

SUPPLEMENTARY SURVEY

Big Salmon Creek

Mendocino County

July 25, 1966

Stream Identification:

Mouth T16N, R17W, Sec. 28: Big Salmon Creek flows into the Pacific Ocean ½ mile south of the Richfield station at the village of Albion on Highway 1 at the bridge crossing over Big Salmon Creek; highway bridge signs reads "Big Salmon Cr.".

Extent of Surveys:

Entire drainage by foot with exception of these tributaries which have been surveyed separately: (1) Haxel Gulch, (2) Donnelly Gulch (Donley Gulch), both of which representing the headwaters of Big Salmon Cr. Period of Survey: 24 July 1966.

Environmental Conditions:Stream Flow:

Immediately above tide water at mouth: 1.30 cfs.

Temperatures:

Immediately above tide water at mouth: 1700: air 62°, water 64°; weather fair, wind 20 mph.

Spawning Gravels:

1. evaluation: good
2. description: 12' in width; coarse gravel - fine gravel bottom with considerable silt in and below current logging areas; 3'-4' winter water coverage; gradient very slight throughout, which favors algae blooms in treeless areas.

Aquatic Insects:

1. type: mayfly nymphs, caddis fly larvae (young population), unidentified black beetle, microscopic insects in algae areas.
2. abundance: the traditional salmonid food, may fly, caddis fly, e.g., are quite limited, because of the character of the stream. The current caddis fly larvae population appear to be recently established. Apparently because of the scarcity of food, in more ideal environments, the parr tend to congregate in the treeless, warmwater areas, where algae blooms occur and where apparently many microscopic forms of insects thrive.

Logging Operations

1. Much silt has been deposited near the confluence of Hazel Gulch and Donnelly Gulch, apparently from the current logging operations on Hazel Gulch by H. J. Gray and Company.
2. Aborigine Logging Co., Caspar Cr., is currently logging along the streambed of Big Salmon for about ½ of a mile. There is at the time of this survey logs and slack in the stream from this operation.

Barriers:

1. Total: 31 log jams
2. Size:
 - a. 17 small to moderate jams
 - b. 14 large jams:
 - #4 - 42'l, 18'w, 8'h; #5 - 24'l, 18'w, 10'h; #6 - 24'l, 24'w, 8'h;
 - #7 - 50'l, 30'w, 10'h; #16 - 48'l, 30'w, 5'h; #19 - 100'l, 12'w, 4'h;
 - #9 - 18'l, 24'w, 6'h; #11 - 36'l, 30'w, 10'h; #20 - 150'l, 40'w, 8'h;
 - #22 - 60'l, 12'w, 4'h; #23 - 36'l, 45'w, 6'h; #24 - 36'l, 12'w, 5'h;
 - #25 - 150'l, 18'w, 4'h; #26 - 100'l, 36'w, 5'h.

Note: area of stream near mouth, boulder bottom and narrow channel, may jam any logs or debris moving across, although it is now free of any barriers.

Fish Population

1. Silver Salmon and Steelhead

The following parr were netted, identified, and examined before release in representative samples:

	<u>Actual Size</u>	<u>Range</u>	<u>Size Average</u>	<u>Condition</u>
Salmon	112	2"-3½"	2¼"	Heavy, well proportional
Steelhead	48	1¼"-7"	2"	" " "
Total	160			

The populations of Steelhead and salmon below optimum.

2. Other Fish Netted and Identified

Three-spine stickleback: actual count 19.

Access Confluence of Hazel Gulch and Donnelly Gulch:

Access by new Hardell Ranch Rd., which joins the Albion Ridge Rd (county) 6¼ miles east of the post office of the village of albion. A small house just north of the entrance marks this site. The old Hardell ranch rd., about a mile north of the new rd., is currently impassible because of a washout. A mile from the entrance on the new rd., an old logging rd. joins the Hardell ranch rd., which logging rd. leads to the mouth of Hazel Gulch and Donnelly Gulch. From this point an old logging road follows Big Salmon downstream for 2% miles, but is currently impassable, because of washouts and windfalls. During survey it was not checked in its entirety; it may be feasible to repair it.

Central Part of Big Salmon ½ mile Below End of Logging Road From Hardell's Ranch Road:

Access by new Aborigine Logging Co. Rd., which joins the Navarro Ridge Rd. 3 1/4 miles up the Navarro Ridge Rd. from Highway #1. The aborigene Rd. passes through an old ranch, the gate to which was unlocked at time of survey. The gradient of this Road requires either a 4 wheel drive or a weighted pickup.

At Mouth:

Access to mouth by road (paved) joining Highway #1 on west side, 100 feet south of Rickfield Service Station at village of Albion. A former logging road runs along the stream from the mouth to a point 2% miles upstream from mouth. Locked gate at mouth, key to which is available from James Sousi, Little River Rd., leasee of land from Polly Anderson, owner. Road from mouth is currently impassable even by jeep. Anderson intends to reopen road, however, purchasing land from Novello for this purpose. Rd. used for logging about 6 years ago.

Comments:

Big Salmon Cr. is of primary importance for silver salmon, secondary for steelhead

(stream is supporting twice as many salmon as steelhead). However, because of the serious extremely large log jam barriers, the spawning and nursery potential of the stream is not realized and the successful migration of the smolt is impaired. Removal of the log jams would increase the number of fish spawning by permitting access to spawning areas (primarily in Hazel Gulch and Donnelly Gulch), would favor successful nursery by lowering water temperatures and by encouraging common insect reproduction (caddis fly apparently just returning after a previous elimination of population from stream) and would permit the timely return of the year's hatch to the sea.

The current logging damage to the central portion of Big Salmon by Aborigine should be rectified for preservation of nursery area and fish traffic, the current logging damage to Hazel Gulch by H. J. Gray should be repaired for this area is of primary importance to the drainage as spawning grounds.

Recommendations:

1. Clearance of the 31 log jam barriers, as delineated on attached map.
2. Inspection of H. J. Gray's current logging operations to determine whether clearance of debris has been made.
3. Inspection of Aborigine's current logging operations to determine whether clearance of debris has been made.

Sources of Information:

1. Personal Observation.
2. S.T. Novella, rancher at mouth, owns south side of stream.
3. James Sansi, Little River Rd., leasee of land at mouth of sheep grazing.
4. Foreman of Gray's Logging operation.
5. Williams of William's Ranch
6. Mr. Hardell, Hardell's Gen. Mis. Store, Fort Bragg.

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12/22/66