Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information			
Culvert Site ID:	CV6	Crew:	DG + BK
HWY CL STA:		Date:	8/26/03
Plan Sheet:		Time:	1500

Field Inspection Summary				Comments:
Migration Barrier:	yes	no	uncertain	
Maintenance:	yes	no	uncertain	
Repair:	yes	no	uncertain	
Retrofit:	yes	no	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	yes	no	
Photographs:	yes	no	
Photo Log:	yes	no	
Velocity Measurements:	yes	no	
Flow Depth Measurements:	yes	no	
Pebble Counts:	yes	no	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	silt deposits ↑ inlet
2	Debris accumulation	none
3	Pecent inlet blockage	0
4	Pebble count in channel	–
5	Inlet crown to bed height	3.1
6	Inlet bed elevation	
7	Inlet drop height	0
8	High water marks	2.8 ↓ culvert inlet
9	Resting pools	back water areas
10	Condition of inlet	as built
11	Condition of wing walls	n/a
12	Condition of embankment	as built
13	Condition of riprap	"
14	Condition of streambed	" w/ additional silt
15	Conditoin of stream banks	well vegetated / stable
15	Approach channel flow depth	.2'
16	Flow depth at inlet	<.1'
17	Approach channel velocity	
18	Velocity at inlet	
19	Streambed width	3.5'

Comments: too shallow for velocity measurements, near 0
juvenile fish throughout inlet channel
channel full of silt, no high flow events apparently

profile 0 - 3.1 20-3.4 50-3.2 80 3.2
30-3.0 60-3.0 90 3.15
10 - 3.4 40-3.1 70-3.1 100 3.3

CV6 #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	some silt [illegible]
21	Sediment size	gravel / cobble as built
22	Bed forms	none
23	Resting pools	none
24	Crown to bed height	
25	% change from as-builts	none - except no bed material placed as built
26	Flow depth	
27	Velocity, trial 1	
28	Velocity, trial 2	
29	High water marks	
30	Debris accumulation	no
31	Condition of barrel	as built
32	Condition of baffles/weirs	n/a

Comments: too small for [illegible] measurements, backwatered by Klehini R but closer to inlet

Culvert Outlet and Downstream Channel	
33	Outlet velocity
34	High water marks
35	Scour hole length
36	Scour hole width
37	Maximum pool depth
38	Distance to maximum pool depth
39	Culvert invert elevation
40	Pool tail crest elevation
41	Invert-to-pool drop
42	Condition of outlet
43	Conditon of embankment
44	Condition of pipe bedding
45	Condition of riprap
46	Condition of downstream weir
47	Condition of stream banks
48	Condition of streambed

Comments: Culvert outlet directly [illegible] Klehini R. Culvert backwatered at present water level. No outlet channel

Fish	
49	Presence/Absense of Fish

Comments: Fish [illegible] approach channel

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information			
Culvert Site ID:	CU 7	Crew:	DG + BK
HWY CL STA:		Date:	8/26/03
Plan Sheet:		Time:	

Field Inspection Summary				Comments:
Migration Barrier:	yes	no	uncertain	
Maintenance:	yes	no	uncertain	
Repair:	yes	no	uncertain	
Retrofit:	yes	no	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	yes	no	
Photographs:	yes	no	
Photo Log:	yes	no	
Velocity Measurements:	yes	no	
Flow Depth Measurements:	yes	no	
Pebble Counts:	yes	no	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	some silt being deposited near inlet
2	Debris accumulation	none
3	Pecent inlet blockage	0
4	Pebble count in channel	—
5	Inlet crown to bed height	7.7'
6	Inlet bed elevation	
7	Inlet drop height	0
8	High water marks	6.1' ↓ inlet crown
9	Resting pools	backwater area near east shore
10	Condition of inlet	as built
11	Condition of wing walls	"
12	Condition of embankment	"
13	Condition of riprap	"
14	Condition of streambed	"
15	Conditoin of stream banks	"
15	Approach channel flow depth	.9'
16	Flow depth at inlet	1.0
17	Approach channel velocity	98 cm Pygmy meter
18	Velocity at inlet	102 "
19	Streambed width	30'

