

A PHYSICAL INVENTORY OF STREAMS IN THE
UPPER WILLAMETTE WATERSHED ABOVE THE CONFLUENCE
OF MIDDLE AND COAST FORKS OF WILLAMETTE RIVER

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INTRODUCTION

This report contains physical inventory information concerning the Coast and Middle Fork systems of the Willamette River as it relates to game fish and, to a lesser extent, wildlife production. Included survey data encompass nearly all streams within the drainage considered to have significant value for this purpose. Most of the surveys were conducted by the author in the summer of 1964. Substantial assistance was provided by personnel of the Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service. A portion of the Coast Fork Willamette watershed was surveyed by Oregon State Game Commission personnel in 1963. Also included are brief summaries of Oregon Fish Commission inventories made on Fall, Hills (lower), Lost and Mosby Creeks in 1959 (Willis, Collins and Sams, 1960).

Information derived from the surveys will permit more intensive management of fish, wildlife, water and associated natural resources by those agencies responsible. Major portions of the inventoried watersheds are located above large dams not presently having fish passage facilities. Due to the commonly high fish-producing potentials of the streams above these barriers coupled with possible eventual utilization by anadromous or other migratory fish, factors which would affect anadromous as well as resident fish species were recorded.

State Water Resources Board Map No. 2A. 70148 upon which stream names and mileages are based accompanies this report (Plate 1).

SURVEY METHODS

Surveys were conducted on foot except when roads paralleled the streams and visual contact with the stream was uninterrupted, thus permitting the use of a vehicle. Spot checks were occasionally made, but only above the indicated upper limits of the regular surveys (Plate 1) and usually above any portion of the stream having value for game fish.

Inventory records were kept for stream sections which varied from 0.25 mile to several miles in length. Chosen section lengths depended upon stream size, location of permanent landmarks and rate of change of physical stream features.

Most flows recorded were obtained with the "floating chip" method. Frequent flow measurements made by Game Commission personnel with current meters in many streams surveyed during the summer of 1964 were used to check the accuracy of flow volumes estimated with the floating chip method.

Fish species presence was obtained from available records and visual observations. An artificial fly attached to a short nylon leader on a wooden walking staff occasionally proved highly effective for obtaining trout for these observations. Table 1 presents fish distribution data from studies conducted by Basin Investigations personnel in many of the streams in 1964.

Water and air temperatures were measured with a hand thermometer and recorded in degrees Fahrenheit. The frequency of thermal measurements depended upon the size of the stream, the number of tributaries entering and the subsequent rate of change of flow.

Spawning Gravel Classification

Spawning gravel was designated as good or marginal for trout or for salmon and steelhead. Gravel for trout spawning was considered to be predominantly 1/4 to 2 inches in diameter, and for salmon and steelhead if between 2 and 6 inches in diameter. This method was used for the purpose of standardization, although it was realized that anadromous species could also utilize much of the smaller gravel. Gravel classified as "good" was relatively devoid of excessive fine or coarse materials, appeared to be of adequate depth for successful spawning, and was located in stream areas which would experience proper water depths and velocities during spawning periods. "Marginal" gravel was usable but had deficiencies in one or more of these requirements. Spawning gravel was recorded in square yards. For stream comparison and illustration purposes, gravel density is also expressed as a percentage of total stream bottom in Table 2 and Plate 1. In these instances good and marginal gravel suitable for both anadromous and nonanadromous fish spawning were grouped together.

Barrier Classification

The most common barriers to fish movement recorded were falls, cascades, log and debris jams, man-made dams, culverts, rock slides and road fills. Their relative size and effect upon fish passage is described in the text. Jams termed "impassable" are those that appeared to create complete barriers to anadromous fish at most stream flow volumes due to excessive size and compaction, a substantial waterhead in the forebay, or a combination of these factors. Only the more severe barriers are shown on the map (Plate 1).

Definition of Other Terms

Stream gradient is designated as either slight (less than 4%), moderate (4 - 6%), or steep (over 6%).

Pool depth is the estimated maximum depth in feet.

Shade cover is described by indicating plant species and the degree of shade imparted to stream surfaces, expressed as slight, moderate or dense.

Watershed cover types are the predominant plant species found on the stream watershed.

Water turbidity is defined as clear, slight, moderate or severe.

Land ownership of lands adjacent to streams is given when possible.

Riffle-pool ratio is expressed in percent for a particular stream section surveyed.

Stream widths were paced or estimated in feet at the mouth and in each section surveyed.

Bottom composition is designated as mud, silt, sand, gravel, rubble (6-12 inches in diameter), boulders (12 inches or more in diameter), and bedrock.

ACKNOWLEDGMENTS

Basic survey procedures were patterned after those provided by Oregon State Game Commission biologist William O. Saltzman. The Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, provided office space and secretarial assistance in Eugene in addition to considerable field survey aid. Bureau personnel who assisted on the surveys under the supervision of Clifford E. Soderstrom were Arthur Arp, Jack Howerton, Harley Roberts and William Slade. Game Commission employees providing some additional field assistance were Mike Roberts, Wernald Christianson, Gary Hewitt, Greg Hattan and Jay Watson. Supervision and assistance during the surveys and report compilation were provided by Ralph Swan and Jim Hutchison. Surveys conducted by Frank DeShon and Ralph Opp on the Coast Fork Willamette River in 1963 are incorporated in this report.

Table 1

Results of Fish Distribution Studies Conducted in Upper Willamette Basin Streams, 1964

Stream	Tributary To	Sta. No.	Date	Flow (cfs)	Temp. (°F.)	Method ^{1/}	Location	Stream Mile	Species ^{2/} and Numbers
Coast Fk. Willamette R.	Willamette R.	1	8-21-64	15	63	Sh	3.7 mi. below Big and Little R.	36.3	Cot 3, Ct 7, D 5, Rb 5, Su 1
Bear Cr.	Coast Fk. Will. R.	1	7-22-64	3	61	Sh	4.0 mi. above mouth	4.0	Cot 30, Ct 29, D 4, RsS 2, Su 1
Big R.	" "	1	8-21-64	10	60	Sh	Mouth	0.0	Cot 3, Ct 4, D 8, Rb 1
"	" "	2	7- 1-64	5	56	Sh	0.3 mi. above Jasper Cr.	2.4	Cot 1, Ct 1, D 1
"	" "	3	7- 1-64	6	56	Sh	0.7 mi. above Edwards Cr.	6.5	Cot 5, Ct 16, D 2
Jasper Cr.	Big R.	1	7- 1-64	-	56	Sh	25 yds. above mouth	0.1	Ct 10, D 2
Little R.	Coast Fk. Will. R.	1	7- 1-64	12	56	Sh	100 yds. above first br.	0.6	Cot 8, Ct 4
"	" "	2	7- 1-64	-	55	Sh	1.2 mi. above Saroute Cr.	3.5	Cot 4, Ct 2
Saroute Cr.	Little R.	1	7- 1-64	-	54	Sh	1.0 mi. above mouth	1.0	Cot 3, Ct 9
Wilson Cr.	Cottage Grove Res.	1	7- 1-64	3.5	56	Sh	1.0 mi. above mouth	1.0	Cot 4, Ct 11
Row River	Mid. Fk. Will. R.	1	8-20-64	30	72	Sh	3.9 mi. below mouth of Sharps Cr.	13.0	Cot 73, Ct 5, D 53, Rb 1
"	" "	2	8-21-64	20	68	Sh	Mouth of Sharps Cr.	17.0	Cot 15, D 44, Rb 1
"	" "	3	8-20-64	15	70	Sh	0.4 mi. below Brice and Layng Crs.	20.5	Cot 26, Ct 2, D 78
Brice Cr.	Row R.	1	8- 6-64	11	69	Sh	0.3 mi. above mouth	0.3	Cot 5, Ct 4, D 4, Rb 1
"	"	2	7- 3-64	55	53	Sh	1 mi. above Alder Cr.	3.0	Cot 10, Ct 2
"	"	3	8- 6-64	10	63	Sh	3.3 mi. below Champion Cr.	5.2	Ct 2
"	"	4	8- 6-64	10	60	Sh	0.2 mi. below mouth of Champion Cr.	8.6	Ct 7, Rb 2
"	"	5	7- 2-64	25	51	Sh	0.2 mi. above mouth of Champion Cr.	9.0	Ct 7

Table 1 continued

Stream	Tributary To	Sta. No.	Date	Flow (cfs)	Temp. (°F.)	Method	Location	Stream Mile	Species and Numbers
Brice Cr.	Row R.	6	8- 6-64	5	59	Sh	2.3 mi. above mouth of Champion Cr.	11.1	Ct 10
Champion Cr.	Brice Cr.	1	7- 2-64	15	50	Sh	0.3 mi. above mouth	0.3	Ct 2
Layng Cr.	Row R.	1	8- 6-64	12	63	Sh	0.3 mi. above mouth	0.3	Cot 17, Ct 1, D 6
"	"	2	8- 6-64	8	59	Sh	3.2 mi. above mouth	3.2	Cot 14, Ct 2, D 16
"	"	3	7- 3-64	18	54	Sh	0.8 mi. above Patterson Cr.	7.8	Ct 11, D 7
Mosby Cr.	"	1	8- 6-64	15	73	Sh	0.7 mi. above mouth	0.7	Cot 52, D 3, LB 7, RsS 2, Su 1
"	"	2	8- 6-64	13	75	Sh	4.3 mi. above mouth	4.3	Cot 2, D 6, RsS 18
"	"	3	7-22-64	19	68	Sh	0.3 mi. below Fall Cr.	7.7	Cot 6, Ct 4, Ct or Rb fry 6, Rb or St 3, RsS 20, Su 4, Sq 1
"	"	4	7-22-64	15	66	Sh	Near Allen Cr.	13.5	Cot 15, D 20, Rb or St 2
"	"	5	7-22-64	10	63	Sh	Between Shea and Gray Crs.	18.3	Cot 4, Ct 4, Ct or Rb fry 6, D 42, Rb or St 4
Rat Cr.	Dorena Res.	1	7- 2-64	6	53	Sh	0.8 mi. above mouth	0.8	Cot 10, Ct 25
Sharps Cr.	Row R.	1	7- 3-64	33	63	Sh	1.6 mi. above mouth	1.6	Cot 8, Ct 2, D 4
"	"	2	7- 3-64	23	62	Sh	2.5 mi. below Martin Cr.	8.5	Cot 4, Ct 7, D 8
"	"	3	7- 3-64	15	56	Sh	0.9 mi. above Martin Cr.	11.8	Cot 3, Ct 13
Martin Cr.	Sharps Cr.	1	7- 3-64	8	62	Sh	0.7 mi. above mouth	0.7	Cot 8, Ct 3, D 8
Smith Cr.	Dorena Res.	1	7- 2-64	12	55	Sh	1.8 mi. above Teeter Cr.	2.3	Cot 7, Ct 12, D 2
Teeter Cr.	Smith Cr.	1	7- 2-64	9	54	Sh	100 yds. above mouth	0.1	Ct 6, D 8

1/ Sh - Electrofishing gear.

2/ Cot - cottid, Ct - cutthroat, D - dace, Rb - rainbow, RsS - reidside shiner, Su - sucker, LB - largemouth bass, St - steelhead, Sq - squawfish

Table 2

Spawning Gravel Density and Distribution

Stream	Stream Section (Miles)	Good Gravel (Yds.)	Marginal Gravel (Yds.)	Total Gravel (Yds.)	Percent of Bottom with Gravel
Coast Fork					
Willamette R.	0 - 19.2			128,050	18.9
"	19.2 - 29.7			27,500	9.9
"	32.5 - 36.4	785	3,710	4,495	13.1
"	36.4 - 39.6	590	2,390	2,983	10.6
Coast Fork Will. R.					
and Big R.	39.6 - 5.4	1,271	3,853	5,124	12.6
Big R.	5.4 - 8.4	358	1,136	1,494	16.9
Anderson Cr.	0.0 - 1.3	18	11	29	1.3
Beaver Cr.	0.0 - 0.5	31	-	31	2.7
Bar Cr.	0.0 - 0.5	31	10	41	2.3
"	0.5 - 1.0	48	5	53	3.0
"	1.0 - 1.3	2	2	4	0.5
Cedar Cr.	0.0 - 0.5	14	279	293	25.6
"	0.5 - 1.0	11	16	27	2.4
"	1.0 - 1.5	14	2	16	1.8
"	1.5 - 1.9	9	3	12	1.6
Combs Cr.	0.0 - 1.6	114	60	174	2.3
Drue Cr.	0.0 - 1.4	71	7	141	2.9
"	1.4 - 2.4	23	3	46	1.3
Edwards Cr.	0.0 - 1.5	278	491	769	29.1
Jasper Cr.	0.0 - 0.8	21	12	33	1.3
Johnson Cr.	0.0 - 0.5	2	-	2	0.2
Little R.	0.0 - 1.0	611	160	771	8.8
"	1.0 - 2.0	22	68	90	1.4
"	2.0 - 3.0	3	16	19	0.3
"	3.0 - 4.0	4	16	20	0.6
"	4.0 - 5.0	37	34	71	2.0
"	5.0 - 5.5	-	2	2	0.1
Blood Cr.	0.0 - 0.3	-	25	25	2.9
Saroute Cr.	0.0 - 1.0	118	102	220	3.1
"	1.0 - 2.0	27	48	75	1.0
"	2.0 - 2.3	-	22	22	1.6
W. Cinnabar Cr.	0.0 - 0.2	-	1	1	0.3
S. Fk. Big R.	0.0 - 4.3	357	214	571	4.5
Row R.	0.0 - 7.5	4,435	29,500	33,935	11.0
"	11.5 - 16.5	-	30	30	0.03
"	16.5 - 21.0	18	150	168	0.2
Brice Cr.	0.0 - 2.0	-	-	Negligible	-
"	2.0 - 4.0	12	15	27	0.1
"	4.0 - 6.0	239	1,099	1,338	7.6
"	6.0 - 8.0	301	584	885	6.3
"	8.0 - 10.0	30	24	54	0.3
"	10.0 - 15.0	121	530	651	0.9
Champion Cr.	0.0 - 2.0	79	82	161	1.7
Layng Cr.	0.0 - 2.0	2	23	25	0.2
"	2.0 - 4.0	-	25	25	0.2
"	4.0 - 6.0	28	50	78	0.8
"	6.0 - 8.5	11	28	39	0.4

