

107-10-10300  
BASELINE AQUATIC SURVEY

Part I.

1. Survey Areas A 1-50, B 1-19, C 1-7 2. Historical Fish PS,CS,SS,ST,CT,DV

Part II.

1. Stream Name Black Bear Creek 2. ADF&G Catalogue No. 107-10-30  
3. USGS Map No. Craig C-1 4. Legal Location R86E,T71S,S-12  
5. Latitude and Longitude 55°43'<sup>35"</sup>27", 132°<sup>10'00"</sup>9'<sup>50"</sup> 6. Agency Unit 05  
7. Aerial Photo No. 0024,1873,215,9-14-73 02190 8. Mgmt. Area K29-709  
9. Estimated Flow 1 m<sup>3</sup>/sec 10. Flow Stage 2  
11. Land Use a. present trapline b. historical rigging site for cannery  
12. Temperature Sensitivity and/or origin 5,4,1  
13. Access 2 14. Stream Temperature 12°  
15. pH 7 16. Intertidal Zone \_\_\_\_\_ a. Gradient 1.5  
b. Bottom type 1. fines \_\_\_\_\_ 2. gravel/small cobble 100  
3. large cobble/boulders/bedrock \_\_\_\_\_  
c. ASA excellent - a 100 m. by 30 m. stretch with 99% ASA in the upper ITZ  
d. Schooling nice deep pool in upper ITZ  
e. Shellfish potential evidence of crab, clams, and cockles in Union Bay  
f. Anchorage Long tidal flat, Union Bay subject to high winds

17. Comments

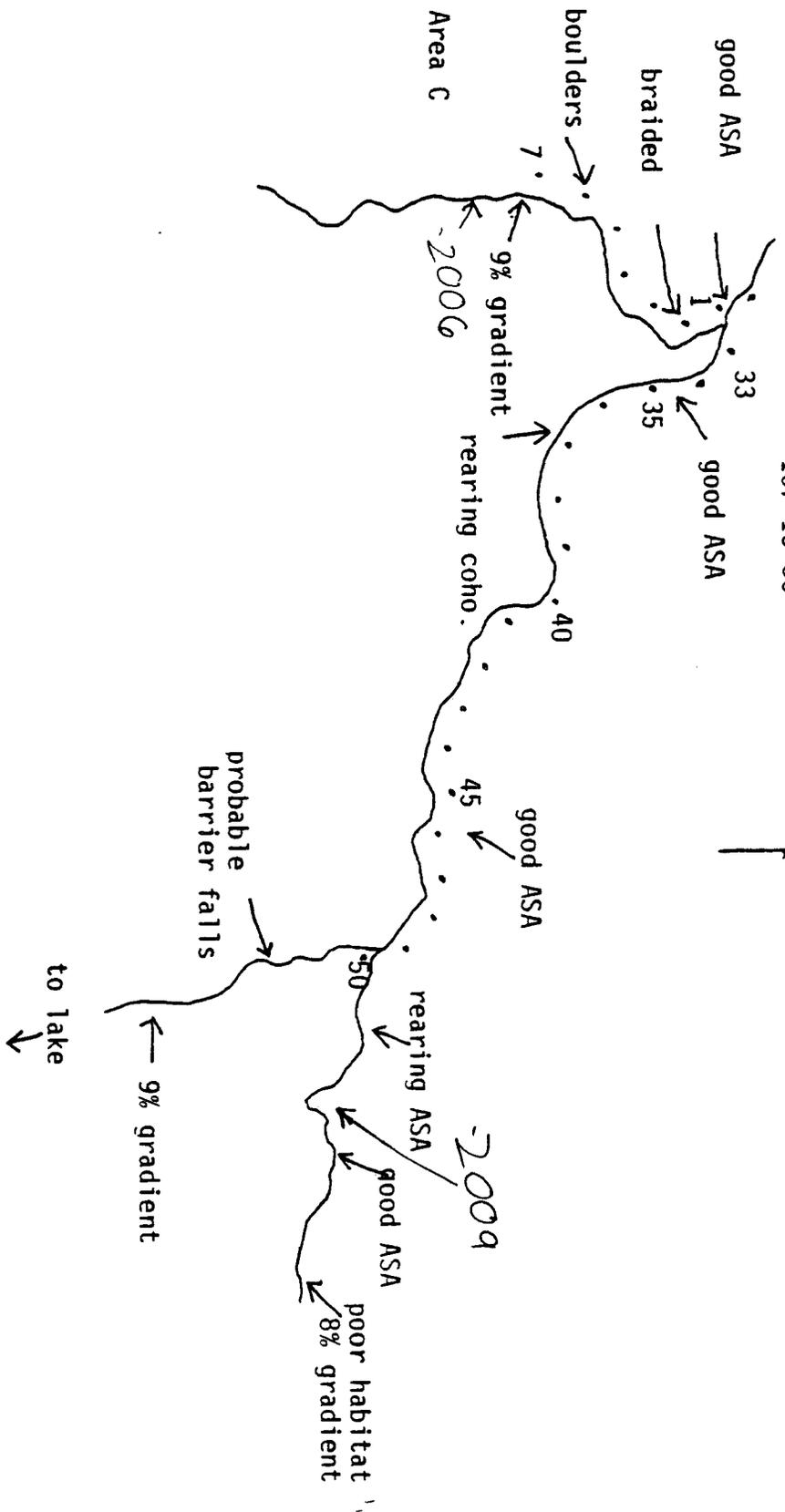
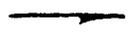
Ten Peterson disc tags and two "J" tags were recovered during the survey. 107-10-30 appears to be a very productive system. Excellent quality ASA is found in Sections 1 through 15 and 33 through 49 in Area A. Area B also contains almost a mile long stretch of good ASA. Smaller amounts of ASA are present in Area C and a small tributary from an old beaver area in Section 50. The rearing habitat is of exceptional quality, due to a lack of cover throughout most of the mainstem. The tributaries had heavy debris loads which provided more cover. Rearing coho were very abundant throughout the system except for the stretch of bedrock in Sections 1 through 32. More rearing coho were observed in this stream than any other system surveyed during the 1984 field system.

