13 October 1992
Marking Site Descriptions

Section-Reach: C7
This is a low gradient riffle (LGR, habitat type 1) located off the path from the stone restroom. This is a very long riffle, all of which was not sampled. We worked the uppermost portion of it.

Widths	Length	Thalweg Depth*	Current Velocity*
36'1"	92'1"	0.9'	1.2 ft/s
37'0"		0.5'	0.8 ft/s
45'0"		0.6'	1.7 ft/s
46'5"		0.5'	1.7 ft/s
49'7"		0.65'	0.9 ft/s
		0.9'	0.8 ft/s

Substrate and cover?
SEE C7 on 930608 for substrate and cover description.

*These measured at 45m intervals.

4 October 1992
Marking Site Descriptions

Section-Reach: C8

A log-formed lateral scour pool (LSP, hab. type = 8). Access via small, vertical rocky path from park road, downstream from stone restroom. Unit extended from bottom of upstream riffle to top of downstream run.

W	L	D[1]	V
28'10"	37'2"	0.9'	1.6'/s
26'0"		1.85'	0.5'/s
24'0"		1.2'	0.6'/s

[1] Thalweg depth

Substrate dominated by large cobbles and then small boulders.

Cover dominated by two fallen logs in water perpendicular to flow, w/ root masses; and then overhanging alder branches on east bank.

14 October 1992
C9 (run)

Same access as for C8; located immediately downstream, adjacent to C8. Entire run.

W	L	D	V
37'0"	117'5"	1.25'	0.3'/s
35'8"		0.85'	0.6'/s
35'6"		1.0'	0.65'/s
34'11"		0.95'	0.55'/s
33'10"		1:0'	0.5'/s

Substrate dominated by large cobbles, then small boulders and coarse gravel.

Cover provided by small boulders and overhanging alder branches on east bank.

15 ft upper

92/10/15 C14-LGR	W	L	Vel	DEPTH
upper	30'4"	76'	1.6	.6ft
	28'		1.6	1.0ft
	18'1"		1.3	1.0ft
	15'4"		2.1	0.6ft
lower	18'2"			

Substrate dominated by large cobbles than small boulders. Cover provided by alders & overhanging alder branches on E bank

10 ft upper

92/10/15 C15-RW	W	L	Vel	DEPTH
upper	17'2"	57'4"	1.2	1.1 ft
	21'4"		1.3	1.5 ft
	24'4"		1.4	1.0ft
	22'3"		1.0	1.5ft
lower	24'5"			

Substrate dominated by large cobbles then small-large boulders and protruding bedrock, then sand. Boulder step in middle of unit. Shelter provided by boulders and overhanging alder branches on east bank. C14 & C15 are at mouth of Juan Higuera Creek.

921015 AMSR Access Gate 9

AM-16 (LGR)

W	L	D (bankfull)	V
27'0"	83'0"	0.7'	1.2 ft/s
26'2"		0.7'	1.8 ft/s
28'7"		0.5'	1.7 ft/s
33'8"		0.6'	1.7 ft/s
28'1"		0.5'	1.7 ft/s

Substrate dominated by small to large cobbles, then small boulders.
Cover provided by small boulders, overhanging willows on west bank, and then small organic debris clumps.

10/16/92 AMSP ACCESS gate 9
AM-17 (RUN)

L	W	D	Vel
101'	18'3"	0.8'	1.2 ft/s
	17'6"	0.95'	1.0 ft/s
	16'8"	1.4'	0.8 ft/s
	21'2"	1.5'	1.4 ft/s
	24'10"	0.8'	1.9 ft/s

Substrate dominated by small-large cobbles, then small boulders.

Cover provided by large cobbles and small boulders, log end at bottom of section, and especially downed alder and redwood root mass at top of the unit.

10/16/92 AMSP
AM-23 (LGR)

W	L	D	Vel
12'10"	61'7"	0.5'	1.5 ft/s
13'11"		0.5'	1.7 ft/s
12'9"		0.4'	1.8 ft/s
14'9"		0.4'	1.3 ft/s

Water temp. @ 17^{50}: 15°C
Access from trail to walk-in campground; path down to stream just after "No Camping" sign before camp.

Substrate dominated by large gravel and small cobbles.
Cover provided by overhanging willow branches on south bank.

10/17/92 CAMP-12 (RUN)
Access from Buzzard Peak trail below Hwy 1 bridge (park at ranger station in park). Just dns from water intake pump, w/ top of run beginning at base of very short riffle at temporary rock dam.

Substrate dominated by small-large cobbles, then small boulders, gravel, and sand.
Cover provided by three small rootwads and overhanging alder and willow branches on east bank; and small boulders.

L	W	D_{Th}	Vel
66'9"	24'0"	0.8'	1.2'/s
	23'0"	0.9'	0.7'/s
	20'10"	1.3'	0.9'/s
	21'0"	0.7'	2.0'/s

10/17/92 C-13 (LGR)
Immediately adjacent, downstream from C-12.

Substrate dominated by large cobbles and small boulders.
Cover provided by cobbles and boulders, one rootwad and overhanging alders on east bank.

L	W	D_{Th}	Vel
49'0"	21'0"	0.9'	0.5'/s
	22'7"	0.7'	0.6'/s
	20'3"	0.8'	1.5'/s
	18'0"	0.8'	1.7'/s

12/92 Gorge (G)

G5 Step-run series at bottom of gorge, parallel to campsites 199-201. Bottom end at overhanging maple, top end at boulder →

W	L	D	V
46'4"	132'5"	1.0'	1.7'/s
47'3"		0.8'	2.3'/s
53'0"		1.2'	2.6'/s
59'3"		1.1'	1.0'/s
48'0"		0.8'	2.0'/s

→ step, 45m upstream from willow in mid-stream.

Substrate dominated by large cobbles-small boulders, then large boulders and large (coarse) gravel.

Cover provided by boulders, and over-hanging alders along north bank.

11/3/92 Gorge: G3

Step-run series, @ 1st steep gradient boulder patch, above long flat glide. Two step-runs, top end near "end of trail" on north side, @ 2' step.

W	L	D	V
30'0"	63'10"	1.0'	1.7'/s
31'6"		1.1'	2.0'/s
32'9"		1.2'	1.3'/s
43'0"		0.8'	3.2'/s
41'6"		1.5'	0.8'/s

Substrate dominated by large cobbles - small boulders, then large boulders and coarse gravel.

Cover provided by overhanging alders (N. bank) and willows (mid-stream & S. bank), and boulders.

11/3/92 Gorge: G1

Step-run series (3 runs), beginning @ small rock dam just upstream from house-size boulder in mid-stream, adjacent to small beach. old downed tree over 2nd, short step. 1st run w/ deep pool on south bank.

	W	L	D	V
1st run	27'5"	87'9"		
	27'5"		1.4'	1.2'/s
	27'0"		1.3'	0.5'/s
2nd run	35'10"		1.6'	0.8'/s
uppermost run	15'4"		2.6'	2.5'/s
	16'9"		1.5'	3.2'/s

Substrate dominated by large cobbles—huge boulders*, then small cobbles and coarse gravel.

* and bedrock.

Cover provided by large-huge boulders primarily.

RENAMED M19 (9/2/93)

11/4/92 AMSP: AM18 (Run)

Access gate 4, to right on path down hill to small, culverted trib., and over to river; the run at this location is the unit. Entire unit taken (bordered by very short riffle at top and bottom.

W	L	D	V
24'7"	78'8"	1.1'	1.0'/s
29'10"		1.0'	1.8'/s
37'9"		0.7'	2.8'/s
32'0"		1.2'	2.3'/s
27'5"		1.0'	1.5'/s

Substrate dominated by large cobbles and small boulders, then large boulders. Some silting of substrate.*

Cover provided by boulders, and overhanging boulders on both banks.

* Some spawning gravel present.

RENAMED M18 (9/2/93)

11/4/92 AMSP: AM19 (LGR)

LGR upstream from AM18, above long, shallow glide. Come in from access gate 4. From bottom of riffle (net placed below big rock in mid-stream), to halfway up riffle (net placed just downstream from grass slump in stream, where gradient increases downstream).

W	L	D	V
35'6"	70'5"	0.6'	2.6'/s
32'3"		0.6'	3.5'/s
36'7"		0.7'	1.9'/s
40'10"		0.7'	2.2'/s
48'7"		0.5'	1.4'/s

Substrate dominated by small-large cobbles. A few small boulders present.

Cover provided by overhanging willows on east bank, overhanging redwoods and redwood root masses on west bank, and boulders in stream.

11/5/92 AMSP: AM20 (LGR)

First major riffle just downstream from bank-stabilization site @ AMSP parking lot. Entire unit taken. Glide above, LSP below.

	W	L	D	V	
top	44'10"	64'0"	0.5'	1.7'/s	top
	29'5"		0.5'	1.8'/s	
	29'10"		0.5'	1.9'/s	
	26'4"		0.5'	3.2'/s	
	18'7"		0.6'	3.2'/s	

Substrate dominated by small to large cobbles.

Cover provided by downed willow along NW bank, and overhanging cottonwood on SE bank, and large cobbles and a few small boulders.

11/5/92 AM5P : AM24 (RUN)
ACCESS DOWN STREAM CHANNEL FROM AM20, BELOW THE GLIDE AND A SHORT RIFFLE - THE FIRST REAL RUN. TAKEN FROM BOTTOM OF UPSTREAM RIFFLE TO BOTTOM OF FLAT WATER BELOW SMALL ROCK DAM, AT UPSTREAM EDGE OF POINTED BOULDER.

