

SITE NUMBER: SH-R2-02
LOCAL NAME: Lear Springs
WRIA: 20.0478A

NORTH COAST OFF CHANNEL SITE INVENTORY DATA

RIVER SYSTEM: S.F. Hoh **DATE:** 7/28/88 **OBSERVER:** Nettnin

CHANNEL TYPE: Terrace Trib.

TRIBUTARY TO: S.F. Hoh River (20.0473)

SITE LOCATION: R.B. @ River Mile 4.3

LEGAL DESCRIPTION:

	<u>UPPER END</u>	<u>LOWER END</u>
<u>WATER TEMP.:</u>	47 F	48 F
<u>FLOW (CFS):</u>	0.25 - 0.5	0.5 - 1.0

SUBSTRATE TYPE: Upper end: gravel & silt. Lower end: Gravel, cobble and boulder.

SITE SIZE: **Length-** Approx. 500 m
 Width- 4 - 8 ft
 Depth- 4 - 10 inches (pools to 2 ft)

WATER SOURCE: Springs.

DIRECTIONS TO SITE: Head north on Hwy 101. Turn right at mile post 176 onto the Hoh Mainline. Turn left just prior to mile post 7.0 onto the H-1000. Follow the H-1000 about 2.4 miles to a major fork. Stay right at the fork and continue on the H-1000 approximately 5.5 miles to the H-1000 bridge and the South Fork Hoh Campground. Continue on pass the campground and up the hill. The H-1000 ends at a landing about 2 miles beyond the campground. SH-R2-02 is located south of the landing. (See site direction map).

FISH ACCESS AND CURRENT USE: 0+ coho were very abundant in this terrace trib. There is good spawning gravel present in the system which might be utilized by adult coho. The fry that were seen may have been spawned here. The steep mouth of the channel may restrict fry access but should permit access to pre-smolts.

FLOODING POTENTIAL: Low.

LANDOWNER: Unknown at this time. Probably DNR.

COMMENTS & RECOMMENDATIONS: SH-R2-02 is an excellent spring-fed channel that appears to maintain a year round flow. Coho fry were seen throughout SH-R2-02, except in the upper 30 to 40 m of the main channel. A trib near the upper end of the main channel appears to contribute a lot of gravel to the system. This has caused some braiding of the channel in the middle reaches. It is not apparent whether this gravel movement occurs every winter or in periodic slumps.

A beaded channel, in conjunction with control structures, could greatly enhance and increase the available rearing area as well as increasing the quality and stability of the spawning gravel. Ponds could be excavated at both the upper end of the main channel and the upper end of the RB trib (see site map). While currently lying in an area of old growth timber, cutting boundaries have been marked and the area appears scheduled for logging in the near future. It appears that a buffer strip has been marked along this channel. Depending on how the unit is logged and where the roads are located, there may be machine access to this site in the future.

A similar, though somewhat smaller, terrace trib enters the S.F. Hoh just downstream of SH-R2-02 (see site map). This trib is inaccessible to coho because of a steep 15 to 20 ft cascade/falls at the mouth. No fry were observed in this trib. Efforts to make this trib accessible do not appear feasible.

DATE: 5/16/90

OBSERVER: King, Nettnin

The roads have been built into this area and will provide good access to this channel, SH-R2-02 and SH-R2-01. There has been some road building problems but no major impacts on the channels yet. The channels are well buffered so if the loggers observe these buffers the channels should stay in good shape.

DATE: 8/20/90

OBSERVER: King

This area has been logged since the last site visit with very little impacts to the stream. Good flow and lots of fry above the cascade. This channel will be checked for the possibility of doing some enhancement work in 1991.

DATE: 10/10/90

OBSERVER: Nettnin

The area around SH-R2-02 has been logged. There is a good buffer left, so there is very little apparent impact on the channel. There is a flow of about 3 cfs. Many coho fry were observed throughout SH-R2-02.

The access road is closed to vehicles.

