

Spawning habitat conditions: None Poor Fair Good Excellent

Describe spawning habitat: Patch gravel is present from 70 meters up to 950 meters. Gravel is ideal sized but impacted by clay.

Rearing habitat conditions: None Poor Fair Good Excellent

Describe pond and other rearing habitat: The lower 70 meters runs along and under the road and has been impacted by brush cutting, and road maintenance. From 70 to 255 meters is moderate gradient with good cover and LOD. Adults have been observed spawning in this reach. Above this point to 435 meters is low gradient with beaver ponds in the lower end. There is good cover and woody debris throughout. Two small tribs with multiple beaver dams and ponds enter on the right bank. From 435 to 950 meters the stream is low gradient with many pools, woody debris and cover is abundant. At 950 meters the gradient increases to 15%, this is the probable end of anadromous access. At 1076 meters the channel splits, The left bank channel is only accessible 10 meters to a cascade. The right bank channel is slightly larger and is low gradient up to the next split. Above the split the stream increases in gradient quickly to a steep cascade at 1195 meters.

Describe unaccessible habitat:

Wetland type: Bog Marsh Scrub-shrub Forested

Describe:

Flooding potential: Low Medium High

Describe: Site is protected from the river, and appears rather stable.

FISH INFORMATION

Site entry condition: Poor Fair Good

Describe: A steep cascade at the mouth provides difficult access during low to moderate flows in the SF Stillaguamish river. The culvert is probably a complete barrier to juvenile passage.

Coho access and use: Juvenile Unknown None Poor Fair Good
Adult Unknown None Poor Fair Good

Describe: Juveniles were observed on the day of the survey and on previous surveys, six adults were observed on the day of the survey.

Other species acces and use: Chum Pink Sockeye Chinook Trout

Describe: Steelhead, char and resident trout use is presumed but not verified.

ENHANCEMENT OPPORTUNITIES

Project type: Culvert upgrade, fishway/baffles

Equipment access: Good

ADDITIONAL COMMENTS: Concrete box culvert under the Mtn Loop Highway is currently a partial barrier to upstream migration due to slope, sheet flow and drop at the outlet. (See 05.0433A 0.10) Culvert has adequate hydraulic capacity to baffle, would need a small fishway at the outlet.

