME BEGINNING: 1045 hrs Ending 1235 hrs

NUMBER OF PASSES: 2

NUMBER OF SHOCKERS USED: 5

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 7

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine lower seine waterfall cascade other

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 8 C or F Time 1230 hrs

b. pH = 7.1

c. Conductivity = 30 micromhos/cc

d. Total alkalinity: # drops 5

-- 2.5 = grains/gallon

X 17.12 = mg/l

Water Quality Comments:

ELECTROFISHING SURVEY SUMMARY

GENERAL LOCATION (describe in detail & draw map on Location form)

Survey Date (da/mo/yr) 14 / 1968 / 1 00
Stream Name CLAVEY RIVER Section 6
Location Description Trout Creek (218 ft upstream of bridge)
Section Length 327 ft Average Width 25.74 ft
99.67 METERS 7.846 meters
PS Unit Used BROWN TROUT
Waypoint No. 058 Time 1558 PDT FOM 16.2 ft
North 38, 13664 West 119, 97415
Other information

DATA PACKET CHECKLIST

- Location Map
Fish Population
Water Quality/Discharge/Gradient
Stream Transect (Depth/Substrate/Habitat)
Vegetation /Bank Stability/Cover
Habitat Description
Volunteer Service Agreements
Other

SURVEY PARTICIPANTS

Table with 2 columns: Name, Affiliation. Includes Stan Stephens (DFG-R4), Rob Tibstra (DFG-R-4), Mike Schommer (DFG-HQ), Bob Soledici, Dave Lantz.

ELECTROFISHING CONDITIONS

Section Closures: (check one for each end)
Upstream Block: [x] seine [] cascade [] waterfall [] other
Downstream Block: [x] seine [] cascade [] waterfall [] other

Type of Electrofisher(s) Used: (check one)
[x] backpack [] totebarg [] boat
Salt Added? (check one) [x] YES [] NO
Number in Crew: Shockers 2 Netters 3
Live Car Tenders 1 Fish Processing post-shocking

Recorder: Sharon Shultz CDFG

ELECTROFISHING EFFORT

Table with columns for hooker, class 1-4, and total. Includes handwritten values for hooker 081WON and SHADOW CASTER.

NOTES & COMMENTS:

E-FISHOR SETTINGS - J-6 at 100 to 200 VOLTS - had to switch over whenever output fluctuated too high because of uneven salt concentrations

Amphibians and Reptiles Observed:

NONE

FISH PROCESSING

Anesthetic used: (check one) [x] CO2 [] Other
Oxygen Added? (check one) [] YES [x] NO

FISH POPULATION ESTIMATE SUMMARY

(use space below for notes or additional columns, if needed)

Table with columns for taxon, class 1-4, and total. Includes handwritten values for taxon RT.

WATER QUALITY

Parameter	Value	Time	Method	Measured by	Recorded by
Temperature	14 <small>°C or °F (circle one)</small>	1015	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>YSI Cond. Meter</u>	<i>MS</i>	<i>MS</i>
Conductivity	20 micromhos/cm	"	<input checked="" type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	"	"
pH	8.2	1545	<input checked="" type="checkbox"/> Cole-Parmer pocket pH meter <input type="checkbox"/> other (specify) _____	M. SCHUMMER	B. SOLECKI
Total Alkalinity	> 500 mg/l	1545	<input checked="" type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____	M. SCHUMMER	B. SOLECKI

REMARKS (note appearance, turbidity, etc.) Note Stan's conductivity meter read 2600

STREAM DISCHARGE (FLOW)

Cell Cell Bounds (ft)	Cell Depth (ft)	Water Velocity (ft/sec)*			Cell Discharge (cfs)	Total Discharge (cfs)
		at 0.2D	at 0.4D	at 0.8D		
0 to 0.8	2		.15			
3 to 1.6	2.25		-.05			
6 to 2.4	2.85		-.02			
4 to 3.2	2.80		-.01			
2 to 4.0	2.80		.06			
0 to 4.8	2.12		.16			
8 to 5.6	2.25		.18			
6 to 6.4	0.90		.26			
4 to 7.2	0.60		.58			
2 to 8.0	0.25		.84			
0 to 8.4	0.10		.55			

Distance from downstream end of section to this transect: 298 ft

Stream width at this cross section: 8.4 ft
(N.B. - need minimum of 10 cells across the transect)

* Measure velocity at 0.4 D if the stream is < 0.6 m deep. If deeper than 0.6 m, measure at 0.2D and 0.8D. Measure at all three depths if the velocity profile is distorted by irregularities such as large submerged objects or overhanging vegetation touching the water.

Comments _____

Measured by MIKE SCHUMMER
 Recorded by BOB SOLECKI

STREAM GRADIENT

see historical data

Transect Location: Upstream Downstream Measured by _____
 Section length _____ ft Recorded by _____

Measurement	1	2	3	4	5	6	7	8	9	10	Σ =
Level:											
Reading:											

Σ Run = Section length or horizontal distance of stream covered = _____ ft

Stream Gradient = (Σ Rise / Σ Run) * 100 = _____ %

WATER QUALITY

DATE: 10 17 196

RECORDER: RD

STREAM: Clary river SECTION: 6

WATER TEMPERATURE 18 C or _____ F recorded at 1400

_____ C or _____ F recorded at _____

CONDUCTIVITY 5 micromhos/cm recorded at 1400

pH 7.0

TOTAL ALKALINITY

Hach Kit

Titrets

of drops 3

of drops / 2.5 = 1.2 grains/gal

(grains/gal) X 17.12 = 20.544 mg/l 20.544 mg/l

COMMENTS

(Appearance, Turbidity, Etc.) _____

ELECTROFISHING CONDITIONS

DATE: 10 / 7 / 96

STREAM: Clavey River

SECTION 6

SECTION CLOSURE

Upstream Block:

seine other (describe) _____ cascade _____ waterfall _____

Downstream Block:

seine other (describe) _____ cascade _____ waterfall _____

NUMBER OF ELECTROFISHERS USED: 2

BOAT(S) _____

NUMBER OF NETTERS: 2

TOTAL NUMBER IN ELECTROFISHING CREW: 6

NUMBER OF REMOVAL PASSES: 2

SALT ADDED ? : yes

SPECIES PRESENT

SPECIES CODE

PASS 1:

RT
117

PASS 2:

13

PASS 3:

0

PASS 4:

AMPHIBIANS AND/OR REPTILES OBSERVED:

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

22/8/89
day mo yr

STREAM: Clavey R.

SECTION: 3

TIME BEGINNING: 1100 hrs Ending 1511 hrs

NUMBER OF PASSES: 234

NUMBER OF SHOCKERS USED: 2

NUMBER OF NETTERS: 2

TOTAL NUMBER IN CREW: 5

1st pass 45 min
2nd pass 35 min
3rd pass 30 min

COMMENTS, PROBLEMS, etc. 25-28 min delay on first pass due to Awade failure!

SECTION BLOCKS:
upper seine lower seine waterfall cascade other
← upper block

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 16.8 C or F Time 1020hrs

b. pH = 7.5

c. Conductivity = 41 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = grains/gallon

X 17.12 = mg/l

Water Quality Comments:

ELECTROFISHING CONDITIONS

DATE: 08 OCT 1986

STREAM: CLAVEY RIVER

SECTION 2

SECTION CLOSURE

Upstream Block: seine other (describe) _____ cascade _____ waterfall _____

Downstream Block: seine other (describe) _____ cascade _____ waterfall _____

NUMBER OF ELECTROFISHERS USED: 3

BOAT(S) _____

NUMBER OF NETTERS: 3

TOTAL NUMBER IN ELECTROFISHING CREW: 7 + 2 BANK

NUMBER OF REMOVAL PASSES: 3

SALT ADDED?: YES

SPECIES PRESENT

	SPECIES CODE		
	RT	SKR	RCH
PASS 1:	44	37	28
PASS 2:	11	25	11
PASS 3:	9	9	10
PASS 4:			
	64		

AMPHIBIANS AND/OR REPTILES OBSERVED: FOOTHILL YELLOW-LEGGED FROGS (2)

1 LARGE (1) RECENTLY METAMORPHOSED ADULT

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

NUMEROUS SMALL < 50 MM SUCKER AND POACH (25 MM TO 50 MM) IN THE EDGEWATER AND ISOLATED POOLS

WATER QUALITY

DATE: 08 / OCT / 96

RECORDER: _____

STREAM: CLAVY RIVER

SECTION: 2

WATER

TEMPERATURE

16 C or _____ F recorded at 11:30

_____ C or _____ F recorded at _____

CONDUCTIVITY

40 micrmhos/cm recorded at _____

pH

7.4

TOTAL ALKALINITY

Hach Kit

Titrets

of drops 3

of drops / 2.5 = 1.2 grains/gal

(grains/gal) X 17.12 = 20.5 mg/l _____ mg/l

COMMENTS

(Appearance, Turbidity, Etc.) _____

STREAM: Clavey River

SECTION: 2

TIME BEGINNING: 1140 hrs

Ending 1315 hrs

NUMBER OF PASSES: 2

NUMBER OF SHOCKERS USED: 2

NUMBER OF NETTERS: 2

TOTAL NUMBER IN CREW: 5

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:

upper seine lower seine waterfall cascade other

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 19° C or F Time 1013 hrs

b. pH = 7.5

c. Conductivity = 45 micromhos/cc

d. Total alkalinity: # drops 4

-- 2.5 = grains/gallon

X 17.12 = mg/l

Water Quality Comments:

HABITAT DESCRIPTION

SITE 1308
day no yrSTREAM ClaveySECTION 7TERRAIN, TOPOGRAPHY, GRADIENT: Moderately high & low gradient streamunbounded by moderately to steep canyon walls that are densely forested. Next to the stream is a meadow.DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Predominantly comprised of
moose cedar and Doug fir densely forested area.STREAM HABITAT: Predominantly comprised of high & low gradient
ripples with interspersions of run & pocket water.SUBSTRATE: Predominantly comprised of boulders & cobble
with interspersions of gravel & fines located in runs &
pocket water.RIPARIAN VEGETATION/BANK STABILITY: Indian Shrub, Alder, willow, and
interspersions of sedges comprise the majority of the riparian
vegetation. Banks look very stable due to boulders & trees
but there is some evidence of erosion.AQUATIC VEGETATION: Moderate numbers of emergents & moss. Little
algae is evident and no rooted aquatics were evident.COVER: Instream boulders provided the majority of the cover.
cobble screen, woody debris, & pool depth comprised the
remainder of cover.IMPACT (cattle, water development, fishing pressure, etc.): Little to no
evidence of fishing pressure due to location. Impacted by
water development raising & lowering the H_2O level.

SC. :

ELECTROFISHING CONDITIONS

DATE: 06 1 10 1977 STREAM: CLAVEY RIVER SECTION 6

SECTION CLOSURE

Upstream Block: seine other(describe) cascade X waterfall

Downstream Block: seine X other(describe) cascade waterfall

NUMBER OF ELECTROFISHERS USED: 2 BOAT(S)

NUMBER OF NETTERS: 2

TOTAL NUMBER IN ELECTROFISHING CREW: 5 + 2 BANK

NUMBER OF REMOVAL PASSES: 3 SALT ADDED?: No

SPECIES PRESENT

Table with 2 columns: PASS (1-4) and SPECIES CODE. Entries include RT, 72, 25, and Q10.

AMPHIBIANS AND/OR REPTILES OBSERVED: NO

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

Four horizontal lines for writing comments.

ELECTROFISHING CONDITIONS

DATE: 10 / 7 / 96 STREAM: Clavey River SECTION 6

SECTION CLOSURE

Upstream Block: seine [checked] cascade _____ waterfall _____
other(describe) _____

Downstream Block: seine [checked] cascade _____ waterfall _____
other(describe) _____

NUMBER OF ELECTROFISHERS USED: 2 BOAT(S) _____

NUMBER OF NETTERS: 2

TOTAL NUMBER IN ELECTROFISHING CREW: 6

NUMBER OF REMOVAL PASSES: 3 SALT ADDED?: yes

SPECIES PRESENT

SPECIES CODE

PASS 1: RT _____
117
PASS 2: 13
PASS 3: 0
PASS 4:

AMPHIBIANS AND/OR REPTILES OBSERVED: _____

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

HABITAT DESCRIPTION

STREAM

Clary R.

SECTION

3

RAIN, TOPOGRAPHY, GRADIENT: Very steep (almost vertical)
 upon walls composed of granite, shale and chert
 stream exhibits a moderate gradient.

MINANT PLANT COMMUNITY/VEGETATION TYPE: Ponderosa, Jeffrey and
giant pine, also oak and poison oak, wild grasses
and flowering annuals

STREAM HABITAT: Upper section is a series of cascades
riffle habitat. Middle typified by pool / flat water
habitat. Lower section composed of riffle / run /
rockwater habitat

STRATE: Bedrock slabs line most of the bottom
throughout this section. Boulders and cobble do
occur. Gravel and fine occur in backwater areas.

RIAN VEGETATION/BANK STABILITY: Riparian veg. is very
sparse. What little there is, it is composed
of willow and alder respectively. Bank
stability is excellent.

ATIC VEGETATION: None - very sparse

ER: Prevented by instream boulders,
surface turbulence, and pool depth

ACTION (cattle, water development, fishing pressure, etc.):

section occurs just upstream of bridge so
sea does get fished.

...

HABITAT DESCRIPTION

DATE 4/18/57
DAY 80 YRSTREAM Chicoy RiverSECTION 2

TERRAIN, TOPOGRAPHY, GRADIENT: Very steep Canyon walls grading into bedrock walls at streamside. In this section the stream exhibits a very low gradient at upper end and a high gradient at lower end.

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Consists of digger, Jeffrey and ponderosa pines. Also oak trees occur and poison oak.

INSTREAM HABITAT: Upper end is entirely "Flat water" habitat. Water movement is negligible. Lower portion consists of a series of cascades, High, low gradient riffle and plunge pool habitat.

SUBSTRATE: composed of large boulders, bedrock deposits. Very little sand and gravel.

RIPARIAN VEGETATION/BANK STABILITY: Willow and alder trees make up what little riparian vegetation there is in this section. Also sedge (emergents) occur throughout section. Bank stability is excellent due to bedrock walls.

QUATIC VEGETATION: Sedges occur but very little "instream" vegetation occurs. Some brown algae.

COVER: instream boulders provides the greatest amount of cover. Surface turbulence and pool depth also provides cover.

IMPACTION (cattle, water development, fishing pressure, etc.): Section is located approx. 100 yds above bridge, so area most likely does get fished.

DISC.: _____

Stream Name SFK Kings Section 3 Survey D. (da/mo/yr) 19 Sept 2002

Zimmerman meadow

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	12.1 °C or °F (circle one)	1026	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>Hanna Meter</u>		
Specific Conductivity	16 micromhos/cm	1026	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____		
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH	7.13	1026	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	12 mg/l	1250	<input checked="" type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____	T. Purpus	S. Shih

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.)

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): Thyra 12BS

Start Time: 11:15 End Time: 1230

Electrofisher Settings:

Pulse Frequency _____ Hz

Pulse Duration _____ ms

Mode G 15 (SR Type XII only)

Output Voltage 500 Volts

Current _____ Amps

Power = Volts x Amps = _____ Watts

ELECTROFISHING EFFORT

Operator	Bill	Brian	Tracy	Alec	Total
Shocker	CAHMAN	EZ	SHAWNO	NO	Time (sec)
	LAST	NAME			
Pass 1	1000	941	940	950	
Pass 2	772	818	772	770	
Pass 3	652	792	600	642	
Pass 4					

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: _____ %

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
Stan Stephens	Rod Brown	did after
Sandra Houston		passers were
Shawn Shih		complete

note: Rod is still switched with places down down 3rd pass

Stream Name SF KING'S RIVER Section 1 Survey Date (da/mo/yr) 19 SEPT 02

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	<u>12.1</u> °C or °F (circle one)	<u>1032</u>	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>Hanna</u>	<u>SANDRA HOWERTON</u>	<u>S. HOWERTON</u>
Specific Conductivity	<u>186</u> micromhos/cm	<u>1032</u>	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	↓	↓
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH	<u>7.08</u>	<u>1032</u>	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	<u>14.3</u> mg/l	<u>1044</u>	<input checked="" type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____	↓	↓

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.) Very clear and low water

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

- backpack totebarge boat

Make & Model(s): SF-1255

Start Time: 1215 End Time: 1503

ELECTROFISHING EFFORT

Operator	Alec	Tracy	Brian	Bill	Total
Shocker	NO NAME	SHAWLON 52 CASH	52 CASH	COOK MAN	Time (sec)
Pass 1	<u>2292</u>	<u>1697</u>	<u>2442</u>	<u>1589</u>	
Pass 2	<u>1555</u>	<u>1529</u>	<u>1659</u>	<u>1463</u>	
Pass 3	<u>1248</u>	<u>1258</u>	<u>1327</u>	<u>1014</u>	
Pass 4					

Electrofisher Settings:

64,500
Pulse Frequency _____ Hz
Pulse Duration _____ ms
Mode G / 14 (SR Type XII only)
Output Voltage 500 Volts
Current _____ Amps
Power = Volts x Amps = _____ Watts

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
<u>SHAWLON</u>	<u>ROD</u>	
<u>SANDRA</u>		

General Fish Response: (check all that apply)

- Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

- 0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: <1 %

SURVEY CONDITIONS AND SAMPLING

21, 9, 89,
day mo yr

STREAM: MAF. San Joaquin SECTION: 9

TIME BEGINNING 11:18 hrs Ending 1530 hrs 1/2 hour lunch

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 2

NUMBER OF NETTERS: 2

TOTAL NUMBER IN CREW: 5

COMMENTS, PROBLEMS, etc. Very fast and rough water
made shocking difficult - Difficultly + shocker section
not enough people on this day.