Comments: little change since constructed. Some willows growing in west bank but little else + very small

profile 0 - 7.7' 10 - 7.9 20 - 7.3 30 - 7.3 40 - 7.8 50 - 9.0 60 - 8.8 70 - 7.9 80 - 8.4 90 - 8.5 100 - 8.9

CV7 #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	none
21	Sediment size	large cobbles/boulders
22	Bed forms	none
23	Resting pools	none
24	Crown to bed height	8.5'
25	% change from as-builts	
26	Flow depth	2.35'
27	Velocity, trial 1	92 on Pygmy
28	Velocity, trial 2	
29	High water marks	
30	Debris accumulation	none
31	Condition of barrel	good
32	Condition of baffles/weirs	n/a

Comments: bare spot remains on culvert bottom. Almost no deposition has [illegible] in culvert. Large boulders help w/ complexity.

adult DV noted in culvert

Culvert Outlet and Downstream Channel		
33	Outlet velocity	116 on Pygmy
34	High water marks	
35	Scour hole length	33'
36	Scour hole width	33'
37	Maximum pool depth	2.6
38	Distance to maximum pool depth	17.5'
39	Culvert invert elevation	
40	Pool tail crest elevation	8.3' ↓ culvert invert
41	Invert-to-pool drop	
42	Condition of outlet	as built
43	Conditon of embankment	"
44	Condition of pipe bedding	"
45	Condition of riprap	"
46	Condition of downstream weir	questionable fish passage
47	Condition of stream banks	no vegetation
48	Condition of streambed	as built

Comments: School of DV in outlet pool. No sign of outlet pool being over topped. Functioning as designed, except outlet channel likely needs work.

Fish	
49	Presence/Absense of Fish

Comments:

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information			
Culvert Site ID: CV 8		Crew: DG + BK	
HWY CL STA:		Date: 8/26/03	
Plan Sheet:		Time: 1215	

Field Inspection Summary				Comments: Appears as built
Migration Barrier:	yes	(no)	uncertain	
Maintenance:	yes	(no)	uncertain	
Repair:	yes	(no)	uncertain	
Retrofit:	yes	(no)	uncertain	

Check List for Completed Monitoring Tasks			Comments: Pygmy meter
Narrative:	(yes)	no	
Photographs:	(yes)	no	
Photo Log:	yes	no	no barrel measurements, too small
Velocity Measurements:	(yes)	no	
Flow Depth Measurements:	(yes)	no	
Pebble Counts:	yes	(no)	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	some silt accumulation
2	Debris accumulation	small amount of debris accumulation
3	Pecent inlet blockage	0
4	Pebble count in channel	—
5	Inlet crown to bed height	3.45
6	Inlet bed elevation	
7	Inlet drop height	0
8	High water marks	none
9	Resting pools	bank water ↑ inlet
10	Condition of inlet	as built
11	Condition of wing walls	n/a
12	Condition of embankment	as built
13	Condition of riprap	"
14	Condition of streambed	
15	Conditoin of stream banks	vegetated
15	Approach channel flow depth	.2'
16	Flow depth at inlet	.3'
17	Approach channel velocity	60 clicks Pygmy meter
18	Velocity at inlet	27 clicks Pygmy meter
19	Streambed width	7.7'

Comments: low flow, silt accumulating @ inlet, banks becoming well vegetated
juvenile fish noted

profile 0-3.45 10 3.5 20-3.3 30-3.2 40-2.9 50 2.3 60 2.1 70-2.0 80-2.1 90 2.2 100-1.9

CV8 #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	silt deposition 0 cfs
21	Sediment size	silt/gravel/cobble
22	Bed forms	none
23	Resting pools	back water in lower culvert
24	Crown to bed height	
25	% change from as-builts	0
26	Flow depth	
27	Velocity, trial 1	
28	Velocity, trial 2	
29	High water marks	none
30	Debris accumulation	none
31	Condition of barrel	as built
32	Condition of baffles/weirs	n/a