DATE: Sept. 1991

OBSERVER:

An overwintering habitat enhancement project was completed here. The outlet channel was widened and sloped and debris jams were removed. The area upstream, where the gradient of Lear Ck. had flattened out and deposited gravel, was deepened and a log control was installed along with a hardened berm. The R.B. spring channel had 2 ponds dug into it with plank controls to deepen and control the water level. A portion of spring flow from Byrnes Springs (SH-R2-1A) was diverted into the ponds via a hand-dug channel. "Wetland" benches were installed and planted with Sedge around the perimeters of the ponds. The exposed banks were revegetated with grass, shrubs and trees. WDF did the heavy equipment work and DNR labor crews did the hand work.

During the dry spell following the completion of the controls the lower pond dried up. Water was flowing into the upper pond, but apparently is flowing subsurface somewhere else, this needs to be monitored closely during the summer.

As soon as the rains came and the flows increased adults showed up in the mainstem Lear Cr., in the spring channel and at least one pair spawned in the interconnecting channel.

DATE: 10/30/91

OBSERVER: King, Young, Nettnin

During the summer the lower end of Lear Cr. was regraded to remove a debris jam and cascade. Rock and log controls were installed to control stream bed degradation. In the RB spring channel two small ponds were excavated, the shallows were planted to wetland species (sedges and rushes mainly), cover structures were added, all disturbed areas were mulched, seeded, and planted to alder, spruce and other woodland plants. Controls were installed to maintain pond levels. An interconnecting channel was dug between a branch of Byrnes Spring and Lear Spring to augment summer flows through the ponds and also to allow fish access to Byrnes Spring which has a steep egress. During the dry spell following the completion of the controls the lower pond dried up. Water was flowing into the upper pond, but apparently is flowing subsurface somewhere else, this needs to be monitored closely during the summer.

As soon as the rains came and the flows increased adults showed up in the mainstem Lear Cr., in the spring channel and at least one pair spawned in the interconnecting channel.

DATE: Nov. & Dec. 1991

OBSERVER:

The Hoh tribe monitored spawner use at this site and counted a total of 11 coho redds in Lear Springs and 18 coho redds in Lear Creek.

DATE: 1/14/92

OBSERVER: Darrow

Six minnow traps were baited with salmon roe and set throughout Lear Springs. A total of 12 Coho, 11 trout and 9 cottid were captured.

DATE: 1/30/92

OBSERVER: Young

Temp of spring: 8° C; Temp of creek: 8° C;
Flow in creek: 15 - 20 cfs

Valley wall trib was flowing at the bridge on the way in.

The benches where the sedge grasses are planted is covered with 15 - 20 cm of water, some ferns are covered also. Water is running over the shoulders of the upper two weirs, but causing no apparent erosion problems. The lowest weir is submerged.

DATE: 5/14/92

OBSERVER: King, Nettin

0+ Coho fry were observed all through the ponds, the spring channel, the interconnecting channel and in Byrnes Springs.

DATE: 5/18/92 - 5/28/92

OBSERVER: Darrow, Rinda

During this time frame it was decided to trap some fry from Lear Springs and move them to Mosley Springs. Six minnow traps were baited with salmon roe and placed in the ponds. A total of 260 fry were moved to Mosley Springs.

DATE: June 1992

OBSERVER:

The lower pond at Lear Springs dried up. Over 300 coho fry were removed from the pond before it dried up completely. These fish were moved to Mosely Springs (SH-R2-03). Bentonite was added to the pond bottom by DNR crews. The upper pond did not dry up but seep holes were detected. Bentonite was added to the R.B. side and bottom of this pond. The hardened berm in Lear Creek was reinforced with rock also. Trees and shrubs were planted on the L.B. side of the lower channel of Lear Creek.

DATE: 8/92

OBSERVER: Nettin

During this period several additions and modifications were completed to this project:

- Completed armoring the left bank at the control log in the main channel.
- Placed rip rap along the right bank just above the spring channel.
- Installed two logs across the main channel to create a plunge pool or under scour to help create better spawning opportunities.
- Modified the debris jam in the main channel to allow better adult passage.
- Placed spawning gravel in the spring channel.
- Did some additional revegetation and added cover to the ponds.
- installed controls at the inlet and outlet of the diversion channel.
- Spread 12 sacks of bentonite in the upper pond in an effort to seal the bottom.
- In the lower pond we removed about six inches of dirt from the pond bottom laid down about a 1/4 inch of bentonite and then covered it. We used about 10 sacks.