SECTION BLOCKS:
upper seine lower seine waterfall cascade other
upper
seine

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 10 C or F Time 102 hrs

b. pH = 7.2

c. Conductivity = 9 micromhos/cc

d. Total alkalinity: # drops 2

-- 2.5 = .8 grains/gallon

x 17.12 = 13.70 mg/l

Water Quality Comments:

RECORDED BY: WICKERT

HABITAT DESCRIPTION

DATE 9/9/89
day mo yr

STREAM SAN JOAQUIN

SECTION 8

RAIN, TOPOGRAPHY, GRADIENT: Moderate Gradient section located in a steep high Rocky walled Valley.

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: The dominant plant community is lodgepole with moderate amounts of Jeffrey, Limber pine, white fir & Red fir plus ~~some~~ amounts of Cedar & Aspen.

STREAM HABITAT: The majority of the instream habitat consists of low gradient riffles & run. Small sections of high gradient riffles and with pools & deeper water which then turn into a run.

SUBSTRATE: The substrate mostly consists of bedrock. Gravel & boulders in moderate amounts cover portions of the bedrock. Moderate Fines ^{ARE present in} POOL HABITAT.

RIPARIAN VEGETATION/BANK STABILITY: Stable bank due bedrock & rocky banks. The riparian vegetation consists of willows, grasses, Aspen, Alder & Horse-tails & flowering plants

AQUATIC VEGETATION: The aquatic vegetation consists of moderate amounts of filamentous Algae

COVER: The cover mainly consists of instream boulders followed by pool depths & a small amount of surface CURB.

IMPACTION (cattle, water development, fishing pressure, etc.): Moderate to little fishing pressure due to the impacted trail & campground.

SURVEY CONDITIONS AND DATA

DATE: 9/9/89/
day mo yr

STREAM: San Joaquin

SECTION: 8

TIME BEGINNING: 1030 hrs

Ending 1130 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 2

NUMBER OF NETTERS: 2

TOTAL NUMBER IN CREW: 5

COMMENTS, PROBLEMS, etc.

SECTION BLOCKS:
upper seine lower seine waterfall _____ cascade _____ other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 11.5 C or _____ F Time 10:20hrs

b. pH = 7.1

c. Conductivity = 12 micromhos/cc

d. Total alkalinity: # drops 1

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

HABITAT DESCRIPTION

DATE 7, 9, 89
day mo yr

STREAM M.F. San Joaquin

SECTION 7

TERRAIN, TOPOGRAPHY, GRADIENT: Moderately sloped valley with steep canyon walls and cliffs. Granite boulders & cliffs predominate. Soils heavily laden with volcanic rock (Pumas).

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Coniferous forest (Lodge Pole Pine & Red Fir with occasional Quaking Aspens and Limber Pines).

INSTREAM HABITAT: consists of low & high gradient riffles with considerable pocket water and small pools. Several large logs are strewn across the stream.

SUBSTRATE: Mainly cobbles & boulder in the riffles, mainly gravel with some fines in the pocket water and pools. Instream boulders are abundant.

RIPARIAN VEGETATION/BANK STABILITY: Lodge Pole Pine roots are exposed along stream indicating moderate erosion during higher water. Erosion appears to be minimal at present time. Alders are fairly abundant along waters edge helping to keep erosion down.

AQUATIC VEGETATION: Filamentous Algae is moderate. Moss is sparse. Rooted Aquatics are present in the slower water.

COVER: consists mainly of instream boulders & surface turbulence. Overhanging Alder provides good cover mainly in the lower half of section.

IMPACTION (cattle, water development, fishing pressure, etc.): A campground is located about 1/2 miles downstream. There is evidence of fishing pressure but probably not too much.

MISC.: Several small springs with heavy concentrations of Iron are located in the upper half of the section. These springs also appear to be emitting CO₂ or methane gas.

7, 9, 89
day mo yr

STREAM: MF San Joaquin

SECTION: 7

TIME BEGINNING: 1025 hrs Ending 1450 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 2

NUMBER OF NETTERS: 2

TOTAL NUMBER IN CREW: 5

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS: upper seine lower seine waterfall _____ cascade _____ other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 9 C or _____ F Time 1005 hrs

b. pH = 7.0

c. Conductivity = 12 micromhos/cc

d. Total alkalinity: # drops 2

-- 2.5 = .8 grains/gallon

X 17.12 = 13.70 mg/l

Water Quality Comments:

MFSJA

2002

Section 6

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	4°C °C or °F (circle one)	1030	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>HANNA</u>		
Specific Conductivity	66 micromhos/cm	1030	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____		
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$		
pH	6.97	1030	<input checked="" type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____		
Total Alkalinity	25 mg/l	1030	<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) <u>TOTAL ALKALINITY</u>		

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.)

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

- backpack totebarge boat

Make & Model(s): SR-12B

Electrofisher Settings:

Pulse Frequency _____ Hz
 Pulse Duration _____ ms
 Mode G 15 (SR Type XII only)
 Output Voltage 400 Volts
 Current _____ Amps
 Power = Volts x Amps = _____ Watts

General Fish Response: (check all that apply)

- Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

- 0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: _____ %

Start Time: 1059

End Time: Pass 1 + took break
end of Pass 2 = 12:20
Pass 3 13:15 to 2:45

ELECTROFISHING EFFORT

Operator	Shocker	Pass 1	Pass 2	Pass 3	Pass 4	Total Time (sec)
<u>Mike</u>	<u>Castor</u>	<u>1084</u>	<u>1213</u>	<u>940</u>		
<u>Joel</u>	<u>Castman</u>	<u>1205</u>	<u>1187</u>	<u>972</u>		
<u>Mike</u>	<u>Castor</u>	<u>1445</u>	<u>1154</u>	<u>1004</u>		
<u>Greg</u>	<u>NO NAME</u>	<u>1352</u>	<u>1437</u>	<u>7550</u>		

← battery died just short of end of first pass

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
<u>Alex</u>	<u>John</u>	<u>Shannon</u>
<u>Nick</u>	<u>Debra</u>	<u>Sandra</u>
<u>Rick</u>		
<u>Jim</u>		
<u>Christy</u>		
<u>Kim Russell</u>		

Stream Name MF SAN JOAQUIN RIVER Section 6 Survey Date (month) 11 / 10 / 10

WATER QUALITY

Parameter	Value	Time	Method	Measured by	Recorded by
Temperature	3.5 °C or °F (circle one)	0845	<input type="checkbox"/> pocket thermometer <input checked="" type="checkbox"/> other (specify) <u>YSI meter</u>	S. Stephens	D. Hawk
Conductivity	29 micromhos/cm	0845	<input checked="" type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	"	"
pH	7.8	1140	<input type="checkbox"/> Cole-Parmer pocket pH meter <input checked="" type="checkbox"/> other (specify) <u>used Radio's APH meter</u>	D. Hawk/R. KUNSTKE	D. Hawk
Total Alkalinity	11.2 mg/l	0945	<input checked="" type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____	S. Shiba	S. Shiba

COMMENTS (note appearance, turbidity, etc.) _____

STREAM DISCHARGE (FLOW)

Gage Line Position (ft)	Cell Depth (ft)	Water Velocity (ft/sec)*			Cell Discharge (cfs)	Total Discharge (cfs)
		at 0.2D	at 0.4D	at 0.8D		
0 to 2.4	0.2				0.43	
4 to 4.8	0.4				0.92	
8 to 6.2	0.7				1.34	
2 to 8.6	0.7				1.53	
6 to 11.0	0.7				1.25	
0 to 13.4	0.6				1.34	
4 to 15.8	0.4				1.43	
8 to 18.2	0.5				1.36	
2 to 20.6	0.3				0.77	
6 to 23.0	0.2				0.61	
0 to 24.0	0.1				0.18	

Distance from downstream end of section to this transect: 188 ft

Stream width at this cross section: 24.0 ft
 (N.B. - need minimum of 10 cells across the transect)

* Measure velocity at 0.4 D if the stream is < 0.6 m deep. If deeper than 0.6 m, measure at 0.2D and 0.8D. Measure at all three depths if the velocity profile is distorted by irregularities such as large submerged objects or overhanging vegetation touching the water.