ATTACHMENTS AVAILABLE

Aerials Sketch Maps Spawning Surveys Juvenile Trapping
 Other References

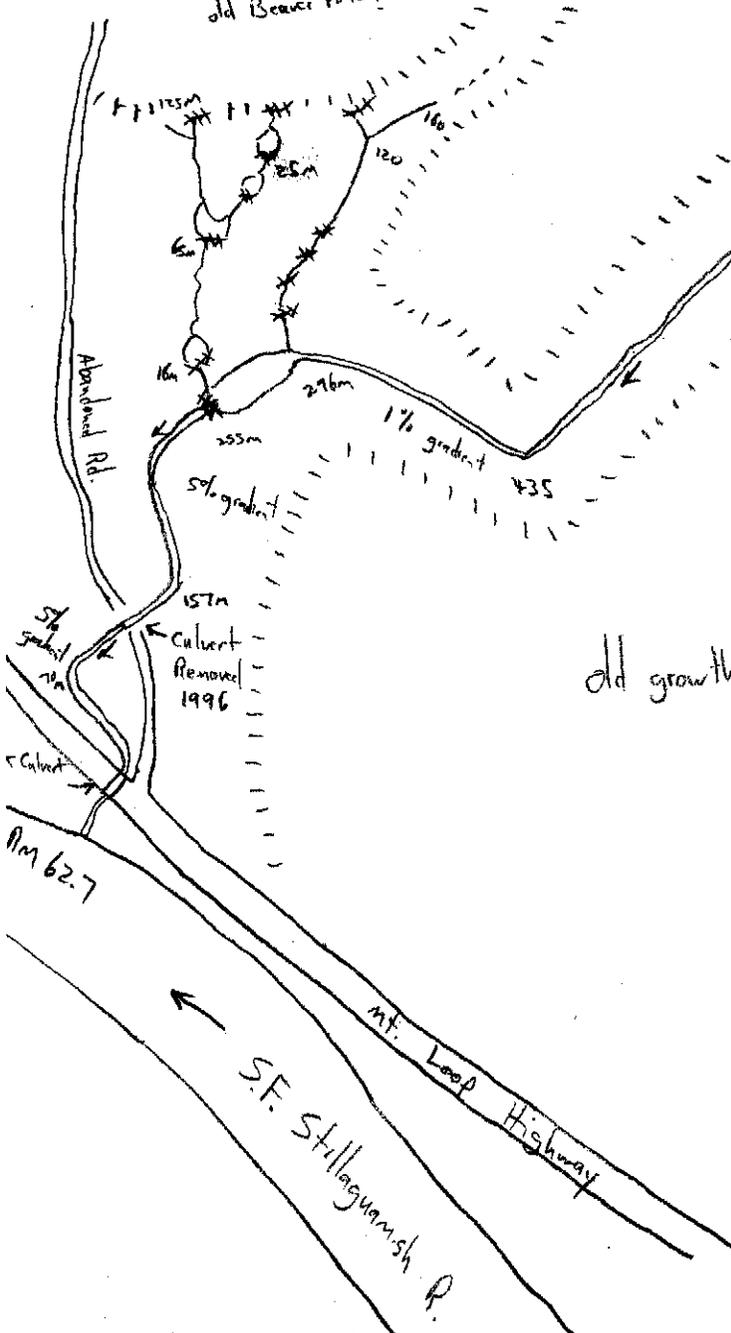


