

STATE OF WASHINGTON
DEPARTMENT OF FISH & WILDLIFE
LANDS AND RESTORATION SERVICES PROGRAM
Salmonid Screening, Habitat Enhancement &
Restoration Division (SSHEAR)

OFF-CHANNEL SITE INVENTORY DATA

General Information:

Region: North Coast	Observer(s): Nettrin
River System: Sol Duc	Date: 2/19/97 - 4/9/97
Site Identifier: S-0312	WRIA: 20.0312
River Mile Location: 22.1	RB/LB: RB
Local Name: Swanson Creek	Trib. to: Sol Duc River (20.0096)
Legal Description: SW¼ Sec 16 T29N R13W	County: Clallam

Habitat Type: Lower valley wall trib

Landowner: Federal State County Other Government Private
- Department of Natural Resources
- Rayonier Timber Operations Company
- Other private land owners.

Directions to site:

There are numerous accesses to Swanson Creek. To access the mouth, drive north from Forks on Highway 101 to Shuwah Road, MP 196.1. Turn right onto Shuwah and park at the intersection. Walk down the trail to the Iverson Hole, then upstream along the RB of the Sol Duc River to the mouth of Swanson Creek (about 20 m). To access the upper reach, drive north from Forks on highway 101 to MP 198.1. Turn left onto the T-line and continue for about 0.1 mile to the second culvert crossing. The first culvert crossing is a trib and overflow.

Site Overview:

This is a fourth order stream. It sources on the lower slope of Tye Ridge in a side slope wetland. This wetland is supplied by several ephemeral and losing streams that flow from the upper ridge. Swanson Creek drains approximately 360 hectare (900 acres). About a third of the drainage is owned by private individuals, the rest is timberland. Roughly a third of the timberland is 10 - 15 year old spruce and the rest is a 60 - 120 year old mixed hemlock, spruce forest.

There are two major branches that make up the upper half of Swanson Creek. One branch is Loushin Creek and the other continuous as the mainstem. Both branches are similar in character: numerous small gaining streams sourcing in side slope wetlands, support spawning, good rearing and similar gradient.

There are 14 culvert crossings in the Swanson Creek drainage, several of which have problems that should be addressed.

Habitat Information:

Water source: Springs, and surface runoff

Intermittent/year-around: Year-around

Estimated flows (cfs): Lower end: 15.0 - 20.0 Upper end: 0.2 - 1.0

Water temperatures: Lower end: 6.5° C Upper end: 6.5 - 7.5° C

Adjacent stream temperature Sol Duc River (20.0096): 6.0° C

Other water observations: Water is slightly tannic

Site area measurements: Indirect Direct Combination

Widths: Channel- 0.7 - 7.7 m Pond- None Wetland- 300 - 800 m

Depths: Channel- 15 - 130 cm Pond- None Wetland- 5 - 30 cm

Total length surveyed : 4,000 m

Total existing habitat area (est.): 26,600 m²

Spawning area: 3,700 m² Tributaries: 200 m² Total: 3,900 m²

Impounded area: 5,300 m² Tributaries: 700 m² Total: 6,000 m²

Other rearing area: 11,000 m² Tributaries: 5,700 m² Total: 16,700 m²

Spawning Habitat conditions: None Poor Fair Good Excellent

Describe spawning habitat:

- Most of the spawning area is below highway 101
- The aggregate mix is very good for salmonid spawning.
- There is enough gradient to move the bed load and keep it clean, but not so much it scours everything.

Rearing habitat conditions: None Poor Fair Good Excellent

Describe pond and other rearing habitat:

- Rearing conditions range from fair to excellent.
- There is summer rearing provided by this system, but location has not been determined.
- Most of the slack water and over winter rearing is in the upper reach and in the tributaries.
- The impoundments are behind beaver dams. One is a typical stream channel pond, the other backwaters an associated wetland.
- Cover in the mainstem is good in places, but is lacking overall. Cover is provided by large and small woody debris, bank overhang and deep pools.
- Cover in the impounded wetland is provided by sedges and other aquatic plants.
- Most of the stream is well shaded by a mix of conifer and deciduous trees.