Comments _____

Measured by Solecki
 Recorded by SCHAMBER

STREAM GRADIENT

Measuring Location: Upstream Downstream
 Section length _____ ft
 Measured by _____
 Recorded by _____

Measurement Level:	1	2	3	4	5	6	7	8	9	10
Rising:										
Falling:										

Σ Run = Section length or horizontal distance of stream covered = _____ ft
 Stream Gradient = $(\Sigma \text{ Rise} / \Sigma \text{ Run}) * 100 =$ _____ %

ELECTROFISHING SURVEY SUMMARY

GENERAL LOCATION (describe in detail & draw map on Location form)

Survey Date (da/mo/yr) 17 / 10 / 00
 Stream Name MF San Joaquin River Section 6
 Location Description Ranger Station
 Section Length 560 ft Average Width 38.13 ft
 GPS Unit Used BROWN TROUT
 Point No. 063 Time 0904 FOM 25A ft
 North 37.62781 ° West 119.08964 °
 Other information _____

DATA PACKET CHECKLIST

- Location Map
- Fish Population
- Water Quality/Discharge/Gradient
- Stream Transect (Depth/Substrate/Habitat)
- Vegetation /Bank Stability/Cover
- Habitat Description
- Volunteer Service Agreements
- Other _____

SURVEY PARTICIPANTS

Name	Affiliation
Debra Hawk	DFG
Troy Kelly	" / Volunteer
Nancy Mejer	"
Leo Millan	"
Mike Schommer	"
Bob Solecki	"
Robb Kunstle	NPS
Laura Wilvert	NPS
Sharon Shiba	DFG
Joe Medeiros	Volunteer

ELECTROFISHING CONDITIONS

Section Closures: (check one for each end)
 Upstream Block: seine cascade waterfall
 other (describe) _____
 Downstream Block: seine cascade waterfall
 other (describe) _____
Type of Electrofisher(s) Used: (check one)
 backpack totebarge boat
Alt Added? (check one) YES NO
Number in Crew: Shockers 3 Netters 4
 Live Car Tenders 2 (Fish Processing _____)

Recorder: SNS CDFG

ELECTROFISHING EFFORT

Order	081-WON	SHADDO CASTLE	CARSMAN
1	3500	3777	3621
2	2394	2943	2968
3	2108	2579	2606
4			

NOTES & COMMENTS:

streamflow was lower than that observed last year; ∴ used 3 instead of 4 shockers

ANALYSIS PROCESSING

esthetic used: (check one) CO₂ Other _____
Oxygen Added? (check one) YES NO

Amphibians and Reptiles Observed:

POPULATION ESTIMATE SUMMARY

ENTERED AS RT

1	BN	RT/CP	BK	H-RT
	239	851	25	1
	140	381	13	2
	662	181	12	0

(use space below for notes or additional columns, if needed)

ONLY 84 (ONLY GET 1 UNIT)

ELECTROFISHING CONDITIONS

DATE: 1/1/97 STREAM: M.P. SAN JOAQUIN SECTIONS

SECTION CLOSURE

Upstream Block: seine [checked] other (describe) cascade waterfall
Downstream Block: seine [checked] other (describe) cascade waterfall

NUMBER OF ELECTROFISHERS USED: 3 BOAT (S) NO
NUMBER OF NETTERS: 4
TOTAL NUMBER IN ELECTROFISHING CREW: 9
NUMBER OF REMOVAL PASSES: 3 SALT ADDED?: NO

SPECIES PRESENT

SPECIES CODE

RT BN

- PASS 1:
PASS 2:
PASS 3:
PASS 4:

AMPHIBIANS AND/OR REPTILES OBSERVED: NONE OBSERVED
ON 10/1/97 BUT TRAP PROB
REPORTED WEEK AGO BY
S. PARMENTER

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)
A WOULD HAVE BEEN A
BETTER BARGE SECTION

WATER QUALITY

DATE: 10 / 10 / 95

RECORDER: KNK

STREAM: M.F. SAN JAVIN SECTION: 6

WATER TEMPERATURE 4 C or _____ F recorded at 9:29 A.M.
_____ C or _____ F recorded at _____

CONDUCTIVITY 15 micrmhos/cm recorded at 9:29 A.M.

pH 7.1

TOTAL ALKALINITY

Hach Kit

Titrets

of drops 1

of drops / 2.5 = _____ grains/gal

(grains/gal) X 17.12 = _____ mg/l _____ mg/l

COMMENTS

(Appearance, Turbidity, Etc.) _____

ELECTROFISHING CONDITIONS

NOTE: THIS PG WAS IN MF SAN JOAQUIN PG
MF SAN JOAQUIN PG
SECTION: F DATE MATCHES SAN JOAQUIN SURVEY DATE

DATE: 10 / 10 / 95
day mo yr

STREAM: UPPER OWENS ??
MF SAN JOAQUIN

SECTION: F DATE MATCHES SAN JOAQUIN SURVEY DATE

SECTION BLOCKS

Upstream Block: seine waterfall _____ cascade _____
other(describe) _____

Downstream Block: seine waterfall _____ cascade _____
other(describe) _____

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 8

NUMBER OF REMOVAL PASSES: _____ SALT ADDED: yes

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	_____	_____	_____	_____	_____	_____
PASS 2:	_____	_____	_____	_____	_____	_____
PASS 3:	_____	_____	_____	_____	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling Conditions/ Equipment or other Problems

1991

Section: 6

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2 X 100 =

Total = _____ (ft)

_____ %

COVER

Type	Relative Abundance	Overall Rating
_____	_____	Excellent _____
_____	_____	Good _____
_____	_____	Fair _____
_____	_____	Poor _____
_____	_____	Negligible _____
_____	_____	
_____	_____	
	100%	

Comments: _____

WATER QUALITY

Temperature 16.2 c or 61 F at 1615 Time

pH 7.17

Conductivity 360 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 4

drops / 2.5 = 1.6 grains / gallon

drops X 17.12 = 27.4 mg / l

_____ mg/l

Water quality comments: (Appearance, Turbidity, etc.)

Water clarity high, algal growth light in ...

SURVEY CONDITIONS AND SAMPLING QUALITY

15, 9, 88,
day mo yr

STREAM: MF San Joaquin

SECTION: 6

TIME BEGINNING: 09:40 hrs Ending _____ hrs

NUMBER OF PASSES: _____

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 0

TOTAL NUMBER IN CREW: _____

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:

upper seine lower seine waterfall _____ cascade _____ other _____

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 5° C or _____ F Time _____ hrs

b. pH = 7.3

c. Conductivity = 89 micromhos/cc

d. Total alkalinity: # drops 3

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

WATER QUALITY

DATE: 05 / OCT / 199

RECORDER: SHIBA

STREAM: MIDDLE FORK SAN JOAQUIN RIVER

SECTION: BW. JOHN MUIR TRAIL BRIDGE 5

WATER TEMPERATURE

6° C or _____ F recorded at 10:15

_____ C or _____ F recorded at _____

CONDUCTIVITY

58 micromhos/cm recorded at 10:16

pH

7.5

TOTAL ALKALINITY

Hach Kit

Titrets

of drops _____

of drops / 2.5 = _____ grains/gal

(grains/gal) X 17.12 = _____ mg/l 45 mg/l

COMMENTS

(Appearance, Turbidity, Etc.) WYMON ECKHART NOTED THAT STAGE HEIGHT WAS ~~SE~~ HIGHER THAN THAT OBSERVED DURING LAST YEAR'S SURVEY

ELECTROFISHING CONDITIONS

DATE: 30 19 197

STREAM: MF SAN JORDON

SECTION 5

SECTION CLOSURE

Upstream Block: seine X cascade _____ waterfall _____
other (describe) _____

Downstream Block: seine X cascade _____ waterfall _____
other (describe) _____

NUMBER OF ELECTROFISHERS USED: 3

BOAT(S) X

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 8

NUMBER OF REMOVAL PASSES: 3

SALT ADDED ? : NO

SPECIES PRESENT

PT BN SPECIES CODE

PASS 1:

PASS 2:

PASS 3:

PASS 4:

AMPHIBIANS AND/OR REPTILES OBSERVED:

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

WOULD BE BETTER W/ 4 SHOOTERS
SOME PROBLEMS W/ DEPTH
75 FOOT SEINES RECOMMENDED

WATER QUALITY

DATE: 10/11/95

RECORDER: Bruitt

STREAM: M.F. San Joaquin SECTION: _____

WATER TEMPERATURE 9° C or _____ F recorded at 1:10 PM

_____ C or _____ F recorded at _____

CONDUCTIVITY 52 micrmhos/cm recorded at _____

pH 7.5

TOTAL ALKALINITY

Hach Kit _____ Titrets _____
of drops 6
of drops / 2.5 = _____ grains/gal
(grains/gal) X 17.12 = _____ mg/l _____ mg/l

COMMENTS

(Appearance, Turbidity, Etc.) _____

ELECTROFISHING CONDITIONS

DATE: 11 10 195 STREAM: M.F. SAN JOAQUIN SECTION 5

SECTION CLOSURE

Upstream Block: seine cascade _____ waterfall _____
 other(describe) _____

Downstream Block: seine cascade _____ waterfall _____
 other(describe) _____

NUMBER OF ELECTROFISHERS USED: 3 BOAT(S) _____

NUMBER OF NETTERS: 3

TOTAL NUMBER IN ELECTROFISHING CREW: 7

NUMBER OF REMOVAL PASSES: 4 SALT ADDED?: yes

SPECIES PRESENT

SPECIES CODE

	<u>Rt</u>	<u>Bh</u>	
PASS 1:	2	26	28
PASS 2:	2	8	10
PASS 3:	5	11	16
PASS 4:	4	1	5

AMPHIBIANS AND/OR REPTILES OBSERVED: None

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

1991

day no yr

Stream: M.F. San Joaquin

Section: 5

ERODING BANK (ft):

<u>0</u>	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total

 Section Length X 2 X 100 =
 _____ %

Total = 0 (ft)

COVER

Type	Relative Abundance	Overall Rating
<u>Submerged Boulders</u>	<u>80</u>	Excellent _____
<u>Overhanging Vegetation</u>	<u>20</u>	Good _____
_____	_____	Fair <input checked="" type="checkbox"/>
_____	_____	Poor _____
_____	_____	Negligible _____

100%

Comments: At first glance the stream appears to hold little in the way of adult trout cover, but the fish are under many of the boulders, illustrating that "we" may not always recognize fish habitat even as we trip over it.