old growth forest

SS 1195m
7% gradient
1137m
SS 10m cascade
1076

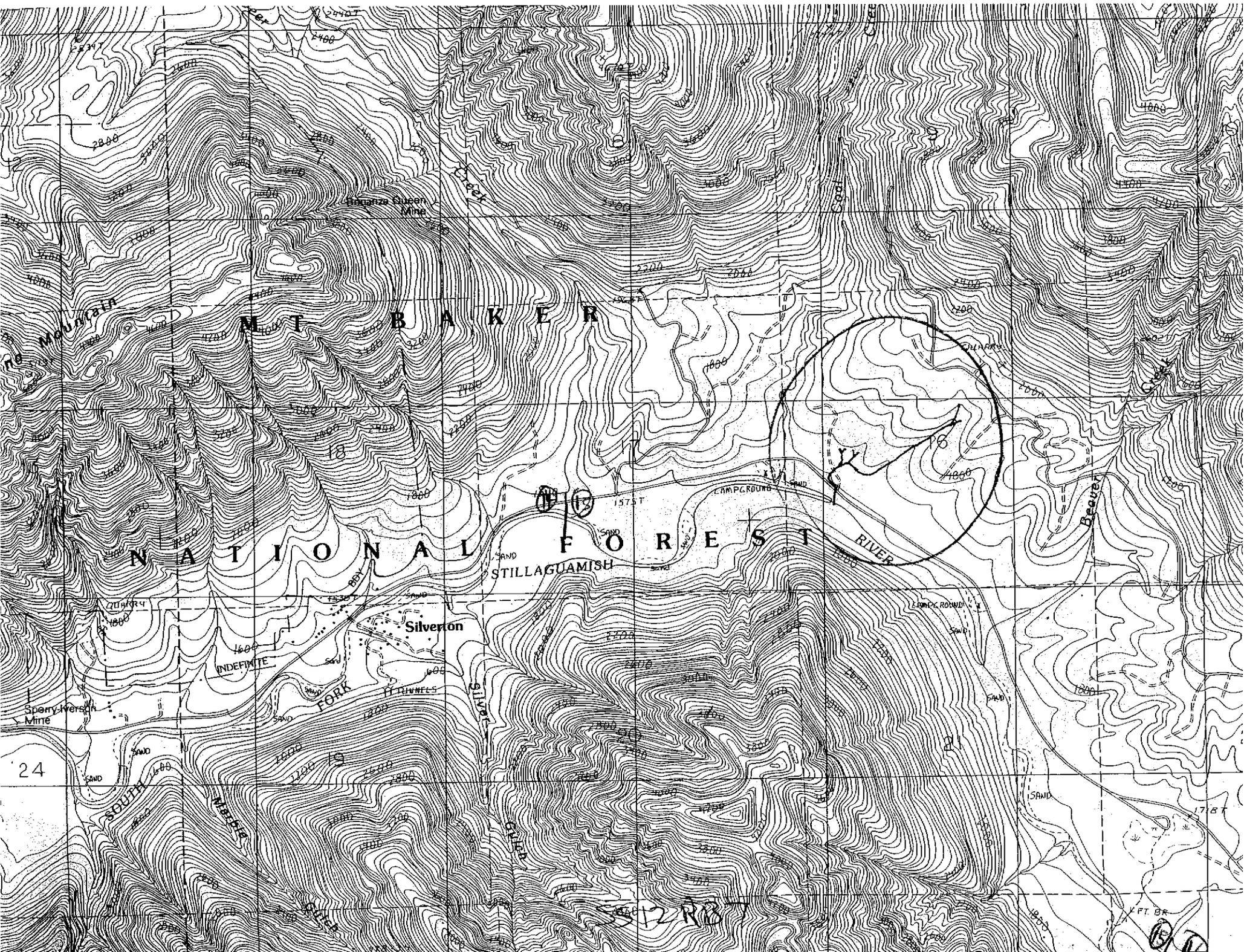
Filled in wetland
old Beaver Pond?