Spawning Gravel Density and Distribution continued

Stream	Stream Section (Miles)	Good Gravel (Yds.)	Marginal Gravel (Yds.)	Total Gravel (Yds.)	Percent of Bottom with Gravel
Sharps Cr.	0.0 - 2.0	369	105	474	2.0
"	2.0 - 4.0	228	455	683	3.2
"	4.0 - 6.0	175	449	624	2.7
"	6.0 - 8.0	2,542	169	2,711	15.4
"	8.0 - 10.0	277	1,270	1,547	11.0
Martin Cr.	0.0 - 2.3	32	97	129	1.0
Wilson Cr.	0.0 - 1.0	24	6	30	0.5
"	1.0 - 2.0	31	41	72	1.5
"	2.0 - 2.7	24	28	52	2.1
Middle Fk. Willamette R.	0.0 - 4.0	22,000	72,000	94,000	33.4
"	4.0 - 8.0	11,000	22,000	33,000	11.7
"	8.0 - 12.0	35,000	46,000	81,000	28.8
"	12.0 - 16.8	51,000	76,000	127,000	37.6
"	16.8 - 31.0	-	-	-	-
"	31.0 - 45.5	20,000	46,000	66,000	9.0
"	45.5 - 52.9	-	-	-	-
"	52.9 - 57.0	430	885	1,315	0.8
"	57.0 - 61.0	-	225	225	0.2
"	61.0 - 64.0	420	715	1,135	1.3
"	64.0 - 68.0	430	1,280	1,710	1.6
"	68.0 - 72.0	350	1,070	1,410	1.5
"	72.0 - 75.1	100	435	535	1.0
"	75.1 - 81.0	313	745	1,058	1.5
Coal Cr.	0.0 - 5.5	659	340	999	2.1
Coffeepot Cr.	0.0 - 1.0	50	60	110	2.7
Deception Cr.	0.0 - 1.5	-	15	15	0.2
Fall Cr. <u>2/</u>					
Gold Cr.	0.0 - 3.0	-	60	60	0.6
Goodman Cr.	0.0 - 1.0	30	45	75	2.6
Hills Cr. (lower) <u>2/</u>					
Hills Cr. (upper)	0.0 - 3.0	-	-	-	-
"	3.0 - 7.0	1,227	42	1,269	3.6
"	7.0 - 11.0	340	200	540	1.5
"	11.0 - 16.0	45	30	75	0.3
Larison Cr. <u>2/</u>	1.2 - 3.5	42	104	146	1.4
Lost Cr.					
Noisy Cr.	0.0 - 2.0	25	40	65	0.7
N. Fk. of Mid. Fk.					
Willamette R.	0.0 - 5.0	135	720	885	0.4
"	5.0 - 11.0	197	2,773	2,970	1.3
"	11.0 - 14.6	110	205	315	0.6
"	14.6 - 18.6	1,854	355	2,209	3.3
"	18.6 - 22.6	565	544	1,109	1.4
"	22.6 - 26.6	425	888	1,313	1.6
"	26.6 - 30.6	370	930	1,300	1.6
"	30.6 - 34.6	280	520	800	0.9
"	34.6 - 38.4	150	125	275	0.3

Spawning Gravel Density and Distribution continued

Stream	Stream Section (Miles)	Good Gravel (Yds.)	Marginal Gravel (Yds.)	Total Gravel (Yds.)	Percent of Bottom with Gravel
Christy Cr.	0.0 - 3.0	120	315	435	1.7
"	3.0 - 6.0	195	380	575	3.3
"	6.0 - 11.0	-	-	Negligible	-
Fisher Cr.	0.0 - 4.0	840	460	1,300	7.9
Packard Cr.	0.0 - 2.0	-	75	75	0.5
Salmon Cr.	0.0 - 3.0	170	460	630	0.9
"	3.0 - 6.0	1,500	1,930	3,430	4.9
"	6.0 - 9.0	200	980	1,180	1.7
"	9.0 - 12.0	380	1,900	2,280	2.6
"	12.0 - 15.0	360	80	440	1.3
"	15.0 - 18.0	400	165	565	1.6
"	18.0 - 21.0	15	19	34	0.1
Black Cr.	0.0 - 4.0	370	865	1,235	3.5
"	4.0 - 8.0	140	195	335	1.2
"	8.0 - 11.0	340	715	1,055	4.5
Furnish Cr.	0.0 - 1.5	40	120	160	2.3
Salt Cr.	0.0 - 5.0	591	1,134	1,725	2.9
"	5.0 - 10.5	785	464	1,249	1.9
"	10.5 - 14.5	179	67	246	0.5
"	14.5 - 22.4	48	49	97	0.1
"	22.4 - 25.9	516	182	698	1.1
"	25.9 - 27.2	-	12	12	0.2
S. Fk. Salt Cr.	0.0 - 0.9	-	-	Negligible	-
"	0.9 - 2.9	2,779	1,381	4,160	39.4
"	2.9 - 3.9	-	-	Negligible	-
Schweitzer Cr.	0.0 - 1.0	-	40	40	1.73
Snake Cr.	0.0 - 1.2	-	20	20	0.7
Staley Cr.	0.0 - 8.8	400	800	1,200	1.6
Swift Cr.	0.0 - 7.5	87	105	192	0.4

1/ Streams surveyed but not listed in this table have only a negligible amount or no gravel.

2/ Stream surveyed by Oregon Fish Commission (Willis, Collins and Sams, 1960) and summarized in this report.

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Unnamed (T. 24S, R. 4E, Sec. 15)	172
Unnamed (T. 24S, R. 4E, Sec. 12)	173
Unnamed (T. 25S, R. 5E, Sec. 2)	174

All on a table
under Swift Cr.,
page 166

INDIVIDUAL STREAM DATA

September 22 & 24, 1964

Surveyors: Hutchison, Thompson, H. Roberts

Stream: Coast Fork Willamette River
Tributary to: Willamette River
Stream System: Willamette

Mouth at: T. 18S, R. 3W, Sec. 11
County: Lane

Characteristics:

Width (Feet)

At 10
60

At 19
45

Total Stream Length (nearest 0.25 mile): 51.0 (29.6 miles included here)

Bottom Type:

Square Yards

Good Gravel
Salmon - 40,800

Marginal Gravel
Salmon - 114,750

Riffle-Pool Ratio:
Percentage

Riffle
10

Pool
90

Water Temperature and Flow Data:

Time	Temperature °F.		Flow (cfs)	Location
	Water	Air		
6:00 p.m.	66			Mouth
12:00 noon	64			29.6 miles

Gradient: Slight

Possible Limiting Factors:

Falls: Two 4 ft. and one 3 ft. falls. (One 3 ft. dam and one 4 ft. dam without fish passage facilities in the vicinity of Cottage Grove.)

Other: Low flows over riffles would block a potential run of adult anadromous fish. Low water quality.

Fish Species Present: One adult male chinook salmon seen at mile 5.5. Suckers, cyprinids, cutthroat trout.

Accessibility: Public and private roads provide fair to good access.

Watershed Cover Types: Mixed broadleaf.

Comments: Raw sewage is emptied into river around Cottage Grove. Much water is pumped from river for irrigation purposes.

9-22-64 0 - 10 miles

The Coast Fork Willamette River joins the Middle Fork to form the Willamette River main stem near Springfield. The Coast Fork is 51.0 miles long. At 6:00 p.m. the water temperature was 66°F. at the mouth. The watershed is largely mixed broadleaf. Water turbidity was moderate. Rubble, gravel and silt characterize the bottom. There are 28,500 square yards of good and 54,950 square yards of marginal salmon and steelhead spawning gravel. The pool area greatly exceeds that of riffle. A pool near mile 5.0 is nearly 0.75 mile long. Several other pools in this section extend for several hundred yards. Past gravel removal operations at mile 3.5 have widened the river channel and formed a shallow lake-like area 30 acres in size.

(more)

The lack of a well-defined channel in this area is detrimental to upstream fish passage at a low flow. A 6-foot wide irrigation ditch on the left had a 3 to 6 cfs flow diverted by a gravel dam built across one third of the river 300 yards upstream from Highway 58 bridge. The river gradient is slight. One live adult male chinook salmon was seen about a half mile below Highway 58 bridge. The estimated weight of the fish was 15 pounds. Most of the property adjacent to the river in this section is privately owned. Fair to good access is provided by public and private roads. Fifteen irrigation pumps with an average pipe diameter of about 6 inches were counted in this section. The water temperatures and turbidity below Cottage Grove Dam are of a critical nature to salmon and would inhibit successful spawning and rearing of anadromous fish. A possible remnant run of spring chinook is the only known anadromous fish population now utilizing the Coast Fork Willamette River. Native trout populations are relatively low below Cottage Grove Dam. Riffle-pool ratio is 5:95.

Tributaries to the river in this section are covered on separate sheets.

10.0 - 19.2 miles

This section of river has an average width of 60 feet. At 3:00 p.m. the water temperature at mile 12.0 was 64 °F. and the air temperature 76 °F. The watershed is largely mixed broadleaf. The shade cover is sparse. The bottom composition is characteristically rubble, gravel and silt. The gravel size becomes larger upstream. There are 8,300 square yards of good and 36,300 square yards of marginal salmon and steelhead spawning gravel. The pool area continues to exceed that of riffle. One pool in the area of mile 11.0 is $1\frac{1}{2}$ miles long. The regulated flow is too low at this time to provide for adult anadromous fish passage over most riffles. A temporary gravel dam extending halfway across the river approximately 2.5 miles below Saginaw was diverting about 5 cfs into an 8-foot wide ditch on the left. Neither this ditch nor the ditch near Highway 58 crossing is believed to be screened. Twelve irrigation pumps with pipes having an average diameter of about 6 inches were counted in this section. The river gradient is slight. Several hundred suckers and cyprinids were seen. Riffle-pool ratio is 10:90.

Tributaries to the river in this section are covered on separate sheets.

19.2 - 29.6 miles

The average width of this section of the river is 45 feet. At 12:00 noon the water temperature at mile 29.7 was 64 °F. The watershed is predominantly broadleaf. The shade cover is sparse. There are 4,000 square yards of good and 23,500 square yards of marginal salmon and steelhead spawning gravel in this section. A concrete dam 4 feet high with a small concrete fish ladder is located at mile 24.5, 100 yards below the freeway bridge. This structure backs water that is diverted to a Weyerhaeuser mill 0.25 mile downstream via a ditch 10 feet wide (flow was about 15 cfs) and a separate 30-inch pipeline with an electric pump. It is unknown if the diversion intakes are screened. A 4-foot stone masonry dam at mile 23.0 is an impassable barrier to fish at the current low flow. This structure creates a reservoir from which a large pump and pipe draw water about 100 yards upstream. A 3-foot concrete dam at mile 22.0 is a barrier to fish passage at current low flow. This structure had no apparent purpose. Eight irrigation pumps with 6-inch pipes draw water from this river section. The river gradient is slight. Suckers and cyprinids were observed to be numerous. Most land adjacent to this section is privately owned. Numerous public and private roads provide good access. The riffle-pool ratio is 10:90. Cottage Grove Dam is at river mile 29.6.

Tributaries to the river in this section are covered on separate sheets.

July 17, 1963

Surveyors: Opp and DeShon

Stream: Coast Fork Willamette River (Mile 32.5 - 36.4)

Stream System: Willamette

Characteristics:

At 400 yds above reservoir bridge

Width (Feet) 15

Bottom Type: Good Gravel Marginal Gravel

Square Yards 785 3,710

Riffle-pool Ratio: Riffle Pool

Percentage 53 47

Water Temperature and Flow Data

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:30 a.m.	60	71	20	

Fish Species Present: Cutthroat trout, shiners, dace, suckers, squawfish and cottids.

Accessibility: Roads on both sides of the creek.

Watershed Cover Types: Heavy deciduous brush.

Comments: Creek narrow in riffle areas and wide in pool areas.

July 18, 1963

Surveyors: Opp and DeShon

Stream: Coast Fork Willamette River (mile 36.4 - 39.6)

County: Lane

Stream System: Willamette

Characteristics:

At Hobart Cr.

Width (Feet)

15

Bottom Type

Good Gravel

Marginal Gravel

Square Yards

590

2,393

Water Temperature and Flow Data

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	58	64	16	Hobart Creek

Possible Limiting Factors: Road construction has changed channel in some places.

Fish Species Present: Rainbow trout, cutthroat trout, redbside shiners, dace, suckers, squawfish, cottids and whitefish.

Accessibility: Road parallels section.

Watershed Cover Types: Dense deciduous brush.

Comments: Creek bottom is typically bedrock and boulders with some gravel.

July 24, 1963

Surveyors: Opp and DeShon

Stream: Coast Fork Willamette River (miles 39.6 - 5.4 on Big R.)

County: Lane

Stream System: Willamette

Characteristics:

At Confluence of Little R.

Width (Feet)		12
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	1,271	3,853
Riffle-Pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	69	31

Water Temperature and Flow Data:

Time	Temperature(°F.)		Flow (cfs)	Location
	Water	Air		
11:30 a.m.	58	68	10.5	Little River

Possible Limiting Factors:

Falls: 10 ft. falls at mile 40.6.

Other: Road construction has altered the channel in some places.

Fish Species Present: Many cutthroat trout; shiners, dace, suckers.

Accessibility: Road parallels creek.

Watershed Cover Types: Moderately dense shade cover of deciduous types.

Comments: Fewer pools in the section than in lower portion.

Coast Fork Willamette River (Cottage Grove Reservoir to headwaters)

July 17, 1963

32.5 - 33.3 miles

The first 400 yards are backwater from Cottage Grove Reservoir. The river is about 15 feet wide at mile 32.5, but above the influence of the reservoir it widens into large pools. Heavy brush borders the river. Bedrock and boulders constitute the riverbed. An old damsite with a 2-foot passable falls occurs 50 yards below Numbers Creek. Riffle-pool ratio is 37:63.

33.3 - 34.3 miles

Large pools have marginal gravel in the lower ends. The riffles are mostly over bedrock. Caddis larvae are abundant in the stream. Johnson Creek, which enters from the left at mile 34.3, contains cutthroat trout. Riffle-pool ratio is 62:38.

34.3 - 35.6 miles

Large pools in the lower part of this section are separated by good and marginal gravel. The upper part of the section is mainly bedrock. There is a board dam 6 inches high at mile 34.8 and a bridge at mile 35.0. Cutthroat trout were observed in Shortridge Creek which enters from the right at mile 35.3. Massy Creek, which enters from the right at mile 35.6, has no value for game fish. A bridge crosses the Coast Fork 250 yards below Ewing Creek. Fill from road construction has made fish passage up Ewing Creek difficult if not impossible. Cutthroat trout were observed in Ewing Creek above the road. The riffle-pool ratio is 40:60.

35.6 - 36.8 miles

Large pools are common. Bedrock and marginal gravel characterize the streambed. Cutthroat trout were observed in Anderson and Hobart Creeks which enter from the left at miles 36.5 and 36.8, respectively. The riffle-pool ratio is 40:60.