18. Investigators Burns/Cariello 19. Weather 3,1





107-10-30





1. Excellent riffle in the upper ITZ.



2. Excellent ASA in Section #14.



3. Section 29: Poor rearing and ASA were provided by the predominately bedrock substrate of Reach 4.



4. Section 48: Excellent ASA typical of Reach 5. Rearing coho were abundant also.



5. Section 50: Many rearing coho and a good stretch of ASA were found up this tributary.



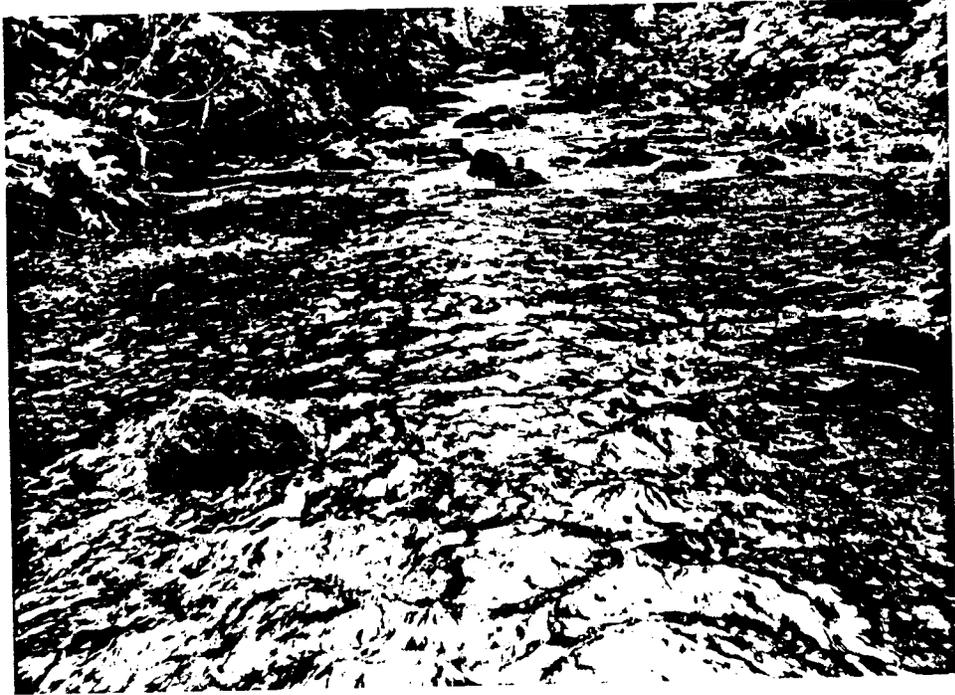
6. Section 50: The ASA and rearing habitat decline immensely at the end of the survey.



7. Section 7: Probable 4 m. airstep falls 150 m. beyond Section 50.



8. Large boulder and bedrock substrate 400 m. beyond Section 50.



1. Typical habitat in the lower reach.



1. Section 2: Typical large cobble substrate in the ASA of the lower reach.



2. Section 7: Large boulder substrate at the end of the survey.

Section	Length (m)	Width (m)	ASA %	ASA Total	Section	Length (m)	Width (m)	ASA %	ASA Total
1	100	16	70	1120					
2	100	19	20	380					
3	100	11	60	660					
4	100	13	80	1040					
5	100	18	10	180					
6	100	16	50	800					
7	100	31	30	930					
8	100	23	40	920					
9	100	23	20	460					
10	100	9	20	180					
11	100	9	75	675					
12	100	11	65	715					
13	100	11.5	60	690					
14	100	12	75	900					
15	100	12	25	300					
16	100	10	25	250					
17	100	10	10	100					
18	100	12	1	12					
19	100	12	10	120					
20	100	12	10	120					
21	100	15	0	0					
22	100	17	5	85					
23	100	16	1	16					
24	100	13	1	13					
25	100	10.7	1	10.7					
26	100	8.2	5	41					
27	100	11.7	1	11.7					
28	100	9.3	1	9.3					
29	100	16	0	0					
30	100	9	1	9					
31	100	9.6	25	240					
32	100	13	5	65					
33	100	10	50	500					
34	100	14.5	30	435					
35	100	14.5	60	870					
36	100	19	55	1045					
37	100	17	40	680					
38	100	10.5	60	630					
39	100	13.5	60	810					
40	100	10.5	40	420					
41	100	15	60	900					
42	100	7.3	50	365					
43	100	9.5	65	617.5					
44	100	10.3	65	669.5					
45	100	17	70	1190					
46	100	12.5	75	937.5					
47	100	11	80	880					
48	100	17.1	80	1368					
49	100	5.7	30	171					
50	100	12	5	75					