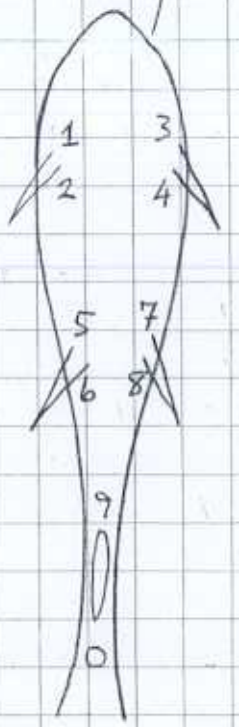
W	L	D	V
29'7"	130'4"	0.6'	3.5'/s
20'2"		1.0'	1.8'/s
23'6"		2.0'	0.7'/s
19'3"		0.7'	1.1'/s
13'9"		0.7'	1.4'/s

SUBSTRATE MIXED BUT DOMINATED BY SMALL COBBLES - SMALL BOULDERS, THEN LARGE BOULDERS AND BEDROCK.*

COVER PROVIDED PRIMARILY BY BOULDERS, THEN ALDER AND WILLOW AT TOP OF UNIT ON SOUTH BANK, AND OVERHANGING WILLOWS ON NORTH BANK AT BOTTOM OF UNIT.

*SOME IMBEDDEDNESS FROM SAND.

NUMBERING LOCATIONS:



11/6/92 AMSP
LLA25 (lagoon habitat)

Lower lagoon (hence LLA) sampled from top end of stream outlet (OUT) to about halfway through the lower basin of the lagoon (i.e. the basin below the footbridge at the beach). Only a single el-fishing pass was made, with emphasis on working clumps of kelp brought in by waves. Kelp used as shelter (at least escape cover) by trout. Primary objective was to check for trout presence/absence in the lagoon. Fish were worked up and marked (LLA25) as usual. No physical habitat measurements were made, however.

11/6/92 AMSP
OUT27 (River outlet habitat)

The final flowing portion of the stream, which connected the lagoon and the ocean, was sampled. The depletion method (2 el-fishing sweeps) was applied for an abundance estimate. Physical habitat measurements were not made, but current velocity was high in the outlet. Small kelp piles were important as shelter for the trout. The length of the outlet was roughly 30 m (~100 ft). All trout were worked up and marked (OUT27) as usual.

11/6/92 Juan Higuera Creek
JH10: mostly steep gradient, cascade habitat. Redwood canyon. Sand-small gravel bottom. Sampled from the mouth of Juan Higuera Creek to the Hwy 1 bridge. Only one el-fishing pass made, although intention was to make a second sweep through a sub-section to determine an approximate $\hat{p}$, and apply depletion method to make abundance estimate. But darkness came too soon.

Relatively high density of trout found, perhaps a mixed resident-migrant portion of population. Note the relatively low frequency of BSD. For analysis, compare size structure of JH29, JH10, and Big Sur mainstem.

Length, width of section can be accurately measured at later date.

11/6/92 Juan Higuera Creek
JH29: mostly steep gradient, cascade habitat in redwood canyon. Logging previously in drainage! Substrate dominated by sand and small gravel, cascades created mostly by boulders.

El-fished from 2nd barrier located c. 200 m above Hwy 1 bridge (see notes from 19-20 Sept. 1992), upstream to next barrier, and further upstream to base of gradient increase/curve to left looking upstream (approximate measurements of section lengths may be made at later date). Between first two significant barriers, only four ≥1/+ trout were captured. Above second barrier, trout density was generally higher and trout

JH29, 11/6/92 (cont.)
<10 cm long, presumably including YOY were also in the catch. There was usually one large trout in each small cascade pool while O+ and perhaps small 1+ trout were in shallower, swifter habitats.

The size, and presumably the age, structure of this portion of the population was much more dominated by older, larger fish than in the main stem. Note also the presence of ripe males, 77.5 & 81.5 mm TL! That these fish are probably residents, and/or delay movement to the main stem and/or ocean, and well-segregated from the main stem, is evidenced by their complete lack of BSD.

6/7/93 AM20 (LGR)
High flows have altered channel greatly: channel is more deeply ed the riffle is much shorter, r pool at top end, *
D V

7.0m	11.0m	1.0 ft	4.8 ft/sec
6.8m		1.0 ft	4.4 ft/sec
7.0m		1.1 ft	4.7 ft/sec
7.1m		1.2 ft	3.0 ft/sec
7.5m		1.7 ft	3.8 ft/sec

* LSP remains at bottom end. Unstable habitat unit. Torrential Substrate dominated by small to large cobbles.

Cover provided by downed willow snag on NW bank as before, but positioned on opposite shore is well above shore now, and provides no cover. Large cobbles and small boulders still provide some potential shelter.

6/08/93 C-7 (ALGAE)

6/08/93 C7 (CLOTH) ✓

- note: ② designates lateral habitat
- Total length 31.9 m

W	W_2 (m)	L	L_2 (m)	D	D_2 (ft)	V (ft/s)	V_2
12	3.5	31.9m		1.4	0.3	2.0 ft/s	0.1 ft/s
11.5	1.5			1.0	0.6	~~0.0 ft/s~~ 1.4 ft/s	~~0.1 ft/s~~ 0.3 ft/s
15	3.7			1.4	0.7	2.8 ft/s	0.1 ft/s
18	3.9			1.5	0.9	2.7 ft/s	1.7 ft/s
16.6	5.7			1.4	0.8	2.4 ft/s	1.2 ft/s

- Width of lateral habitat estimated from changes in depth and turbulent flow.

- Depth and Velocity in lateral habitat Taken at mid point

cont. →

C7 930608 cont.

mid-channel water temp. @ 1345:
16.0°C

Substrate dominated by small to large cobbles, then small boulders.
Cover provided by overhanging alders on each bank, left/bank (looking d/s) especially, and by small boulders.

Stable habitat unit.

6/08/93 C8

W (m)	W_2 (m)	L (m)	D (FT)	D_2 (FT)	V (FPS)	V_2
12.4	1.8	14.9	1.2	0.7	~~1.5~~ 1.2	1.1
10.2	2.5		1.5	0.6	2.1	0.2
10.3	4.2		2.0	0.5	~~2.4~~ 3.3	0.2
10.5	2.7		1.1	0.6	2.5	0.2
11.8	N/A		1.2	N/A	2.7	N/A

note: section is diagonal, no lateral habitat sampled on Transect 5

6/9/93 C9

± stable habitat unit; see earlier description.

W (m)	W_2 (m)	L (m)	D (ft)	D_2 (ft)	V (ft/s)	V_2 (ft/s)
13.0	4.8	35.2	1.4	0.4	3.6	0.1
13.0	3.1		1.5	0.5	1.6	0.8
12.1	2.9		1.6	0.9	1.6	0.9
13.8	3.2		1.5	0.6	1.3	0.4
12.0	1.9		1.9	0.6	1.0	0.5

water temp. @ 11:30: 16.5°C

Paucity of both trout and sculpins.

6-9-93 AM 24

± stable habitat unit; possibly some increased scouring at huge boulder on left bank in upper xsection.

W (m)	W_2	L (m)	D (ft)	D_2 (ft)	V ft/s	V_2
7.6	N/A	40.7	1.7	N/A	3.4	N/A
9.3			~~2.3~~ 2.2		2.0	
7.2			3.6		2.0	
11.9			1.6		2.1	
10.9			1.3	(2.0)	1.4	(3.1)

Thalweg split measurements from right bank side

water temp. @ 15:15 : 19.0°C

6-9-93 AM23

Temp : 19.5°C
Time : 16:30

W (m)	W_2 (m)	L (m)	D (ft)	D_2 (ft)	V (fps)	V_2 (fps)
13.4	3.3	26.0	1.3	0.6	1.78	1.3
13.6	2.6		0.6	0.6	2.0	1.7
12.9	3.5		1.0	0.5	2.1	1.5
12.8	4.0		1.1	0.3	2.82	~~2.3~~ 0.6
8.6	N/A		1.5	N/A	3.1	N/A

10-93 AM17

Time 16:45

Temp 19.5°C

W	L(m)	D(ft)	V(ft/s)
9.5	41.0	1.8	1.6
7.9		1.7	1.9
7.8		2.0	1.6
7.7		2.4	2.3
5.8		2.0	6.0

7/6/93 on data sheet

7/7/93 AM18 (RUN)

W(m)	L(m)	D(ft)	V(ft/s)
10.1	29.4	1.5	1.50
12.0		1.5	1.01
11.7		1.8	2.71
10.5		1.3	2.04
11.2		1.2	2.14

Habitat unit 1 stable. Fall 1992 description of physical characteristics still applies.