Comments: Too small for interior measurements. Backwatered in lower 1/3

Culvert Outlet and Downstream Channel		
33	Outlet velocity	5 on flygoy
34	High water marks	none
35	Scour hole length	none
36	Scour hole width	—
37	Maximum pool depth	—
38	Distance to maximum pool depth	—
39	Culvert invert elevation	
40	Pool tail crest elevation	—
41	Invert-to-pool drop	—
42	Condition of outlet	as built
43	Conditon of embankment	some veg mixed w/ rock
44	Condition of pipe bedding	as built
45	Condition of riprap	as built
46	Condition of downstream weir	n/a
47	Condition of stream banks	mostly vegetated
48	Condition of streambed	

Comments: water is backed up into culvert no fish noted

profile 0 - 3.3 20 - 3.5 50 - 3.0 80 - 3.2 lower channel very
10 3.6 30 - 3.3 60 - 3.15 90 - 3.0 silted in, current resumes
40 - 3.2 70 - 3.9 100 - 3.0 just below profile

Fish		
49	Presence/Absense of Fish	

Comments: Very few fish noted

Haines Highway Mitigation Monitoring

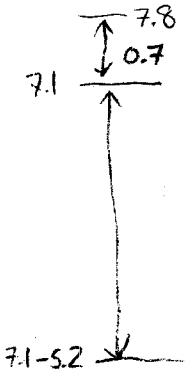
Culvert Evaluation Field Form

General Information			
Culvert Site ID:	CV 9	Crew:	DG + BK
HWY CL STA:		Date:	8/28/03
Plan Sheet:		Time:	1515

Field Inspection Summary				Comments:
Migration Barrier:	yes	(no)	uncertain	
Maintenance:	yes	(no)	uncertain	
Repair:	(yes)	no	uncertain	
Retrofit:	yes	(no)	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	(yes)	no	
Photographs:	(yes)	no	
Photo Log:	yes	no	
Velocity Measurements:	(yes)	no	
Flow Depth Measurements:	(yes)	no	
Pebble Counts:	yes	(no)	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	none
2	Debris accumulation	"
3	Pecent inlet blockage	none
4	Pebble count in channel	
5	Inlet crown to bed height	7.8'
6	Inlet bed elevation	
7	Inlet drop height	none
8	High water marks	5.9 ↓ culvert inlet
9	Resting pools	near LWD
10	Condition of inlet	good
11	Condition of wing walls	n/a
12	Condition of embankment	as built
13	Condition of riprap	"
14	Condition of streambed	good
15	Conditoin of stream banks	RB is riprap - no vegetation
15	Approach channel flow depth	0.6'
16	Flow depth at inlet	0.6' 198 on Pygmy
17	Approach channel velocity	5 sec - 20' 150 "
18	Velocity at inlet	5 sec - 20'
19	Streambed width	20.0'



Comments:

no fish noted Incorporate vegetation into stream banks

profile

0 -	7.8	20	7.4	50	6.5	80	6.1
		30	7.4	60	6.35	90	6.7
10	7.75	40	7.2	70	5.65	100	8.2

CV9 #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	none
21	Sediment size	gravel / cobble
22	Bed forms	none
23	Resting pools	none
24	Crown to bed height	
25	% change from as-builts	
26	Flow depth	.85'
27	Velocity, trial 1	156 on Pygmy
28	Velocity, trial 2	
29	High water marks	
30	Debris accumulation	none
31	Condition of barrel	good
32	Condition of baffles/weirs	n/a

Comments:

channel complexity would help - near to sheet flow

Culvert Outlet and Downstream Channel		
33	Outlet velocity	9sec / 20' 114 on Pygmy
34	High water marks	
35	Scour hole length	none
36	Scour hole width	"
37	Maximum pool depth	"
38	Distance to maximum pool depth	none
39	Culvert invert elevation	
40	Pool tail crest elevation	none
41	Invert-to-pool drop	none
42	Condition of outlet	good
43	Conditon of embankment	as built
44	Condition of pipe bedding	"
45	Condition of riprap	"
46	Condition of downstream weir	"
47	Condition of stream banks	ripping near culvert
48	Condition of streambed	good

Comments:

downstream weir seems to have little effect at this water level

profile

0 - 8.45	30	9.7	60	7.7	90	8.0
10 - 8.85	40	8.4	70	8.15	100	8.4
20 - 8.45	50	8.15	80	8.1		