Total Area A ASA

23,616.2m<sup>2</sup>

Section	Length (m)	Width (m)	ASA %	ASA Total	Section	Length (m)	Width (m)	ASA %	ASA Total	
1	100	2.5	15	37.5	1	100	8.1	30	243	
2	100	3.8	15	57	2	100	8	30	240	
3	100	5.6	10	56	3	100	10	20	200	
4	100	5.8	1	5.8	4	100	9	10	90	
5	100	4.8	20	96	5	100	6.3	1	6.3	
6	100	5.4	5	27	6	100	3.2	1	3.2	
7	100	5.4	1	5.4	7	100	6.7	0	0	
8	100	6	15	90					Total Area "C" ASA	782.5m <sup>2</sup>
9	100	7	50	350						
10	100	6.2	50	310						
11	100	3.8	30	114						
12	100	8	30	240						
13	100	17.5	40	700						
14	100	4.8	30	144						
15	100	7	30	210						
16	100	6.5	65	422.5						
17	100	5	50	250						
18	100	7.2	5	36						
19	100	7.2	0	0						

Total Area "B" ASA 3,151.2m<sup>2</sup>

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/22/84  
 Area A

1. Reach	1	1	1	1	1	1	1	1	1
2. Section	1I	2I	3	4	5	6	7	8	9
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	1	1	1	1	.75	.75	.75	.75	.75
5. Water Quality	3	3	3	3	3	3	3	3	3
6. Water Width a. channel	27.5	29	20	20	32	26	31	23	36
b. water	16	19	11	13	18	16	31	23	23
c. special character			3						
7. Water Type % SS	15	65	40	20	80	50	65	70	80
SF	85	25	59	80		50	30	30	10
DS		10	1				5		10
DF					20				
8. Undercut Banks (m) left	0	0	0	15	30	50	10	60	10
right	0	0	15	1	0	30	1	20	15
9. Debris Cover % small	0	0	0	0	1	1	1	1	0
large	0	0	1	1	1	15	1	1	1
10. Riparian Vegetation %	0	0	0	5	15	10	1	10	1
11. Substrate %:									
a. boulders		25							5
b. cobble	15	25	35	40	40	30	40	40	40
c. gravel	70	35	50	50	50	60	50	50	40
d. sand	15	15	15	10	10	10	10	10	10
e. organic muck									
f. bedrock									5
g. other									
12. ASA	70	20	60	80	10	50	30	40	20
13. Gravel Shape	3	3	3	3	3	3	3	3	3
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	A	A	A	B	A	A	A	A	A
15. Average Depth (cm)	13	10	41	13	10	30	15	18	18
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	2/3	2/3	2/3	2/3	2/3	2/3	2	2/3	2/1.3
b. density	1/3	1/3	1/2	2/2	2/2	2/3	1	1/3	1/3
19. Sampling	-	-	-	-	-	-	-	-	Y
20. Rearing Area	10	50	30	20	60	50	70	60	80

21. Comments

Section 1: Survey was started at the mouth of 107-10-29 near the upper end of their common ITZ. The ASA is excellent quality. The rearing habitat lacks cover in this Section and throughout the reach. There is little debris, undercut banks, or overhanging vegetation.

Section 2: Schools of rearing coho were observed. A good riffle provides ASA for 20 m. before the stream enters a pool with boulders and cobble substrate. The rearing coho were utilizing the boulders in this low velocity area for cover. Old logging sign was evident on the banks.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 3: Rearing coho were abundant throughout the reach. A large back water area is present to the right which could provide rearing area at high water stages. It is too shallow and lacks enough cover to be good rearing habitat at the present flow. A good riffle provides excellent ASA.

Section 5: Good gravel substrate is present, but the water velocity is insufficient for ASA at a normal flow stage. Cover is present only along the left bank.

Section 9: A group of possible steelhead redds were observed.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/22/84

1. Reach	2	2	2	2	2	3	3	3	3
2. Section	10	11	12	13	14	15	16	17	18
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	1.5	1.5	2	1.5	2	1.5	1.5	1.5	2.5
5. Water Quality	3	3	3	3	3	3	3	3	3
6. Water Width a. channel	22	15	19.5	22	23	15	17	20	15
b. water	9	9	11	11.5	12	12	10	10	12
c. special character	-	-	-	-	1	-	-	-	-
7. Water Type % SS	40	30	25	20	20	35	35	65	25
SF	50	70	70	80	80	60	60	25	65
DS	10		5			5	5	10	10
DF									
8. Undercut Banks (m) left	20	30	1	10	10	15	20	10	1
right	0	5	50	0	0	10	1	0	0
9. Debris Cover % small	1	0	1	1	1	1	1	1	0
large	1	1	3	1	5	5	1	1	5
10. Riparian Vegetation %	10	5	5	1	5	5	5	5	5
11. Substrate %:									
a. boulders	15				10	35	40	45	60
b. cobble	35	30	40	50	40	30	25	20	20
c. gravel	40	60	50	40	40	25	25	15	10
d. sand	10	10	10	10	10	10	10	10	10
e. organic muck									
f. bedrock									
g. other									
12. ASA	20	75	65	60	75	25	25	10	1
13. Gravel Shape	3	3	3	3	3	3	3	3	3
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	A	A	B	B	B	B	B	B	B
15. Average Depth (cm)	18	15	13	25	20	15	13	10	13
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	2,1	2	2/3	2/3	2/3	2/3	2/1,3	2/1	2/1
b. density	2	1	1/3	1/3	1/3	2/3	1/3	1/3	1/3
19. Sampling	-	-	-	-	-	-	-	-	-
20. Rearing Area	80	50	50	40	30	50	50	40	50

21. Comments

Section 10: The gradient increases slightly and the stream channel narrows.  
 Section 11: Possible pre-emergent markers are present on the right bank. Two Peterson disc tags were found.  
 Section 12: A deep pool at the end of the Section provides rearing as well as being a possible holding area.  
 Section 13: The rearing habitat continues to lack much cover of any type.  
 Section 14: A large tributary surveyed as Area B enters from the right bank at the start of the Section. Some braiding is present.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 15: The ASA decreases as the substrate size increases. More deep pool areas are available in this reach.