Describe unaccessible habitat:

Describe wetland: Bog Marsh Scrub-shrub Wetland Forested Wetland

- The wetland is 100 - 400 m wide and about 700 m long.
- The wetland is in the upper reaches and is made up of several types. That portion to the southeast along the T-1010, is typical open marsh with sedges, shrubs, one or two trees, and impounded water. On the northwesterly side the wetland begins to change characteristics: slight increase in elevation, some sedge, skunk cabbage, grasses, upland and wetland shrubs, scattered conifer and deciduous trees, and braided channels. Further on toward the ridge, the elevation change becomes more apparent as the toe of the ridge is encountered. Here the vegetation changes to dominant skunk cabbage and young spruce, the ground is saturated and innumerable springs emanate from the slope.

Flooding potential: Low Medium High

Fish Information:

Site entry condition to Sol Duc River (20.0096): Poor Fair Good

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

Adult- Unknown None Poor Fair Good

- Coho have good access to this channel.
- There are reaches of the stream that may be inaccessible to upstream migrating juveniles due to culvert installations.
- Just above the second county culvert, the rip rap at the toe of the road fill forms a cascades that look to be a migration problem for juveniles.
- At C. Loushins' driveway there are four culverts That have excessive plunge on low flows and may have excessive velocities on high flows.
- On 3/5/97 - 3/6/97 twelve minnow traps were set and 49 coho were caught.
- The Quileute Tribe has a spawner index on Swanson Creek.

Other species access and use: Chum Pink Sockeye Chinook Trout

- On 3/5/97 - 3/6/97 Twelve minnow traps were set and fished: four CTT, three RBT, one SND and 83 cottid.
- Observed one dead male steelhead above T-1010.
- The Quileute Tribe has a spawner index on Swanson Creek.

Habitat Improvements:

Enhancement opportunities:

Possible project type:

- Check all culverts to insure free passage
- Replace culverts as needed
- Gravel placement
- Install bedload controls to hold gravel.
- Modify LOD jam above highway.
- Replace or reenforce beaver dam at northeast end of wetland at junction of T-line and T-1010 were wetland would drain to Lake Creek. That channel is to steep for fish habitat.
- maintain integrity of the wetland.
- Modify rip rap upstream of second county culvert if needed.
- There is equipment access to culverts

Additional Comments:

- There appears to be a type of fishway under highway 101.
- There are six road crossings in the mainstem and an additional eight road crossings in the tributaries.

Attachments Available:

Contact respective SSHEAR habitat biologist for the following checked items:

<input checked="" type="checkbox"/> Aerials	<input checked="" type="checkbox"/> Sketch	<input checked="" type="checkbox"/> Maps	<input checked="" type="checkbox"/> Culvert Report
<input type="checkbox"/> Other references	<input type="checkbox"/> Spawning surveys	<input checked="" type="checkbox"/> Juvenile trapping	<input type="checkbox"/> Fishway Report

NORTH COAST OFF CHANNEL SURVEY
SUBSEQUENT SITE EVALUATION FORM

River System: Sol Duc

Site No.: S-0312
 Site Name: Swanson Creek
 WRIA: 20.0312

DATE: 3/5/97 - 3/6/97

OBSERVER: Nettnin

MINNOW TRAPPING REPORT

TRAP	DATE		DATE		CATCH		RBT	CUTT	COTTID	TROUT (SND)
	SET	TEMP	PULLED	TEMP	COHO	MRK				
1	3/5	5.5°C	3/6	6.0°C	0	0	0	0	16	0
2	3/5	5.5°C	3/6	6.0°C	4	0	0	2	7	0
3	3/5	5.5°C	3/6	6.0°C	6	0	1	1	6	0
4	3/5	5.5°C	3/6	6.0°C	3	0	0	0	0	1
5	3/5	5.5°C	3/6	6.0°C	6	0	1	1	12	0
6	3/5	6.5°C	3/6	7.0°C	0	0	0	0	2	0
7	3/5	6.5°C	3/6	7.0°C	0	0	0	0	2	0
8	3/5	6.5°C	3/6	7.0°C	6	0	0	0	6	0
9	3/5	7.0°C	3/6	7.5°C	7	0	1	0	2	0
10	3/5	7.0°C	3/6	7.5°C	4	0	0	0	20	0
11	3/5	7.0°C	3/6	7.5°C	9	0	0	0	2	0
12	3/5	7.0°C	3/6	7.5°C	4	0	0	0	1	0
TOTALS:					49	0	3	4	76	1