36.8 - 38.2 miles

The stream's vegetative canopy begins to decrease in density traveling upstream but remains brushy along the banks. Boulder and rubble characterize the lower portion and gravel the center of this section. The main channel has been altered by road construction at mile 37.5. A small tributary entering from the left at mile 37.9 is of no value to game fish. Unidentified fish were observed in Rouse Creek which enters from the right at mile 38.2. The riffle-pool ratio is 65:35.

38.2 - 38.9 miles

The streambed consists mainly of bedrock and boulders. Cutthroat trout were observed at the mouth of Hambrick Creek which enters from the left at mile 38.6.

38.9 - 39.5 miles

The streambed is typically marginal gravel. A 2-foot falls occurs at mile 39.1. Unidentified fish were observed at the mouth of a small tributary which enters from the left at mile 39.3. Combs Creek marks the end of this section. The riffle-pool ratio is 45:55.

Coast Fork Willamette River continued

39.5 - 40.0 miles

Large pools are common. Boulders characterize the streambed. A bridge located 125 yards below the confluence of Little River marks the upper end of this section. The riffle-pool ratio is 62:38.

0.0 - 0.9 miles (Big River)

The streambed consists of bedrock and boulders. A 1-foot falls occurs at mile 0.1 and a 3-foot falls at mile 0.5. A 10-foot falls at mile 0.8 is now impassable to all fish, but may be passable to anadromous fish during high water. The riffle-pool ratio is 74:26. A small tributary entering on the left at mile 0.6 is of no value to game fish.

0.9 - 1.9 miles

There is a moderate amount of marginal gravel. The stream splits into several separate channels below Drue Creek. Cutthroat trout were observed in both Drue and Jasper Creeks which enter from the right at miles 2.0 and 2.1, respectively. The riffle-pool ratio is 55:45.

1.9 - 3.4 miles

The stream gradient is steeper than in preceding sections. The streambed is mostly bedrock and boulders. The banks are brushy. An old bridge is located 100 yards below Bar Creek. There is a log jam at mile 2.7. Rough fish observations were less frequent. Fish were seen in a tributary entering from the left 50 yards below the end of the section. Fish were observed in a tributary entering from the right at mile 3.4. The riffle-pool ratio is 66:34.

3.4 - 4.7 miles

The creek bed is mostly bedrock. Gravel is sparse. A 5-foot falls is located just below the road crossing at mile 4.5. Cutthroat trout were observed in a small stream entering from the left 300 yards below the upper end of the section. The main creek channel has been altered near the end of the section by road construction. Riffle-pool ratio is 71:29.

4.7 - 5.8 miles

Pools are more frequent and gravel more dense in this section. Large gravel bars are common. Bedrock characterizes the creek in the lower portion, while gravel is more common in the upper portion. Much logging debris occurs about midway in the section. South Fork enters Big River from the left at mile 6.5. Edwards Creek, which enters from the right at mile 5.8, is the uppermost point in Big River at which suckers were observed. A small tributary entering on the left 600 yards from the end of the section is of no value to game fish.

August 1, 1963

Surveyors: Opp and DeShon

Stream: East Fork Big River

T. 23S, R. 2W, Sec. 8

Tributary to: Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At Mile 1.9</u>	<u>At Mile 3.0</u>
Width (Feet)	10	5	3
Total Stream Length (nearest 0.25 mile):	3.75		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	358	1,136	
Riffle-Pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	70	30	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:00 a.m.	61	73	3.1	Mouth

Gradient: Moderate to mile 3.5; steep above mile 3.5.

Possible Limiting Factors:

Falls: Many falls above mile 3.5 where the creek enters a very steep canyon. No fish above mile 3.8 (about 200 yards into canyon).

Logjams: Many logjams and much logging debris in the creek.

Fish Species Present: Cutthroat very abundant. A few shiners and dace in lower 1.0 mile.

Accessibility: A road parallels the creek to mile 3.0. It follows fairly close to mile 3.5 then swings away.

Watershed Cover Types: Coniferous forest with broadleaf understory.

Comments: The creek bed has been changed in a few places by road construction.

East Fork of Coast Fork Willamette River

August 1, 1963

0.0 - 1.0 miles

This section is brushy with much debris. A 4-foot falls occurs at mile 0.4. Many sculpins, dace and redbreast shiners were observed. Two logjams occur at mile 0.7 and 0.9, and a beaver dam at the end of the section. The road parallels the creek. The watershed at the end of the section is logged off. A small tributary entering from the right at mile 1.0 is designated as tributary "A" on the map. The riffle-pool ratio is 73:27.

(more)

East Fork Big River

1.0 - 2.0 miles

The watershed is logged off and the streambed is full of logging debris. A small logjam is at mile 1.4, a large logjam at mile 1.6, and another small jam 50 yards from the end of the section. Rough fish were not observed above mile 2.0. Two small tributaries enter from the right at miles 1.9 and 2.0. The riffle-pool ratio is 62:38.

2.0 - 3.0 miles

Logjams occur at miles 2.0, 2.4 and 2.5; the latter creates a 4-foot falls. The streambed is typically bedrock and boulders with much logging debris. A road crosses the creek at mile 3.0. Three small tributaries enter this section; fish were not seen in any of them. The riffle-pool ratio is 73:27.

3.0 - 3.5 miles

The road does not provide good access in this section. Logjams occur at 40 yards into the section, at 3.2 miles and at mile 3.5. A 4-foot falls is located 40 yards above the beginning of the section and a 5-foot falls at mile 3.3. There is some good gravel. A heavy algae bloom occurs in this portion of the creek. Cutthroat trout were observed in a small tributary which enters from the right at mile 3.1. A small tributary entering on the left at mile 3.5 is choked with logging debris at the mouth. The riffle-pool ratio is 85:15.

3.5 - 4.0 miles

A portion of the creek lies within a deep canyon. Windfall is severe. The gradient is very steep. Fish were not observed above mile 3.7. The creek splits at 400 yards with about half of the water in each channel. The left fork was surveyed another 600 yards. Falls 10 to 15 feet high are common near the upper end of the section. The right channel is similar to the left channel. The riffle-pool ratio is 90:10.

July 7, 1964

Surveyors: H. Roberts and Howerton

Stream: Alex Small Creek

Mouth at: T. 22S, R. 3 W, Sec. 17

Tributary to: Coast Fork of Willamette River County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.5; (lower 0.1 mile surveyed).

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

Negligible

Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:45 p.m.	58		0.1	Mouth

Gradient: Moderate to steep

Possible Limiting Factors:

Falls: One 3 to 5-foot falls within 10 yards of the mouth.

Accessibility: Roads and trails provide access to the mouth.

Watershed Cover Types: Mixed broadleaf and conifer.

Comments: Little value to fish.

0.0 - 0.1 mile

The water temperature at 12:45 p.m. was 58°F. The creek had a flow of 0.1 cfs. There is no shade nor is there any spawning gravel in the 200 yards surveyed. A 3 to 5-foot falls is within 10 yards of the mouth. Alex Small Creek flows through an old rock quarry for as far as was surveyed. It enters Coast Fork Willamette River at river mile 34.0. This point is approximately 1.6 miles above the upper influence of Cottage Grove Reservoir.

June 30, 1964

Surveyors: Slade and Howerton

Stream: Anderson Creek

Mouth at: T. 22S, R. 3 W, Sec. 27

Tributary to Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 0.7 mile</u>
Width (Feet)	10	3
Total Stream Length (nearest 0.25 mile):	1.25 (all surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	18 (trout)	11 (trout)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	56	44

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:00 a.m.	53		1.0	0.9 mile

Gradient: Moderate

Possible Limiting Factors:

Logjams: Impassable logjam at mile 0.7. Other logjam at miles 1.1, 1.2 and 1.22.

Fish Species Present: Native cutthroat trout seen up to mile 1.2.

Accessibility: Logging road runs parallel to creek for one-half mile.

Watershed Cover Types: Willow, alder and mixed conifers.

Comments:

0.0 - 0.5 mile

Anderson Creek enters Coast Fork Willamette River at mile 36.5. It is 10 feet wide at the mouth and had a flow of 1.5 cfs. The shade cover is moderately dense. The creek bed is heavily silted. Two square yards of good and 10 square yards of marginal trout spawning gravel occur in this section. There are six pools two feet deep and one pool one foot deep. The stream gradient is slight to moderate. Cutthroat fingerlings were seen at mile 0.1. Anderson Creek flows through a culvert 90 yards above the mouth and through another 200 yards above the mouth. Riffle-pool ratio is 48:52.

0.5 - 1.0 mile

The average width of this section is three feet. The water temperature at 10 a.m. was 53°F. Beaver Creek enters Anderson Creek at mile 0.7. The shade cover is moderately dense and consists of alder and mixed conifers. The creek bed is primarily

(more)

Anderson Creek continued

rubble with much silt. One-half square yard of good and one square yard of marginal trout spawning gravel occur in this section. There are four pools 1 foot deep and one 2 feet deep. One of two logjams in this section is impassable to fish. The stream gradient is moderate. Cutthroat trout were seen up to mile 0.8. The water was mildly turbid. Anderson Creek flows under an old log bridge at mile 1.0. The riffle-pool ratio is 55:45.

1.0 - 1.3 miles

A shade cover of willow and alder is moderately dense. The watershed consists of mixed broadleaf and conifers. A tributary of Anderson Creek enters at mile 1.2. Sixteen square yards of good trout spawning gravel were recorded. There are three pools 2 feet deep and three 1 to 2-foot falls. Three passable logjams are found at 1.0 and 1.2. The stream gradient is moderate. Five-inch native cutthroat trout were seen at mile 1.2. Riffle-pool ratio is 65:35.

June 30, 1964

Surveyors: Slade and Howerton

Stream: Beaver Creek

Mouth at: T. 22S, R. 3W, Sec. 30

Tributary to Anderson Creek (river mile 36.5)

County: Lane

Stream System: Willamette

Characteristics:

At 0.5 mile

Width (Feet)	6	
Total Stream Length (nearest 0.25 mile):	1.25 (lower 0.5 mile surveyed).	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	31 (trout)	Negligible
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	45	55

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:30 a.m.	53		0.5	Mouth

Gradient: Moderate to steep

Possible Limiting Factors:

Log jams: There are several passable log jams in section surveyed, but a large impassable jam occurs at mile 0.4.

Fish Species Present: Native cutthroat trout 4 to 5 inches in length were observed at mile 0.1.

Accessibility: Logging road crosses creek about 200 yards from its mouth.

Watershed Cover Types: Sparse broadleaf and mixed conifers.

Comments:

0.0 - 0.5 mile

Beaver Creek is a tributary to Anderson Creek at mile 0.5. It is 6 feet wide at the mouth and had a water temperature of 53°F. The watershed consists of mixed broadleaf and coniferous vegetation. A small tributary flows into Beaver Creek from the left at mile 0.3. The creek bed is primarily boulders and silt with some sand. Thirty-one square yards of good trout spawning gravel occur in this section. There are two pools 2 feet deep and one 2-foot falls. This section has 5 small passable log jams and 2 large jams impassable to fish. The large log jams are near mile 0.4. The stream gradient is moderate to steep. Three 4 to 5-inch cutthroat trout were seen at mile 0.1. Beaver Creek flows near a sawmill at mile 0.1 and under a logging road at mile 0.4. The riffle-pool ratio is 45:55.

August 21, 1963

Surveyors: Opp and DeShon

Stream: Tributary "A" of East Fork Big River
Tributary to: Coast Fork Willamette
Stream System: Willamette

T. 23S, R. 2W, Sec. 16
County: Lane

Characteristics: At Mouth

Width: (Feet)	7	
Total Stream Length (nearest 0.25 mile):	1.0	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	73	91
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	65	35

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	54	74	0.1	Mouth

Gradient: Moderate

Possible Limiting Factors:

Logjams: Much logging trash in creek.

Other: Road construction has filled in one section of the creek. Creek flows underground and is intermittent in many places.

Fish Species Present: Cutthroat abundant up to 4 inches; a few up to 7 inches.

Accessibility: Road parallels creek.

Watershed Cover Types: Coniferous forest and broadleaf understory.

Comments: Regardless of its small size, cutthroat trout up to 7 inches long were seen in this stream. A logging road crosses 50 yards upstream from the mouth. There is much logging debris. Two small tributaries which enter from the right at 300 yards and at 800 yards have fish at their mouths. A large debris jam occurs at 600 yards above the mouth. The stream is dry from 700 to 800 yards and intermittent above. A small tributary entering from the right at 800 yards has fish at the mouth but is completely choked with logging debris above this point. The riffle-pool ratio is 65:35.

August 21, 1963

Surveyors: Opp and DeShon

Stream: Tributary "B" of East Fork Big River T. 23S, R. 2W, Sec. 16
Tributary to: Coast Fork Willamette R. County: Lane
Stream System: Willamette

Characteristics: At Mouth

Width (Feet)	6	
Total Stream Length (nearest 0.25 mile):	0.75	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	15	25
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	70	30

Water Temperature and Flow Data:

Time	Temperature(°F.)		Flow (cfs)	Location
	Water	Air		
2:30 p.m.	58	80	0.05	Mouth

Gradient: Moderate

Possible Limiting Factors:

Logjams: Much logging trash in creek.

Other: At 0.5 mile the creek becomes stagnant in pools with algae and temperatures in the high 70's. Main water source is from a small tributary.

Fish Species Present: Cutthroat abundant in lower part of creek.

Accessibility: Road along creek.

Watershed Cover Types: Coniferous forest and broadleaf understory.

Comments: Little value to game fish.

Tributary "B" is very similar to tributary "A" in almost every physical feature. Much debris occurs in the creek from logging. Most of the water comes from a tributary at 200 yards. Fish, unidentified as to species, were seen up the tributary for 200 yards. The mainstream above the confluence of the tributary flows through a logged area and the water becomes warm and choked with algae. The riffle-pool ratio is 75:25.

1964

Surveyor: Ralph Swan 1/

Stream: Bear Creek

Mouth at: T. 18S, R. 2W, Sec. 31

Tributary to: Coast Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 8.0

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			3	Mouth

Gradient: Slight

Possible Limiting Factors: Much debris chokes stream.

Fish Species Present: Cutthroat trout,

Watershed Cover Types: Mixed broadleaf and conifer.

Comments: Much of the creek flows through farm land.

1/ Information not from a survey but from Swan's general knowledge of the stream.

Summer 1964

Surveyor: Ralph Swan 1/

Stream: Bennet Creek

Mouth at: T. 20S, R. 3W, Sec. 28

Tributary to: Coast Fork Willamette River

County: Lane

Stream System: Willamette

Total Stream Length (nearest 0.25 mile): 4.0

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		

less than

0.1

Mouth

Gradient: Slight

Possible Limiting Factors: Dam near the mouth diverts most of the flow for irrigation.