7/7/93 Am 19 (LGR)

W(m)		L(m)		D(ft)	V(ft/s)
LOWER					
11.30		20.5		0.8	1.95
11.20				1.0	2.80
12.50				1.25	2.16
14,90				0.7	4.48
14.50				1.0	3.41
UPPER		22.3			
14.5				1.0	3.41
16.9				1.2	1.77
16.0	UNDER CUT			0.85	1.45
16 0	UNDER CUT			0.7	2.65
16.2				0.9	1.43
		G-5			
LOWER	L.L.E	M.S	BOTTOM LL	0.4	0.72
15.5	6.1	38.0		0.4	0.41
15.1	8.3			0.7	0.06
15.9	7.9			0.8	0.57
15.7	3.7		TOP	1.2	0.53
15.2	3.2	BOTTOM	MS	0.6	1.03
	68			0.7	1.54
	~3			1.0	1.68
				1.6	1.27
		TOP		1.2	0.31

7/8/93 C 15 18.5 Total LENGTH

W(m)		L(m)		D FT			V(FT/S)		
							20%	40%	80%
LOWER									
B	C		Total						
1.8	6.1	1.8	9.70	2.2	1.7	1.25	0.68 0.80	0.71	1.03
2.5	5.4	1.2	9.10	0.9	2.0	1.85	0.26	1.47 1.81	0.71
.85	6.65	1.5	9.00	1.1	2.1	1.3	-0.06	1.24 3.63	0.48
2.5	6.05	.7	9.25	0.85	1.55	0.65	0.01	2.09	1.53
0.0	7.10	1.0	8.10	—	1.0	0.65	—	2.62	0.77
UPPER					C-14		30.3 Total LENGTH		
0.0	7.10	1.0	8.10	—	1.0	0.65	—	2.62	0.77
.75	5.85	2.0	8.60	0.7	1.25	0.4	0.04	4.26	2.16
1.6	7.60	2.0	11.20	0.85	1.30	0.5	-0.11	3.18	0.33
1.35	7.65	2.0	11.00	0.65	1.15	0.3	0.10	3.02	0.13
2.20	7.80	1.7	11.70	0.60	1.20	0.7	0.93	1.95	1.88

July 9, 1993 Sec. JH 10

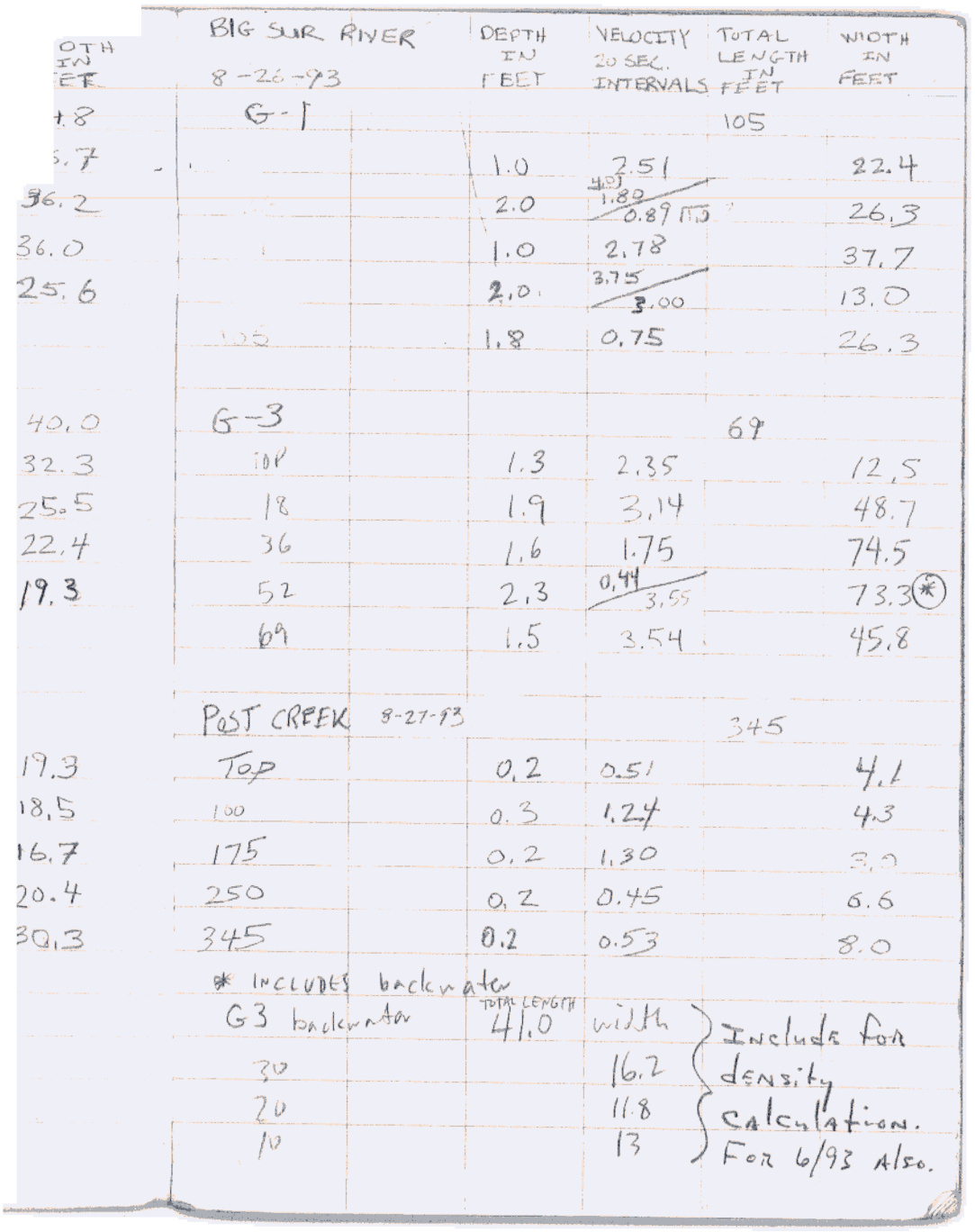
Shocking

	depth	flow	with	hab. type
5m	0.6	1.69	3.45	flowing
10	0.3	2.97	2.0	flow
15	0.6	.57	1.90	pool
20	0.9	1.37	2.75	flow
25	0.5	1.19	2.30	flow
30	0.6	1.68	3.25	pool
35	0.6	0.15	3.10	flow
40	0.2	1.70	1.95	flow
45	0.7	0.79	3.40	pool
50	0.7	1.89	4.45	flow
55	0.8	1.58	2.65	run
60	0.6	.11	1.70	flow
65	0.7	1.28	3.25	flow
70	0.8	1.53	3.40	flow
75	0.3	.44	1.90	flow
80	0.4	2.10	3.75	flow, large undercut bank
82.5	0.8	0.12	3.40	flow large undercut bank

Beginning @ upstream end of culvert and working upstream.

ad 29.3

Big Sur River		IN FEET DEPTH	20 SEC INTERVALS FT/SEC	IN FEET TOTAL LENGTH	TRANSECT IN FEET WIDTH
8-23-93					
C-7				186	
		1.0	1.63		52.3
		0.8	2.13		45.8
		1.2	1.19		30.0
		0.9	2.05		39.3
		1.0	1.80		36.3
EFFORT					
Pass #1	113	28680			
Pass #2	1110	30078			
8-24-93					
C-15				138.5	
		1.0	0.82		25.6
		1.5	1.62		21.9
		1.5	2.19		25.8
		1.6	0.74		30.7
		1.9	0.77		35.7
EFFORT					
Pass #1					
Pass #2					



DEPTH IN FEET	BIG SUR RIVER 8-26-93	DEPTH IN FEET	VELOCITY 20 SEC. INTERVALS	TOTAL LENGTH IN FEET	WIDTH IN FEET
1.8	G-1			105	
5.7		1.0	2.51		22.4
36.2		2.0	4.03 / 1.89 / 0.89		26.3
36.0		1.0	2.78		37.7
25.6		2.0	3.75 / 3.00		13.0
	105	1.8	0.75		26.3
40.0	G-3			69	
32.3	10	1.3	2.35		12.5
25.5	18	1.9	3.14		48.7
22.4	36	1.6	1.75		74.5
19.3	52	2.3	0.44 / 3.55		73.3 (*)
	69	1.5	3.54		45.8
	POST CREEK 8-27-93			345	
19.3	Top	0.2	0.51		4.1
18.5	100	0.3	1.24		4.3
16.7	175	0.2	1.30		3.0
20.4	250	0.2	0.45		6.6
30.3	345	0.2	0.53		8.0

* INCLUDES backwater

G3 backwater	TOTAL LENGTH 41.0	width	Include for density calculation. For 6/93 also.
30		16.2	
20		11.8	
10		13	

BIG SUR RIVER
8-31-93

	Depth Fee	Velocity 20 sec intervals	TOTAL LENGTH in Feet	WIDTH IN FEET
G5			124.0	
TOP		4.89		47.7
	1.7	1.49		51.9
62	1.6	1.89		52.7
93	0	1.43		47.7
124.	1.1	2.49		49.4
C (LSL)			36.0	
		1.66		32.7
	1.5	1.85		31.0
8	1.2	1.93		28.2
7	1.2	1.40		32.2
	1.5	1.55		36.0
C9 (RUN)			132	
	1.5	1.55		36.0
22	1.1	1.24		36.8
66	1.4	1.08		36.4
99	1.2	1.16		37.1
132	1.0	.75		34.5

BIG SUR RIVER
9-1-93

	TOTAL LENGTH IN FEET	Depth in Feet	Velocity in 20 sec intervals	Width in Feet
M 16 (LGR)	118.7			
TOP		0.8	1.37	33.2
30		1.0	1.67	28.1
60		0.8	2.23	33.1
90		0.7	2.41	21.1
120		0.4	3.78	27.1
M17 (RUN)	108.0			
TOP		0.4	3.78	36.4
27		1.1	2.01	19.5

BIG SUR RIVER
9-3-93 LGR

	TOTAL LENGTH	Depth in ft	Flow in 20 sec intervals	WIDTH in Feet
M-18 (formerly M-19)	122.0			
TOP		0.5	1.87	51.8
30		0.8	1.38	55.8
60		0.7	2.75	49.9
90		1.0	2.26	40.7
122		0.6	1.5	35.8
RUN				
M-19 (formerly M-18)	104.0	(26' Intervals)		
BOTTOM		1.0	2.13	35.1
		1.2	1.66	32.8
		0.9	2.11	37.3
		1.0	1.80	31.8
TOP		0.7	2.67	32.0

BIG SUR RIVER
9-21-93
JUAN HIGUERA (TOP)

H29 (CAS)

TOTAL LENGTH	Depth in feet	velocity in 20sec intervals	width feet
238.0			
TOP	1.0		5.8
180			2.8
120			7.8
			8.4
			3.2

M20 (930922) cont. — AND boulders on steep bank, then IN-CHANNEL cobbles and boulders. A few small willows on stream channel side. Otherwise, this is a relatively exposed portion of the river and filamentous algae the abundant. Nursery area for sculpins.