Section 18: A large deep pool is present midway through the Section.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/22/84 - 6/19/84  
 Area A

1. Reach	3	4	4	4	4	4	4	4	4
2. Section	19	20	21	22	23	24	25	26	27
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	1.5	1.25	1.5	1	2	2	2.5	4.5	4
5. Water Quality	3	3	3	3	3	3	3	3	3
6. Water Width a. channel	15	14	15	17	20	18.5	16	20	14
b. water	12	12	15	17	16	13	10.7	8.2	11.7
c. special character	-	-	-	-	-	-	-	-	-
7. Water Type % SS	30	20	10	30	15	15	10	10	15
SF	70	80	90	70	85	85	90	75	75
DS								5	5
DF								10	5
8. Undercut Banks (m) left	0	10	1	0	5	0	5	0	0
right	1	20	1	15	0	0	0	0	0
9. Debris Cover % small	0	0	0	0	0	0	0	0	0
large	0	0	0	0	0	1	1	5	1
10. Riparian Vegetation %	5	1	1	5	15	15	10	5	5
11. Substrate %:									
a. boulders	50	55	65	40	70	30	15	70	10
b. cobble	25	25	20	30	10	10	10	5	5
c. gravel	15	15	10	20	5	8	5	3	3
d. sand	5	5	5	5	5	2	1	2	2
e. organic muck									
f. bedrock	5			5	10	50	69	20	80
g. other									
12. ASA	10	10	0	5	1	1	1	5	1
13. Gravel Shape	3	3	3	2	2	2	2	2	2
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	B	B	B	B	B	B	B	B	B
15. Average Depth (cm)	13	15	13	13	15	17	25	25	20
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	2/1	2/14	2/1,4	2/1	1,3	1,3	1,3	1,3	1,3
b. density	1/3	1/3	1/3	1/3	1	1	1	1	1
19. Sampling	-	-	-	-	-	-	-	-	-
20. Rearing Area	60	50	50	60	15	15	15	15	15

21. Comments

Section 19: A Peterson disc tag was recovered. Icing scars were observed on alder along the bank.

Section 20: The stream is slowly evolving into another habitat type as the ASA decreases and the substrate changes to boulder and bedrock by Section 23.

Section 22: A small dark tributary with an estimated flow of .015 to .025 m<sup>3</sup>/sec. enters from the right bank near the end of the Section. The water temperature was 11.5°C. The tributary is 2.5 m. in width and averages 7 to 10 cm. deep. A heavy moss growth is present over the substrate in places. Minimal amounts of very poor

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 22, continued: ASA are present due to the silty, compact nature of the cobble substrate. There are abundant salmon bones on the bank however, and rearing coho are abundant. The tributary provide rearing habitat for about 400. The water velocity is very sluggish and it does not appear than an increased water flow will improve the fisheries habitat much.

Section 23: A small tributary enters from the left bank near the start of the Section. The water temperature was 9.5°C and the pH was 7. The substrate is moss covered boulders and there is no ASA present Sections 23 through 50 were surveyed on 6/19/84.

Section 24: Two more Peterson disc tags were recovered in this Section. The bedrock substrate and increased gradient combine to provide little ASA or rearing habitat.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/19/84

1. Reach	4	4	4	5	5	5	5	5	5
2. Section	28	29	30	31	32	33	34	35	36
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	5	5	3	2	2	1.5	1.5	1.5	1.5
5. Water Quality	3	3	3	3	3	3	3	3	3
6. Water Width a. channel	16.7	20.1	14.3	9.6	15.6	19	21.9	15	27
b. water	9.3	16	9	9.6	13	10	14.5	14.5	19
c. special character	-	-	-	-	-	-	3	3	3
7. Water Type % SS	10	10	10	15	20	45	40	50	30
SF	70	80	80	75	75	50	50	40	70
DS	10					5	10	10	
DF	10	10	10	10	5				
8. Undercut Banks (m) left	0	0	0	10	10	80	10	10	10
right	0	0	0	5	0	10	60	50	50
9. Debris Cover % small	0	0	0	0	0	0	1	1	0
large	1	2	1	1	1	3	5	3	1
10. Riparian Vegetation %	10	15	15	15	15	15	15	10	5
11. Substrate %:									
a. boulders	5			1					
b. cobble	3			5	1		5	5	
c. gravel	2		1	59	74	75	70	75	75
d. sand	1		1	10	20	25	25	20	25
e. organic muck									
f. bedrock	89	100	98	25	5				
g. other									
12. ASA	1	0	1	25	5	50	30	60	55
13. Gravel Shape	2	2	2	2	2	2	2	2	2
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	B	B	B	B	B	B	B	B	B
15. Average Depth (cm)	25	25	17	17	10	10	10	18	12
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	1,3	1,3	1/3	1,3	3/1,2	2,3	2,3	3/1,2	3/2
b. density	1	1	1/2	2	2/3	2	2	2/3	2/3
19. Sampling	-	-	-	-	-	Y	-	-	-
20. Rearing Area	15	15	15	20	30	40	50	40	40

21. Comments

Section 28: A debris falls is present, but is not a barrier. It could be a hindrance at low flow.