clear cut
~ 1985



old growth forest

Site id. code: SS12 RB7
Site name: Fish Creek
Scale: 1" = 100 m
Observer(s): B. Barkdall
Legal location: SW16, T30N, R10E



M T B A K E R

N A T I O N A L F O R E S T

STILLAGUAMISH

Silverton

24

12 RB

FT. DR

**WDF&W - SSHEAR
PHYSICAL SURVEY OF POTENTIAL HABITAT (Ver. 4c)**

Stream Name:	FISH CREW CREEK	Date:	11/14/02
Tributary To:	SF STILLAGUAMISH	Observer(s):	BARKDULL
WRIA #:	05.0433A	Section surveyed:	BARRIER CULVERT TO ANAD END
Sample Frequency:	60M/REACH		0
Survey Method:	RSFS	Filename:	050433A.XLS

Summary of Information - Total Stream Length

Total Length Surveyed:	1493.00 m	Tot. Length Culverted:	14.00 m
Total Length Sampled:	474.00 m	Percent of Stream Length	
Percent Sampled:	31.75 %	Culverted:	0.94 %

Measured Pool Area:	1541.16 m ²	Total Spawning Area:	883.26 m²
Measured Riffle Area:	1254.41 m ²		
Measured Rapid Area:	317.82 m ²	Total Rearing Area:	2761.02 m²
Measured Pond Area:	388.75 m ²		
Total Measured Stream Area:	3502.15 m²		

POOL : RIFFLE : RAPID : POND RATIO (%)