Crew days: 4 (crew days based on a 10 man crew working 8 hrs/day).

DATE: 10/28/92

OBSERVER: Young

Water temp in the mainstem of Lear Creek was at 47° F. Water temp at the inlet to the upper pond was at 48° F. No more of the inlet channel was wetted than when DK, DN and RY last visited this site on 9/30/92.

Just a trickle of flow out of the upper pond and into the lower pond (< 5 gal/min). Water depth in the lower pond is no more than 1 ft. No surface flow out of the lower pond.

DATE: 10/29/92

OBSERVER: King, Gowen

The lower pond in Lear Springs had started to fill.

DATE: 11/4/92

OBSERVER: King, Nettin

Both ponds in Lear Springs were flowing.

DATE: 12/30/92 - 12/31/92

OBSERVER: Darrow

The minnow traps were baited with salmon roe that was acquired at the Soleduck Hatchery. Has been a dryer then normal fall.

MINNOW TRAPPING REPORT

TRAP	DATE SET	TEMP	DATE PULLED	TEMP	COHO	CATCH			COTTID
						TROUT RBT	CUTT	0+	
1	12/30	N/A	12/31	N/A	0	0	0	0	0
2	12/30	N/A	12/31	N/A	0	0	0	0	4
3	12/30	N/A	12/31	N/A	1	0	0	0	0
4	12/30	N/A	12/31	N/A	0	0	1	0	0
TOTALS:					1	0	1	0	4
Avg. L (mm)					67	0	73		N/A

DATE: 1/12/93

OBSERVER: King, Nettnin

Observed six redds in Lear Spring Channel around the two sets of controls , including the additional gravel added this year.

DATE: 4/93

OBSERVER: King

Saw 0+ coho fry in both ponds. Flows were pumped up. Wetland plants looked good. New growth.

DATE: 7/6/93

OBSERVER: King

Still had 2" of water flowing over lower pond controls.

DATE: August 1993

OBSERVER:

Lower pond has dried up. All fry in pond were lost.

DATE: 12/28/93

OBSERVER: King

Good flow! No rain for 2 weeks. Upper creek flowed in early Dec. 7 or 8 redds in springs section on spawning pads and above ponds on L.B. trib. No redds in Byrnes bypass channel. 1 or 2 redds on main creek. Saw fry above ponds in main channel.

DATE: 8/3/95

OBSERVER: Nettnin

The water is still flowing over the lowest weir.

DATE: 11/30/95

OBSERVER: King

Counted 12 adult coho on the project and above.
Saw 8 coho in Lear Ck.
Saw 1 redd in the bypass channel between Lear and Byrnes springs.

DATE: 4/4/96

OBSERVER: Darrow

There is moderate erosion on the left bank where a tree has blown over and has exposed a 15 - 18 foot silt bank. Rock armoring is suggested for this area. There are numerous (11-13) redd flags from this winter's surveys. Fry were observed throughout the area. Some presmolts were also seen.

DATE: 8/96

OBSERVER: Powell

Ponds had plenty of water this summer.

DATE: October 96

OBSERVER: Nettnin

Added spawning gravel to the lower channel.

DATE: 11/18/96

OBSERVER: Darrow

All the controls looked good. There were 2 - 3 coho redds near controls and live coho adults were observed.

DATE: 5/8/97

OBSERVER: Powell/Darrow

Lots of water and lots of fry. Saw some smolt sized fish also. There was some fresh steelhead digging in the project. Everything looked good. It is obvious the fish are utilizing the added spawning gravel.

DATE: 8/5/97

OBSERVER: Nettnin

- Added cover to the ponds
- Added gravel to low spots along the interconnecting channel from Lear Springs to Brynes Spring.

DATE: 10/20/97

OBSERVER: Powell

Everything looked good - lots of water. Saw numerous various sized salmonids in all the ponds.