WATER QUALITY

Temperature 14.0 C or 57 F at 1510 Time

pH 7.85 Conductivity 89 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 8.5-9.0

drops / 2.5 = _____ grains / gallon

drops X 17.12 = 61.6 mg / l

_____ mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

water clarity excellent

SURVEY CONDITIONS AND SAMPLING QUALITY

DATE: 23/9/1981
day mo yr

STREAM: M.F. SAN LAGUIN R. SECTION: 5

TIME BEGINNING: _____ hrs Ending _____ hrs

NUMBER OF PASSES: _____

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 6

TOTAL NUMBER IN CREW: 11

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine lower seine waterfall _____ cascade _____ other _____

+++++

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 6 C or _____ F Time 0945 hrs

b. pH = 7.5

c. Conductivity = 55 micromhos/cc

d. Total alkalinity: # drops 7

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

HABITAT DESCRIPTION

5

STREAM SAN JUAN (M.F.)

SECTION

MAIN

TRAIL

BRIDGE

12/6/84
day no yr

TERRAIN, TOPOGRAPHY, GRADIENT: A moderate gradient stream flowing through a canyon of ^{very} gently sloping hills.

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: A dense lodgepole pine forest dominates the sloping hills with some red fir, white fir, and quaking aspens interspersed among the pine.

STREAM HABITAT: A long shallow run flows into a short shallow, cascade which flows into another long, deep run.

SUBSTRATE: Substrate consists primarily of boulders with a good amount of cobble and gravel interspersed among the boulders. Bedrock along the west bank protrudes into the water for about $\frac{1}{2}$ its length.

RIPIARIAN VEGETATION/BANK STABILITY: Riparian vegetation consists primarily of dense alder along the east bank with cottonwood, quaking aspen and lodgepole pine interspersed. Mostly sparse lodgepole pine and alder along the west bank.

AQUATIC VEGETATION: Algae found on boulders & cobble instream.

There is moss growing along moist, shady areas along the bank.

COVER: Instream boulders & cobble, overhanging vegetation and undercut banks provide fish cover.

IMPACTION (cattle, water development, fishing pressure, etc.): Some impaction found in the form of fishing line in the alder branches, and bottle instream. However, section looks fairly pristine.

DISC.:

Mt. San Joaquin River

WATER CHEMISTRY AND SAMPLING QUALITY

5

DATE: 26/09/81 /
day mo yr

STREAM: San Joaquin M.F. SECTION: Muir Trail Bridge

TIME BEGINNING: 1140 hrs Ending 1350 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 7

COMMENTS, PROBLEMS, etc.

SECTION BLOCKS:
upper seine lower seine waterfall cascade other

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 10 C or 50 F Time 1120 hrs

b. pH = 7.7

c. Conductivity = 50 micromhos/cc

d. Total alkalinity: # drops 5

-- 2.5 = 2 grains/gallon

X 17.12 = 34.24 mg/l

Water Quality Comments:

Flow:

HABITAT DESCRIPTION

DATE 25/9/87
day mo yr

STREAM Middle Fork San Joaquin SECTION

Agnew Meadow below
confluence of Shadow creek

TERRAIN, TOPOGRAPHY, GRADIENT: A moderate gradient stream flowing through a fairly wide canyon with fairly steep rocky slopes. Slopes are somewhat covered with coniferous trees

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: The area is dominated by coniferous trees most of which are lodge pole pine. A few red fir are also interspersed.

INSTREAM HABITAT: The section begins upstream with a shallow run which gives way to a low gradient cascade. The remainder of the section is a shallow "riffly-run".

SUBSTRATE: Dominated by cobble. A fair amount of boulder and gravel also present with few fines in the pocket water. A small amount of bedrock present near the top of the section.

RIPARIAN VEGETATION/BANK STABILITY: Composed primarily of alder followed by cotton woods and lodge pole pine. Also present in but not as prominent are willows, grasses, and other herbaceous plants.

AQUATIC VEGETATION: Some moss and algae present but not in great amounts.

COVER: In stream cobble and boulder and overhanging vegetation provide the majority of cover. Root wads and in-stream woody debris also provide some cover.

IMPACT (cattle, water development, fishing pressure, etc.): Stream seems fairly pristine with very little impact.

ISC.:

Section 4

CURVE CONDITIONS AND SAMPLING QUALITY

Agnew Meadow

DATE: 75/69/87/
day mo yr

STREAM: Middle Fork San Joaquin SECTION: _____

TIME BEGINNING: 11:40 hrs Ending 1430 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3 on 1st pass - 2 on 2nd + 3rd

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 7 in the water, 3 on the bank

COMMENTS, PROBLEMS, etc. Mechanical failure of a shocker forced us to use 2 shockers after the 1st pass.

SECTION BLOCKS: upper seine lower seine waterfall cascade other

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 12 C or 53.6 F Time 11:00 hrs

b. pH = 6.6

c. Conductivity = 0.5 micromhos/cc

d. Total alkalinity: # drops 2

-- 2.5 = 0.8 grains/gallon

X 17.12 = 13.7 mg/l

Water Quality Comments:

Flow 7.84 ft³/sec

SURVEY CONDITIONS AND SAMPLING QUALITY

DATE: 24 9 88
day mo yr

STREAM: W.F. SAN JUAN R SECTION: 3

TIME BEGINNING: _____ hrs Ending _____ hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 6

TOTAL NUMBER IN CREW: 11

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:

upper seine lower seine waterfall _____ cascade _____ other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 6° C or _____ F Time _____ hrs

b. pH = 7.6

c. Conductivity = 60 micromhos/cc

d. Total alkalinity: # drops 6

-- 2.5 = _____ grains/gallon

X 17.12 = _____ mg/l

Water Quality Comments:

RECORDED BY: K. Raum

Section 3

HABITAT DESCRIPTION

DATE 24 / 09 / 87
day mo yr

STREAM M.F. San Joaquin River SECTION below Rainbow Falls

TERRAIN, TOPOGRAPHY, GRADIENT: A moderate gradient stream flowing through a moderate to steep canyon. Canyon consists of huge rock outcroppings and a dense coniferous forest.

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Coniferous forest is dominated by White Fir, Red Fir, Ponderosa Pine & Jeffrey Pine.

INSTREAM HABITAT: A wide, shallow step run flowing through many boulders, with about $\frac{1}{3}$ rd of the section a shallow riffle flowing among the wide run.

SUBSTRATE: Substrate consists of dense boulder and cobble. Some gravel and fines are visible around the boulder & cobble.

RIPARIAN VEGETATION/BANK STABILITY: Dense alder lines the bank of the section with Cottonwood, Quaking Aspen, White & Red Firs intermixed among the alder. Bank is fairly stable with about 27 feet of the section actively eroding. At higher flows, more bank erosion would occur.

AQUATIC VEGETATION: Some algae is found growing on instream boulders. Dense moss grows along shaded banks along section.