LGR (Replaces old AM20 that was washed-out last winter.)

173.7			
	0.5	4.6	36.5
	0.8	2.3	29.3
	0.6	1.7	26.3
	0.7	2.5	23.7
	0.8	2.8	25.1

1 cent

1 by

Deeper
willows
Cover

Big Sur River 9-22-93

	Total Length	Depth (ft.)	Velocity (2x inter.)	Width (ft.)
M-23 (RUN)	138			(10%/60%)
TOP		1.2	2.55	22.0
105		2.1	1.03 / 0.77	24.0
70		1.5	0.82	25.3
35		1.5	1.33	15.0
BOTTOM		1.0	1.62	32.5

9-23-93

M-25 (RUN)	Total Length = 152	Depth (ft)	Velocity (20 sec)	Width (ft.)
TOP		1.2	1.55	23.5
114		0.8	0.85	25.0
76		1.1	1.03	24.5
38		0.8	1.34	33.0
BOTTOM		1.0	0.88	33.8

SEE NEXT pg. for description

9-24-93 - Juan Higuera Creek

H-10 (CASCADES) Bottom	Total Length = 205	Depth (ft)	Velocity (20 sec)	Width (ft.)
TOP		0.8	.70	9.0
153		1.0	.90	9.7
102		0.6	.46	9.5
51		0.7	1.38	7.8
BOTTOM		0.7	0.01	8.0

* Bottom of H-10 starts 10.5 ft. above lowest culvert
* Top of H-10 at sm. crescent-shaped falls, beside lrg. boulders on left, 52' above small trail crossing

9-24-93 - Juan Higuera Creek

H-27 (CASCADES) Mig	Total Length = 196	Depth (ft)	Velocity (10 sec)	Width (ft.)
TOP = 196		0.7	1.27	5.8
147		0.8	1.70	9.8
98		0.6	1.37	6.7
49		0.4	2.19	5.0
BOTTOM		0.8	0.72	7.7

* Bottom of H-27 starts 21.0 ft. above Hwy. 1 bridge
* Top of H-27 at small cascade beside lrg. boulder on left water's edge. 1 lrg. redwood leaning against others, across the creek, 65' up. 1 Lrg. boulder leaning against trees on top of left bank, 30' up.

M25 description:
Run adjacent downstream from 1992 AM-23 riffle.
Substrate dominated by large cobbles and small boulders, then large gravel and small cobbles.
Cover provided by overhanging willows, especially along left (ds) bank, and small-large boulders.
Unit ends above fallen tree ~20 m.

RIVER		Velocity			HIGUERA	TOTAL	Depth			
19/93	VGTH			)	/93	NGTH	(ft)			(ft)
					H:O					
C F	1?				WEEK JH					
TO		1.		47	DP				4	10
56		.3	.4	45 7	15		8	0		4
104		0			100		7		7	8
52				4	50		0			8
TTOM		5	9 6		BOTTOM		6		0	
9	1				BIG SUR RIVER					
TOP			4		/ /93					
						75				
			0 9	33	OP		3		1 2	25.8
BO		0		34.			1			5
					6		0.8		2 9	
3	59				13		.8		2	8.
P		8	)	3	BOTTOM					8
30		4	0 7							
20		1.	1		C	ns				
10			0		TOP		4		1.1	18.4
BOTTOM		2		19	78		2		16	21.1
					52		2		1.2	24.
					26		4		8	2
					BOTTOM		3			41.8

	TOTAL LENGTH	Depth (ft)	Velo ft/s	Width (ft)		DEPTH
11/						
POOR RE	345			C 14		
TOP				TOP		
258			2	60		4
172				40		0
86			5			
BOTTOM						1
11/11/93	H 27					
JUAN MOVE	(m 94			C 1		
TOP			2	TOP		5
147			5	03		
98		2	5	42		
49		6	7			7
Bottom		5	14	BOTTOM		4
H-29						
JUAN H	(TOP)					
top			5			7
180			8	78		
120				7		
60				6		
BOTTOM		9	9	BOTTOM		

BIG SUR RIVER 11/16/93	TOTAL LENGTH	Depth (FT)	Velocity	width (FT)
G3	69			
TOP		1.0	0.2	9.9
52		1,9	1.3	62.5
36		1.35	1.3	65.1
18		2.2	4.2/0.5	44.6
Bottom		13	1.6	45.9

Backwater not included this time.

11/17/93

M-19	104			
TOP		1.0	1.7	31.5
78		1.1	1.7	25.0
52		0.M	1.3	36.0
26		1.2	1.9	37.6
BOTTOM		1.25	1.8	32.3

M-18				
TOP	122	1.6	1.7	50.9
90		0.6	1.5	55.1
60		0.5	3.2	47.7
30		1.1	1.5	40.9
BOTTOM		0.7	1.2	36.7

BIG SUR 11/18/93	TL	depth	velocity	width
M-20	74.0			
TOP		0.6	4.2	40.1
54		0.8	7.1	36.7
36		0.7	2.5	26.0
18		1.0	2.2	23.9
BOTTOM		1.1	1.5	24.6

Below M-20 Sport smoke area

	103	BANK READ EAST BANK LOTS OF LOGS & BOULDERS		
TOP		1.8	0.2	7.0
75		2.6	1.9/0.7	5.0
50		3.0	0.7/.06	9.0
25		3.4	0.7/0.2	7.0
BOTTOM		1.9	0.7	10.0

M-23	138			
TOP		1.0	2.8	23.5
105		1.8	0.9	26.0
70		2.1	0.9/0.8	26.5
35		1.1	1.2	26.0
BOTTOM		0.7	1.5	33.0

	T	DEPTH	VEL	WIDTH
M 25	152			
TOP		.1	1.1	24.5
114		0.9	1.5	25.0
76		1.2	0.7	26.0
38		1	1.25	36.0
BOTTOM		2	0.9	34.0

Big Sur River
16/93

	Total Length	Depth (Ft)	Velocity (20% 22.9 / 80%) (m/s)	Width (Ft)
G3	69			
TOP		1.3	1.0	12
52		1.5	0.7	57
36		0.6	0.5	66
18		2.3	0.3 / 0.2	45
BOTTOM		1.1		
M19	104			
TOP		0.7	0.5	17
78		0.9	0.6	31
52		1.2	0.2	35
26		1.3	0.8	26
BOTTOM		0.8	0.4	29
C15	85			
TOP		1.0	0.6	24.5
63		1.7	0.1	25.2
42		1.6	0.3	24.0
21		0.7	0.3	26.2
BOTTOM		1.2	0.2	28.6

Big Sur R. Unit M25
9/20/94
1st pass 1M25994.BSR*
15C: 9785 RENAMED
12 : 1411 s 1M250994.TAG

2nd pass 2M25994.BSR
15C: 1482 RENAMED
12 : 987 2M250994.TAG

Dummy codes:
Color: Parr = HATCHERY
Silvery Parr = WILD
Smolt = UNKNOWN
BSD: Present = PARASITE
Absent = NO Notation

* 1M250994.TAG
pass unit MMYY OR MOR OR REC

BIG SUR RIVER

09/20/94	TOTAL LENGTH	Depth (ft)	Velocity (m/s	WIDTH (ft)
25	152			
TOP		1	0.37 ( )	2
114		5	0. 1 (02)	22.5
76		2.7	0.25 (0.22)	2: 2
38		2.5	0.23 (0.75)	28.
BOTTOM		0.7	0.04 (0.13)	31 3

09/20/94 16:30 W TEMP = 19°C

1 M25 0994 TAG

2 M25 0994 TAG

Big Sur R. 9/21/94
Unit C37 (AKA C13.5)

1ST pass (1C370994.TAG) 4 3
15C: 3206 s (@ 400 V, 90 Hz, 2 ms)
M12: 3504 s (@ 200-300 V, 60 Hz)

2ND pass (2C370994.TAG)
15C: 1499
M12: 1812

Unit is a boulder formed LSP demarcated (unfortunately) by a rock dam at both the upstream and downstream boundaries! There five large boulders in the unit, the largest of which on the west bank creates the pool and provides escape cover for the large trout. Most of the small fish were in the run-like area at the head of the pool (really a part of the pool?) where logs and debris on the west bank provide shelter. Many small fish (mostly 0+, few 1+), missed after the 1st pass, were seen feeding in the pool as well. Substrate at head ~~and tail~~ of pool dominated by cobbles and then coarse gravel; in main pool area by sand and then cobbles, boulders, and bedrock;*
Cover provided by largest boulder and logs/debris on west bank, and overhanging alders on both banks.

* At tail of pool by small cobbles and gravel in thalweg, and sand behind boulder.

C37 DATE 21-Sept. 94

Time 1430

	Total Length	Depth Ft	Velocity (m/s)	Width (m)
	47.2m			
Top 36.6m		1.2	0.22	7.8
.45m		2.4	0 (80) 0.03 (20) -0.03	12.1
.30m		4.0	(20) 0.09 (80)	11.6
.15m		2.85	-0.02 (80) (20) 0.01	14.7
0		1.25	0.04	13.9

Note: Bottom site, dam built
Apx 1.5 ft tall

Note T p ... xt d Above
... ... section ...