DATE: 3/22/98

OBSERVER: Darrow

Did not see any past season spawner flagging but observed old redds. Project looks fine. Observed fry and 1+ juveniles in project. ~ 1.5 - 1.75 CFS.

DATE: 11/5/98

OBSERVER: Darrow

This system is doing well. A school of approximately 25 coho darting for cover as I crossed the footbridge at the beginning of the trail across the outflow. No adult activity. Numerous old flags and mounds were observed. No barriers were encountered. Frequent usage of the spawning gravel has piled and concentrated it in some areas, especially in short bays below beads and pond. Gravel could use some human redistributing after a busy season as current flow is not sufficient to do it naturally. Numerous coho were observed in the main channel.

DATE: 5/12/99

OBSERVER: Nettnin

- Overall project looks good.
- Could use more cover in the upper pond and more gravel on the spawning beds
- Need to remove some gravel from between the two lower weirs. Low flows go inter-gravel.

GPS position data was taken and is as follows:

- Egress with S. F. Hoh River:	East 1,149,920 ft.	North 916,706 ft.
- Egress of SH-R3-02A with SH-R3-02	East 1,150,266 ft.	North 916,782 ft.
- Outlet of upper pond (SH-R3-02A)	East 1,150,461 ft.	North 917,059 ft.
- Location of upper end of SH-R3-02A	East 1,150,807 ft.	North 917,052 ft.
- Egress of SH-R3-02B with SH-R3-02	East 1,150,958 ft.	North 916,694 ft.
- End of SH-R3-02B	East 1,151,159 ft.	North 916,329 ft.

DATE: 10/20 - 12/2/99

OBSERVER: King

Checked site on numerous occasions between these dates. No beaver activity. On 10/20, ponds were still full of water after a long dry spell. Lots of juvenile salmonids in the creek and springs. Everything was flowing by 11/2 and three live adult coho were observed. Two to 4 redds were seen immediately above the controls in the lower end of the pond area. Flow was up on 11/9 and there was flow under the bridge at the upper road crossing. No adult fish were observed on that date. On 12/1, several redds had been marked by the tribe. The redds were located in the springs, creek and at the creek's source springs. A few unmarked redds were also seen. Ponds need additional woody debris.

DATE: 7/5/00

OBSERVER: Nettnin

The project looked good. It appears to need additional spawning gravel. Juvenile coho were observed in the project, in the mainstem stream, and in the cross over channel with Brynes Springs.

DATE: 11/14/00

OBSERVER: King

Project looks good overall. Possible redd near mouth of spring in main creek. Juveniles seen in ponds and creek.

DATE: 11/20/00

OBSERVER: Nettnin

The upper pond could use more cover, and more gravel on the spawning beds. Some gravel needs to be removed from the area between the two lower weirs. During low flows, water goes inter-gravel.

DATE: 4/2/01

OBSERVER: Darrow

Lower than normal precipitation this winter and early spring does not appear to have had any affect on this system - healthy flow. Observed numerous fry throughout the system. Project looks great.

DATE: 7/24/01 - 9/13/01

OBSERVER: Nettin

Installed six weirs in the upper spring channel.

DATE: 11/14/01

OBSERVER: King

Ten adult coho in creek. No adult fish in Lear Creek Springs.

DATE: 11/27/01

OBSERVER: King

Fifty-five coho adults were observed and numerous redds throughout the area including in the new project section on the upper springs. Schools of juvenile salmonids were seen in pool areas. Access from the river still looks good. Pools need additional woody debris. Crossover channel from Byrnes Springs to Lear Springs needs some deepening and widening.