Fish Species Present: Native cutthroat trout.

Watershed Cover Types: Mixed broadleaf,

1/ Information not from a survey but from Swan's general knowledge of the stream.

Summer 1964

Surveyor: Ralph Swan 1/

Stream: Camas Swale Creek

Mouth at: T. 18S, R. 3W Sec. 36

Tributary to: Coast Fork Willamette River

County: Lane

Stream System: Willamette

Total Stream Length (nearest 0.25 mile): 11.0

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			Less than 1.0	Mouth

Gradient: Slight

Fish Species Present: Cutthroat trout.

Accessibility: Roads provide fair access.

Watershed Cover Types: Mixed broadleaf.

Comments: Does not have significant value for game fish.

1/ Information not from a survey but from Swan's general knowledge of the stream.

July 6, 1964

Surveyors: Slade and Howerton

Stream: Cedar Creek

Mouth at: T. 22S, R. 3W, Section 5

Tributary to: Coast Fork of Willamette River (Cottage Grove Reservoir)

Stream System: Willamette

County: Lane

Characteristics:

Width (Feet)	<u>At 0.5 mile</u> 4	
Total Stream Length (nearest 0.25 mile)	4.0 (lower 1.9 miles surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	48 (trout)	299 (trout)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	51	49

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:30 a.m.	55		3	Mouth
				1.00 mile
			1	1.50 miles

Gradient: Moderate

Possible Limiting Factors:

Falls: Two 6-foot falls in section 1.5 - 1.9.

Logjams: Many logjams from mile 1.0 upstream.

Other: Man-made dam at mile 1.2 that creates a small reservoir from which water is being pumped.

Fish Species Present: Native cutthroat trout fingerlings seen up to mile 1.7.

Accessibility: A logging road parallels most of Cedar Creek.

Watershed Cover Types: Alder, vine maple and mixed conifers.

0.0 - 0.5 mile

Cedar Creek enters Cottage Grove Reservoir from the left. It is 4 feet wide at its mouth and had a flow of 3 cfs. The cover is sparse. Much of the watershed is pasture. The bottom material consists of rubble and silt. Fourteen square yards of good and 279 square yards of marginal trout spawning gravel were recorded. There are five pools 1 foot deep, seven 2 feet deep, and two 3 feet deep. There are no logjams, falls or other fish passage obstructions for the first half mile. The gradient is slight. Cutthroat trout fingerlings were noted. Riffle-pool ratio is 38:62.

(more)

Cedar Creek continued

0.5 - 1.0 mile

Shade cover is sparse in this section but becomes moderately dense at mile 1.0. The streambed is nearly all sand and silt. Only occasional gravel bars occur. Eleven square yards of good and 16 square yards of marginal trout spawning gravel were tallied. There are three logjams, all near mile 0.9. The stream gradient is slight to moderate. Cutthroat trout were seen up to mile 0.9. Riffle-pool ratio is 45:55.

A tributary flows into Cedar Creek at mile 0.8. It is 4 feet wide at the mouth and flows under a bridge 100 yards from its mouth.

1.0 - 1.5 miles

The water temperature at 9:30 a.m. was 55° F. A sparse to moderate shade cover of broadleaf vegetation occurs in this section. Silt, clay and some sparse gravel characterize the bottom material. Fourteen square yards of good and 2 square yards of marginal trout spawning gravel were recorded. There are three pools 2 feet deep and one 3 feet deep. Eight small passable logjams occur. The stream gradient is slight to moderate. Cutthroat fingerlings were seen up to mile 1.4. Cedar Creek flows under two bridges, one at mile 1.1 and the other at mile 1.3. The riffle-pool ratio is 40:60.

A tributary entering Cedar Creek from the left at mile 1.5 had a flow of 0.3 cfs, an average width of 3 feet near its mouth, and a water temperature of 54° F. at 10:00 a.m.

1.5 - 1.9 miles

Cedar Creek had a flow of 1 cfs at mile 1.5. The shade cover is moderate to sparse and consists of alder, vine maple, and some mixed conifers. Rubble and boulders with much silt characterize the bottom. Nine square yards of good and $2\frac{1}{2}$ square yards of marginal trout spawning gravel were recorded. There are no pools. There is one falls 1 to 2 feet high, three 3 to 5 feet high, two 6 feet high, and one cascade 2 to 3 feet high. There are six small logjams and one large logjam. The gradient is moderate to steep. Cutthroat up to 6 inches long were seen. At mile 1.6 a man-made bridge dams the creek. The riffle-pool ratio is 57:43.

June 25, 1964

Surveyors: Slade and Howerton

Stream: Combs Creek

Mouth at: T. 23S, R. 3W, Sec. 5

Tributary to: Coast Fork Willamette River County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 8

Total Stream Length (nearest 0.25 mile): 4.0 (lower 1.6 miles surveyed)

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	112 (trout) 2 (salmon)	5 (trout) 55 (salmon)

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	45	55

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			4.8	Mouth

Gradient: Moderate to steep throughout section surveyed.

Possible Limiting Factors:

Falls: 5-foot falls between mile 0.5 and 1.0, a 12-foot cascade between mile 1.0 and 1.6, 15-foot falls at mile 1.2, 30-foot falls at mile 1.4.

Fish Species Present: Native cutthroat trout seen up to mile 1.4.

Accessibility: Logging road parallels most of the creek. There is a locked gate at the entrance, however.

Watershed Cover Types: Mixed broadleaf and conifers.

Comments:

0.0 - 0.5 mile

Combs Creek enters Coast Fork Willamette River from the right at mile 39.5. It is 8 feet wide at the mouth and has an average width of 8 feet for the first half mile. The flow was 4.8 cfs. The creek has a heavy shade cover of mixed broadleaf and conifers. Rubble with silt over bedrock predominates the creek bed material. Sections of clay and some of sand also occur. Six square yards of good and 4 square yards of marginal trout spawning gravel, and 5 square yards of marginal salmon and steelhead gravel are within this section. There are seven pools 2 feet deep, seven 3 feet deep, and one 1 to 2-foot falls here. There are 4 logjams, all passable. The stream gradient is moderate to steep. Cutthroat trout were sighted at mile 0.5. The creek flows through a culvert

(more)

Combs Creek continued

20 to 30 yards from the mouth. The riffle-pool ratio is 46:54.

0.5 - 1.0 mile

The shade cover in this section is sparse to moderately dense. Silt and rubble over bedrock with some sections of clay and sand constitute the bottom material. Twelve square yards of good and 1 square yard of marginal trout spawning gravel occur. There are 2 square yards of good salmon and steelhead spawning gravel, also. There is one pool 1 foot deep, ten 2 feet deep, two 3 feet deep and one 4 feet deep. There is one falls 2 to 3 feet high and one 5 feet high. This section has 12 logjams. The gradient is moderate to steep. Trout 4 to 5 inches were observed. The stream flows under an old wooden bridge at mile 0.7. Riffle-pool ratio is 47:53.

1.0 - 1.6 miles

Conifers are the predominant vegetative cover. Rubble and boulders characterize the creek bed. A small tributary enters at mile 1.1. Ninety-four square yards of good trout spawning gravel and 50 square yards of marginal salmon and steelhead spawning gravel were tallied. There are eleven pools 2 feet deep and five 3 feet deep. There are four falls 2 to 3 feet, two 3 to 5 feet, one 12 feet, and a 15-foot falls at mile 1.2. There is a 30-foot falls at mile 1.4. Nine logjams occur; only one obstructs fish passage. The stream gradient is moderate. Native cutthroat trout were seen as far as mile 1.4, just above the 30-foot falls. Trout probably extend their range above this point, but the survey terminated here. Recent logging of the watershed has contributed much silt and debris to the creek. The riffle-pool ratio is 42:58.

June 23, 1964

Surveyors: Swan, Thompson, M. Roberts & Slade

Stream: Drue Creek ^{1/}

Mouth at: T. 23S, R. 3W, Sec. 3

Tributary to Big River (Coast Fork Willamette R.) County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At mile 0.25</u>
Width (Feet)	10	6
Total Stream Length (nearest 0.25 mile):	4.5 miles (lower 2.4 miles surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	84 (trout) 30 (salmon)	3 (trout) 7 (salmon)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	67	33

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:30 a.m.	56		8	Mouth

Possible Limiting Factors:

Falls: 20-foot falls at mile 1.3, 50-foot falls at mile 2.0, two other falls 25 and 30 feet at miles 1.8 and 2.0, respectively.

Logjams: Logjam capable of stopping fish passage noted at 770 yards (0.4 mi.). Impassable logjams are numerous from here upstream.

Other: Dirt, gravel and boulder fill graded over a 200-foot section of stream at mile 2.3. Water flows out of sight under this section. Completely impassable to fish migration. Occurs on O & C (BIM) land.

Fish Species Present: Cutthroat trout fingerlings noted above as well as below the 20-foot falls (1.3 miles) and above an apparently impassable logjam.

Accessibility: Road parallels with one fourth mile of the stream to a point 3.0 miles above the mouth where it crosses. Dense forest limits accessibility.

Watershed Cover Types: Mixed conifers and broadleaf species along stream. Second growth.

Comments: Logjams, silted spawning gravel or none at all, plus several high falls, seem most critical above 1.5 miles with conditions becoming increasingly worse toward the headwaters of the stream.

^{1/} Drue Cr. is named Jasper Cr. on State Water Resources Board map.

Drue Creek

0.0 - 0.5 mile

Drue Creek enters Big River 2.1 miles above the confluence of Big River and Little River. The mouth of the stream is 10 feet wide. It had a flow of 8 cfs and a water temperature of 56° F. at 10:30 a.m. The watershed contains second-growth mixed conifers and broadleaf species with a moderate to heavy understory of ferns, grasses and low-lying shrubs. The creek bed consists largely of rubble and boulders with occasional underlying bedrock. Logs and debris are common. One logjam at 770 yards is nearly impassable to fish. There are 17 square yards of good trout spawning gravel, 25 square yards of good salmon and steelhead spawning gravel, and 7 square yards of marginal salmon and steelhead spawning gravel. Five pools 2 to 3 feet deep were noted. The average stream gradient was moderate. Riffle-pool ratio is 65:35.

0.5 - 1.4 miles

This section has 44 square yards of good trout spawning gravel and 5 square yards of good salmon spawning gravel. The bottom is composed largely of boulders, rubble and silted gravel. There is a 40-yard section of bedrock. A moderately dense canopy of shrubs occurs over the creek. The water was moderately turbid. Stream gradient was steep. Native cutthroat trout were sighted up to and above the 20-foot falls in this section. Two tributaries flow into Drue Creek. Eight logjams also occur; two are potentially impassable if more debris accumulates. There are three falls 3 to 5 feet, two 10 to 15 feet and two 20 feet. There are 8 deep pools. The riffle-pool ratio is 67:33.

1.4 - 2.4 miles

At mile 1.4 Drue Creek had a flow of 4 cfs. The section contains 23 square yards of good and 3 square yards of marginal trout spawning gravel. There are several large pools, usually formed by logjams. The section contains 7 major logjams, all impassable to fish. There are three falls 0 to 5 feet, one 25 feet, one 30 feet and one 50 feet. A dirt fill has been graded over the creek for a 200-foot section at mile 2.2, producing an impassable barrier. From miles 1.9 to 2.1 there is a 200-yard section of bedrock. Native cutthroat trout fingerlings were noted at 1.4 miles. The creek has much debris in it from past logging operations. Riffle-pool ratio is 75:25.

August 21, 1963

Surveyors: Ralph Opp and Frank DeShon

Stream: Edwards Creek

T. 23S, R. 2W, Sec. 7

Tributary to: Coast Fork Willamette R.

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 1 mile</u>	<u>At 1.5 miles</u>
Width (Feet)	10	3	1
Total Stream Length (nearest 0.25 mile):	1.5		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	278	491	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	70	30	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:30	57	72	2.2	Mouth of creek

Gradient: Moderate

Possible Limiting Factors:

Falls: Two small falls in section, neither limiting in high water.

Logjams: Many logjams in section and much logging trash in creek.

Other: A little over one mile upstream, road construction has filled the creek with rock and the stream is underground.

Fish Species Present: Many cutthroat trout up to 5 inches long. A few sculpins.

Accessibility: Road along creek.

Watershed Cover Types: Coniferous forest and broadleaf understory.

Comments: A small tributary has a few small cutthroat trout one-half mile from the mouth. Another tributary at 1-1/8 mile also has cutthroat. The second creek has a 10-foot falls at 75 yards with a few fish above. Neither tributary was surveyed for more than one-quarter mile because of little spawning gravel and cutthroat only 3 inches in length present.

0.0 - 0.5 mile

Numerous logjams at the mouth and scattered throughout the section greatly limit fish passage. There is a section of bedrock from 750 to 850 yards above the mouth. Pools are numerous, mostly backed up behind logjams. The gravel is sparse

(more)

Edwards Creek continued

and the gradient steep in a tributary entering from the right. Cutthroat trout up to 5 inches long were seen in the tributary.

0.5 - 1.5 miles

Debris jams are numerous. There is a section of bedrock from mile 0.5 to 0.7 with several small falls and pools. At about mile 1.1 the creek subs beneath a 300-yard section of road construction fill consisting of large rock. The last quarter mile is completely filled with logging debris. The creek is relatively inaccessible in this area. A small tributary enters at 200 yards.

1964

Surveyor: Ralph Swan ^{1/}

Stream: Gettings Creek

Mouth at: T. 20S, R. 3W, Sec. 2

Tributary to: Coast Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 10.0

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			Minimum 2	Mouth

Gradient: Slight.

Fish Species Present: Native cutthroat trout.

Watershed Cover Types: Agricultural land.

Comments: Lower 0.75 mile is a slough containing mostly suckers and a few bass, catfish and bluegills. From mile 0.75 to 1.75 the creek flows through an altered and cleared channel.

^{1/} Information not supplied from a survey but from Swan's general knowledge of the stream.

July 7, 1964

Surveyors: H. Roberts and Howerton

Stream: Hambrick Creek

Mouth at: T. 22S, R. 3W, Sec. 33

Tributary to: Coast Fork Willamette R.

County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

4

Total Stream Length (nearest 0.25 mile): 1.5 (spot check at mouth)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards Negligible

Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:20 p.m.	70		0.1	Mouth

Possible Limiting Factors:

Falls: Six-foot falls from a culvert near the mouth.

Accessibility: Logging road runs parallel to creek from mile 0.75 to 1.5
at a distance of 300 yards from the left side of the creek.

Watershed Cover Types: Mixed broadleaf and conifers.

Comments: Has little value for game fish.