Section 30: Moss growth is heavy.

Section 31: The gradient decreases and both the ASA and rearing habitat improve in quality. Fontinalis is present in Sections 31 and 32.

Section 32: A tributary surveyed as Area C enters from the right bank at the end of the Section.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 33: Large numbers of rearing coho were observed throughout Reach 5. The rearing habitat is improved over the bedrock stretch in Reach 4, but still lacks enough debris or overhanging riparian vegetation to provide excellent rearing habitat. A Peterson disc tag was recovered. Excellent substrate provides exceptional ASA in this reach.

Section 34: Green algae is heavy in the slow shallow areas. This reach contains many small back water areas which contain rather stagnant water at the present flow, but could provide sheltered areas at high water flows.

Section 35: A small feeder tributary, 9°C, enters from the right bank. Coho were utilizing it for rearing area.

Section 36: A stickleback is observed. Another small tributary enters from the right bank and providing rearing habitat to coho.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/19/84  
 Area A

1. Reach	5	5	5	5	5	5	5	5	5
2. Section	37	38	39	40	41	42	43	44	45
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	1.5	1.5	1.5	1.5	2	2	2.5	2.5	2.5
5. Water Quality	3	3	3	3	3	3	3	3	3
6. Water Width a. channel	18	21	21.4	15.5	18	10.5	15	11.3	17
b. water	17	10.5	13.5	10.5	15	7.3	9.5	10.3	17
c. special character	-	-	-	1	-	-	-	-	-
7. Water Type % SS	45	35	35	20	20	25	25	40	30
SF	45	35	45	40	70	50	75	60	70
DS	10	30	20	20	10	25			
DF									
8. Undercut Banks (m) left	10	15	20	20	30	60	60	20	20
right	50	15	15	20	30	40	20	20	20
9. Debris Cover % small	0	1	1	2	1	1	1	1	-
large	1	5	8	10	5	6	3	1	-
10. Riparian Vegetation %	10	15	20	25	15	20	15	15	15
11. Substrate %:									
a. boulders									
b. cobble					5	5	10	10	10
c. gravel	75	75	75	75	80	75	80	80	80
d. sand	25	25	25	25	15	20	10	10	10
e. organic muck									
f. bedrock									
g. other									
12. ASA	40	60	60	40	60	50	65	65	70
13. Gravel Shape	2	2	2	2	2	2	2	2	2
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	B	B	B	B	B	B	B	B	B
15. Average Depth (cm)	13	15	20	15	12	30	45	11	11
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	3/2	3/2	3/2	3/2	3/2	3/2	3/2	3/2	3/2
b. density	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3
19. Sampling	-	-	Y	-	-	-	-	-	-
20. Rearing Area	50	50	40	65	50	60	50	50	40

21. Comments

Section 37: Good gravel is present, but the velocity of the stream is too slow to allow it to be fully utilized as ASA.  
 Section 40: Large debris creates some braiding. A large patch of blue clay is present on the left bank and stream bottom.  
 Section 41: A Peterson disc tag was recovered.  
 Section 43: A small feeder tributary enters from the right bank. There continues to be a lack of cover although rearing coho are plentiful.  
 Section 44: A small tributary enters from the right bank. It is very steep and no ASA is provided.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/19/84

Area A

1. Reach	5	5	5	5	6				
2. Section	46	47	48	49	50				
3. Section Length (m)	100	100	100	100	100				
4. Gradient	2.5	2.5	2.5	2.5	3				
5. Water Quality	1	1	1	1	1				
6. Water Width a. channel	12.5	12.5	23.5	7.2	18.9				
b. water	12.5	11	17.1	5.7	15				
c. special character		1	1	1	1				
7. Water Type % SS	25	50	30	30	30				
SF	75	50	70	70	70				
DS									
DF									
8. Undercut Banks (m) left	50	50	60	60	70				
right	50	50	30	10	20				
9. Debris Cover % small	0	0	0	0	0				
large	0	0	2	0	0				
10. Riparian Vegetation %	15	20	10	10	10				
11. Substrate %:									
a. boulders			1	25	45				
b. cobble	15	50	49	59	45				
c. gravel	65	40	40	15	5				
d. sand	20	10	10	10	5				
e. organic muck									
f. bedrock									
g. other									
12. ASA	75	80	80	30	5				
13. Gravel Shape	2	2	2	2	2				
14. Streambank Vegetation									
a. percentage	100	100	100	100	100				
b. type	B	B	B	B	B				
15. Average Depth (cm)	12	10	15	25	15				
16. Beaver Activity	5	5	5	5	5				
17. Potential Barrier	-	-	-	-	-				
18. Aquatic Vegetation									
a. type	3/2	3/2	3/2	3/2	3/2				
b. density	2/3	2/3	2/3	2/3	2/3				
19. Sampling	-	-	Y	-	-				
20. Rearing Area	25	25	40	45	30				
21. Comments									

Section 46: Several possible steelhead redds are present. Rearing coho are abundant.

Section 47: A flood channel to the right could provide ASA at high water stages. A yellow "J" tag was recovered. The stream begins to braid.