DATE: 2/6/02

OBSERVER: Darrow

MINNOW TRAPPING REPORT

TRAP	DATE		DATE		CATCH				
	SET	TEMP	PULLED	TEMP	COHO	RBT	CUTT	COTTID	
1	2/19	7°C	2/20	7°C	4	0	1	1	
2	2/19	7°C	2/20	7°C	5	0	0	3	0
3	2/19	7°C	2/20	7°C	4	0	0	2	4
4	2/19	7°C	2/20	7°C	0	0	0	0	0
5	2/19	7°C	2/20	7°C	3	0	0	3	1
6	2/19	7°C	2/20	7°C	2	0	0	0	1
7	2/19	7°C	2/20	7°C	3	6	0	0	0
8	2/19	7°C	2/20	7°C	0	2	2	2	1
9	2/19	7°C	2/20	7°C	4	1	1	1	3
10	2/19	7°C	2/20	7°C	4	1	1	2	5
TOTALS:					29	10	14	16	

Average size: 86.8 mm STD: 11.7 Min-Max: 63-110 Count: 29 coho measured

COMMENTS:

Traps were placed in new project area.

Traps 1 and 2 were placed upstream of 6th new control, in the upper most part of the project

Traps 3 and 4 were placed in the area between the 5th and 6th new controls.

Traps 5 and 6 were placed in the area between the 4th and 5th new controls.

Trap 7 was placed between the 3rd and 4th new controls.

Trap 8 was placed between the 2nd and 3rd new controls.

Trap 9 was placed between the 1st and 2nd new controls.

Trap 10 was placed directly downstream of the 1st new control.

DATE: 4/22/02

OBSERVER: Darrow

MINNOW TRAPPING REPORT

TRAP	DATE		DATE		CATCH				
	SET	TEMP	PULLED	TEMP	COHO	RBT	CUTT	COTTID	
1	4/21	7°C	4/22	7°C	0	0	0	3	
2	4/21	7°C	4/22	7°C	3	0	0	0	1
3	4/21	7°C	4/22	7°C	0	0	0	0	3
4	4/21	7°C	4/22	7°C	0	0	0	0	0
5	4/21	7°C	4/22	7°C	1	0	0	0	6
6	4/21	7°C	4/22	7°C	1	0	0	0	0
7	4/21	7°C	4/22	7°C	1	2	1	1	5
8	4/21	7°C	4/22	7°C	0	0	0	0	2
9	4/21	7°C	4/22	7°C	1	0	0	0	4
10	4/21	7°C	4/22	7°C	0	0	0	1	1

TOTALS: 7 2 2 25

Average size: 97.0 mm STD: 6.5 Min-Max: 89-108 Count: 7 coho measured

COMMENTS:

Traps were placed in new project area.

Traps 1 and 2 were placed upstream of 6th new control, in the upper most part of the project

Traps 3 was placed in the area between the 5th and 6th new controls.

Traps 4 and 5 were placed in the area between the 4th and 5th new controls.

Traps 6 and 7 were placed between the 3rd and 4th new controls.

Trap 8 was placed between the 2nd and 3rd new controls.

Traps 9 and 10 were placed between the 1st and 2nd new controls.

DATE: 4/22/02

OBSERVER: Darrow

Upper most pond on the right bank tributary has a control leak around the left bank side. It is not a passage problem. It is presently stable and not further eroding. All and all, the system looks good. Lots of fry throughout the system. Fry were also distributed between the cut between Byrns Springs, and to the headwall of Byrns Springs.

DATE: 6/3/02

OBSERVER: Nettnin

Placed spawning gravel on new and old project. Also placed gravel in the spring channel above the old project site.

DATE: 11/20/02

OBSERVER: King

Twenty plus adult coho spawners were observed on new project and in Lear Creek. None were in Lear Cr Springs. Good flow.

DATE: 12/18/02

OBSERVER: King

Over 150 coho adults were observed throughout the system. All areas have good spawner coverage. There are 18 adults in the new project.

DATE: 4/25/03

OBSERVER: King

~~Project looks good. There are lots of fry~~

DATE: 8/21/03

OBSERVER: Nettnin

Added cover structures and planted willow and sedges along the channel edge.