Hambrick Creek is 4 feet wide at the mouth, had a flow of 0.1 cfs and a water temperature of 70°F. at 2:20 p.m. There is a 6-foot falls from a culvert near the mouth. The water was highly turbid. Hambrick Creek flows into the Coast Fork Willamette River from the left 6 miles above Cottage Grove Reservoir.

July 7, 1964

Surveyors: H. Roberts and Howerton

Stream: Harvey Creek

Mouth at: T. 21S, R. 3W, Sec. 32

Tributary to Coast Fork Willamette River (Cottage Grove Reservoir) County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.0 (lower 0.1 mile surveyed)

Bottom Type: Good Gravel Marginal Gravel

Square Yards: Negligible Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:00 a.m.	55		0.1	Mouth

Gradient: Slight

Possible Limiting Factors: Small size.

Accessibility: No roads or trails provide access to headwaters. A public road crosses mouth.

Watershed Cover Types: Vine maple and conifer.

Comments: Little value to game fish.

0.0 - 0.1 mile

Harvey Creek is three feet wide at the mouth, had a flow of 0.1 cfs and a water temperature of 55° F. at 9:00 a.m. There is no shade cover for the first 200 yards surveyed. The watershed consists of vine maple and conifer. The creek bed is rubble and silt. The gradient is slight. Harvey Creek flows into Cottage Grove Reservoir.

Surveyor: Ralph Swan

Stream: Hill Creek

Mouth at: T. 19S, R. 2W, Sec. 7

Tributary to Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 8.0

Gradient: Slight

Possible Limiting Factors: Stream flows through several ditches, mill ponds and culverts.

Fish Species Present: Native cutthroat trout.

Accessibility: Roads provide fair access.

Watershed Cover Types: Mixed broadleaf.

Comments: Information not supplied from a survey but by Ralph Swan from his general knowledge of the stream.

July 7, 1964

Surveyors: H. Roberts & Howerton

Stream: Hobart Creek

Mouth at: T. 22S, R. 3 W, Sec. 29

Tributary to: Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 9

Total Stream Length (nearest 0.25 mile): 1.25 (cursory survey near mouth)

Bottom Type: Good Gravel Marginal Gravel

Square Yards Negligible Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:00 p.m.	58		0.9	Mouth

Gradient: Steep

Accessibility: A logging road comes within 100 yards of the left side of the creek at mile 0.5.

Watershed Cover Types: Mixed broadleaf and conifers.

Comments:

Hobart Creek is 9 feet wide at the mouth, had a flow of 0.9 cfs and a water temperature of 58°F. at 2:00 p.m. Except for the first 50 yards there is no shade cover. No spawning gravel was noted and no fish were seen. The gradient is steep at the mouth. Hobart Creek flows into the Coast Fork Willamette River from the left about 3 miles above Cottage Grove Reservoir.

June 24, 1964

Surveyors: Thompson, M. Roberts, Slade, Howerton

Stream: Jasper Creek

Mouth at: T. 23S, R. 3W, Sec. 3

Tributary to: Coast Fork Willamette River (Big River) County: Lane

Stream System: Willamette River

Characteristics:

	<u>At Mouth</u>	
Width (Feet)	9	
Total Stream Length (nearest 0.25 mile):	2.25 miles (lower 1.1 miles surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	21 (trout)	11.5 (trout)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage:	64	36

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:30 AM	56		3.5	Mouth
12:00 N	56			0.25 - 0.5 mile
2:00 PM	57			0.7 mile

Gradient: Steep at 0.7 mile.

Possible Limiting Factors:

Falls: Four 3-foot falls, six 1-5 foot falls, one 7-foot falls and one 25-foot falls.

Logjams: Seven logjams, two impassable.

Fish Species Present: Native cutthroat up to 3 inches long sighted as far up as 0.5 miles; dace.

Accessibility: Logging road crosses at mouth and another parallels Jasper Creek, crossing the stream at 1.5 miles.

Watershed Cover Types: Mixed conifers and broadleaf species.

Comments: The Water Resources Board map labels Jasper Creek as Martin Creek. Jasper Creek and Drue Creek (labeled Jasper Cr.) do not merge near the mouth as shown on the Water Board map.

(more)

Jasper Creek

0.0 - 0.3 mile

Jasper Creek enters Big River from the right at mile 2.1. It is 9 feet wide at its mouth with a water temperature at 10:30 a.m. of 56° F. and a flow of 3.5 cfs. Watershed cover consists of mixed conifers and broadleaf species. Within the section are 4½ square yards of good trout spawning gravel and 1 square yard of marginal salmon and steelhead spawning gravel. The section has 8 deep pools. There are two logjams, one probably impassable to fish. Other possible hinderances to fish passage are 4 falls 1 to 3 feet high. Native cutthroat trout were seen at the mouth and again at 0.3 mile. Jasper Creek flows under the road and through a metal culvert 15 to 35 yards from the mouth. In this section the creek splits into separate flows at two different points. It splits into 4 separate flows 145 to 160 yards from the mouth. The riffle-pool ratio is 65:35.

0.3 - 0.5 mile

The water temperature of Jasper Creek in this section at 12:00 noon was 56° F. The vegetative canopy is only moderately dense. The creek's bottom consists primarily of small boulders and rubble with 90 yards of bedrock. There are 13 square yards of good and 6 square yards of marginal trout spawning gravel, and 4 square yards of marginal salmon spawning gravel. Thirteen deep pools were counted. Three logjams occur in this section; one possibly is impassable to salmon and steelhead. There are 6 falls 1 to 5 feet high. Trout were seen at 0.5 mile. The riffle-pool ratio is 56:44.

0.5 - 0.7 mile

The water temperature at 1:00 p.m. was 55° F. Two tributaries flow into Jasper Creek. One enters at mile 0.6 and the other at mile 0.7. Both are from the left. This section has a bottom consisting mainly of bedrock and boulders and has a steep gradient. Three and a half square yards of good and one half square yard of marginal trout spawning gravel were tallied. There are three deep pools. At 0.6 mile the stream is divided for a distance of 20 yards. There are two falls, one 2 feet high and one 25 feet high in two steps. Two logjams occur; neither one apparently blocks fish migrations. The riffle-pool ratio is 72:28.

1.0 - 1.1 miles

A 100-yard spot check was made at this point. The water temperature at 3:00 p.m. was 59° F. There are no pools and the gradient is steep. No fish were seen.

July 1964

Surveyors: Slade and Howerton

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Stream: Johnson Creek

Mouth at: T. 22S, R. 3 W, Sec. 18

Tributary to Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 4

Total Stream Length (nearest 0.25 mile): 1.25 (lower 0.5 mile surveyed)

Bottom Type: Good Gravel Marginal Gravel

Square Yards 2 (trout) Negligible

Riffle-pool Ratio: Riffle Pool

Percentage 69 31

Gradient: Moderate to steep

Possible Limiting Factors:

Falls: Three 2 to 3-foot falls and one 3 to 5-foot falls.

Logjams: Impassable logjam at mile 0.2. Others throughout first half mile, but not considered impassable to fish.

Other: Dense brush in creek, impassable to fish, from mouth to 40 yards.

Fish Species Present: Native cutthroat trout seen up to mile 0.2.

Accessibility: No access roads.

Watershed Cover Types: Mixed broadleaf and conifers.

Comments:

0.0 - 0.5 mile

Johnson Creek enters Coast Fork Willamette River from the left at river mile 34.7. The stream is 4 feet wide at the mouth. Shade is sparse to moderately dense. Broadleaf varieties and mixed conifers constitute the watershed. A tributary enters at mile 0.3. Bedrock and some gravel characterize the bottom material. Two square yards of good trout spawning gravel occur in this section. There is one pool 1 foot deep, and one falls 1 to 2 feet, three 2 to 3 feet and one 3 to 5 feet. There are 7 logjams. One is impassable to fish. Other obstructions in the stream include a brush jam at mile 0.4 and a dirt fill across the creek at mile 0.2. The stream gradient is moderate to steep. Cutthroat trout were seen up to mile 0.2. Riffle-pool ratio is 69:31.

July 7, 1964

Surveyors: Thompson and M. Roberts

Stream: Little River

Mouth at: T. 23S, R. 3W, Sec. 5

Tributary to: Willamette River - Coast Fork

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 2.5 miles</u>	<u>At 5.0 miles</u>
Width (Feet)	30	12	6
Total Stream Length (nearest 0.25 mile):	5.5 (all surveyed)		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	305 (trout) 372 (salmon)	120.5 (trout) 189 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	63	37	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	58		12	Mouth
2:30 p.m.	62		5	Mile 2.5
9:15 a.m.	58			Mile 4.5

Gradient: Slight to moderate.

Possible Limiting Factors:

Falls: No falls over 5 feet high until 4.0 to 4.5 miles. Two over 5 feet in that section and one over 5 feet in section 5.0 - 5.5.

Logjams: One impassable logjam in section 1.0 - 2.0. One large impassable logjam in the section 3.0 - 4.0 miles. Seven impassable jams in the section 4.0 - 5.0.

Fish Species Present: Native cutthroat trout and cottids.

Accessibility: Logging road parallels river to headwaters. Locked Weyerhaeuser and BIM gates may limit accessibility.

Watershed Cover Types: Alder, maple, willow and mixed conifers predominate.

Comments: This stream has many characteristics of a good trout stream.

0.0 - 0.5 mile

Little River joins Big River to form Coast Fork 7.7 miles above Cottage Grove Reservoir. Little River is 30 feet wide at the mouth, had a flow of 12 cfs and a water temperature of 58° F. at 11:00 a.m. Alder and vine maple are predominant watershed vegetation. The section has a moderately dense shade cover. The riverbed

(more)

Little River continued

consists primarily of rubble and boulders with occasional bedrock. Within the half-mile section there are 165 square yards of good and 23 square yards of marginal trout spawning gravel, and 165 square yards of good and 85 square yards of marginal salmon and steelhead spawning gravel. There are five pools 2 to 3 feet deep, and ten 3 to 4 feet deep. Only one falls occurs in this section. It is four feet high with a natural ladder for easy fish passage. The stream gradient is slight. Native cutthroat trout up to 9 inches in length were seen throughout the section. Little River flows under two bridges in this section. A 5-inch screened pipe with pump was drawing water from the river 170 yards above the mouth. Much of the gravel in Little River that is of appropriate size for spawning was deemed marginal or of no value at all because of extreme silting. The riffle-pool ratio is 51:49.

0.5 - 1.0 mile

Maple, alder and some cedar predominate in this section as watershed and shade cover vegetation. The cover becomes more dense towards the upper end of the section. Two tributaries flow into Little River in this section. Both occur at mile 0.75, one from the left and one from the right. Neither creek has sufficient flow to be of significant importance for fish. Rubble, boulders and silt characterize the riverbed. Within the half-mile section there are 108 square yards of good and 26 square yards of marginal trout spawning gravel, and 173 square yards of good and 26 square yards of marginal salmon and steelhead spawning gravel. There are two pools 3 to 4 feet deep and no obstructions to fish passage. The degree of slope is slight. Native cutthroat trout were seen throughout. The water was slightly turbid. Due to removal of gravel from the riverbed, apparently for road construction, a 30-yard section of the river has been diverted and the water there has become stagnant. A 12-yard section of bank has eroded and could easily collapse to obstruct fish passage. The riffle-pool ratio is 48:52.

1.0 - 1.5 miles

The average width of this section of Little River is 10 feet. The temperature at 1:00 p.m. was 62° F. Shade cover is sparse to moderately dense. Watershed and cover vegetation includes alder, maple and willow. A tributary occurs at mile 1.3. Its flow is less than 0.1 cfs and there is a 4-foot falls 10 yards from its mouth. Silt and rubble characterize the river bottom. Ten square yards of good and 7 square yards of marginal trout spawning gravel, and 9 square yards of good and 34 square yards of marginal salmon and steelhead spawning gravel were tallied here. There are three pools 2 to 3 feet deep and fifteen 3 to 4 feet deep. One small logjam occurs in this section. The jam was considered to be an obstruction to fish migrations and possibly impassable. The stream gradient is slight to moderate. In several places debris has accumulated but offers no obstruction to fish passage. The riffle-pool ratio is 60:40.

1.5 - 2.0 miles

The watershed and shade cover consists of alder, maple, willow, cottonwood and fern. The degree of shade cover in this section varies from sparse to dense. Saroute Creek enters from the left at mile 1.7. The streams had nearly equal flows. Silt, sand and occasional bedrock or boulders over bedrock characterize the bottom material. Three square yards of good and 14 square yards of marginal trout spawning gravel, and 13 square yards of marginal salmon and steelhead spawning gravel were tallied here. There are two pools 3 to 4 feet deep. No obstructions to fish passage occur. The gradient is slight. Native cutthroat trout from fingerling size to 10 inches

(more)

were seen throughout the section. The riffle-pool ratio is 61:39.

2.0 - 2.5 miles

At 2:30 p.m. the water temperature was 62° F. The flow was 7 cfs. The bottom consists of silt, rubble, boulders and some bedrock. Three square yards of good and 8 square yards of marginal salmon and steelhead spawning gravel were recorded. There is one pool 2 to 3 feet deep. No log or debris jams or falls exist. The gradient is slight to moderate. Native cutthroat trout to 8 inches in length were noted throughout the section. Much of the silt covering the bottom is attributed to dust from the dirt road that runs parallel to the river. For the larger part of this section the road is no farther than 6 to 8 feet from the creek. All vegetation next to and over the river has a thick layer of dust on it. The riffle-pool ratio is 63:37.

2.5 - 3.0 miles

The average width of Little River in this section is 12 feet. The average depth is about 8 inches. The shade cover is moderate to dense. Alder, maple and some douglas fir constitute the watershed vegetation. Trail Creek, with a flow of 0.5 cfs enters Little River from the right. The tributary is too small to be of much value for fish. This section of Little River has one square yard of marginal trout spawning gravel and 7 square yards of marginal salmon and steelhead spawning gravel. There is one pool 2 to 3 feet deep and one 3 to 4 feet deep. A small logjam does not obstruct fish passage. A 1 to 2-foot falls was also noted. Stream gradient is moderate. One 6-inch native cutthroat trout and several cutthroat fingerlings were seen. The road continues to parallel the river; thus, almost all gravel of suitable size for spawning is silted too much to be usable. The stream flows through three culverts in this section. They have a diameter of about 5 feet and are 30 feet long. The riffle-pool ratio is 73:27.