COVER: Boulders and cobble provide good fish cover

IMPACTION (cattle, water development, fishing pressure, etc.): Impaction appears to be low. However, fishing is done in this area and a trail runs by the section about

SURVEY CONDITIONS AND SAMPLING QUANTITIES

24/09/87 /
day mo yr

STREAM: San Joaquin River
(Middle Fork)

SECTION: below Rainbow Falls

3

TIME BEGINNING: 1145 hrs Ending 1430 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 7

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine lower seine waterfall _____ cascade _____ other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

- a. Temperature = 10° C or 50 F Time 1130 hrs
- b. pH = 7.7
- c. Conductivity = 52 micromhos/cc
- d. Total alkalinity: # drops 7
 -- 2.5 = 2.8 grains/gallon
 X 17.12 = 47.9 mg/l

Water Quality Comments:

SURVEY CONDITIONS AND SAMPLING QUALITY

22, 9, 44
day mo yr

STREAM: San Joaquin SECTION: 2

TIME BEGINNING: 10:30 hrs Ending 2:00 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 4

TOTAL NUMBER IN CREW: 9

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine _____ lower seine waterfall _____ cascade other _____

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 5.3 C or _____ F Time _____ hrs

b. pH = 7.2

c. Conductivity = 30 micromhos/cc

d. Total alkalinity: # drops 3

-- 2.5 = _____ grains/gallon

x 17.12 = _____ mg/l

Water Quality Comments:

MF 5JR

Section 1

2002

Stream Name Little Rock Sandpoint River

WATER QUALITY

Parameter	Value & Unit	Time	Method	Measured by	Recorded by
Water Temperature	2.4°C °C Or °F (circle one)	1036	<input type="checkbox"/> pocket thermometer <input type="checkbox"/> other (specify) _____	ANDRA HOWERTON	SANDRA HOWERTON
Specific Conductivity	47 micromhos/cm	"	<input type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> YSI meter <input type="checkbox"/> other (specify) _____	"	"
Ambient Conductivity	micromhos/cm	same as above	Ambient = $\frac{\text{Specific Conductivity}}{[1.02]^{(25 - \text{Water Temp. } ^\circ\text{C})}}$	"	"
pH	7.54	"	<input type="checkbox"/> Hanna Waterchek meter <input type="checkbox"/> other (specify) _____	"	"
Total Alkalinity	mg/l		<input type="checkbox"/> Chemetrics Titret Kit <input type="checkbox"/> other (specify) _____	"	"

COMMENTS: (Note appearance, turbidity, etc. If conductivity is low and salt is added, specify quantity, remeasure conductivity at least once before each pass, and note time.)

ELECTROFISHING CONDITIONS

Type of Electrofisher(s) Used: (check one)

backpack totebarge boat

Make & Model(s): SR 12B

Start Time: PASS 1 11:03 PASS 2 ~ 12:00 PASS 3 13:12 PASS 4 14:15 to End Time: 11:50 12:32 13:35 14:38

ELECTROFISHING EFFORT

Operator	MIKE BOGREN	CHRISTY Kim	BRIM BEAL	Total	
Shocker	No NAME	EASYCHEESE	CRATMAN	SHADW CROCKETT	Time (sec)
Pass 1	1686	1640	1232	1999	
Pass 2	1425	1401	1152	1779	
Pass 3	1488	1511	1158	1546	
Pass 4	972	1008	917	1162	

OTHER CREW MEMBERS: (First and last names, please!)

Netters	Live Car Tenders	Fish Processing
WILEY FOTE	JILL ANDERSON	SANDRA HOWERTON
MITCH LOCKHART		SHARON SHIDA
DAVE PARKER		
RICK		
2°		
JOEL MULDER		
ALEC STRACHAN		

Electrofisher Settings:

Pulse Frequency _____ Hz

Pulse Duration _____ ms

Mode G / 6 (SR Type XII only)

Output Voltage 400 Volts

Current _____ Amps ~ 14

Power = Volts x Amps = _____ Watts

General Fish Response: (check all that apply)

Galvanotaxis Narcosis Tetany

Estimated Flow: _____ cfs

Water Clarity: (check one)

0 - 2 ft 2 - 4 ft > 4 ft

Weed Cover: 10 %

ELECTROFISHING SURVEY SUMMARY

GENERAL LOCATION (describe in detail & draw map on Location form)

Survey Date (da/mo/yr) 18 / 10 / 00
 Team Name MIDDLE FORK SAN JOAQUIN R-Section 1
 Location Description UPPER SODA SPRINGS

Section Length 300 ft Average Width 35.55 ft
91.44 METERS 10.84 METERS

Species Unit Used BROWN TROUT
 Point No. 06A Time 0951 FOM 18.9 ft
 North 37.6555 ° West 119.08003 °

Other information According to the old location map description, the lower end of the section is 504 ft. upstream of the bridge. In last two years however, the top of the section was 804 ft above the bridge - we did the same this year.

ELECTROFISHING CONDITIONS

Section Closures: (check one for each end)

- Upstream Block: seine cascade waterfall
 other (describe) _____
 Downstream Block: seine cascade waterfall
 other (describe) _____

Type of Electrofisher(s) Used: (check one)

- backpack totebarge boat

Alt Added? (check one) YES NO

Number in Crew: Shockers 3 Netters 4
 Live Car Tenders 1 Fish Processing 4

ELECTROFISHING EFFORT

Person	1	2	3	4
<u>SHAWN METZ</u>	<u>1556</u>	<u>1431</u>	<u>1356</u>	
<u>OBINONI CARTMAN</u>	<u>1587</u>	<u>1355</u>	<u>1204</u>	
	<u>1325</u>	<u>1081</u>	<u>989</u>	

FISH PROCESSING

Anesthetic used: (check one) CO₂ Other _____
Oxygen Added? (check one) YES NO

FISH POPULATION ESTIMATE SUMMARY

Species	BN	BK	RTGT	RT-H
1	<u>61</u>	<u>9</u>	<u>20</u>	<u>7</u>
2	<u>21</u>	<u>1</u>	<u>11</u>	<u>2</u>
3	<u>15</u>	<u>1</u>	<u>4</u>	<u>1</u>
4				
Total	<u>97</u>	<u>11</u>	<u>35</u>	<u>10</u>

DATA PACKET CHECKLIST

- Location Map (old) Fish Population
 Water Quality/Discharge/Gradient
 Stream Transect (Depth/Substrate/Habitat)
 Vegetation /Bank Stability/Cover
 Habitat Description
 Volunteer Service Agreements
 Other _____

SURVEY PARTICIPANTS

Name	Affiliation
<u>SHARON SHIBA</u>	<u>DFG - HQ</u>
<u>BOB SOLECKI</u>	<u>DFG - HQ</u>
<u>MIKE SCHOMMER</u>	<u>DFG - HQ</u>
<u>STAN STEPHENS</u>	<u>DFG - R4</u>
<u>NANCY MEYER</u>	<u>DFG - R6</u>
<u>LEO MILAN</u>	<u>DFG - R6</u>
<u>JOE MEDEIROS</u>	<u>VOLUNTEER</u>
<u>DEBRA HAWK</u>	<u>DFG - R6</u>

Recorder: D. HAWK CDFG

NOTES & COMMENTS:

ORIGINAL LOCATION MAP (1986) INDICATED THAT THE BOTTOM OF THE SECTION WAS 504 FT ABOVE THE BRIDGE. SINCE 1998, THE LOWER BLOCK NET WAS PLACED 804 FT ABOVE THE BRIDGE.

Amphibians and Reptiles Observed:

NONE

(use space below for notes or additional columns, if needed)

ELECTROFISHING CONDITIONS

DATE: 05 / 10 / 199

STREAM: MF SAN JOAQUIN

SECTION ^{UPPER} 50A

SECTION CLOSURE

Upstream Block:

seine other (describe) _____

cascade _____ waterfall _____

Downstream Block:

seine other (describe) _____

cascade _____ waterfall _____

NUMBER OF ELECTROFISHERS USED: 4 (3 shockers on #3 pass)

BOAT(S) _____

NUMBER OF NETTERS: 6

TOTAL NUMBER IN ELECTROFISHING CREW: 12

NUMBER OF REMOVAL PASSES: 3

SALT ADDED?: YES

SPECIES PRESENT

SPECIES CODE

PASS 1: _____

PASS 2: _____

PASS 3: _____

PASS 4: _____

AMPHIBIANS AND/OR REPTILES OBSERVED: _____

COMMENTS

(Additional passes, unusual conditions, problems with equipment or other conditions, observations, etc.)

HABITAT DESCRIPTION

819 1891
day mo yr

STREAM MF San Joaquin

SECTION 1

RAIN, TOPOGRAPHY, GRADIENT: Moderately steep canyon walls are
ten composed of granite bedrock.

INANT PLANT COMMUNITY/VEGETATION TYPE: This area is dominated by lodgepole
pine and red fir. Jeffrey and ponderosa pines can also
found near this area.

STREAM HABITAT: Mostly low gradient riffle and run to a lesser extent,
very shallow edgewater areas which may form braids
depending on the water level.

STRATE: Many instream boulders here which allow gravel to settle
the pockets behind them. The ~~are~~ predominate substrate overall
this section is cobble.

RIPIARIAN VEGETATION/BANK STABILITY: This section's riparian vegetation
composed almost entirely of alders. Very little willows and quaking
oak are along this section (<5% of ~~the~~ total ^{riparian} vegetation). Banks
are very stable due to large boulders along edges of stream.

ALGAL VEGETATION: Sparsely algae and rooted aquatics. No
emergents in the section.

COVER: Mostly provided by instream boulders. Also a significant
amount of cover provided by overhanging vegetation.
Cobble screens and pool depth provided some cover as
well.

THREATS (cattle, water development, fishing pressure, etc.): Since this
section is only about 500' above the campground, it
receives much more fishing pressure than the other sections
sampled this year which are further upstream.