DATE: 11/7/03

OBSERVER: King

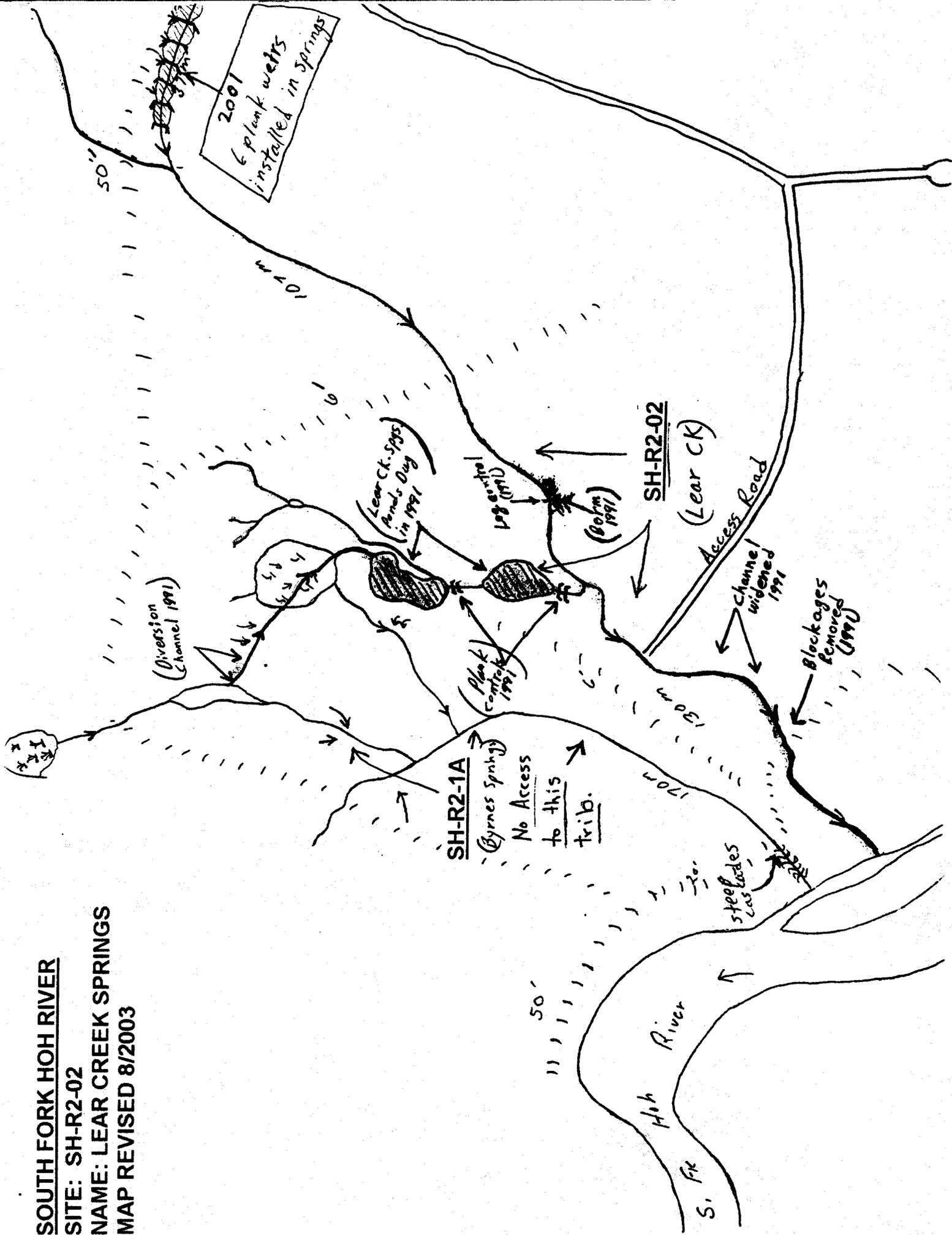
Project looks good. No adult fish yet.