Pool= 44.01 Riffle= 35.82 Rapid= 9.08 Pond= 11.10

PRODUCTION AREA CALCULATIONS

	Sockeye	Chum	Pink	Coho	SR Cutthroat	Chinook	Steelhead	Res CT/RB	Bull	Brook	Brown
Reach 1	0.00	0.00	0.00	440.85	0.00	0.00	440.85	440.85	440.85	0.00	0.00
Reach 2	0.00	0.00	0.00	205.00	0.00	0.00	205.00	205.00	205.00	0.00	0.00
Reach 3	0.00	0.00	0.00	1246.89	0.00	0.00	1246.89	1246.89	1246.89	0.00	0.00
Reach 4	0.00	0.00	0.00	156.35	0.00	0.00	156.35	156.35	156.35	0.00	0.00
Reach 5	0.00	0.00	0.00	119.92	0.00	0.00	119.92	119.92	119.92	0.00	0.00
Reach 6	0.00	0.00	0.00	222.46	0.00	0.00	0.00	222.46	0.00	0.00	0.00
Reach 7	0.00	0.00	0.00	115.50	0.00	0.00	0.00	115.50	0.00	0.00	0.00
Reach 8	0.00	0.00	0.00	80.60	0.00	0.00	0.00	80.60	0.00	0.00	0.00
Reach 9	0.00	0.00	0.00	173.46	0.00	0.00	0.00	173.46	0.00	0.00	0.00
Reach 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total area*	0.00	0.00	0.00	2761.02	0.00	0.00	2169.01	2761.02	2169.01	0.00	0.00

* Spawning habitat used for sockeye, chum and pink, rearing used for all other species.

ADJUSTED PRODUCTION AREAS

	Sockeye	Chum	Pink	Coho	SR Cutthroat	Chinook	Steelhead	Res CT/RB	Bull	Brook	Brown
Reach 1	0.00	0.00	0.00	436.40	0.00	0.00	436.40	438.52	438.52	0.00	0.00
Reach 2	0.00	0.00	0.00	202.93	0.00	0.00	202.93	203.91	203.91	0.00	0.00
Reach 3	0.00	0.00	0.00	1234.29	0.00	0.00	1234.29	1240.28	1240.28	0.00	0.00
Reach 4	0.00	0.00	0.00	154.77	0.00	0.00	154.77	155.52	155.52	0.00	0.00
Reach 5	0.00	0.00	0.00	118.71	0.00	0.00	118.71	119.28	119.28	0.00	0.00
Reach 6	0.00	0.00	0.00	222.46	0.00	0.00	0.00	222.46	0.00	0.00	0.00
Reach 7	0.00	0.00	0.00	115.50	0.00	0.00	0.00	115.50	0.00	0.00	0.00
Reach 8	0.00	0.00	0.00	80.60	0.00	0.00	0.00	80.60	0.00	0.00	0.00
Reach 9	0.00	0.00	0.00	173.46	0.00	0.00	0.00	173.46	0.00	0.00	0.00
Reach 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total area*	0.00	0.00	0.00	2739.12	0.00	0.00	2147.10	2749.53	2157.51	0.00	0.00

11/14/02 Fish Crow cr 45°, River 44'

0 3.0 wide, cascade at mouth
11.6 at culvert cascades to mouth

^{14.0} 25.6 upstream end of culvert

^{7.3} 32.7 2.0 3.1 0.1 Rap

^{3.4} 36.3 2.9 3.1 0.2 Pool

^{21.5} 57.2 2.2 3.0 0.1 Rap

^{0.2} 58.0 2.8 3.1 0.2 Pool

^{1.2} 70.0 2.3 2.8 0.1 Rap

^{3.6} 73.6 2.8 3.0 0.3 Pool

^{6.0} 79.6 2.7 3.9 0.1 Rap

^{5.4} 83.0 3.0 3.4 0.2 Pool

^{2.6} 85.6 2.9 3.4 0.1 Rap

1520 895 565 B

Cont

120 old Road fill, taken out by RR

157 ave 5% to here

180 four Adults sp - 6 total

255 Beaver Dam, Rock Beach

RB trib

296 End of Beaver pond 5.0 mile
of RB trib

304 start sample

1.8

313.8 2.0 1.6 0.1 R.Fk

1.8

315.6 2.2 1.7 0.2 Pool

1.9

317.5 2.1 1.6 0.1 R.Fk

1.2

321.7 2.1 1.4 0.2 Pool

1.3

323.0 2.2 0.8 0.1 R.Fk

2.6

330.6 3.0 1.8 0.3 Pool

3.0

333.6 2.2 0.9 0.1 R.Fk

8.0

Cont'd

341.6	3.0	2.1	0.2	Pool
^{3.5} 345.1	3.2	2.5	0.1	R.B.C
^{5.0} 350.1	2.2	1.5	0.2	Pool
^{3.0} 353.1	2.2	1.7	0.1	R.B.C
^{2.2} 355.3	2.7 ^{2.8}	2.5	0.2	Pool
^{2.7} 358.0	3.0	2.1	0.1	R.B.C
^{6.0} 364.0	3.0	2.8	0.2	Pool