3.0 - 3.5 miles

The average width of this section is 6 feet. The water temperature at 3:15 p.m. was 63° F. The watershed consists of alder, oak, maple and mixed conifers. The shade cover is moderately dense, becoming more dense towards the upper end of the section. East Cinnabar Creek enters Little River in this section. This tributary had a flow of about 0.3 cfs with a temperature of 57° F. at 3:30 p.m. The degree of slope at the mouth of this tributary is steep. Silted gravel and rubble with some bedrock characterize the riverbed. One square yard of good and 4 square yards of marginal trout spawning gravel, and 4 square yards of marginal salmon and steelhead spawning gravel were recorded. There are six pools 2 to 3 feet deep and four 3 to 4 feet deep. There is one small passable logjam. Two falls 1 to 2 feet high and two 2 to 3 feet high were recorded. The degree of slope remains moderate, but becomes increasingly steep towards the headwaters of the river. Native cutthroat trout from fingerling size to 8 inches in length were seen throughout the section. The gravel-surfaced logging road continues to run parallel to the river. The riffle-pool ratio is 59:41.

3.5 - 4.0 miles

Alder, maple and salmonberry constitute the watershed cover vegetation in this section. The shade cover is moderately dense. Weyerhaeuser Creek flows into Little River from the right. It had a flow of 0.2 cfs which was 56° F. at 4:00 p.m. Two 4-foot falls are within 15 yards of the mouth. From 15 yards to 25 yards above its mouth, Weyerhaeuser Creek flows through a culvert. At the downstream

(more)

Little River continued

end of the culvert the water falls 4 feet into a deep pool. The bottom composition of Little River in this section is characterized by silted gravel, rubble and small boulders with occasional bedrock. Two square yards of good and 8 square yards of marginal trout spawning gravel, and one square yard of good salmon and steelhead spawning gravel were recorded. One pool 1 to 2 feet deep, six 2 to 3 feet deep and one 3 to 4 feet deep were recorded. Three small logjams, one medium-sized logjam and one large (10 x 20 yds.) logjam occur in this section. The large logjam is impassable. One 4-foot falls and one 6-foot falls exist. Logs and debris are piled against the downstream side of the 6-foot falls making it impassable by fish during low flows. The stream has a steep slope. Fingerling cutthroat trout were observed. The riffle-pool ratio is 58:42.

4.0 - 4.5 miles

The average width of this section of Little River is 6 feet. The temperature at 9:15 a.m. was 58° F. Due to the clear-cut watershed, shade cover is sparse. Some alder, vine maple and willow have grown back over the adjacent slopes. A tributary with 0.3 cfs flow enters Little River from the right at 4.2 miles. Large boulders over bedrock with silt and some rubble constitute the bottom material. One square yard of good and one square yard of marginal trout spawning gravel, and 4 square yards of marginal salmon spawning gravel occur. There are three pools 2 to 3 feet deep and six 3 to 4 feet deep. Three small logjams occur but none are impassable by fish. Three falls 1 to 2 feet, four 2 to 3 feet, two 3 to 5 feet and one 6 feet exist. Four to eight-inch native cutthroat trout were seen throughout the section. The river flows through two culverts, once at 4.0 miles and again at 4.2 miles. Most of this section has cut logs lying in or over the stream. The gradient is steep. The riffle-pool ratio is 61:39.

4.5 to 5.0 miles

Little River has an average width of 6 feet here. There is no shade cover. A tributary enters from the left; its flow was 0.3 cfs with a 6-foot falls 10 yards from the mouth. The riverbed in this section is composed of rubble and boulders with much silt. The excess silt is a result of the logged off watershed and unchecked erosion. Despite these unfavorable conditions, 12 square yards of good and 28 square yards of marginal trout spawning gravel, and 24 square yards of good and one square yard of marginal salmon and steelhead spawning gravel were recorded. There are three pools 2 feet deep and four 3 feet deep. Three small and four large logjams occur. One of the small and two of the large logjams are probably impassable by anadromous fish. There are two falls 5 to 10 feet that were considered impassable by fish and also four falls 2 to 3 feet and one 3 to 5 feet. The gradient is steep. Debris jams the upstream side of a wooden culvert at 4.7 miles forming an impassable barrier to fish migration. Much filamentous algae covers the stream bottom. The water was moderate to severely turbid. The riffle-pool ratio is 74:26.

5.0 - 5.5 miles

The average width of this section is 5 feet. Average depth is about 4 inches. The flow was 1 cfs. There is no shade cover and the watershed is all clear-cut. Two tributaries flow into Little River in this section. One at 5.2 miles enters from the left, has an insignificant flow and a 40 degree slope. The other tributary enters from the right at 5.3 miles and had a flow of 0.2 cfs. The river bottom is largely silt and boulders. Two square yards of marginal salmon and steelhead spawning gravel were recorded for the entire section. There are three large, impassable

(more)

logjams. The first is 30 feet wide and 100 yards long; the second is 15 feet high and has a single 6-foot waterfall. The third is about 15 feet high and is wedged between the banks of a steep gulley. It has a 12-foot head, certainly impassable with the current flow of water. One falls 2 to 3 feet, one 3 to 5 feet and one 5 to 10 feet were recorded in this section. Despite adverse passage conditions, native cutthroat trout fingerlings were seen at 5.4 miles. The last tributary on the right has a road built across it 100 yards from its mouth. The culvert has become plugged with debris. Mud and debris have accumulated behind the dam formed by the road fill to a depth of about 30 feet and a width of 30 feet. For 100 yards the trickle flows from a badly eroded watershed, down across a mud plateau, and over the road. About half of the original flow seeps into this mud and debris accumulation. The other half reaches Little River 100 yards away in a severely turbid state. The riffle-pool ratio of Little River in this section is 88:12.

July 1964

Surveyors: H. Roberts and Howerton

Stream: Blood Creek

Mouth at: T. 23S, R. 3 W, Sec. 17

Tributary to: Little River (Coast Fk. Willamette R.) County: Lane

Stream System: Willamette

Characteristics:

	<u>At Mouth</u>	<u>At 0.3 mile</u>			
Width (Feet)	6	5			
Total Stream Length (nearest 0.25 mile):	2.0 miles (lower 0.5 mile surveyed)				
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>			
Square Yards		15 (trout) 10 (salmon)			
Riffle-pool ratio:	Riffle - 42	Pool - 58			
Water Temperature and Flow Data:					
	Temperature (°F.)		Flow		
	Time	Water	Air	(cfs)	Location
	3:00 p.m.	55		0.6	Mouth

Gradient: Slight

Possible Limiting Factors:

Logjams: Dense logjams may be impassable at miles 0.06, 0.08 and 0.3.

Other: A beaver dam 80 yards from the mouth of the creek may be impassable.

Fish Species Present: Native cutthroat trout of legal size seen up to mile 0.1.

Accessibility: Logging road runs parallel to creek for about 0.5 mile.

Watershed Cover Types: Alder, willow and mixed conifers.

Comments: Little value to game fish.

0.0 - 0.3 mile

Blood Creek is 6 feet wide at the mouth and has an average width of 5 feet. The water temperature at 3:00 p.m. was 55° F. The flow was 0.6 cfs. There is a moderately dense to dense shade cover of alder, willow, maple and mixed conifers. The watershed contains a higher proportion of coniferous species than does the shade cover adjacent and over the stream. Rubble, boulders and much silt describe the creek bed. Fifteen square yards of marginal trout spawning gravel and 10 square yards of marginal salmon and steelhead spawning gravel occur in this section. There are three pools 2 feet deep and two 3 feet deep. The section contains one falls 1 to 2 feet high and two 2 to 3 feet high (one is a cascade). There are 4 logjams, one debris jam and 2 beaver dams obstructing fish passage. The stream gradient is slight. Cutthroat trout up to 8 inches long were seen throughout most of the section surveyed. The creek flows through a road culvert at mile 0.2. The riffle-pool ratio is 42:58. Blood Cr. enters Little R. from the left bank at mile 1.4.

July 7 and 8, 1964

Surveyors: Roberts and Howerton

Stream: Saroute Cr.

Mouth at: T. 23S, R. 3W, Sec. 17

Tributary to: Little River (Coast Fk. Willamette R.) County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 1.5 miles</u>	<u>At 2.0 miles</u>
Width (Feet)	12	12	8
Total Stream Length (nearest 0.25 mile):	3.0 miles (lower 2.3 miles surveyed)		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	10 (trout) 62 (salmon)	56 (trout) 94 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	59	41	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:30 p.m.	59		2.5	Mouth
10:00 a.m.	55			1.0 mile
1:20 p.m.	56		1.0	2.3 miles

Gradient: Moderate to steep

Possible Limiting Factors:

Falls: 12 ft. falls at mile 0.6, 10 ft. falls at mile 0.7, 9 ft. falls at mile 2.1.

Logjams: Large, dense and probably impassable jams are located at mile 0.8 and 1.0. Impassable beaver dam at mile 0.9.

Fish Species Present: Native cutthroat trout seen up to mile 2.0. Cottids.

Accessibility: Logging road runs parallel to all of main creek and most of its tributaries.

Watershed Cover Types: Alder, vine maple, willow and mixed conifers.

Comments: Because access road belongs to a private logging concern, access rights must be arranged before the public could pass the locked gates.

0.0 - 0.5 mile

Saroute Creek enters Little River from the left at mile 1.7. It is 3.0 miles long and 12 feet wide at the mouth. The water temperature at 3:30 p.m. was 59° F. Rubble, boulders and some bedrock characterize the creek bed. There are 22 square yards of good and 6 square yards of marginal trout spawning gravel, and 29 square

(more)

Saroute Cr. continued

yards of good and 36 square yards of marginal salmon and steelhead spawning gravel. Nine falls occur within this section, eight are 1 to 2 feet high and the ninth is a cascade 3 to 5 feet high. There are 4 logjams; all are small and passable. The stream gradient is moderate. There are no pools more than 3 feet deep. Small native cutthroat trout were noted throughout the section. The shade cover consists of alder and vine maple and is sparse to moderately dense. A logging road running parallel to the creek provides good access. Riffle-pool ratio is 65:35.

0.5 - 1.0 mile

On July 7 the water temperature at 3:30 p.m. was 59° F. at mile 0.5. At 10:00 a.m. on July 8 the water temperature at the same place was 55° F. Rubble with some boulders, bedrock and much silt constitute the creek bed. There are 34 square yards of good and 6 square yards of marginal trout spawning gravel, and 33 square yards of good and 54 square yards of marginal salmon and steelhead spawning gravel. There are eleven 1 to 2-foot falls, three 2 to 3-foot falls (two of which are cascades), four 3 to 5-foot falls (one of which is a cascade), one 5 to 10-foot cascade, one 10-foot falls, and one 12-foot falls. Five logjams exist in this section, one at mile 0.6 and one at mile 0.7. The former is 10 yards long and passable by fish. The latter is 20 yards long and offers no passage problems. A large logjam at mile 0.8 may be impassable to anadromous fish at the current flow. Another at mile 0.85 is 20 yards long and passable to anadromous fish at the current flow. A beaver dam at mile 1.0 forms an impoundment with a one-acre surface area. During low flows the dam is probably impassable to fish. The stream gradient is moderate to steep. Pools 1 to 3 feet deep are numerous; none were more than 3 feet deep, however. Small native cutthroat trout were noted throughout the section. Carlson Creek enters Saroute Creek at mile 0.9. The survey of Carlson Creek appears on a separate form. The moderately dense shade cover consists of alder, vine maple and willow. The watershed is predominantly coniferous. Good stream access is provided by a logging road which closely follows the stream. The water is clear. Riffle-pool ratio is 69:31.

1.0 - 1.5 miles

Rubble, boulders, some bedrock and much silt characterize the bottom. This section contains 12 square yards of good and 6 square yards of marginal trout spawning gravel. Falls 1 to 2 feet high are numerous. There are four log and debris jams. One at mile 1.0 is 5 yards wide and 20 yards long, and probably impassable to anadromous fish at the current flow. Two other logjams at mile 1.3 are passable. A beaver dam in the vicinity of mile 1.0 is currently passable. The stream gradient is steep in the lower portion of this section but becomes slight toward the upper portion. There are no pools of significant depth. Fingerling cutthroat trout were observed throughout this section. The water is clear. Riffle-pool ratio is 63:37.

A tributary entering Saroute Cr. from the right between mile 1.0 and 1.5 had a flow of 0.2 cfs and a water temperature of 51° F. at 11:30 a.m.

1.5 - 2.0 miles

The average width of this section is 12 feet. The water temperature at 1:20 p.m. was 56° F. Rubble, boulders, bedrock and silt constitute the creek bed material.

(more)

Saroute Cr. continued

There are 15 square yards of good and 38 square yards of marginal trout spawning gravel, and 4 square yards of marginal salmon and steelhead spawning gravel. Falls 1 to 3 feet high are numerous. One 3 to 5-foot cascade was recorded. A small logjam with a 2-foot water head occurs at mile 1.7. There are no fish passage problems here. A second logjam at mile 1.8 is small and passable by all fish. The shade cover is dense. The gradient is moderate to steep. Pools 1 to 3 feet deep are numerous. Fingerling cutthroat were seen throughout the section. Riffle-pool ratio is 69:31.

2.0 - 2.3 miles

The average width in this section is 8 feet. The flow at mile 2.0 was about 1.0 cfs. The creek bed consists of rubble and boulders with some bedrock and much silt. There are 22 square yards of marginal trout spawning gravel. Falls 1 to 3 feet high are numerous. One falls 3 to 5 feet high, one 6 feet high and one 9 feet high were recorded in this upper portion of the stream. There are no logjams. The stream gradient is steep. Pools 1 to 4 feet deep are numerous. Cutthroat trout fingerlings were seen up to mile 2.1, but such observations were less frequent than in previous sections. There is a moderate to dense shade cover of alder, maple and mixed conifers. Much of the watershed has been logged with much debris and cut logs in the creek bed. Riffle-pool ratio is 62:38.

Saroute Creek forks at mile 2.1. The flow in the main channel (Brauti Cr.) above the forks was 0.8 cfs and had a water temperature of 56° F.

Unnamed Tributary

0.0 - 0.3 mile

An unnamed tributary enters Saroute Creek from the right 1.5 miles above the mouth. It is 6 feet wide at the mouth, had a water temperature of 56° F. and a flow of 0.5 cfs at 12:40 p.m. The creek bed consists of bedrock and silt. One 1 to 2-foot falls, one 2 to 3-foot falls and one 3 to 5-foot falls occur. There are several small beaver dams in this section. Log and debris jams are numerous. The stream gradient is steep. There is one pool 2 feet deep and one 4 feet deep. Native cutthroat trout and a sculpin were seen up to 250 yards from the mouth. The shade cover is dense at the mouth but becomes open 130 yards upstream. The watershed is predominantly coniferous. Riffle-pool ratio is 26:74.

July 13, 1964

Surveyor: Thompson

Stream: Carlson Cr.

Mouth at: T. 23S, R. 3W, Sec. 19

Tributary to: Saroute Cr.