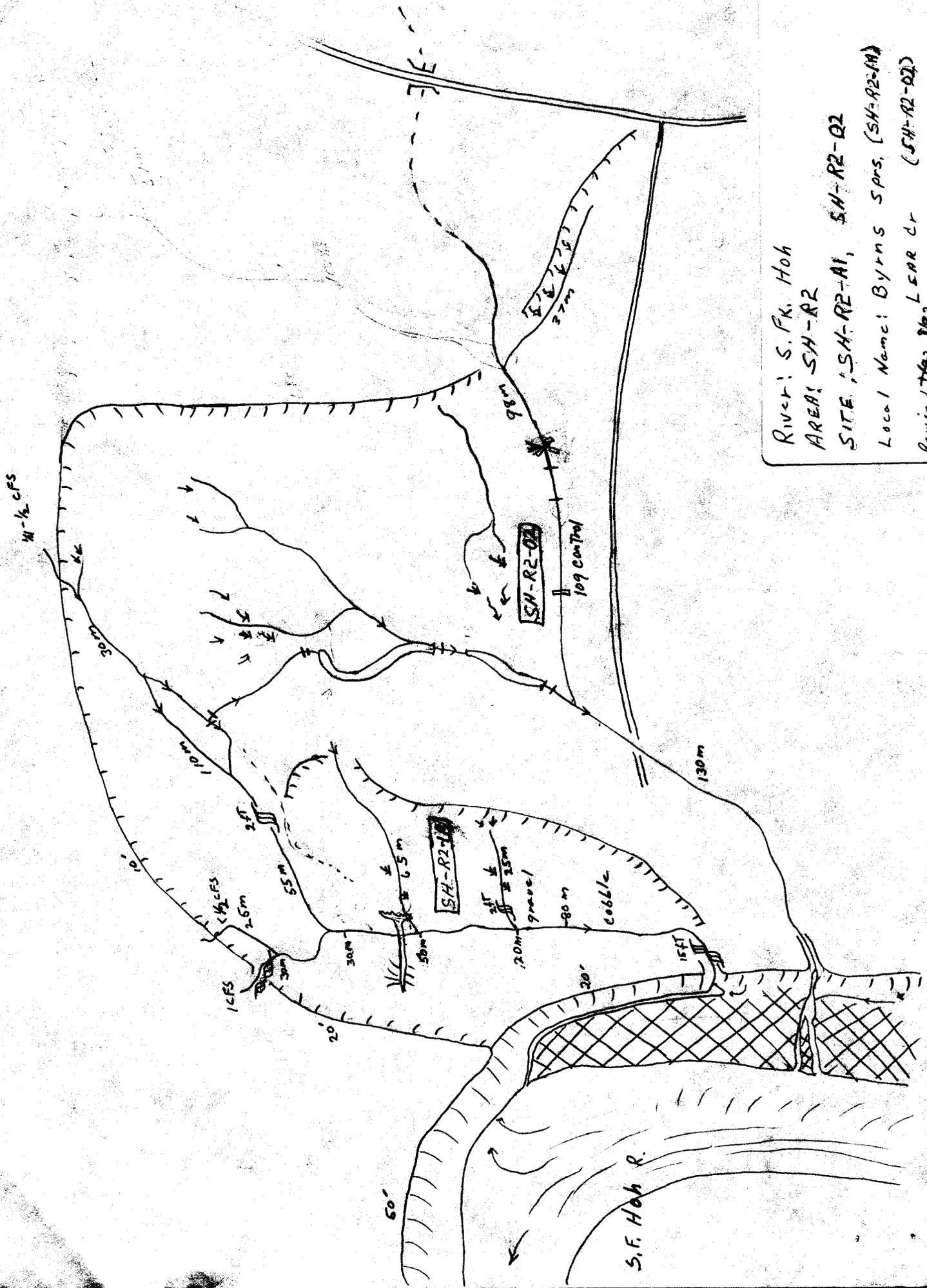
SOUTH FORK HOH RIVER

SITE: SH-R2-02

NAME: LEAR CREEK SPRINGS

MAP REVISED 8/2003





River: S. Fk. Hoh
 AREA: SH-R2
 SITE: SH-R2-A1, SH-R2-Q2
 Local Name: Byrns Spns. (SH-R2-A1)
 Revise L 7/92 8/92 LEAR cr (SH-R2-Q2)

**SOUTH FORK HOH RIVER
SITE: SH-R2
OVERVIEW MAP**