50% gravel, 40 sand, 10 rubble
2% gradient

601 tiny LD trap, no rabbit

650 clear rat LB

827 R.B trap L10% $\frac{3}{4}$ 1' wide

no access, not measured

913 R.B trap

Continues

950 Reach Break gaging gradient
start sample 1,035

^{4.2} 1039.0 2.0 1.9 0.2 Rsp

^{1.0} 1040.0 2.0 1.8 0.2 Pool

^{16.0} 1056.0 2.1 1.3 0.2 Rsp

^{4.1} 1060.1 2.5 1.8 0.3 Pool

^{10.0} 1070.1 2.3 1.6 0.2 Rsp

^{2.8} 1072.9 2.8 1.8 0.3 Pool

^{3.3} 1076.2 2.6 0.9 0.1 RIF

Reach 4 ↑ LB trib 40% of flow
Reach 5 ↓ 10m access 1.5 wide

new sample RB fork

~~1072.9~~ 2 1.5 1.0 0.1 RIF

^{1.9} 1078.1 2.4 1.7 0.1 Pool

^{22.4} 1100.5 1.8 1.5 0.1 RIF

^{3.2} 1102.7 2.1 1.8 0.2 Pool

^{2.8}

9201

LSU

Cont.

11065 21 0.9 RF

^{3.5} 11070.0 20 1.8 Pool

^{2.5} 1132.7 22 1.5 RF

^{3.5} 1136.2 2.2 1.8 Pool

^{0.8} 1137.0 Tiny RB +rb

1195 Lud Caracas

7% ore

50 yard 20 B, 20 cob 10 sand

12/16/02 Fish cr Continued
RB trib o 2SS 25% of flow

0

4.0 2.0 Beaver Pond Dam

16.5 4.0 End of Beaver Pond
stream like start sample

19.7 2.5 4.0 0.3 Pool No gravel

24.4 1.6 3.1 0.2 R.I.S 5% gr

29.3 1.8 3.9 0.3 Pool

35.4 1.3 2.5 0.2 Rap

40.2 4.5 6.0 0.2 Pool

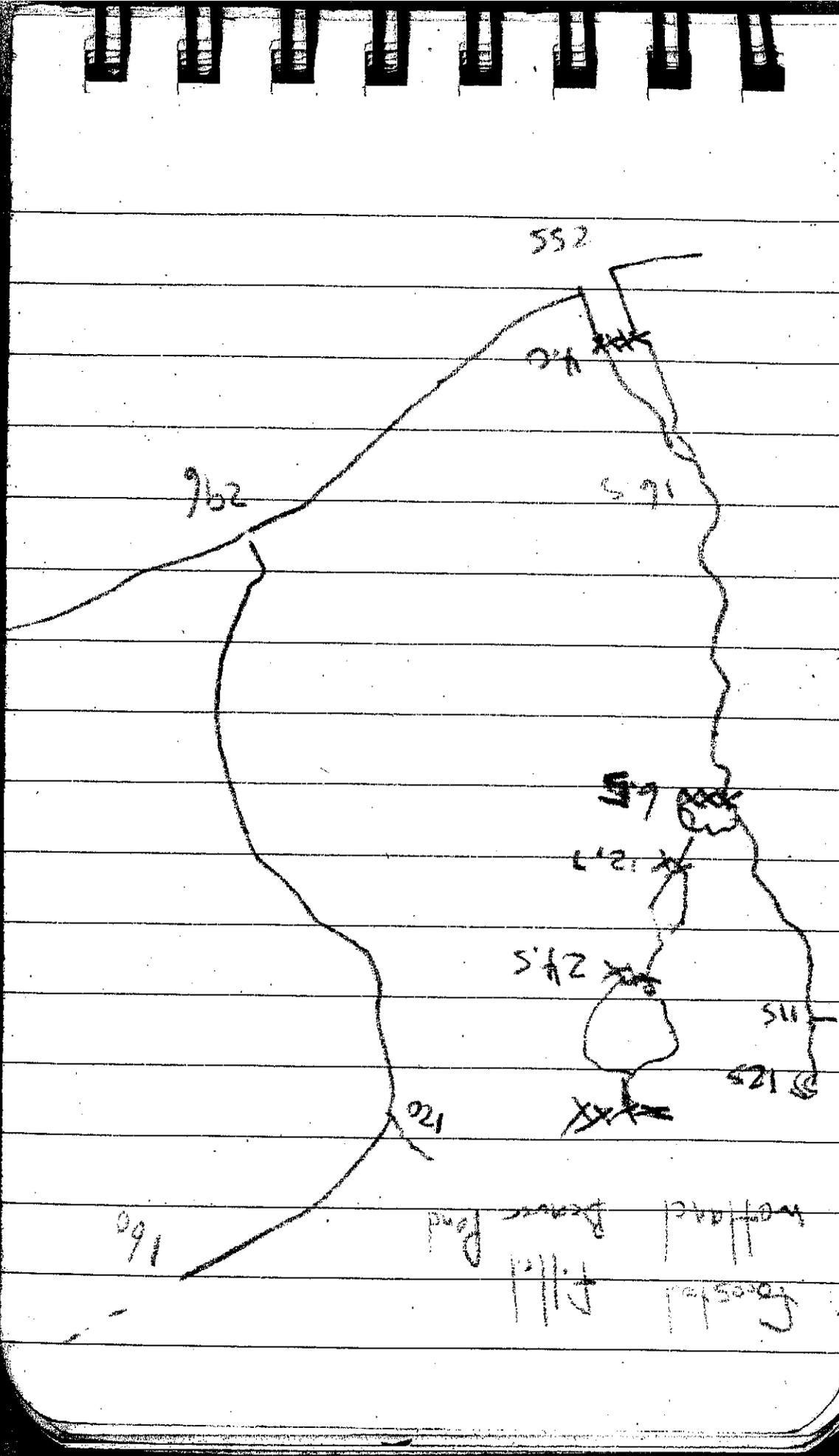
45.5 2.0 4.0 0.2 R.I.S

52.6 2.1 4.2 0.4 Pool

65.2 2.1 3.2 0.1 R.I.S

Beaver Pond Pond

channel split



552

~~121~~

912

591

~~121~~

127

245

115

125

~~121~~

121

160

Beaver Pond

Fill

Wofford

Forest

Cont.

70.4 8.0 9.0 0.8 Pool
cont. Right fork

75.8 1.5 2.2 RB

79.3 3.5 4.0 Pool

102.0 1.7 2.5 R.F

109.9 3.0 3.4 Pool

112.2 1.3 2.0 R.F

RB tab no access

125.6 2.5 3.0 Pool

cascade thru den

No spawning 7% gr.

20 yr old Re prod.

LB tab equal size

Re zero

Continued

0

7.7 3.0 3.1 0.4 Rap

12.7 2.0 2.3 0.1 Rap

21.1 5.0 5.0 0.5 Pond

24.7 2.0 2.4 0.1 Rap

Big (6') Bear Pit

RB tub @ 296

0

5.5 3.0 3.5 0.4 P.

7.5 1.0 1.2 0.1 Rap

18.0 1.0 1.1 0.2 P.

57.4 6.8 1.1 0.1 RA

60.0 1.0 1.1 0.1 P.

120 at wetland

160 Potusent