County: Lane

Stream System: Willamette (Coast Fork)

Characteristics:

At Mouth

Width (Feet)

3

Total Stream Length (nearest 0.25 mile): 1.0 (lower 0.1 mile surveyed)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

Negligible

Negligible

Riffle-pool Ratio:

Riffle

Pool

Percentage

10

90

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	59	74	0.3	Mouth

Gradient: Slight

Possible Limiting Factors:

Logjams: Several in short section surveyed.

Other: Several beaver dams near mouth create passage problems.

Fish Species Present: Many native cutthroat trout.

Accessibility: Logging road crosses at about 100 yards from mouth. Brush extremely dense along creek's perimeter.

Watershed Cover Types: Broadleaf and mixed conifers.

Comments: Accessibility and value have been greatly reduced by log and debris accumulation in the creek.

0.0 - 0.1 mile

Carlson Cr. is about 1 mile long. It joins Brauti Cr. to form Saroute Cr. at mile 0.8. It is 3 feet wide at the mouth, had a flow of 0.3 cfs and a temperature of 59° F. at 1:00 p.m. The surveyed section had a moderate shade cover of broadleaf species. The bottom is largely mud with some silted gravel and rubble. There are many pools among debris accumulation all along the creek. Within the first 70 yards are several beaver dams among other log and debris jams. Most of these would be impassable to anadromous fish, but evidently are not to cutthroat trout. Trout were seen up to 130 yards from the mouth. The stream gradient is slight. Except for the lack of spawning gravel, Carlson Cr. appears to be a fair trout stream. The riffle-pool ratio is 10:90.

July 13, 1964

Surveyors: Thompson and Hattan

Stream: Dennis Cr.

Mouth at: T. 23S, R. 3 W, Sec. 8

Tributary to: Little River

County: Lane

Stream System: Willamette (Coast Fork)

Characteristics:

	<u>At Mouth</u>	<u>At 0.3 mile</u>
Width (Feet)	6	4
Total Stream Length (nearest 0.25 mile):	2.0 (lower 0.3 mile surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	Negligible	10 (trout)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	76	24

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:30 p.m.	60		0.3	Mouth

Possible Limiting Factors:

Logjams: Four logjams within lower 0.25 mile; two are impassable.

Other: A dirt fill without a culvert has been graded over the creek 150 yards from the mouth.

Fish Species Present: Native cutthroat trout up to 8 inches throughout section surveyed.

Accessibility: Logging road parallels most of the creek.

Watershed Cover Types: Alder, vine maple and mixed conifers.

Comments:

0.0 - 0.3 mile

Dennis Cr. is 1.9 miles long. It is a tributary to Little River at mile 1.1. It is 6 feet wide at the mouth, has an average width of 4 feet, had a flow of 0.3 cfs and a water temperature of 60° F. at 2:30 p.m. The creek has a moderate to dense shade cover of alder, vine maple and mixed conifers. The streambed consists of silted gravel and rubble. Ten square yards of marginal trout spawning gravel were recorded. Nine pools 1 foot deep and seven 2 feet deep were counted. There are two falls 1 foot high and two 2 feet high. The private landowner has graded a fill with no culvert over the creek at 150 yards from the mouth to provide a road. This now forms an impassable barrier to all fish but will probably wash out during winter flows. There are four logjams; two are impassable. A long section of bank about 10 feet high has been undermined by erosion and could easily collapse to block a major portion of the stream's flow. The stream gradient is slight to moderate. Cutthroat trout up to 8 inches long

(more)

Dennis Cr. continued

were seen throughout the section surveyed. Accessibility is fair since a road parallels much of the creek. The riffle-pool ratio is 76:24.

July 13, 1964

Surveyor: Thompson

Stream: East Cinnabar Cr.

T. 23S, R. 3 W, Sec. 21

Tributary to: Little River

County: Lane

Stream System: Coast Fork Willamette R.

Characteristics:

	<u>At Mouth</u>	<u>At 100 yds.</u>
Width (Feet)	4	2
Total Stream Length (nearest 0.25 mile):	1.5 miles (surveyed lower 70 yds.)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	4 (trout)	Negligible
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	75	25

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
1:00 p.m.	58		0.2	Mouth

Gradient: Moderate to steep.

Possible Limiting Factors: Low flows and steep gradient.

Fish Species Present: Native cutthroat trout fingerlings seen at 70 yards.

Accessibility: Logging road crosses at about 1.0 mile, a point where the flow was negligible. Dense cover limits accessibility.

Watershed Cover Types: Vine maple, salmonberry and mixed conifers.

Comments:

0.0 - 70 yds.

East Cinnabar Cr., 1.4 miles long, is a tributary to Little River at mile 3.8. It is 4 feet wide at its mouth, had a flow of 0.2 cfs and a temperature of 58° F. at 1:00 p.m. Vine maple, salmonberry, and mixed conifers make up the extremely dense vegetation canopy over the creek; hence, access is limited. Bottom material consists of rubble and sand. Four yards of good trout spawning gravel were noted for the 70 yards surveyed. There are no logjams. The stream gradient is moderate. Cutthroat trout fingerlings were seen at 100 yards. Riffle-pool ratio is 75:25.

July 13, 1964

Surveyors: Thompson and Hattan

Stream: West Cinnabar Cr.

T. 23S, R. 3 W, Sec. 21, 28 and 29.

Tributary to: Little River (Coast Fork Willamette R.)

County: Lane

Stream System: Willamette

Characteristics:

	<u>At Mouth</u>	<u>At 0.2 mile</u>
Width (Feet)	4	2
Total Stream Length (nearest 0.25 mile):	1.25 (lower 0.2 mile surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	Negligible	1 (trout)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	87	13

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:30 a.m.	57	64	0.3	Mouth

Gradient: Steep

Possible Limiting Factors:

Falls: 6-foot falls at mouth,

Logjams: Two impassable logjams, one near the mouth and the other 20 yards above.

Fish Species Present: Cutthroat trout 2 to 3 inches long were abundant.

Accessibility: An old logging road provides access to most of the creek.

Watershed Cover Types: Alder, maple and mixed conifers.

Comments:

0.0 - 0.2 mile

West Cinnabar Cr. is 1.4 miles long. It enters Little River from the left at mile 3.3. The stream is 4 feet wide at the mouth, had a flow of 0.3 cfs and a temperature of 57° F. at 11:30 a.m. The air temperature at this time was 64° F. There is a dense shade cover of alder, maple and mixed conifers. Conifers are more abundant higher on the watershed. Rubble, boulders and bedrock constitute the bottom material. Only one square yard of marginal trout spawning gravel was tabulated for the section surveyed. There are seven pools 1 foot deep and nine 2 feet deep. There is one falls 1 foot high, three 2 feet high, one 3 feet high and one 6 feet high (at the mouth). There are two impassable logjams 250 yards from the mouth. The accessibility is limited due to the lack of roads. Riffle-pool ratio is 87:13.

1964

Surveyor: Ralph Swan 1/

Stream: Martin Cr.

Mouth at: T. 21S, R. 3W, Sec. 5

Tributary to: Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

Gradient: Slight

Possible Limiting Factors:

Logjams: Much debris in upper portion.

Fish Species Present: Native cutthroat trout.

Watershed Cover Types: Mixed broadleaf.

Comments: Lower one mile ditched because of road construction.

1/ Information from Swan's general knowledge of the stream.

July 8, 1964

Surveyors: H. Roberts and Howerton

Stream: Murray Cr.

Mouth at: T. 21S, R. 3W, Sec. 32

Tributary to: Coast Fork Willamette River (Cottage Grove Reservoir)

Stream System: Willamette

County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.0 mile (cursory survey near mouth)

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
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Square Yards	Negligible	Negligible
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Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:30 a.m.	54		0.1	Mouth

Accessibility: No roads or trails providing access.

Watershed Cover Types: Alder, blackberry, mixed conifers.

Comments: Negligible value to fish.

Water temperature of Murray Cr. at 9:30 a.m. was 54° F. and the flow 0.1 cfs. There is a moderate shade cover of blackberry. The watershed consists of alder. Murray Cr. flows into Cottage Grove Reservoir from the left.

June 1964

Surveyors: Thompson & H. Roberts

Stream: Rodgers Cr.

Mouth at: T. 21S, R. 3W, Sec. 33

Tributary to: Cottage Grove Reservoir

County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
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Square Yards	Negligible	Negligible
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Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:00 p.m.	59		Less than 0.1	200 yds. above mouth

Gradient: Slight

Possible Limiting Factors: Water flows too low during dry seasons to support trout.

Accessibility: Road crosses creek at 200 yards from mouth.

Watershed Cover Types: Grass,

Comments: Too small to be of value to fish.

Roger's Creek is 1 mile long. It flows into Cottage Grove Reservoir on the right side. The stream is 1 foot wide at its mouth, had a small trickle with a temperature of 59° F. at 2:00 p.m. The watershed for the first 200 yards is grass. The bottom is mud. No spawning gravel or fish were seen. The stream gradient is slight. There is much more pool than riffle. Roger's Cr. could not support a population of game fish.

September 24, 1964

Surveyors: Hutchison & Hattan

Stream: Row River (mouth to Dorena Dam)
Tributary to: Coast Fork Willamette River
Stream System: Willamette

Mouth at: T. 20S, R. 3W, Sec. 22
County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 5 miles</u>
Width (Feet)	70	70
Total Stream Length (nearest 0.25 mile):	20.1 (lower 7.5 miles covered here)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	4,435 (salmon)	29,500 (salmon)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	60	40

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
6:00 p.m.	69		187	Mouth
1:00 p.m.	65			Dorena Dam

Gradient: Slight

Possible Limiting Factors: Present reservoir releases are often inadequate for upstream passage of anadromous fish. High summer water temperatures limit rearing.

Fish Species Present: Largemouth bass and perhaps other warm-water game species.

Accessibility: Access provided by several public and private roads.

Watershed Cover Types: Mixed broadleaf.

Comments: Flow regulated by Dorena Dam.

0.0 - 7.5 miles

Row River, a tributary to the Coast Fork Willamette River at mile 20.8, is 21 miles long and has an average width in the lower section of 70 feet. The flow is regulated by Dorena Dam at mile 7.5. Water temperature at the mouth was 69° F. at 6:00 p.m. At 1:00 p.m. the water temperature at Dorena Dam was 65° F. Mixed varieties of deciduous shrubs and trees constitute the watershed and shade cover. Bedrock, rubble and gravel characterize the riverbed. There are 29,500 square yards of marginal and 4,435 square yards of good salmon and steelhead spawning gravel scattered throughout the section, though it is more common in the lower river portions. Low water releases from Dorena Reservoir often occur in the fall and could limit the use of much spawning gravel by anadromous fish and even affect upstream passage. Present and past gravel removal operations exist in the lower three miles. The

(more)

Row River 0.0 - 7.5 continued

average depth of the pools between miles 3.5 and 7.5 is 4 to 7 feet; two are approximately 10 feet deep. A large, deep pool is found below the spillway at Dorena Dam. Most of the pools between the mouth and mile 3.5 are shallow although two are approximately 15 feet deep. A 3-foot falls occurs one mile above Mosby Cr. Three long bedrock cascades, passable by fish, occur between river miles 5.9 and 6.9. The river gradient is slight.

Reports from residents in the Cottage Grove area indicate that some spring chinook salmon may have entered Row River in the past (Dimick and Merryfield, 1945). After construction of Dorena Dam juvenile spring chinook salmon were liberated below the dam in 1950, 1953 and 1955. Although some adults from these plants did return, the release of warm water from the dam has not been compatible with salmonid production. Oregon State Game Commission personnel installed a rack below Dorena Dam in 1958 for the purpose of trapping adult spring chinook to transport to Dexter ponds for holding. Only a few fish appeared of which three were trapped. A logger claimed a large salmonid carcass was observed in upper Mosby Cr. in 1958 (Willis, Collins and Sams, 1960). Public and private roads provide access to the river at several points. Most of the land adjoining the river is privately owned and under agricultural development. The maximum temperature recorded by a U. S. Fish and Wildlife Service thermograph located just below Dorena Dam in the summers of 1954-56 was 72° F. September 4-8, 1956. Other water temperature records have been obtained by the U. S. Geological Survey approximately 2 miles below Dorena Dam since 1949 (U. S. Geological Survey, 1964).

July 31, 1964

Surveyors: Thompson & Roberts

Stream: Row River (mile 11.5 - 21.0)
Tributary to: Coast Fork Willamette R.
Stream System: Willamette

Mouth at: T. 21S, R. 3W, Sec. 22
County: Lane

Characteristics:	<u>At 11.5 miles</u>	<u>At 16.5 miles</u>
Width (Feet)	60	30
Total Stream Length (nearest 0.25 mile):	21 miles (9.5 miles are above Dorena Reservoir)	

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	18 (salmon)	40 (trout) 140 (salmon)

Rifle-pool Ratio:	<u>Rifle</u>	<u>Pool</u>
Percentage	31	69

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:10 a.m.	62	58	40	Mile 11.5
11:00 a.m.	61	63	38	Mile 15.5

Gradient: Slight

Possible Limiting Factors:

Falls: Cascades 4 feet and 3 feet high through a narrow channel at mile 12.8. Wildwood Falls 15 feet high at mile 18.5.

Other: A 400-yard section of narrow channel through bedrock may have excessively rapid flows that hinder fish passage during high water. This is located at mile 12.8.

Fish Species Present: Cottids, cutthroat, dace, rainbow.

Accessibility: Paved highways are on each side of the river in several places. All sections are easily accessible.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Poor water quality due to organic and inorganic pollution limit the value of Row River.

11.5 - 16.5

This survey of Row River began at the upper end of Dorena Reservoir where flowing water could first be detected. This point is 11.5 miles above the mouth of Row River. The width at this point is 60 feet. The mean depth is 2 feet. The flow was about 40 cfs and the water temperature was 62° F. The watershed is typically

(more)

Row River 11.5 - 16.0 continued

broadleaf species adjacent to the river and conifers higher on the slopes. There is little shade cover. The riverbed materials consists of bedrock, boulders and gravel with much silt. Three tributaries to Row River occur in this section: Cedar Creek from the right at mile 13.8, Hawley Creek from the left at mile 15.3, and Culp Creek from the left at mile 16.3. Water being used by Bohemia Logging Co. at mile 16.1 for its various operations flowed into Row River at a rate of 0.4 cfs. At this same point ashes from the sawdust burner are being dumped into Row River. These two practices seem to be significant sources of water pollution. For the entire four-mile section only 30 square yards of marginal salmon and steelhead spawning gravel were recorded. There were two pools 4 feet deep, three 5 to 6 feet deep, two 7 to 8 feet deep, and one 15 feet deep. There are two cascades in this section. Both occur at mile 12.8. One is 4 feet high in two sections and the other 3 feet high, flowing through a narrow bedrock channel. The latter may be somewhat of an obstruction to fish passage at high flows. The water quality of the river is poor due to both organic and inorganic pollution. The stream gradient is slight. Paved roads on both sides of the river provide good access. The riffle-pool ratio is 18:82.