SURVEY CONDITIONS AND SAMPLING

DATE: 8/9/89
day mo yr

STREAM: M.F. San Joaquin

SECTION: 1

TIME BEGINNING: 1020 hrs Ending 1420 hrs

NUMBER OF PASSES: 3

NUMBER OF SHOCKERS USED: 3

NUMBER OF NETTERS: 3

TOTAL NUMBER IN CREW: 7

COMMENTS, PROBLEMS, etc. _____

SECTION BLOCKS:
upper seine lower seine waterfall cascade other

WATER CHEMISTRY AND QUALITY

Water Chemistry:

a. Temperature = 6° C or F Time 1005 hrs

b. pH = 7.1

c. Conductivity = 18 micromhos/cc

d. Total alkalinity: # drops 2

-- 2.5 = .8 grains/gallon

X 17.12 = 13.70 mg/l

Water Quality Comments:

WATER QUALITY

DATE: 24 / AUG / 99

RECORDER: S. SHIBA

STREAM: SOUTH FORK MERCED RIVER

SECTION: 1 (lower)

WATER TEMPERATURE 20.5° C or _____ F recorded at 1202

_____ C or _____ F recorded at _____

CONDUCTIVITY 66.1 micromhos/cm recorded at 1202

pH _____

TOTAL ALKALINITY

Hach Kit

Titrets

of drops _____

of drops / 2.5 = _____ grains/gal

(grains/gal) X 17.12 = _____ mg/l 25 ~~25~~ mg/l

COMMENTS

(Appearance, Turbidity, Etc.) _____

Mass
780 S
1360 S
372 S
Corded on
fishy
conditions
page

1990

Section 21

Day No 72

Stream: Merced River

Section: 12

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

$$\frac{\text{Total}}{\text{Section Length} \times 2} \times 100 =$$

_____ %

Total = _____ (ft)

COVER

Type

Relative Abundance

Overall Rating

<u>Boulder</u>	<u>75%</u>	Excellent	_____
<u>Depth</u>	<u>18%</u>	Good	_____
<u>Turbulence</u>	<u>7%</u>	Fair	_____
_____	_____	Poor	<u>X</u>
_____	_____	Negligible	_____
_____	_____		
_____	_____		
	100%		

Comments: SAND & DEBRIS IN BOULDER INTERSTICES

WATER QUALITY

Temperature 14.5 C or _____ F at 1330 Time

pH 6.9 Conductivity 32 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l 20 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1991

Section 20

day no yr

Stream: MERCED RIVER

Section: 11

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total

 Section Length X 2 X 100 =
 _____ %

Total = _____ (ft)

COVER

Type	Relative Abundance	Overall Rating
_____	_____	Excellent _____
_____	_____	Good _____
_____	_____	Fair _____
_____	_____	Poor _____
_____	_____	Negligible _____
_____	_____	
_____	_____	
	100%	

Comments: _____

WATER QUALITY

Temperature 18.5 C or _____ F at _____ Time

pH 6.9 Conductivity 27 micromhos/cm

Total Alkalinity:

Hach Kit Titrets

#drops 2

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 20

Day No Yr

Stream: Merced River

Section: 11

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total _____
 Section Length X 2 _____ X 100 =
 _____ %

Total = _____ (ft)

COVER

Type	Relative Abundance	Overall Rating
<u>Boulder (shelving)</u>	<u>65</u>	Excellent _____
<u>Turbulence</u>	<u>25</u>	Good _____
<u>Woody debris</u>	<u>5</u>	Fair <input checked="" type="checkbox"/>
_____	_____	Poor _____
_____	_____	Negligible _____
_____	_____	
	100%	

Comments: _____

WATER QUALITY

Temperature 17.9 C or _____ F at 1415 Time

pH 7.4 Conductivity 39 micromhos/cm

Total Alkalinity:

Hach Kit Titrets

#drops 3

drops / 2.5 = _____ grains / gallon

drops X 17.12 = 20.6 mg / l 19 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

ELECTROFISHING CONDITIONS

DATE: 17 / 09 / 90
 day mo yr

STREAM: MERCED RIVER

Section 20

SECTION: 11

BOULDER
SECTION
LOOKING ACROSS TO BRIDALVEIL FALLS

SECTION BLOCKS

Upstream Block: seine X waterfall _____ cascade _____
 other (describe) _____

Downstream Block: seine X waterfall _____ cascade _____
 other (describe) _____

NUMBER OF ELECTROFISHERS USED: 4 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 9

NUMBER OF REMOVAL PASSES: 3

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	<u>1183</u>	<u>1150</u>	<u>1119</u>	<u>—</u>	_____	<u>1151</u>
PASS 2:	<u>1321</u>	<u>1039</u>	<u>753</u>	<u>1496</u>	_____	<u>1152</u>
PASS 3:	<u>1116</u>	<u>779</u>	<u>728</u>	<u>1107</u>	_____	<u>932</u>

Additional Passes/ Comments/ Stream Conditions/ Sampling
 Conditions/ Equipment or other Problems

WATER CLEAR, SALT BLOCKS USED
EQUIPMENT FUNCTIONED WELL

1990

Section 19

Day No Yr

Stream: MERCED RIVER

Section: 10

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total _____
 Section Length X 2 _____ X 100 =
 _____ %

Total = _____ (ft)

COVER

Type	Relative Abundance	Overall Rating
<u>BOULDERS / INTERSTITIAL SPACES</u>	<u>92%</u>	Excellent _____
<u>POOL DEPTH</u>	<u>8%</u>	Good + <u>X</u>
_____	_____	Fair _____
_____	_____	Poor _____
_____	_____	Negligible _____
	100%	

Comments: LOGS IN THE STREAM NOT PROVIDING COVER BECAUSE OF
IRREGULARITY AND SIZE OF BOULDERS / LARGEST SUCKERS FOUND NEAR BIG
BOULDERS WITH DEPTH UNDERNEATH THEM

WATER QUALITY

Temperature 12.8 C or _____ F at 0930 Time
 pH 6.8 Conductivity 33 micromhos/cm

Total Alkalinity:
 Hach Kit _____ Titrets _____
 #drops _____
 # drops / 2.5 = _____ grains / gallon
 # drops X 17.12 = _____ mg / l 25 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 18

day mo yr

Stream: MERCED RIVER

Section: 9

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total _____

Section Length X 2 _____ X 100 =

_____ %

Total = _____ (ft)

OVER

Type	Relative Abundance	Overall Rating
<u>POOL DEPTH</u>	<u>14%</u>	Excellent _____
<u>WOODY DEBRIS</u>	<u>85%</u>	Good _____
<u>BOULDER</u>	<u>1%</u>	Fair _____
_____	_____	Poor <u>X</u>
_____	_____	Negligible _____
	100%	

Comments: DOWNED TREES PROVIDING COVER IN THREE LARGE CLUMPS IN THALWEG AND SOME ALONG EAST (SOUTH) BANK

WATER QUALITY

Temperature 17.5 @ 1500 C or 59 F at 1200 Time

pH 6.6 Conductivity 35 micromhos/cm

Total Alkalinity:

Hach Kit Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l 23 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

STREAM GRADIENT

Section 17

DATE: 22/08/91
day mo yr

STREAM: Merced R

SECTION: 8

STARTING: (CIRCLE ONE)

UPSTREAM

DOWNSTREAM

1 2 3 4 5 6 7 8 9 10

EYE LEVEL:

READING:

RISE:

SUM RISE

SUM RUN (SECTION LENGTH)

RISE -- RUN X 100

STREAM WIDTH

POINT	DISTANCE (ft)	WIDTH (ft) ^m	POINT	DISTANCE (ft)	WIDTH (ft) ^m
0	0	28	8	80	36.9
1	10 m	^{4.7} 35.2	9	90	34.5
2	20 m	32.5	10	100	34.7
3	30 m	32.8	11		
4	40 m	32.0	12		
5	50 m	^{3.3} 33.8	13		
6	60 m	33.6	14		
7	70 m	39.0	15		

TOTAL DISTANCE = 33.9

MEAN WIDTH = 33.9 m
= 111.2'

temp 16.9°C @ 9:00 am
cond. 27 µmhos

1990

Section 17

Eroding Banks -

$$\frac{\text{Total}}{\text{Section Length} \times 2} \times 100 =$$

Total = _____ (ft)

VER

Type	Relative Abundance	Overall Rating
WOODY DEBRIS	92	Excellent
ALGAE (MOSS) CLUMPS (ON SUBSTRATE)	2	Good
DEPTH IN POOLS	6	Fair
		Poor
		Negligible
	100%	

Comments: SOME SMALL FISH HIDE IN CLUMPS OF ALGAE GROWING ON WOOD
OR ROCKS OR ON SUBSTRATE

WATER QUALITY

Temperature 15.0° C or _____ F at 1400 Time
 pH 6.6 Conductivity 33 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