Section 48: The braiding continues with excellent ASA present.

Section 49: The substrate is starting to get more compact and the ASA quality is decreasing. Rearing coho are still abundant.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 50: Another Peterson disc tag was recovered. A high water channel is present to the right for a short distance. A .03 to .04 m<sup>3</sup>/sec tributary enters from the left bank at the end of the Section. About 250 m. up this shallow tributary is an old beaver dam in poor repair. This 250 m. stretch was 3 to 4 m. in width and contained 25% ASA. Many rearing coho were observed. There was a good debris load and riparian vegetation cover. Above the beaver dam was a 150 m. stretch with 40% ASA. The stream width continued at 3 to 4 m. and the gradient increased to 4%. Many coho fry were observed. The gradient increased to 8% shortly beyond here and the substrate became boulder/cobble. The mainstem survey was discontinued at the end of Section 50. A reconnaissance above here found that the substrate became primarily boulders with only patches of ASA. A stairstep falls with an overall height of 4 m. is present 150 m. beyond the end of the survey. The falls is a probable barrier. There is little rearing area and no rearing fish were observed above the falls. The gradient increases to 9% about 250 m. further upstream and the fisheries habitat diminishes greatly.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/22/84

Area B

1. Reach	1	1	1	2	2	2	2	2	2
2. Section	1	2	3	4	5	6	7	8	9
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	2	2	2	4	5	6	2.5	4.5	2.5
5. Water Quality	1	1	1	1	1	1	1	1	1
6. Water Width a. channel	6	6.2	8.6	8.2	6	9.4	10	7	7
b. water	2.5	3.8	5.6	5.8	4.8	5.4	5.4	6	7
c. special character	-	-	-	-	-	-	-	-	-
7. Water Type % SS	30	30	30	20	30	30	30	20	45
SF	70	60	65	80	70	70	70	80	45
DS		10	5						10
DF									
8. Undercut Banks (m) left	5	10	5	10	15	5	0	10	10
right	10	10	15	10	15	10	0	30	10
9. Debris Cover % small	1	2	2	2	1	1	1	1	1
large	5	20	15	20	10	5	1	3	10
10. Riparian Vegetation %	5	10	10	15	10	5	10	15	10
11. Substrate %:									
a. boulders	30	40	50	70	45	50	60	30	5
b. cobble	30	30	30	20	25	20	10	30	50
c. gravel	25	20	10	15	20	15	10	20	35
d. sand	10	10	5	5	5	5	5	10	10
e. organic muck									
f. bedrock	5		5		5	10	15	10	
g. other									
12. ASA	15	15	10	1	20	5	1	15	50
13. Gravel Shape	3	3	3	3	3	3	3	3	3
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	B	B	B	B	B	B	B	B	B
15. Average Depth (cm)	10	41	5	15	18	10	10	38	8
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	3	3/1	3/1	3	3	3	3/1	3	3
b. density	3	2/3	1/3	1	2	1	1/3	1	1
19. Sampling	Y	-	-	-	-	-	-	-	Y
20. Rearing Area	50	60	40	40	50	30	30	50	50

21. Comments

Section 1: The flow was estimated at .3 m.<sup>3</sup>/sec and the water temperature was 10.5°C. Rearing coho were abundant. A yellow "J" disc tag was found. The ASA is excellent quality.

Section 2: A .5 m. debris dam is present. A Peterson disc tag was found. A heavy debris load is providing cover and pool area.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 4: The gradient increases and patches of bedrock in the substrate were observed and there is little ASA as the substrate size increases.

Section 5: A good stretch of ASA is present.

Section 6: The substrate size continues to be large with a large number of boulders present. The rearing area lacks good cover in Sections 6 through 8.

Section 8: Good quality ASA is present in the last half of the Section.

Section 9: The stream is braided and alder is growing on the banks. Substantial amounts of ASA continue through this reach.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/22/84

Area B

1. Reach	3	3	3	3	3	3	3	3	4
2. Section	10	11	12	13	14	15	16	17	18
3. Section Length (m)	100	100	100	100	100	100	100	100	100
4. Gradient	1.5	7	2	2	3	1.5	2	1.5	3.5
5. Water Quality	1	1	1	1	1	1	1	1	1
6. Water Width a. channel	9	9.8	9	23	7.8	9	9.5	10	15
b. water	6.2	3.8	8	17.5	4.8	7	6.5	5	7.2
c. special character	-	1	-	-	-	-	-	-	-
7. Water Type % SS	40	30	30	20	30	35	30	30	20
SF	50	69	70	80	70	60	70	70	80
DS	10	1				5			
DF									
8. Undercut Banks (m) left	10	10	30	5	5	15	40	5	10
right	10	60	5	5	50	10	10	15	1
9. Debris Cover % small	1	10	1	5	1	1	1	1	1
large	5	40	10	30	5	5	5	5	3
10. Riparian Vegetation %	15	60	15	70	10	20	20	10	5
11. Substrate %:									
a. boulders					5	5	5	10	70
b. cobble	55	60	60	65	60	60	60	60	20
c. gravel	35	30	30	30	30	30	30	30	10
d. sand	10	10	10	5	5	5	5	5	
e. organic muck									
f. bedrock									
g. other									
12. ASA	50	30	30	40	30	30	65	50	5
13. Gravel Shape	3	3	3	3	3	3	3	3	3
14. Streambank Vegetation									
a. percentage	100	100	100	100	100	100	100	100	100
b. type	B	B	B	B	B	B	B	B	B
15. Average Depth (cm)	5	10	13	8	10	8	25	8	8
16. Beaver Activity	5	5	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-	-	-
18. Aquatic Vegetation									
a. type	3/2	3	3	3	3	3	3	3	3/1
b. density	1/3	1	1	1	1	1	1	1	1/3
19. Sampling	-	-	-	-	-	-	-	-	-
20. Rearing Area	50	60	70	50	50	60	30	30	20

21. Comments

Section 10: Good pool area.