Fish		
49	Presence/Absense of Fish	N

Comments:

no fish noted

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information			
Culvert Site ID:	CV10	Crew:	DG + BK
HWY CL STA:		Date:	8/25/07
Plan Sheet:		Time:	

Field Inspection Summary				Comments:
Migration Barrier:	yes	no	uncertain	very low flow, impeding fish passage
Maintenance:	yes	no	uncertain	
Repair:	yes	no	uncertain	
Retrofit:	yes	no	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	yes	no	
Photographs:	yes	no	
Photo Log:	yes	no	
Velocity Measurements:	yes	no	
Flow Depth Measurements:	yes	no	
Pebble Counts:	yes	no	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	no - algae growth
2	Debris accumulation	no
3	Pecent inlet blockage	0
4	Pebble count in channel	–
5	Inlet crown to bed height	3.0
6	Inlet bed elevation	
7	Inlet drop height	n/a
8	High water marks	
9	Resting pools	none
10	Condition of inlet	good
11	Condition of wing walls	n/a
12	Condition of embankment	as built
13	Condition of riprap	as built
14	Condition of streambed	
15	Conditoin of stream banks	vegetated
15	Approach channel flow depth	0.1'
16	Flow depth at inlet	0.1'
17	Approach channel velocity	too shallow
18	Velocity at inlet	
19	Streambed width	2.6' ↑ culvert

Comments:

profile 0 - 3.1 30 1.85 60
10 - 2.45 40 1.85
20 - 2.1 50 3.05

pond/bog at 50' ↑ culvert

CVD #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	no
21	Sediment size	gravel/cobble
22	Bed forms	none
23	Resting pools	culvert backwatered
24	Crown to bed height	3.4
25	% change from as-builts	
26	Flow depth	
27	Velocity, trial 1	0
28	Velocity, trial 2	
29	High water marks	
30	Debris accumulation	none
31	Condition of barrel	as built
32	Condition of baffles/weirs	n/a

Comments:

no fish noted

Culvert Outlet and Downstream Channel		
33	Outlet velocity	0
34	High water marks	
35	Scour hole length	none
36	Scour hole width	"
37	Maximum pool depth	"
38	Distance to maximum pool depth	none
39	Culvert invert elevation	
40	Pool tail crest elevation	none
41	Invert-to-pool drop	none
42	Condition of outlet	good
43	Conditon of embankment	as built
44	Condition of pipe bedding	"
45	Condition of riprap	"
46	Condition of downstream weir	n/a
47	Condition of stream banks	good
48	Condition of streambed	good

Comments:

0-3.45 20-3.75 40 3.8 70 4.5 100-5.2
10-3.45 30 3.85 50 3.95 80 4.7
60 4.1 90 4.8

Fish		
49	Presence/Absense of Fish	no fish noted

Comments:

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information			
Culvert Site ID:	CV11	Crew:	DG, BK
HWY CL STA:		Date:	8/25/07
Plan Sheet:		Time:	1340

Field Inspection Summary				Comments:
Migration Barrier:	yes	no	uncertain	no water, no sign of recent flow
Maintenance:	yes	no	uncertain	
Repair:	yes	no	uncertain	
Retrofit:	yes	no	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	yes	no	
Photographs:	yes	no	
Photo Log:	yes	no	
Velocity Measurements:	yes	no	
Flow Depth Measurements:	yes	no	
Pebble Counts:	yes	no	

Culvet Inlet and Upstream Channel	
1	Sediment deposition
2	Debris accumulation
3	Pecent inlet blockage
4	Pebble count in channel
5	Inlet crown to bed height 6.35
6	Inlet bed elevation
7	Inlet drop height
8	High water marks
9	Resting pools
10	Condition of inlet
11	Condition of wing walls
12	Condition of embankment
13	Condition of riprap
14	Condition of streambed
15	Conditoin of stream banks
15	Approach channel flow depth
16	Flow depth at inlet
17	Approach channel velocity
18	Velocity at inlet
19	Streambed width

Comments:

no evidence of recent flow

CVA #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	
21	Sediment size	
22	Bed forms	
23	Resting pools	
24	Crown to bed height	6.35
25	% change from as-builts	
26	Flow depth	
27	Velocity, trial 1	
28	Velocity, trial 2	
29	High water marks	
30	Debris accumulation	
31	Condition of barrel	
32	Condition of baffles/weirs	

Comments:

no recent evidence of flowing water.