A Top

0 7 0 30 10 0

C370994 TAG
2C3709 4 ...

JUAN HIGUERA CREEK 9/21/94
UNIT H27 TOTAL 198' = 65.34 m

	Depth ft	Velocity m/s	Width m
Top	0.5 ft	0.13	1.98 m
5.94	0.7 ft	0.09 m/s	4.30 m
2.66	0.5 ft	0.46 m/s	2.12 m
6.53	0.2 ft	0.24 m/s	2.94 m
0 ft	0.7 ft	0.1 m/s	2.35 m

1H270994. TAG
2H270994. TAG

1st PASS - 16.0° C
M12: 1215
2ND PASS
M12: 2114 - 1215 = 899

Notes: Apx 19³⁰ pm FINISHED. DUSK
FEW FISH. SEVERAL
MAN-M. dams.

BIG SUR RIVER

M17 TOTAL LENGTH 108' OR

	Depth (ft)	velocity (ft/s)	width (m)
TOP	0.7	0.86	9.1
81 ft	1.2	1.2	5.4
54 ft	1.9	0.5	5.3
27 ft	1.9	0.39	6.5
BOTTOM	1.1	0.44	8.2

1 M170994.TAG
2 M170994.TAG
3 M170994.TAG
3 M170994.MOR

WATER TEMP - 18°C

1ST PASS		2ND PASS		3RD PASS	
M12	854	M12	729	M12	693
15C	794	15C	741	15C	530
				15 FISH	

BIG SUR RIVER

M16 TOTAL LENGTH 119

	Depth (ft)	velocity ft/s	width (m)
TOP	0.7	0.46	9.9
90	0.6	1.30	7.2
60	0.7	1.12	7.4
30	0.6	2.89	6.3
BOTTOM	0.7	0.86	9

1 M160994.TAG
2 M160994.TAG

WATER TEMP 18°C

1ST PASS		2ND PASS	
M12:	990	M12:	875
15C:	815	15C:	790

JUAN HIGUERA CREEK H29 UPPER

HAUL	LENGTH	WEIGHT	COLOR	COMMENTS
1	160	35.3	SP	NO BSD ONE BELLY SPOT MARKED 29.3
1	140	22.0	P	NO BSD MARKED 29.3 " "
1	134.0	23.4	P	
1	43	29.0	P	NO ID marked 29.

TOTAL LENGTH: 238'

	Depth (FT)	velocity (m/s)	Width (m)
TOP	0.6	1.3	1.2
177	0.7	0.23	1.7
118	0.4	0.64	2.4
59	0.6	0.25	2.8
BOTTOM	0.4	0.49	0.9

PASS 1

9/38 MI2: 2000-694 = 1306

PASS 2

MI2: 2726-2180 =

WATER TEMP = 16°C

BIG SUR C7

9-26-94

TOTAL LENGTH = 186

length (ft	Depth (FT)	velocity (m/s)	width (m)
TOP	0.6	0.43	14.3
138'	0.7	0.37	13.1
92'	0.6	0.15	9.4
46	0.8	0.1	9.7
BOTTOM	1.2	0.05	13.2

WATER TEMP 18°C

	1ST PASS	2ND PASS	3RD PASS
15C	1987	15C 1458	15C 1128
MI2	2609	MI2 1980	MI2 1329
	38 FISH	54 FISH	~25 FISH

2C070994.MOR CONTAINS 3RD PASS FISH

ALL MORT FISH HAVE NOTES

C7099.MOR
1C70994 TAG
1C70994 MOR
1C070994 MOR
2C70994 TAG
2C70994 MOR
2C070994 MOR — INCLUDES 3C70994.TAG
3C70994 MOR

IMPORTANT!

8.94

Depth (ft)	Velocity (m/s)	width (m)
0.9	0.54	3.3
1.0	0.49	18.3
1.9	0.29	18.3
5	0.25	18.2

G

E GTH 69'

TOP

4

7

B TTO

C 2 5

G-3091 4 TAG
94 MOR
4 MOR
994 TAG
994 MOR

1 PASS
1 7
M 2 509

N PASS
75
N 8 8

Temp C ater

B/G UR 9 8.94

C9

DTH LENGTH 32	Depth(ft)	Velocity m/s	Width
TOP	6	0.2	99
99	8	0	99
66	2	6	2
33	2	0 15	
BOTTOM	2	.25	7

TEMP 7°C

PASS	2ND PASS
2 80	M 2 88
5C 2	15 8 7

→ # * 789 REAL WET T 24

C9 94 MOR
1C9 0994 TAG
2C9 4 TAG

BIO SUR
95

TOTAL LENGTH 136

	Depth (ft)	velocity m/s	width (m
TOP	07	02	9
102	2	0.05	5
68	0	02	
3	09	014	4
BOTTOM		0	4/5

H_2 TEMP 17 C

	1st PASS		2 PASS		3RD PASS
M1	2K	M1	746	M12	13
15C	214	5	1408	15C	

3119
1746
73

1G50994 TAG
G50994 Mor
2G50994 TAG
2G5099 4 Mor
3G50994 TAG
3G5099 Mor

FISH REDONE ID ADD
NOTES

JUAN HIGUERA H10 Lower Sept 1994

TOTAL LENGTH 205

	Depth (ft)	Velocity m/s	dpth (m)
TOP	0.5	0.72	2.2
153	05	05	4.7
102	05	074	?
51	0.7	008	2.2
BOTTOM	04	029	29

water temp 50.5

1st PASS		2ND PASS	
M12	782	M12	203
35 FISH		9 FISH	

H10 0994 TAG

3185
198

	Depth (ft)	Vel M/S	width (M)
* Top + 114	0.5	02	2.7

NOV/DEC 1994

BSD FISH WITH PIT TAGS MARKED "PARASITE" ON COMPUTER. PROBLEMS WITH COMPUTER MADE 2-3. NOTES ON PARTICULAR FILES, SO FILES WITH "PAPAPA" OR "DDPAPA" ARE JUST "PA" = BSD.

11/28/94

JUAN HIGUERA H10 Lower

TOTAL LENGTH = 205'

	Depth (ft)	Velocity m/s	width (1/10 Ft)
TOP	0,8	0,2	9,2
153	0,7	0,1	14,2
102	0.6	0.4	7,9
51	0,7	0,2	7,5
BOTTOM	0,6	0,1	8.2

WATER TEMP 9°C

1st PASS	2ND PASS
M12 1563	M12 1468
6 RECAPS (PITTAG)	1 RECAP (PIT-TAG)
11/16 RECAPS	6/6 RECAPS
-1 H10 1194.REC	5 FILES
-2 H10 1194.REC	1 FILE

We ran out of pit tags in this unit in September and dye marked a lot

5th record, weight should be 4.7g

C BIG SUR 11/29/94

DEPTH (ft)	VELOCITY (ft/s)	(ft)
7	0 88	38.9
2	0 ←	39 2
3	0 77	36
5	0 5	37
4		4 4

1S	2ND PASS	3RD
34	43	
265	4	84 CR
24 fish	15 fish	16
CAPS	RECAPS	7 RECAPS

4th PASS

MH 1416

MI 1047

fish

Ø RECAPS

Wierd deplet

SI . N to A botto *

TE P 9

1C 94 REC

PIL

1 FILES

5 FILES

4

*TURNED UP THE VOLTAGE THE 3RD PASS 200V/60 + 3 V/70 HZ.

C 7 BIG SUR 11/29/94

(ft)	Depth	Velocity (ft/s)	Width
TOP (184')	0.	1.43	48.4
38	0	1.07	41.9
42	0.9	1.27	45.9
46	2	1.18	34.6
BOTTOM	4	0.47	40 1

1st PASS		2ND PASS	3RD PASS
M 2	1916	367	563
M	18 5	8	333
49		FISH	
19 RECAPS		9 RECAPS	3 RECAPS
H	C		

5 C071194.REC 3 FISH

C71194 TAG HAS RECORDS

C071194 REC 16 FILES

2C071194 REC 8 F

#012794779 weight is 3.3

H29 JUAN HIGUERA UPPER

TOTAL LENGTH 238'

	DEPTH ft	VEL ft/s	
OP	0.8	1.06	6.8
7	0.5	1.01	10.6
			9.5
		9	7
		81	41.6

PASS 1

154

2 RECAPS

2 94 REC

79 REC

PASS 2

1053

3 FISH

RECAPS

FILES

C8 BIG SUR RIVER

	1/10 Ft DEPTH	Ft/s VEL	1/10 Ft WIDTH
TOP	0.7	1.8	35
3/6	1.0	2.7	29
24			7.6
12			34
BOTTOM	9		37 8

WATER TEMP

1ST PASS 2ND PA

M 2 808 600

M 2 832 2

78 FISH FISH

5 RECAPS RECAPS

COMP.

C37 157 −30 2/1/94

TOTAL LENGTH 157'

	Depth to Ft	Velocity ft/s	width to Ft
TOP	0.9	1.0	20
117	1.4	1.8	28.5
78	4.1	0.2/.02	36.5
39	2.8	.2/0.3	51
BOTTOM	.8	2.3	47.5

WATER TEMP 10°C 20%/80%

	1ST PASS	2ND	
15C	2349	1440	G,3,300
M12	3000	1466	H,6,300
	38 FISH	14 FISH	
	2 RECAPS	1 RECAP	

BOTH MAXED OUT

1C371294.REC 10 FILES

HABITAT TOO DEEP ½ → ¼ OF LOWER SECTION. SCHOOL OF FISH IN THERE EASILY AVOIDING US.