Section 11: A heavy debris loading and riparian vegetation provide excellent cover for rearing. There is some braiding present.

Section 12: A small trickle tributary enters from the right bank. The tributaries substrate is cobble and gravel and at a higher flow good quality ASA would be provided. Rearing coho are utilizing it for rearing habitat.

Section 13: The stream is severely braided into three channels for 65 m. Rearing coho were abundant.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 14: The debris loading decreases and the substrate size begins to increase slightly.

Section 16: An excellent stretch of ASA is present.

Section 17: The rearing habitat is lacking in cover and is not good quality. The substrate size continues to increase to large cobble and boulder size.

Section 18: A small tributary with a substrate of large boulders enters from the right bank. The mainstem's substrate turns to primarily boulders in this Section.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/22/84  
 Area B

1. Reach	4								
2. Section	19								
3. Section Length (m)	100								
4. Gradient	11.5								
5. Water Quality	1								
6. Water Width a. channel	7.2								
b. water	7.2								
c. special character	-								
7. Water Type % SS	20								
SF	80								
DS									
DF									
8. Undercut Banks (m) left	15								
right	15								
9. Debris Cover % small	1								
large	1								
10. Riparian Vegetation %	5								
11. Substrate %:									
a. boulders	40								
b. cobble	15								
c. gravel	5								
d. sand									
e. organic muck									
f. bedrock	40								
g. other									
12. ASA	0								
13. Gravel Shape	3								
14. Streambank Vegetation									
a. percentage	100								
b. type	B								
15. Average Depth (cm)	5								
16. Beaver Activity	5								
17. Potential Barrier	-								
18. Aquatic Vegetation									
a. type	3/1								
b. density	1/3								
19. Sampling	-								
20. Rearing Area	10								
21. Comments									

Section 19: The survey was discontinued at the end of the Section. The substrate is predominately bedrock and large boulders. The gradient is increasing and there is little if any ASA or rearing area present.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM

Stream Name Black Bear Creek ADF&G No. 107-10-30 Date 6/19/84  
 Area C

1. Reach	1	1	1	1	2	2	2
2. Section	1	2	3	4	5	6	7
3. Section Length (m)	100	100	100	100	100	100	100
4. Gradient	3.5	3.5	3.5	4	6	8	9
5. Water Quality	1	1	1	1	1	1	1
6. Water Width a. channel	11	9.3	17.3	23	7.7	4.3	8.6
b. water	8.1	8	10	9	6.3	3.2	6.7
c. special character	1	1	1	1	1		
7. Water Type % SS	15	10	15	15	15	5	5
SF	75	80	75	75	80	90	90
DS	10	10	10	10	5	5	5
DF							
8. Undercut Banks (m) left	40	40	60	60	10	10	0
right	20	40	60	60	40	10	0
9. Debris Cover % small	3	3	5	5	5	5	0
large	15	20	25	30	25	10	5
10. Riparian Vegetation %	1	1	20	30	50	80	90
11. Substrate %:							
a. boulders	1	1	20	30	50	80	90
b. cobble	40	59	60	59	40	15	5
c. gravel	49	35	15	10	10	5	5
d. sand	10	5	5	1			
e. organic muck							
f. bedrock							
g. other							
12. ASA	30	30	20	10	1	1	0
13. Gravel Shape	2	2	2	2	2	2	2
14. Streambank Vegetation							
a. percentage	100	100	100	100	100	100	100
b. type	A	A	A	A	B	B	B
15. Average Depth (cm)	10	12	45	15	15	12	20
16. Beaver Activity	5	5	5	5	5	5	5
17. Potential Barrier	-	-	-	-	-	-	-
18. Aquatic Vegetation							
a. type	2/3	2/3	2/3	2/3	2/3	2/3	2/3
b. density	3/2	3/2	3/2	3/1	3/1	3/1	3/1
19. Sampling	-	-	-	-	-	-	-
20. Rearing Area	30	35	20	20	15	10	10

21. Comments

Section 1: The ASA substrate is primarily loose cobble. Braiding within the channel and a heavy blowdown load is present. Good numbers of rearing coho were observed. A Peterson disc tag was found. The flow is estimated at .25 m<sup>3</sup>/sec. and the temperature and pH were 7.5°C and 7 respectively.  
 Section 2: The braiding continues through the large debris present. A patch of blue clay was observed.

BASELINE (LEVEL TWO) AQUATIC SURVEY FORM, continued

Section 3: The stream braids into three channels and is difficult to follow in the heavy debris load through Section 4.

Section 5: The numbers of rearing coho observed decreased. The gradient increases and the substrate beings turning to primarily boulders. Dolly Varden fry, many having just recently absorbed the yolk sac, are abundant.

Section 6: Salmon bones were found on the bank.

Section 7: The survey was discontinued at the end of the Section. The gradient has increase substantially and the fisheries habitat has diminished. There has been no barrier observed yet, but there is little ASA or rearing habitat present.