Culvert Outlet and Downstream Channel		
33	Outlet velocity	—
34	High water marks	
35	Scour hole length	none
36	Scour hole width	"
37	Maximum pool depth	"
38	Distance to maximum pool depth	"
39	Culvert invert elevation	
40	Pool tail crest elevation	n/a
41	Invert-to-pool drop	none
42	Condition of outlet	good
43	Conditon of embankment	as built
44	Condition of pipe bedding	"
45	Condition of riprap	"
46	Condition of downstream weir	none
47	Condition of stream banks	rocks / stable
48	Condition of streambed	no evidence of recent flow

Comments:

6.75' bed to culvert invert

Fish		
49	Presence/Absense of Fish	

Comments:

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information			
Culvert Site ID:	CV12	Crew:	Gregovich + Kirkpatrick
HWY CL STA:		Date:	8/25/03
Plan Sheet:		Time:	1345

Field Inspection Summary				Comments:
Migration Barrier:	(yes)	no	uncertain	sheet flow thru culvert impeding fish passage
Maintenance:	(yes)	no	uncertain	
Repair:	yes	(no)	uncertain	rock berms over culvert need repair, gravel entering stream
Retrofit:	yes	(no)	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	yes	no	
Photographs:	yes	no	
Photo Log:	yes	no	
Velocity Measurements:	yes	no	
Flow Depth Measurements:	yes	no	
Pebble Counts:	yes	no	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	no
2	Debris accumulation	no
3	Pecent inlet blockage	none
4	Pebble count in channel	no
5	Inlet crown to bed height	6.25'
6	Inlet bed elevation	
7	Inlet drop height	none
8	High water marks	5.2'
9	Resting pools	over widened channel ↑ culvert formed pool
10	Condition of inlet	as built
11	Condition of wing walls	one support not bolted
12	Condition of embankment	as built
13	Condition of riprap	"
14	Condition of streambed	over widened ↑ culvert
15	Conditoin of stream banks	good
15	Approach channel flow depth	
16	Flow depth at inlet	.6'
17	Approach channel velocity	82 on Pygmy
18	Velocity at inlet	19 on "
19	Streambed width	5.5' ↑ culvert in flume

Comments:

Over widened ↑ culvert Rock berm ↑ inlet is only partially effective
silt accumulating on channel margins

juvenile fish noted

stream profile culvert invert control point

0 -	6.25	30 -	5.95	60 -	3.9	90 -	4.5
10 -	6.3	40	5.6	70	4.4	100 -	4.0
20 -	6.2	50	6.05	80	3.8		

CV12 #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	
21	Sediment size	gravel / cobble
22	Bed forms	none - sheet flowing [illegible] culvert
23	Resting pools	some back water areas
24	Crown to bed height	5.6
25	% change from as-builts	
26	Flow depth	.2'
27	Velocity, trial 1	54 cm Pygmy
28	Velocity, trial 2	
29	High water marks	5' ↑ bed
30	Debris accumulation	none
31	Condition of barrel	as built
32	Condition of baffles/weirs	n/a

Comments:
no channel, sheet flow. Difficult to get velocity measurement

Culvert Outlet and Downstream Channel		
33	Outlet velocity	27sec - 20' 22 - Pygmy
34	High water marks	
35	Scour hole length	none
36	Scour hole width	none
37	Maximum pool depth	none
38	Distance to maximum pool depth	n/a
39	Culvert invert elevation	
40	Pool tail crest elevation	n/a
41	Invert-to-pool drop	n/a
42	Condition of outlet	as built
43	Conditon of embankment	good
44	Condition of pipe bedding	as built
45	Condition of riprap	"
46	Condition of downstream weir	n/a
47	Condition of stream banks	rocky / stable some willow stake survival
48	Condition of streambed	