COMMENTS:

- Trap 1 was placed about 100 m above the mouth of Swanson Creek.
- Trap 2 was placed at the outlet of the pipe under Shuwah Road.
- Trap 3 was placed at the out let of the culvert under highway 101.
- Trap 4 was placed about 270 m above highway 101.
- Trap 5 was placed about 50 m above trap 4.
- Trap 6 was placed at the outlet of the pipes under Loushins' driveway.
- Trap 7 was placed about 100 m above the confluence of Swanson Creek and LaGambina Creek.
- Trap 8 was placed about 40 m upstream below a beaver dam (40 m below the T-1010).
- Trap 9 was placed at the outlet of the mainstem pipe under the T-1010 road.
- Trap 10 was placed below the outlet of the first pipe under the T-line.
- Trap 11 was placed above the beaver dam, but outside the main channel in the marsh, 40 m below the T-1010.
- Trap 12 was placed at the outlet of the first pipe under the T-1010 that flows into the marsh to the left of the T-1010. These last two traps are a little out of sequence because originally the marsh was thought to be a separate channel. After the survey was completed it was observed that most of the water that flows through the marsh at this time comes from the mainstem.

WDFW FISH PASSAGE REPORTING FORM

LEVEL I - Facility/Barrier Identification

(1) CHECK ONE: Existing Fishway (includes baffled culverts)
 Man-made Fish Passage Problem

(2) STREAM: Swanson Creek (3) WRIA#/RM: 20.0312 / 0.4

(4) TRIBUTARY TO: Sol Duc River (5) LEGAL(S,T,R): SW¼, Sec 16, T29N, R13W

(6) LATITUDE/LONGITUDE:

(7) MILEPOST/ROAD: 0.1 / Iverson Road (About MP197 on highway 101).

(8) DESCRIPTION OF FISHWAY, FACILITY:

(9) DESCRIPTION OF BARRIER: Culvert velocity needs to be checked. The rip rap above the culvert protecting the toe of the road nicks the channel down causing turbulence and velocity increase.

(10) OWNER: Clallam County

(11) FISH ACCESS UP TO BARRIER VERIFIED/PRIMARY SPECIES: Adults pass through (end of index above the culvert) Unknown if juveniles are able to migrate up from the Sol Duc River.

(12) HABITAT AVAILABLE ABOVE FISHWAY OR BARRIER: Excellent rearing habitat above this and several other culverts.

(13) IDENTIFIED BY (agency/organization): WDFW - SSHEAR

(14) SUBMITTED BY/DATE OBSERVED: D. Nettnin 2/19/97

(15) INVENTORY DESCRIPTOR: S-0312

LEVEL II - Culvert/Barrier Description

CULVERT:

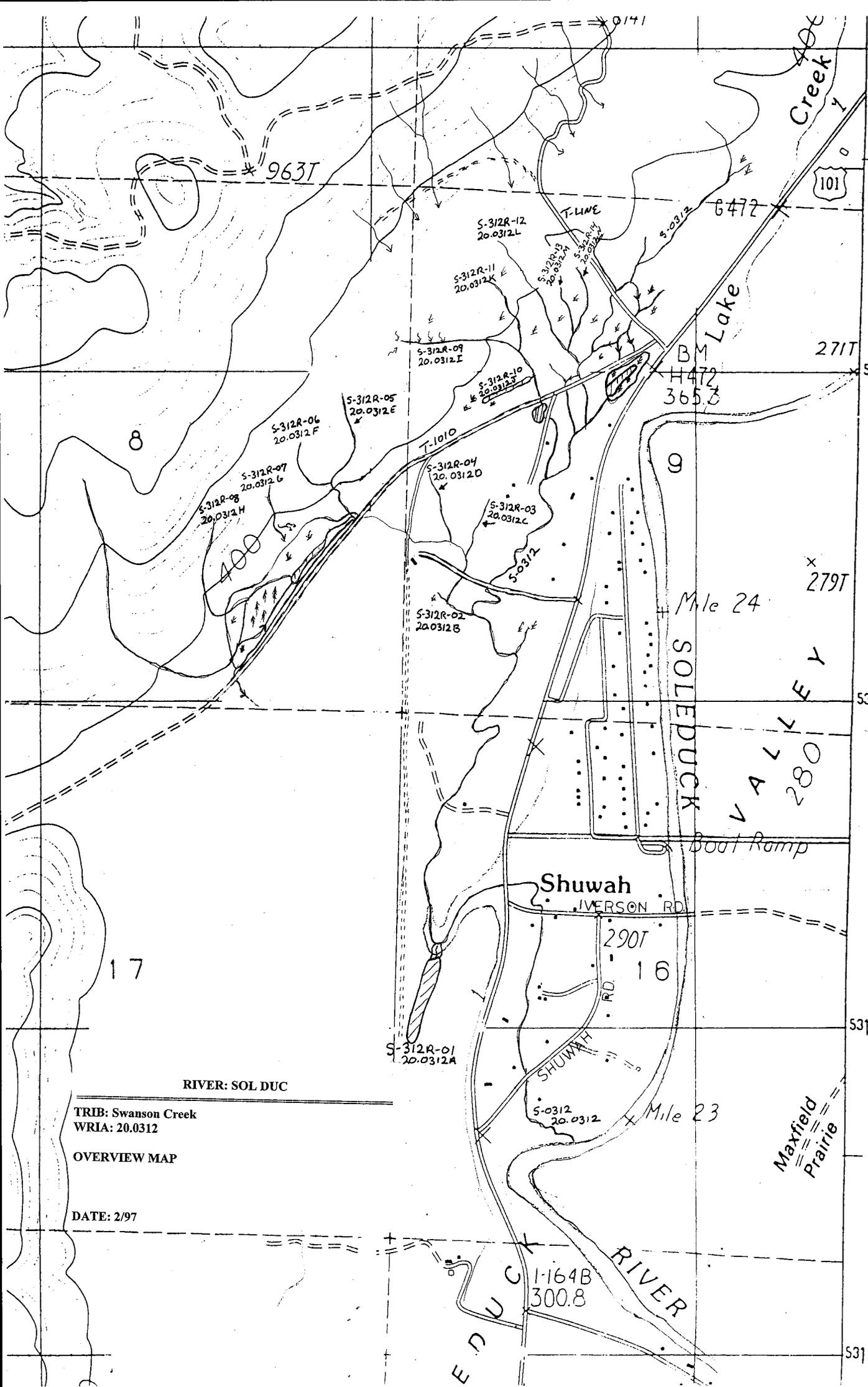
(16) TYPE (Indicate number of each): concrete round
 concrete box
(17) LENGTH: 60' smooth steel pipe
 CMP - Round
(18) DIAMETER: 8' CMP - Arch or Ellipse
 Other:

(19) WATER DEPTH: (20) SLOPE: 0.1' (21) VELOCITY:

(22) OUTFALL DROP: 0.0

DAM:
(23) LENGTH: (24) HEIGHT:

COMMENTS: The pipes under Shuwah Road (RM 0.2) and Iverson Road (RM 0.4) appear to have been installed about the same time. The installations appear good, but velocities should be checked on both.



RIVER: SOL DUC

TRIB: Swanson Creek
 WRIA: 20.0312

OVERVIEW MAP

DATE: 2/97

531

RIVER: SOL DUC RIVER

AREA: S-R3

AREA MAP

9/96