FISH SAMPLING FORM

AUF&G No. 102-80-30 Date 6/22/84 Stream Name Black Bear Creek  
 Survey Area Area A H<sub>2</sub>O Temp. 12°C Bait Braunswager

Trap No.	Time Set	Time Pulled	Species	Comment
1	0930	0945	SS-38mm	Section 9-38mm
2	0930	0945	∅	Section 9 SS observed in trap, but escap

FISH SAMPLING FORM

ADF&G No. 107-10-30 Date 6/19/84 Stream Name Black Bear Crk  
 Survey Area A H<sub>2</sub>O Temp. 11°C Bait Braunswager

Trap No.	Time Set	Time Pulled	Species	Comment
1	0800	0815	6 SS-40mm	set in beaver dam area on tributary to left in Section 50
2	0935	0955	1 SS	Section 48
3	1203	1218	5 SS 5 CT	Section 39
4	1225	1240	3 SS	Section 33

FISH SAMPLING FORM

AUF&G No. 107-10-30 Date 6/22/84 Stream Name Black Bear Creek

Survey Area Area E H<sub>2</sub>O Temp. 10.5 Bait Braunswager

Trap No.	Time Set	Time Pulled	Species	Comment
1	1040	1540	CT	Section 1

FISH SAMPLING FORM

ADF&G No. 102-80-30 Date 6/22/84 Stream Name Black Bear Crk  
 Survey Area A H<sub>2</sub>O Temp. 12°C Bait Braunswager

Trap No.	Time Set	Time Pulled	Species	Comment
1	0930	0945	SS 38 mm	Section 9 38 mm.
2	0930	0945	∅	Section 9 SS observed in trap, but escaped

FISH SAMPLING FORM

ADF&G No. 107-10-30 Date 6/19/84 Stream Name Black Bear Crk  
 Survey Area A H<sub>2</sub>O Temp. 11°C Bait Braunswager

Trap No.	Time Set	Time Pulled	Species	Comment
1	0800	0815	all about 40mm 6 SS	Set in beaver dam area on tributary to left in Sec. 5
2	0935	0955	1SS	Section 48
3	1203	1218	5SS-5CT	Section 39
4	1225	1240	3 SS	Section 33

# FISH SAMPLING FORM

ADF&G No. 107-10-30      Date 6/22/84      Stream Name Black Bear Cr.  
 Survey Area B      H<sub>2</sub>O Temp. 10.5      Bait Braunswager

Trap No.	Time Set	Time Pulled	Species	Comment
1	1040	1540	CT	Section 1

PEAK ESCAPEMENT RECORD

107-10-30

DATE	PINK	CHUM	OTHER SPECIES	REMARKS
8/25/60	4,000			
9/1/61	2,400			
8/21/63	41,000			
8/19/65	26,000			
8/17/66	53,500			
8/21/67	650			
8/19/68	8,500			
8/26/69	10,000			
8/20/70	14,000			
8/21/71	86,800	100	600 coho	
9/11/72	19,690	77		
8/22/73	28,000			
8/27/74		1,000		
9/4/74	18,000.			
8/27/75	25,800			
8/29/76	50,500			
8/19/77	95,000			
8/28/78	47,750			
9/3/78		105		
8/1/79	35,000			
8/3/79		70		
8/19/80	57,000			
10/13/80			3 coho	
8/25/81	26,910	20		
9/14/82		27		
9/24/82	63,730			
9/29/82		45		

BASELINE AQUATIC SURVEY

Part I.

1. Survey Areas A 1-5 B 1-5 2. Historical Fish

Part II.

1. Stream Name Union Bay #5 2. ADF&G Catalog No.

3. USGS Map No. Craig C-1 4. Legal Location R86E,T71S,S-11

5. Latitude and Longitude 55°43'42" 132°11'05" 6. Agency Unit 05

7. Aerial Photo No. 0024,1873,215,9-14-73;02190 8. MGMT Area K29-709

9. Estimated Flow .15m<sup>3</sup>/sec 10. Flow Stage 2

11. Land Use. a. present none observed b. Historical none observed

12. Temperature Sensitivity and/or origin 5,4,1

13. Access 2 14. Stream Temperature 11.5°C

15. pH 6.5 16. Intertidal Zone  a. Gradient 2.5

b. Bottom type 1. fines 10 2. gravel/small cobble 45

3. large cobble/boulders/bedrock 45

c. ASA poor-the only usable gravel was in the lower ITZ

d. Schooling only in Union Bay

e. Shellfish potential evidence of clams, cockles, and crab

f. Anchorage fair - extensive tidal flat

17. Comments

Area A was surveyed 6/24/84 and Area B 8/12/84. Rearing coho were observed in the ITZ. Both deer and bear sign were observed.

Union Bay #5 has little potential up to a beaver dam about 500 m. above the ITZ.

Area A has a substrate of primarily boulders and bedrock that provides little ASA. The rearing habitat in Area A is not good quality either, due to a lack of debris or undercut banks. Only a few rearing fish were observed in the first five Sections.

Area B is a tributary to the large active beaver dam area. There is about 400 m. of fair quality ASA in Area B. There is a large amount of good rearing habitat available in Area B and the beaver pond. Rearing coho were abundant and a large number were captured in a minnow trap. This stream should be nominated as an anadromous stream.

18. Investigators Burns/Cariello 19. Weather 3

20. Date 6/24/84 - 8/12/84 21. Time 0800-1030,0900-1100