Comments:

(5.2 ~~4~~) Rock berm ↑ outlet even less effective
road gravel entering stream

profile				
0 - 6.85	20 6.4	50-7.45	80 7.6	
10 6.2	30 6.75	60-7.05	90 8.4	(cohe)
	40 6.9	70-7.05	100 7.9	many juvenile fish present

Fish		
49	Presence/Absense of Fish	✓

Comments:
juvenile fish noted ↑ + ↓ culvert, none in culvert

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

General Information	
Culvert Site ID: CV-13	Crew: Gregovich, Kirkpatrick
HWY CL STA:	Date: 8-25-03
Plan Sheet:	Time: 1143

Field Inspection Summary				Comments:
Migration Barrier:	(yes)	no	uncertain	Water leaking out of culvert surface 3rd + 4th baffle from bottom
Maintenance:	yes	(no)	uncertain	
Repair:	(yes)	no	uncertain	Water being lost to groundwater
Retrofit:	yes	(no)	uncertain	

Check List for Completed Monitoring Tasks			Comments:
Narrative:	(yes)	no	
Photographs:	(yes)	no	
Photo Log:	yes	no	
Velocity Measurements:	yes	(no)	
Flow Depth Measurements:	(yes)	no	
Pebble Counts:	yes	(no)	

Culvet Inlet and Upstream Channel		
1	Sediment deposition	gravel bar forming
2	Debris accumulation	no
3	Pecent inlet blockage	none
4	Pebble count in channel	n/a
5	Inlet crown to bed height	6.0
6	Inlet bed elevation	
7	Inlet drop height	
8	High water marks	5.8 to inlet crown
9	Resting pools	25' ↑ culvert
10	Condition of inlet	as built
11	Condition of wing walls	n/a
12	Condition of embankment	good / vegetated
13	Condition of riprap	as built
14	Condition of streambed	aggrading
15	Conditoin of stream banks	rocky / stable
15	Approach channel flow depth	.25'
16	Flow depth at inlet	.25'
17	Approach channel velocity	40 on Pygmy
18	Velocity at inlet	too slow to measure
19	Streambed width	8' ↑ culvert in flume

Comments:

juveniles noted at inlet

gravel berm forming above inlet, high flows appear to be common w/ some backwatering

profile				
	0 - 6.0'	30 - 5.8	60 5.25	90
	10 6.1	40 5.85	70 4.5	
	20 5.55	50 6.0	80 2.8	100

CV13 #2

Haines Highway Mitigation Monitoring

Culvert Evaluation Field Form

Culvert Barrel and Bed Sediment		
20	Sediment deposition	mostly @ inlet
21	Sediment size	gravel / cobble
22	Bed forms	no
23	Resting pools	behind baffles
24	Crown to bed height	5.95
25	% change from as-builts	
26	Flow depth	.5'
27	Velocity, trial 1	
28	Velocity, trial 2	
29	High water marks	none
30	Debris accumulation	none
31	Condition of barrel	good
32	Condition of baffles/weirs	good

Comments:
baffles in good shape, water is leaking out of culvert *
baffles make flow measurements unreliable
juvenile fish noted in culvert

Culvert Outlet and Downstream Channel		
33	Outlet velocity	15 on Pygmy
34	High water marks	
35	Scour hole length	no scour hole / berm at outlet
36	Scour hole width	—
37	Maximum pool depth	.5'
38	Distance to maximum pool depth	5'
39	Culvert invert elevation	
40	Pool tail crest elevation	n/a
41	Invert-to-pool drop	
42	Condition of outlet	as built
43	Conditon of embankment	"
44	Condition of pipe bedding	"
45	Condition of riprap	"
46	Condition of downstream weir	"
47	Condition of stream banks	rocky, stable
48	Condition of streambed	rocky, stable

Comments:
profile 0-6.15 20-6.4 40-7.3 60 7.9 90-8.9
10-6.4 30 6.7 50 7.6 70 8.6 100-9.0
80 8.4
lots of juvenile fish present (coho) surface water only @ 100' fish present

Fish		
49	Presence/Absense of Fish	Present

Comments:
lots of fish present, especially below culvert