15C SHOCKER BEEPING WHEN ANODE IS NOT "ON". HAD PROBLEMS WITH NO RESPONSE AS WELL. SELF TEST LIGHT FLASHING CONSTANTLY

H27 JUAN HIGUERA 12/1/94

TOTAL LENGTH 198'

	depth (Ft)	velocity Ft/s	width (Ft)
TOP	0.7	0.56	5.8
150'	1.1	0.08	10.0
100'	0.7	0.7	7.3
50'	0.4	1.32	6.1
BOTTOM	0.7	0.52	6.2

WATER TEMP = 12°C

	1ST	2ND
M12	1172	604
	12 FISH	3 FISH
	6 RECAPS	3 RECAPS

FILES 1 H271294.REC 5 FILES
2 H271294.REC 3 FILES

015 315 823 = RIPE MALE

G3 BIG SUR RIVER 2/2/94

TOTAL LENG 72 ft.

	DEPTH (ft)	VEL (ft/sec)	WIDTH (ft)
TOP	1.3	1.6	11.4
54	1.15	1.91	66.2
36	1.3	0.412	64.5
18	2.3	0.10 / 3.70 20%	71.3
BOTTOM	1.2	1.25	74.5

	1ST PASS	2ND PASS
M12	1823	1130
M12	1745	1214
	66 FISH	21 FISH
	18 RECAPS	6 RECAP

2378
1130

WATER TEMP = 8.5 °C

1G031294.REC 14 FILES
2G031294.REC 5 FILES

~~M20~~ M20 12/5/94

Total length = 73.7'

	Depth (ft)	Vel (ft/sec)	width (ft)
Top	1.3	0.83	39.5
54	1.0	2.07	34.1
36	1.0	4.19	30.0
18	1.2	3.50	26.4
Bottom	1.2	2.64	27.8

	1st PASS	2nd PASS
M12	1051	6.8°C
M12	1248	829
	34 FISH	7 FISH
	1 RECAP	Ø RECAPS

WATER TEMP = 11°C

1M201294.REC FILE

BOTTOM NET BLEW OUT DURING 1ST PASS (TOTALLY RIPPED) DOWN THE WHOLE 2ND PASS
TOP NET BLEW OUT BETWEEN PASSES DOWN WHOLE 2ND PASS
∴ FLOW REALLY STRONG & DEEP

M 7 1/06/94

TOTAL LENGTH 0

	DEPTH (FT)		WIDTH (FT)
TOP	0.6	ft	357
	4	6	3 2
4	3		
7	8		6
BOTTOM	6		7 9

WATER TEMP 10C

1ST PASS	2ND PASS	3RD
M 2 7 3	992	729
M12 1831	957	558
24 FISH	14 FISH	3 FISH
5 RECAPS	RECAPS	Ø RECAPS

14 RE FI

2M 7 294 REC

M16 2/06/9

TOTAL LENGTH 8

	DEP (FT)	VE (FPS)	
TOP	9		36
87		42	3,1.9
58	0 7	- 60	33.6
29	0 7	2 45	414.3
BOTTOM	6	96	357

WATER TEMP 0C

1 PASS	2ND	3RD
M12 1598	501	804
M12 1600	1048	2
22FISH	16 FISH	6 FI
6 RECAPS	5 RECAPS	RECAPS

M16 1294 REC 6 FS

2M 294 REC FILES

3M16 1294 REC FILE

G5 12/7/94

TOTAL LENGTH = 124'

	Depth (ft)	Velocity	Width
TOP	1.0	1.48	58.6
93	1.4	2.25	52.2
62	1.4	1.67	51.9
31	1.2	1.14	53.8
BOTTOM	1.9	0.37	53.7

WATER TEMP = 8.5°C

	1ST PASS	2ND
M12	3972	2543
M12	3499	2369
	89 FISH	32 FISH
	52 RECAPS	13 RECAPS
	1 MORT	

1 G051294.REC 46 FILES
1 G051294.MOR 1 FILE
2 G051294.REC 10 FILES

013 009 804 PREV MARKED 5.3

G1 12/7/94

TOTAL LENGTH = 105'

	Depth (ft)	Velocity (ft/sec)	width (ft)
TOP	0.9	3.32	31.8
78	1.9	3.55	14.0
52	2.1	4.47 / -0.25	38.5
26	2.6	0.88 / 0.44	39.2
BOTTOM	1.3	2.44	32.0

WATER TEMP 8.5°C

	1ST PASS	2ND
M12	2056	1825
M12	2128	611
	30 FISH	7 FISH
	1 RECAP	Ø RECAPS

DISC IARC 8/94

TOTAL W: 26 ft

DIST(ft)	WIDTH(ft)	DEPTH	VEL(ft/s)	AREA(ft²)
0	0			
2				
3				
4				
8				
9	0			
10				
11	11.0			
12				
13	2			
	3			
	4	1.0		
	5	.0		
7	6			
	7			
14	8			

M25 12/08/94

TOTAL LENGTH 2

	Depth (ft)	Vel ft/s	width (ft)
TOP	80	2 3	26.8
114	1.10	76	27.0
76	1.20	1.58	27.4
38	30	3	27
BOTTOM	4	0.90	32.5

WATER TEMP 9°C

	1ST	2ND
M	2 3063	1976
M2	3134	1979
	24 FISH	4 FISH
	3 RECAPS	0 RECAPS

M25 294 3 FILES

NO BLOCK NETS FLOW TOO GREAT

M23 ~~20%~~ 80% 12/8/94

TOTAL LENGTH 122'

	depth (ft)	Vel ft/sec.	width (ft)
TOP	0.8	2.86	21.7
90	1.6	1.00	25.9
60	2.4	~~0.72~~ 0.45	25.4
30	1.4	1.53	32.5
BOTTOM	0.9	1.82	31.6

	1ST	2ND
M12	1883	1232
M12	1558	1032
	12 FISH	4 FISH
RECAP!	1 RECAP	

PIT TAG # 013 844 851

WATER TEMP AT 1500 = ~~9~~ °C

NO BLOCK NETS
FLOW TOO GREAT

C15 12/9/94

TOTAL 85' (to ft)

	depth (ft)	Vel ft/sec	width ft
TOP	1.45	1.13	24.0
63	1.20	~~2.47~~	25.4
42	1.95	1.61	25.2
21	1.9	1.04	28.7
BOTTOM	1.7	0.9	32.0

H_2O TEMP = 8°C AT 1200

	1ST PASS	2ND PASS
M12	1818	1276
M2	2144	1332
	42 FISH	13 FISH
	1 RECAP	∅ RECAP

C14 12/9/94

TOTAL = 65'

	depth (ft)	Vel (ft/s)	width (1/10 ft)
TOP ↓			
44	0.9	2.15	35.0
28	1.4	1.55	32.7
16	1.2	1.29	31.0
BOTTOM ↓	1.0	0.96	23.0
	1.45	1.13	24.0

	1ST	2ND
M12	1337	979
M12	1298	912
	48 FISH	6 FISH
	1 RECAPS	0 RECAPS

WATER TEMP = 8°C

END OF LATE-FALL 1994 SURVEY

START SUMMER 1995 SURVEY '95
AUGUST 1ST RECAPTURE

M25 Total Length: 127'

Loc.	Depth (ft)	Vel. (ft/s)	Width (ft)
Top	1.0	3.77	26.8
96	1.5	2.08	24.6
64	1.4	2.55	27.5
32	1.5	1.88	32.4
Bot.	1.5	0.98	34.9

Shockers Used: 11A (40 min)
5C (1420 sec)

1 PASS 3 TROUT ∅ RECAPS
2 Trout Escaped

WATER TEMP = 68°F @ 16:37

AUGUST 1 RECAPTURE

MR tal ength 153

Loc	Depth (Ft)	Vel. (Ft/s)		Width (Ft)
op		1.14	0.45	24.
7		4.00		9
	7	53	76	
39	4	2.58		5
Bot		22		36.

Pass 1 Trout Ø Recaps
Trout scaped

Shockers 1A 40 min
15 C 1304

Water Temp 68 °F @ 745

AUGUST 1st RECAPTURE

0 tal Length 76

Loc	Depth (Ft)	Vel (Ft/s)	Width (Ft)
Top	1.4	4.09	28
54		3.	28.5
56	0.9	39	28
	3	89	18.5
Bot		58	5

1 Pass 9 Trout Ø Recaps
Escaped

Shockers 11A Min
15 C 669

Water Temp 67 °F @ 1840

AUGUST 2nd RECAPTURE '95

G3 Total Length: 75' (z/80)

Loc	Depth (Ft)	Vel (Ft/s)	Width (Ft)
Top	1.0	1.26	11.0+
57	3.4	4.88/1.45	75.2
38	3.1	1.64/1.04	67.6
19	2.2	1.94/-1.5	73.0
Bot	1.9	2.27	46.0
			78.0*

1 Pass 5 YOY Escaped 2 Recaps
32 Caught

Shockers: M12 2054 sec
15C 1595 sec

+ Width includes area shocked only
* Width includes off-channel

Water Temp = 64°F @ 1050

AUGUST 2nd RECAPTURE '95

G5 Total Length: 170'

Loc	Depth (Ft)	Vel. (Ft/s)	Width (Ft)
Top	1.1	4.77	48.7
129	0.9	1.51	54.7
86	0.9	3.19	42.8
43	1.2	3.05	38.2
Bot	2.0	2.88/1.46	28.4

1 Pass 7 YOY Escaped ? Recaps
? Caught

Shockers: M12 1814 sec
15C 1877 sec

Water temp = 66°F @ 1305

750802 C37

Shockers: 15C : 739 s
M12 : 832 s

No physical measurements made because of excessive depth

AUGUST 2nd RECAPTURE 195

H10 Tota Length: 205'