~~#drops~~ X 17.12 = _____ mg / l

25 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

ELECTROFISHING CONDITIONS

DATE: 22 08 / 91
 day mo yr

STREAM: Merced R

SECTION: (16)
7

SECTION BLOCKS

Upstream Block: seine waterfall _____ cascade _____
 other(describe) _____

Downstream Block: seine waterfall _____ cascade _____
 other(describe) _____

NUMBER OF ELECTROFISHERS USED: 4 BOAT(S): _____

NUMBER OF NETTERS: 4

TOTAL NUMBER IN ELECTROFISHING CREW: 9

NUMBER OF REMOVAL PASSES: _____

	Timer 1	Timer 2	Timer 3	Timer 4	Timer 5	Average
PASS 1:	<u>-</u>	<u>1432</u>	<u>837</u>	<u>765</u>	_____	_____
PASS 2:	<u>814</u>	<u>1169</u>	<u>677</u>	<u>947</u>	_____	_____
PASS 3:	<u>-</u>	<u>975</u>	<u>661</u>	<u>859</u>	_____	_____

Additional Passes/ Comments/ Stream Conditions/ Sampling Conditions/ Equipment or other Problems

Alk. 2.5 drops
 PH 6.6

Cond. 29
 Temp. 21°C

1990

Section 16

STATION: 11300 RAJA

SECTION: 7
"ISLAND"

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total _____

 Section Length X 2 _____ X 100 =
 _____ %

Total = _____ (ft)

COVER

Type

Relative Abundance

Overall Rating

DEPTH IN POOLS &
WOODY DEBRIS ^{LINKED} →

50
50

Excellent _____
 Good X
X
 Fair X
 Poor _____
 Negligible _____

100%

Comments: COVER FOR LARGE FISH GOOD IN POOLS WITH WOODY DEBRIS
85% OF LARGE FISH IN POOLS WITH WOOD COVER
MOST OF SECTION WAS SHALLOW WITH LITTLE COVER

WATER QUALITY

Temperature 16.5 C or _____ F at 1200 Time
 pH 6.6 Conductivity 33 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

25 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1991

day mo yr

Stream: MERCED

Section 15

Section: 6

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2

X 100 =

Total = _____ (ft)

%

COVER

Type

Relative Abundance

Overall Rating

_____	_____	Excellent	_____
_____	_____	Good	_____
_____	_____	Fair	_____
_____	_____	Poor	_____
_____	_____	Negligible	_____

100%

Comments: _____

WATER QUALITY

Temperature 16.3 C or _____ F at _____ Time

pH 6.7 Conductivity 23 micromhos/cm

Total Alkalinity:

Hach Kit Titrets

#drops 2

drops / 2.5 = 5 grains / gallon

drops X 17.12 = 34.24 mg / l _____ mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 14

Day no yr

Stream: Merced River

Section: 5

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2

X 100 =

Total = _____ (ft)

%

COVER

Type

Relative Abundance

Overall Rating

SMALL BOULDERS

95%

Excellent

VEGETATION (ALGAE)

15%

Good

Fair

Poor

Negligible

X

100%

Comments: ONLY COVER FOR LARGER FISH WAS BOULDERS IN LOWER PART OF SECTION. SOME SMALL FISH IN VEGETATION IN SHALLOW WATER SMALL FISH IN COBBLE

WATER QUALITY

Temperature 14 C or _____ F at 1140 Time

pH 6.8 (6.8) Conductivity 32 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

35 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 13

day mo yr

Stream: MERCED RIVER

Section: 4

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2

X 100 =

%

Total = _____ (ft)

COVER

Type

Relative Abundance

Overall Rating

BOULDERS - LARGE COBBLE

85%

Excellent

RIP RAP AGAINST BANK

12%

Good

RIFLE TURBULENCE

3%

Fair

Poor

Negligible

100%

Comments: COVER IN RIP-RAP AND BOULDERS MAY IMPROVE AT
HIGHER FLOWS VERY WIDE & SHALLOW

WATER QUALITY

Temperature 15° C or _____ F at 1630 Time

pH 6.8 Conductivity 30 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops _____

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

35 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 12

HABITAT DESCRIPTION

Campground

DATE 9 / 18 / 90 /
day mo yr

STREAM Merced River
mouth of Tenaya Cr

SECTION 3

TERRAIN, TOPOGRAPHY, GRADIENT: Valley floor - low gradient

DOMINANT PLANT COMMUNITY/VEGETATION TYPE: Ponderosa Pine

INSTREAM HABITAT: Mostly Cobble riffle
water less than one foot deep altered by
small rock dams 1/2 - 1 ft high

SUBSTRATE: Mostly Cobble few boulders

RIPARIAN VEGETATION/BANK STABILITY: very little vegetation on bank mostly
bare earth with some rock riprap

AQUATIC VEGETATION: None

COVER: Good for smaller trout
mostly cobbles and turbulence

IMPACTION (cattle, water development, fishing pressure, etc.): heavy impact from Campground foot traffic

WISC. :

1990

Section 12

Section: 3

% Eroding Banks =

Total

Section Length X 2

X 100 =

%

Total = _____ (ft)

COVER

Type

Relative Abundance

Overall Rating

SMALL BOULDERS

30%

Excellent

COBBLE INTERSTICES

65%

Good

RIPPLE TURBULENCE

5%

Fair

Poor

Negligible

100%

Comments: FISH IN SPACES BETWEEN BOULDERS & COBBLES

BOULDER WING DAMS FORMED WITHIN SECTION

SAME AS SECTION 2

WATER QUALITY

Temperature 17° C or _____ F at 1730 Time

pH 7.4 Conductivity 32 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 2

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

LESS THAN 10 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1991

Section 11

Stream: MERCED RIVER

Section: 2

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total

Section Length X 2

X 100 =

Total = _____ (ft)

%

COVER

Type

Relative Abundance

Overall Rating

Excellent

Good

Fair

Poor

Negligible

100%

Comments: _____

WATER QUALITY

Temperature 19.5 C or _____ F at 14:45 Time

pH 6.9 Conductivity 20 micromhos/cm

Total Alkalinity:

Hach Kit

Titrets

#drops 2

drops / 2.5 = _____ grains / gallon

drops X 17.12 = _____ mg / l

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 11

Stream: MERCED R

Section: 2

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total _____
 Section Length X 2 _____ X 100 =
 _____ %

Total = _____ (ft)

OVER

Type	Relative Abundance	Overall Rating
<u>BOULDERS</u>	<u>90%</u>	Excellent _____
<u>ROOTS ON BANK (UNBECUT)</u>	<u>3%</u>	Good _____
<u>WOODY DEBRIS / LOGS</u>	<u>7%</u>	Fair <u>X</u> _____
_____	_____	Poor _____
_____	_____	Negligible _____
_____	_____	
_____	_____	
	100%	

Comments: TROUT IN COVER OF DOWNED TREE AND ROOTS OF STANDING TREE
LONG SOUTH BANK, BOULDER INTERSTICES PROVIDE REMAINING COVER

WATER QUALITY

Temperature 17° @ 1730 C or _____ F at 1730 Time
 pH 7.4
 Conductivity 32 micromhos/cm

Total Alkalinity:

Hach Kit

#drops 2
 # drops / 2.5 = _____ grains / gallon
 # drops X 17.12 = 13.7 mg / l

Titrets

AT EDGE OF RANGE

LESS THAN 10 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)

1991

Section 10

day mo yr

Stream: MERCED RIVER

Section: 1

ERODING BANK (ft):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =
 Total

 Section Length X 2 X 100 =
 _____ %

Total = _____ (ft)

COVER

Type	Relative Abundance	Overall Rating
_____	_____	Excellent _____
_____	_____	Good _____
_____	_____	Fair _____
_____	_____	Poor _____
_____	_____	Negligible _____
	100%	

Comments: _____

WATER QUALITY

Temperature 18° C or _____ F at 1530 Time

pH 6.9 Conductivity 18 micromhos/cm

Total Alkalinity: _____ 22 AT LOWER SEINE WITH NaCl

Hach Kit
 #drops 1.5
 # drops / 2.5 = _____ grains / gallon
 # drops X 17.12 = _____ mg / l

Titrets
 _____ mg/l
 BELOW SENSITIVITY

Water Quality Comments: (Appearance, Turbidity, etc.)

1990

Section 10

Harold Knox

Section: L

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

% Eroding Banks =

Total _____
Section Length X 2 _____ X 100 =

Total = _____ (ft)

_____ %

OVER

Type	Relative Abundance	Overall Rating
<u>BOULDER</u>	<u>90%</u>	Excellent _____
<u>BUBBLE/TURBULENCE</u>	<u>10%</u>	Good _____
_____	_____	Fair _____
_____	_____	Poor _____
_____	_____	Negligible _____
	100%	

Comments: SOME COVER FOR SMALLER FISH IN RIFFLE TRANSITIONS

WATER QUALITY

Temperature 10° C or _____ F at 10:10am Time

pH 7.2 Conductivity 28 micromhos/cm

Total Alkalinity:

Hach Kit
#drops 2

Titrets

drops / 2.5 = _____ grains / gallon

drops X 17.12 = 13.7 mg / l

LESS THAN 10 mg/l

Water Quality Comments: (Appearance, Turbidity, etc.)