Loc.	Depth (ft)	Vel. (ft/s)	Width (ft)
Top	1.3	-1.34	10.9
153	0.6	0.96	11.0
102	0.6	0.83	6.6
51	0.9	1.75	8.9
Bot.	0.7	0.97	7.6

1 Pass 1 YOY Escaped
1 Yearling Escaped

27 Caught
3 Ad clipped:
- 1 dye mark
- 1 Pit Tag
- 1 No mark

Shocker M12 1115 sec

Water Temp= 64°F @ 1610

AUGUST 2nd RECAPTURE

M17 Total Length: 168'

Loc	Depth (ft)	Vel (Ft/s) (20/80)	Width (ft)
Top	1.2	2.27	34.3
126 R	2.5	2.45/1.02	30.1
84	3.3	0.37/0.10	31.2
42	2.8	0.62/0.63	37.9
Bot.	3.0	0.81/0.69	39.2

1 Pass 2 caught 1 Recap
1 YOY Escaped ← Dye mark

Shocker: M12 850 sec
15C 1200 sec

Water Temp: 67 °F @ 1830

AUGUST 2nd RECAPTURE

M16 Total length: 100' (shocked)
146' (unit)

Loc	Depth (ft)	Vel (ft/s)	Width (ft)
Top	1.0	1.88	54.7
75	1.1	2.74	54.0
50	0.8	2.22	52.5
25	1.0	2.77	49.9
Bot	1.2	2.27	34.3

1 Pass 2 YOY Escaped
Ø Caught

Shocker: M12: 820 sec
15C: 884 sec

Water Temp: 67°F @ 1830

195

AUGUST 2nd RECAPTURE

H29 Total length: 238'

Loc.	Depth (ft)	Vel (ft/s)	Width (ft)
Top	0.9	2.82	7.4
177	0.4	1.73	5.0
118	0.6	0.52	8.7
59	0.7	1.51	8.0
Bot	0.5	2.02	4.2

1 Pass 16 Caught
1 YOY Escaped

3 Recaps
1 Dye
1 Dye/Pit
1 No Mark

Shocker: M12 1230 sec

Water Temp: 62°F @ 2000

AUGUST 3RD RECAPTURE '95

C7 Total Length: 186'

Loc	Depth (FT)	Vel (FT/S)	Width (FT)
Top	1.0	2.42	47.1
138	1.1	1.99	41.3
92	1.2	1.69	34.0
46	1.5	0.96	40.8
Bot	1.5	1.05	42.4

1 Pass 34 Caught 1 Recap (Dye Mark)
6 YOY Escaped

Shockers: M12 2910 sec
15C 2872 sec

Water Temp = 63°F @ 1050

AUGUST 3RD RECAPTURE '95

C8 Total Length: 19' (shocked)

Loc	Depth (FT)	Vel (FT/S)	Width (FT)
Top	1.7	1.20	14.5
15	1.0	1.42	16.0
10	1.5	1.12	18.7
5	1.6	1.14	19.5
Bot	1.7	0.56	19.0

1 Pass Ø Fish Caught
Ø Escaped

Shockers: M12 202 sec
15C 222 sec

Water Temp = 65°F @ 1250

AUGUST 3RD RECAPTURE '95

C9 Total Length: 128'

Loc	Depth (ft)	Vel (ft/s)	Width (ft)
Top	1.8	1.92	31.7
96	1.2	1.11	36.5
64	1.1	2.61	30.0
32	1.8	1.85	27.9
Bot	1.5	2.24	29.5

Shockers: 15C 1595
M12 1764

Caught
9 YOY MISSED

Ø Recaps

Water Temp = 65°F @ 1250

AUGUST 3RD RECAPTURE '95

H27 Total Length: 198'
(20/80)

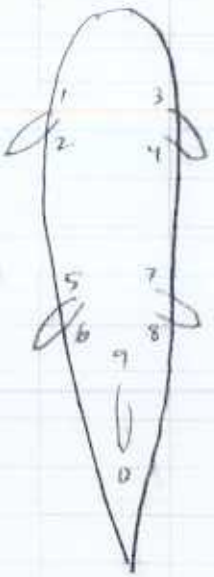
Loc	Depth (ft)	Vel (ft/s)	Width (ft)
Top	1.4	0.35	7.1
150	2.2	0.73/-0.26	10.9
100	0.6	2.16	7.0
50	0.5	1.98	6.5
Bot	1.8	3.25	10.1

Shocker: M12 2088 sec *Includes spot shocking up to 2nd Falls (H29)

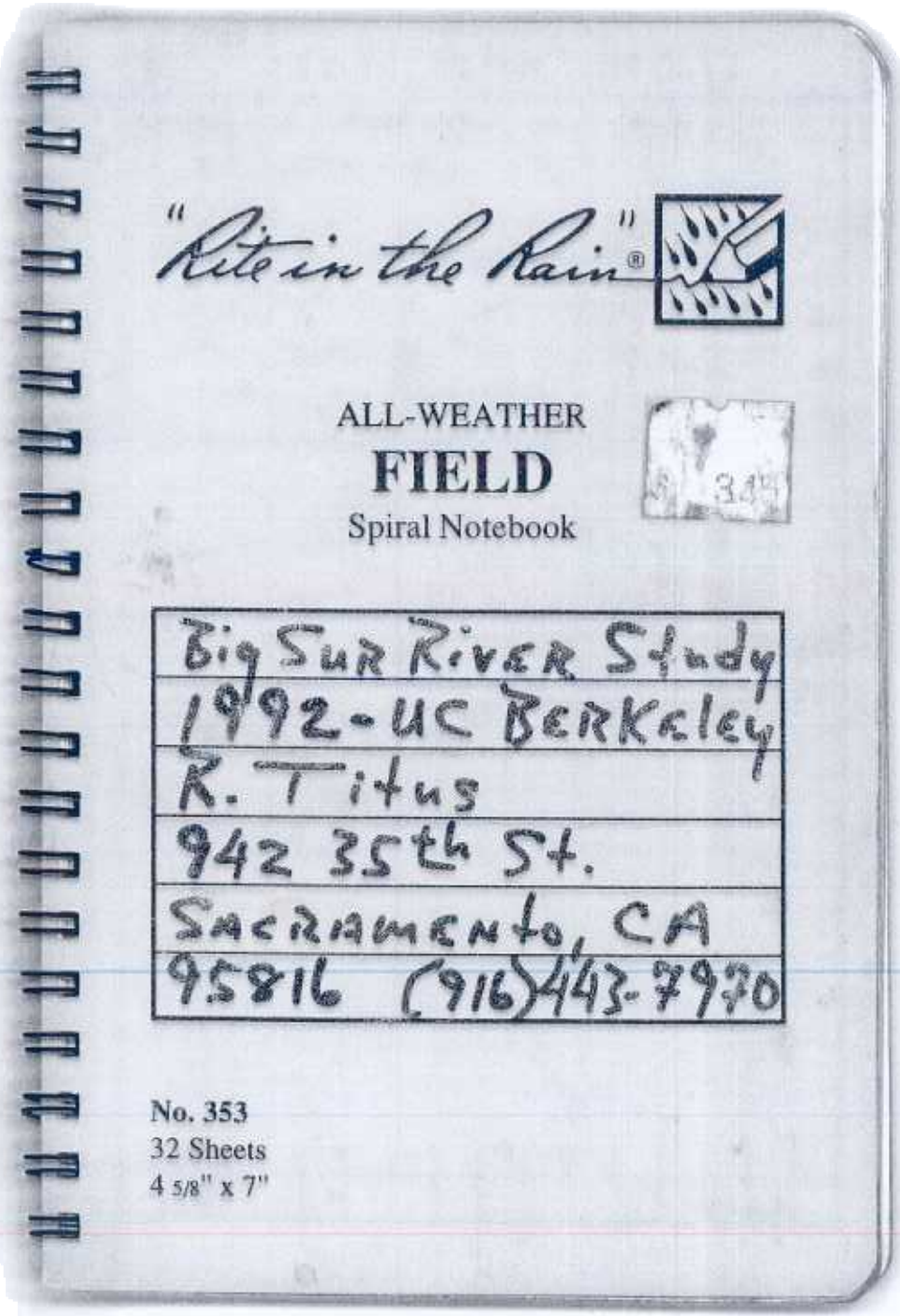
Water Temp = 62 °F @ 1530

? Fish Caught ? Recaps
1 YOY Escaped

	PLAT ENGTH	
G1	105'	1.3
G3	69'	3.3
G5	124'	5.3
C7	186'	7.3
C8	36'	8.3
C9	132'	9.3
C11	149'	35.3
C12	89'	12.3
C13	104'	13.3
C13.5	120'	37.3
C14	70'	14.3
C15	85'	15.3
M16	118.7'	16.3
M17	108'	17.3
M18	122'	18.3
M19	104'	19.3
M20	73.7'	20.3
M23	138'	23.3
M25	152'	25.3
SWAP M16		
H10	205'	10.3
H27	198'	27.3
H29	238'	29.3



VENTANA WILDERNESS SANCTUARY 408 624 1202
BARBARA WOLT


"Rite in the Rain"®
ALL-WEATHER
FIELD
Spiral Notebook
Big Sur River Study
1992 - UC Berkeley
R. Titus
942 35th St.
Sacramento, CA
95816 (916) 443-7970
No. 353
32 Sheets
4 5/8" x 7"

1/12"	0.083" =	0.1"
2/12	0.166 =	0.2
3/12	0.250 =	0.3
4/12	0.333 =	0.3
5/12	0.416	0.4
6/12	0.500 =	0.5
7/12	0.583 =	0.6
8/12	0.666 =	0.7
9/12	0.750 =	0.8
10/12	0.833 =	0.8
11/12 =	0.916 =	0.9

Big Sur River RECONNAISANCE
17 September 1992

Sample 1: Andrew Molera State Park, just downstream from parking lot in deep run section w/ bank stabilization structures, from near bottom of run up to 1st small Rock "dam", 1 pass @ mostly 200V, 90 Hz. MS-222 bucket temp = 64°F @ 1545; river temp = 62.5°F

SH (TL, mm)	
212	black spot disease (BSD)
94	BSD
104	BSD
135	"
170	"
156	"
163	"
159	"
157	"
151	"
135	"
107	"

Cont.

Sample 1 (cont.)
Relatively few YOY SH, high density of sculpins from YOY to granddaddies such as these:
Prickly sculpin (TL, mm)
159, 177
Section length ≈ 35 m (stepped off).
Sample 2: Immediately adjacent upstream, through series of small cobble dams, riffly water, c. 17 m long (stepped off).

SH (TL, mm)	
189	loose scales ! silvery, smolt-like
207	" " " " "
128	"
131	"
118	"
253	"
141	very silvery
137	" "
191	" "
202	" "
96	" "
136	" "
103	" "

several other SH missed. Overhead cover seems important.

9/17/92 (cont.)
Sample 3: Adjacent to walk-in campground, cobbly to riffly section w/ good riparian (vegetation hanging over water at stream margins), downstream from likely spawning riffle. Section ≈ 43 m long. River temp @ 18⁴⁰: 62°F

SH (TL, mm)	
74	dying, internal bleeding
98	
98	
94	
165	smolt
102	
95	
90	
122	smolt
95	
93	
110	
123	
126	
116	
130	parr

Sample 3 (cont)

SH (TL, mm) cont.

90 silvery
122
100
111
105
94
107
119
100
83
80
133 distinct parr marks
96

These fish were not nearly as infested w/ BSD as those captured at the parking lot.

18 Sept 1992

Walking survey of Pfeiffer-Redwood Creek, from nature center parking lot to falls: No fish seen. Flow continuous but shallow, intermittent gravel patches, low-flow barriers but perhaps passable at higher flows.

Walking survey of Post Creek: Flow entirely subterranean in lowermost reach through campground and to confluence with Big Sur River. Upstream from campground, stream gradient increases, flow becomes intermittent and then +/- continuous as one progresses upstream. Apparently perennial holding pools maintained aquatic life as witnessed by the presence of water striders and one large adult frog. No fish were seen, however, not even YOY steelhead which could probably over-summer in the shallow pools.

cont.

Post Cr., 9/18/92, cont.

In addition to reduced flow due to pumping upstream, SH use of the stream is probably also compromised by many potential barriers created by log jams. Some jams have large volumes of sand and gravel backed up behind them and drops of 10' or more have been created. Some spawning might occur in the lower stream, and resultant fry may emigrate to the river as flow drops in summer. Post Creek should be looked at again during the spawning/high flow season.

Sample 4: Big Sur R. @ stone restrooms, in campground, access from day-use side. Cobbly to riffly w/overhanging alders on one side.

SH (TL, mm)			
96	54		76
64	56		63
75	84		128
82	69		81
73	74		67
68	66		80
69	61		88
93	52		134
68	130		61
63	164		74
73	166	smolt ish	71
84	94		68
143	63		84
93	66		85
94	76		94
75	80		75
172	65		94
73	71		88

Also in the catch: sculpins, sticklebacks, and 1 lamprey ammocete.

My overall impression was that these fish were not as silvery and loose-scaled as the trout down in Andrew Molera State Park. BSD infestations were light relative to downstream fish. In general, the larger/older a fish was, and thus the longer it had been in the stream, the heavier the parasite load.

19 Sept 1992

Sample 5: Big Sur gorge c. 100m downstream from big pool at base of barrier falls. Low SH density - shocked several pool sequences.

SH (TL, mm)

72	120	98
86 *	101	63
179	71	81
70	67 *	114 *
94 *	69	142
87	165	136
98	85	142
100	86	88
75 *	96	82
155	160	93
127 *	181	92
74	103 *	
106 *	98	
74	123	
105	65	
117	87	
158	99	
149	120	
110	97	

* Kept for Ageing.

The gorge area contains a high abundance of high quality spawning gravel, but may be too

sterile (steep gradient, much bedrock, Allochthonous mat. flushed out) to be a productive rearing area. Trout well spaced.

19 Sept 1992

Sample 6: Big Sur River between Hwy 1 bridge and group camps. Low velocity, deep glide. Shocked in channel and undercut along west bank. SH density generally low, highest at upstream end in root wad immediately below short riffle. Section length ≈ 45 m (stepped off).

SH (TL, mm)			
85 } Kept - fishing	77	81	
65 } morts *	101 *	74	
71	88	88	
73	75	137	
116 *	93	83	
85	91	77	
88	83	101	
82	80	85	
82	87	61	
82	62	+ 1 missed 1+	
53	70	& 1 Age-2+	
79	65	(the only one	
164	74	seen - c. 20 cm) which	
		escaped bucket	

19 Sept. 1992 (cont.)

Sample 7: Cobbly to riffly section downstream from potential spawning gravel bar. Trout strongly associated w/ cover, e.g. Root wads and temporary stone dam at upstream end. Relatively low trout density. Section length ≈ 38 m. This section just upstream from Sample 6 section.

SH (TL, mm)		
79 } Kept * -	75	85
89 } fish. morts.	135	72
95 *	69	68
109	90	68
95	66	
69	76	
61	71	
88	67	
81	150	
71	154	
104 *	92	
72	78	

19 Sept 1992

Juan Higuera Cr: Spot shocked from downstream culvert to above Hwy 1 bridge.

SH/RT?	(TL, mm)
208	87*
205	
157	Walking survey on 9/20/92:
69	About 200 m above Hwy 1,
62	there is a 2 mt waterfall
62	which is most definitely a
55	barrier to upstream migration
75	of SH. The stream bottom
81	is heavily sedimented and
65	the apparent lack of SH
60	spawning substrate may be
128	yet another limiting factor.
210	Resident trout can probably
52	use the scattered patches
75	of fine gravel for spawning.
98	The stream gradient is
81	fairly steep, producing many
75	small cascades. Only RT
85	and crayfish have been seen -
70	no sculpins or sticklebacks.
91*	Adult size RT (20 cm+) seen above waterfall also.

Juan Higuera, 9/20/92 (cont.):

A mile or so up from Hwy 1, one comes to the forks of the creek. The north fork has the greater flow. Both forks have waterfalls w/in 100 m or so of the confluence. The falls on the south fork are comparable to those on Pfeiffer Redwood Creek, occur along about the same elevation contour on the Ventana Wilderness map, and were probably formed by the same uplifting event. The falls on the north fork are formed by huge boulders. The stream valleys of the forks are very narrow, steep, and high. Adult size RT also seen in north fork above the boulder falls.

9/20/92 Walking survey of lowermost Big Sur River, from Molera Park parking lot to mouth. This portion of the River, perhaps throughout most of Molera Park, is low gradient, mostly shallow w/ a cobbly substrate, and is lined w/ a riparian thicket of mostly deciduous vegetation (including lots of poison oak). Redwoods are absent. Access to the river is best from the walk-in campground side downstream to the campground.* Below this, the riparian is very thick and choked w/ poison oak. The lagoon is only accessible from the beach and working it would require chest waders or a skiff. The riparian vegetation extends out over the water on both sides of the lagoon. The river mouth is still open to the ocean.

* of course, most of this portion of the river may be accessed by simply walking down the stream channel.

20 Sept 1992
Sample 5: Big Sur River in Molera Park @ access gate 9, at downstream edge of redwood zone. Medium velocity glide w/ large cobble-rubble bottom. Most trout, and all large ones, were captured at upstream end of glide @ root-wad and overhanging alder, just downstream from riffle. Trout density in the open glide was low, at least during this time of day (c. 16^{00}-16^{30} PDT). This pass was essentially a complete bank-to-bank sweep. Section length ≈ 21 m.

SL (TL, mm)		
85*	83	105*
98	187	90
96	98	100
91	102	95
91	140	181 VERY lt. BSB
100.	80	91
119*	121	90
96	219 VERY lt. BSB	100
89	117	.

* Kept for ageing.

0 Sept 1992 cont.

Sample 9: Big Sur R. about 30 m upstream from sample 8 site. A mostly open, cobble riffle, high current velocity. Sec. length ~13 m. One complete el-fishing sweep.

H(TL, mm)

91 *	112 *
76	76
80	92
70	93
94	93
76	89
99	
142 heavy BSD?	
91	
85	
92	
95	
100	
90	
78	
87	
84	
79	
79	

13 October 1992

Marking Site Descriptions

Section-Reach: C7

This is a low gradient riffle (LGR, habitat type 1) located off the path from the stone restroom. This is a very long riffle, all of which was not sampled. We worked the uppermost portion of it.

Widths	Length	Thalweg Depth*	*Current Velocity
36'1"	92'1"	0.9'	1.2 ft/s
37'0"		0.5'	0.8 ft/s
45'0"		0.6'	1.7 ft/s
46'5"		0.5'	1.7 ft/s
49'7"		0.65'	0.9 ft/s
		0.9'	0.8 ft/s

~~Substrate and cover?~~

See C7 on 930608 for substrate and cover description.

*These measured at ~5 m intervals.