16.5 - 21.0

Row River has a mean width of 30 feet at mile 16.5 and a flow of 38 cfs. At 11:00 a.m. the water temperature was 61° F. Watershed cover consists of mixed broadleaf and conifers with broadleaves predominating along the river banks. There is scarce shade cover over the river. Silt, rubble and bedrock characterize the river bed. Sharps Cr. enters Row River from the left at mile 17.0. Brice and Layng Creeks join to form Row River at mile 21.0. Forty square yards of marginal trout spawning gravel and 18 square yards of good and 110 square yards of marginal salmon and steelhead spawning gravel were recorded for the section. Pools include three 3 feet deep, two 4 feet deep, five 5 to 6 feet deep and one 8 feet deep. There are three cascades 3 to 5 feet high. Wildwood Falls at mile 18.5 is 15 feet high with a second step 4 feet high. The falls has a 15-foot jump pool below it. A log now lying against the downstream side of the falls probably makes it impassable for all fish. The gradient is slight to moderate. Bohemia Logging Company is drawing water from the river through a 10-inch pipe and pump at mile 16.2. At mile 18.0 there is another 3/4-inch pipe and pump taking water from the river. The water appears much less turbid above Bohemia Logging Company. Riffle-pool ratio is 45:55.

July 27 and 28, 1964

Surveyors: Thompson & H. Roberts

Stream: Brice Creek
Tributary to: Row River
Stream System: Willamette

Mouth at: T. 21S, R. 1W, Sec. 35
County: Lane

Characteristics:

	<u>At Mouth</u>	<u>At 4.0 miles</u>	<u>At 10.0 miles</u>
Width (Feet)	10	20	12

Total Stream Length (nearest 0.25 mile): 16.25 (lower 15.0 miles surveyed)

	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	174 (trout) 529 (salmon)	175 (trout) 2,107 (salmon)

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	74	26

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	63	73	19	Mouth
9:30 a.m.	61	60		4.0 miles
1:10 p.m.	60	70	5	8.0 miles

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: Cascade 15 feet high at mile 6.8. Falls 17 feet high at mile 7.1.
Falls 10 feet high at mile 7.3.

Logjams: Several impassable logjams between miles 10.0 and 15.0.

Other: Several rock slides caused by fill from the road above are impassable.
These occur between stream miles 10.0 and 18.5.

Fish Species Present: Blackside dace, native cutthroat trout, cottids and rainbow trout.

Accessibility: Logging road runs parallel to creek for entire length.

Watershed Cover: Predominantly willow, alder, maple and mixed conifers.

Comments: Because there are 1,200 square yards of usable salmon and steelhead spawning gravel below the large falls and rock slides, Brice Creek may be able to support a limited anadromous fishery, as well as an excellent trout fishery.

(more)

Brice Creek 0.0 - 2.0 miles

Brice Creek is a tributary to Row River 9.6 miles above Dorena Reservoir. The creek is 16 miles long. On July 27 the flow was 19 cfs and the water temperature 63° F. at 11:00 a.m. at the mouth. Brice Creek is 10 feet wide at its mouth. Willow, alder and maple predominate along the creek banks, but conifers constitute most of the watershed cover. There is little shade cover. There is no trout or salmon spawning gravel within the first two miles. The bottom material is primarily rubble. Five pools 2 feet deep, eleven 3 feet deep, five 4 feet deep and two 5 to 6 feet deep occur in this section. The gradient is slight to moderate. The average width of this section is 20 feet. Blackside dace and native cutthroat trout were seen throughout the first two miles. There are two pumps drawing water from the creek here. One occurs at mile 0.1, has a 3/4-inch suction pipe and is screened. The second is at mile 0.1, has a 2-inch pipe and is unscreened. Riffle-pool ratio is 62:38.

2.0 - 4.0 miles

The average width of Brice Creek in this section is 20 feet. The watershed and shade cover consists of alder, maple and mixed conifers. At 9:30 a.m. the water temperature was 61° F. and the air temperature 60° F. The bottom material consists mainly of rubble and boulders. Twelve square yards of good and 15 square yards of marginal salmon and steelhead spawning gravel were recorded for the section. There are four pools 2 feet deep, eight 3 feet deep, four 4 feet deep, two 5 feet deep and one 8 feet deep. Blackside dace and native cutthroat trout occur throughout the section. A gravel-surfaced logging road provides access to all of Brice Creek. Riffle-pool ratio is 68:32.

Alder Creek flows into Brice Creek from the left at mile 2.1. Its flow is 0.3 cfs and the water temperature at 2:50 p.m. was 58° F. Because the degree of slope is very steep at the mouth, Alder Creek probably has little potential for either anadromous or nonanadromous game fish. Adams Creek enters Brice Creek at mile 3.5. It had a flow of 0.2 cfs and a water temperature of 57° F. at 3:00 p.m.

4.0 - 6.0 miles

The average width of this section of Brice Creek is 15 feet. The flow was 14 cfs and the water temperature at 10:15 a.m. was 60° F. The slight shade cover consists of alder and maple. The watershed is predominantly coniferous. Rubble and bedrock characterize the bottom type. Forty-four square yards of good and 80 square yards of marginal trout spawning gravel, and 195 square yards of good and 1,019 square yards of marginal salmon and steelhead spawning gravel were recorded. There are twelve pools 1 foot deep, seventeen 2 feet deep, seven 3 feet deep, six 4 feet deep, and four 6 to 8 feet deep. Eight 2-foot falls, four 3-foot falls, one 4-foot falls and one 8-foot falls with a natural ladder were recorded for the two-mile section. Fill from logging road construction at mile 4.1 has filled the creek with boulders causing one of the 3-foot falls. This slide is impassable to all fish at low flows. Native cutthroat trout were observed through the section. The water is clear.

There are three tributaries to Brice Creek in this section. Donna Creek flows from the left under the road at mile 4.7, had a flow of 0.4 cfs and has a very steep gradient at the mouth. Cedar Creek enters from the left at mile 5.0, had a flow of 0.3 cfs and has a 15-foot falls at the mouth. Crawfish Creek flows into Brice Creek at mile 5.7. Its flow was 0.3 cfs. Crawfish Creek has some value as a trout stream but is small for anadromous fish.

(more)

Brice Creek 6.0 - 8.0 miles

Brice Creek has an average width of 12 feet at mile 6.0. The flow was 5.0 cfs at 1:00 p.m., the water temperature was 60° F. and the air temperature 70° F. The watershed is predominantly coniferous. The shade cover is sparse. Rubble, boulders and bedrock with sizable bars of spawning gravel characterize the creek bed composition. There are 69 square yards of good and 48 square yards of marginal trout spawning gravel, and 232 square yards of good and 536 square yards of marginal salmon and steelhead spawning gravel in this section. The section also contains three pools 1 foot deep, twenty-six 2 feet deep, fifteen 3 feet deep, four 4 feet deep, two 5 to 6 feet deep and one 8 feet deep. Obstructions to fish passage include twelve falls 2 feet high, four 3 feet high, one 4 feet high, one 5 feet high, one 10 feet high with a jump pool 6 feet deep (mile 7.3), and one 17 feet high with a jump pool 4 feet deep (mile 7.1). There are four 4-foot cascades and one 15-foot cascade (mile 6.8). The 10-foot falls, 17-foot falls and 15-foot cascade are impassable by all fish except possibly steelhead. The stream gradient is steep. Riffle-pool ratio is 80:20.

Four tributaries enter Brice Creek in this section. Dog Creek flows from the left, had a flow of 0.2 cfs and a water temperature of 57° F. Inch Creek enters from the left, had a flow of less than 0.1 cfs and has a 30-foot falls at its mouth. Marten Creek enters from the left, had a flow of 1.0 cfs and has a 30-foot falls at its mouth. Hobo Creek enters at mile 8.0 from the left.

8.0 - 10.0 miles

The mean width of Brice Creek in this section is 12 feet. The average depth is about 8 inches. The flow was 6 cfs, the water temperature 60° F. and the air temperature 70° F. at 1:00 p.m. at mile 8. The watershed cover consists of alder, maple and mixed conifers. Broadleaf varieties predominate along the creek banks, and conifers higher on the watershed. Boulders, bedrock and some rubble characterize the creek bed. Twenty-eight yards of good and 2 square yards of marginal trout spawning gravel, and 2 square yards of good and 22 square yards of marginal salmon and steelhead spawning gravel were recorded for the section. There are many pools 2 to 3 feet deep throughout the section. Because the stream gradient is steep there are 3 to 4-foot cascades about every 100 yards. Legal-sized native cutthroat trout were observed in this section. The creek flows under a bridge at mile 9.8. Riffle-pool ratio is 91:9.

Two tributaries have their confluence with Brice Creek in this section, Trestle Creek and Champion Creek. The former flows from the right at 1.0 cfs and has a 30-foot falls at the mouth. Champion Creek is covered on a separate page.

10.0 - 15.0 miles

The mean width in this section is 7 feet. At 2:15 p.m. the water temperature was 57° F. and the air temperature was 77° F. at mile 10.0. The flow at mile 15.0 had diminished to 2.0 cfs. There are 21 square yards of good and 30 square yards of marginal trout spawning gravel, and 100 square yards of good and 500 square yards of marginal salmon and steelhead spawning gravel. The bottom consists mainly of rubble and boulders. Several impassable logjams and rock slides occur as a result of road construction. The stream gradient is steep. There are many pools 2 to 3 feet deep. Riffle-pool ratio is 85:15.

Wyatt Cr. and Parker Cr. flow into Brice Cr. in this section but neither has a significant flow.

July 28, 1964

Surveyors: Thompson & H. Roberts

Stream: Champion Creek

Tributary to: Brice Cr.

Stream System: Row River (Willamette)

Mouth at: T. 22S, R. 1E, Sec. 26

County: Lane

Characteristics:

	<u>At Mouth</u>	<u>At 1 mile</u>
Width (Feet)	10	8
Total Stream Length (nearest 0.25 mile):	4.75 (lower 2.0 miles surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	20 (trout) 59 (salmon)	38 (trout) 44 (salmon)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	85	15

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:00 p.m.	65	72	3.5	Mouth

Gradient: Steep

Possible Limiting Factors:

Falls: Three falls 4 to 5 feet high occur in the section 0.0 to 0.2.

Logjams: Two impassable logjams within the first two miles.

Fish Species Present: Native cutthroat trout were sparse.

Accessibility: Easy access by logging road for the first 1.5 miles. Limited access from there to the headwaters.

Watershed Cover: Mostly logged-off conifer.

Comments: 0.0 - 2.0 miles

Champion Creek is 4.6 miles long. It enters Brice Creek from the left at mile 8.6. The width at the mouth is 10 feet and the flow was 3.5 cfs. The average width is 8 feet. At 3:00 p.m. the water temperature was 65° F. and the air temperature was 72° F. There is a slight shade cover of maple and conifer. Much of the watershed is clear-cut. The bottom consists almost entirely of rubble and boulders. Twenty square yards of good and 38 square yards of marginal trout spawning gravel, and 59 square yards of good and 44 square yards of marginal salmon and steelhead spawning gravel were recorded for the section surveyed. There are pools 2 to 3 feet deep about every 25 yards. Because the stream gradient is steep there are many small falls and cascades. Within the section surveyed there are three falls 4 to 5 feet high that may obstruct fish passage. Four logjams occur; two are impassable.

(more)

Champion Creek continued

The water is clear. Shocking Champion Creek for fish distribution analysis yielded only two cutthroat. The terrain is steep and rugged, and the watershed is entirely coniferous. A logging road runs parallel to all of the stream but provides easy access to only a small section because of its location high on the slopes above the creek. Riffle-pool ratio is 85:15.

There are two tributaries on Champion Creek. Cat Creek occurs at mile 0.6 and Weaver Creek at mile 1.6. Both creeks have a flow of less than 0.2 cfs.

July 29, 1964

Surveyors: Thompson and H. Roberts

Stream: Layng Creek
Tributary to: Row River
Stream System: Willamette

Mouth at: T. 21S, R. 1W, Sec. 35
County: Lane

Characteristics:

	<u>At Mouth</u>	<u>At 4.0 miles</u>	<u>At 6.0 miles</u>
Width (Feet)	12	10	8
Total Stream Length (nearest 0.25 mile): 15.0 (lower 8.5 miles surveyed)			
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	26 (trout) 15 (salmon)	44 (trout) 92 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	62	38	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:00 a.m.	64	69	18	Mouth
10:40 a.m.	64	65		Mile 4.0
1:10 p.m.	64	76	4	Mile 8.5

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: 8-foot falls at mile 2.0 created by concrete dam spillway. Ten-foot falls at mile 2.5 over a concrete spillway.

Other: Poor water quality due to organic pollution, lack of spawning gravel, and warm water temperature limit the value of Layng Creek.

Fish Species Present: Blackside dace, native cutthroat trout, cottids.

Accessibility: Logging road provides access to the entire creek.

Watershed Cover: Alder, willow, maple and mixed conifers.

Comments:

0.0 - 2.0 miles

Layng Creek is 15.0 miles long. Its confluence with Brice Creek forms Row River at a point 9.6 miles above Dorena Reservoir. It is 12 feet wide at the mouth and had a flow of 18 cfs. At 9:00 a.m. the water temperature was 64° F. and the air temperature was 69° F. The watershed cover consists of mixed broadleaf and conifers.

(more)

Layng Creek continued

There is scarce shade cover. Bottom material consists mostly of rubble and boulders with much silt. Two square yards of good and one square yards of marginal trout spawning gravel, and 22 square yards of marginal salmon and steelhead spawning gravel occur in this section. Pitcher and Prather Creeks enter at mile 0.6 and 1.5, respectively. Pitcher Creek had a flow less than 0.2 cfs and has a 6-foot falls at the mouth. The water falls onto boulders. Prather Creek had a flow of 1.0 cfs with a water temperature of 60° F. and has a steep gradient at the mouth. Neither of the tributaries has much game fish value.

There are five pools 2 feet deep, five 3 feet deep, one 4 feet deep, three 5 feet deep, and two 7 to 8 feet deep. Obstructions to fish passage include three cascades 3 feet high, four 3 to 4-foot falls, and an 8-foot falls created by a sloping concrete dam 70 feet wide. The spillway occurs at stream mile 2.0. Stream gradient is moderate. A logging road provides access to all but the headwaters of Layng Creek. Much of the gravel that is of appropriate size for spawning is almost worthless due to the extreme siltation in certain sections. The water is moderately turbid. Riffle-pool ratio is 46:54.

2.0 - 4.0 miles

The average width of this section is 10 feet. The water temperature at 10:40 a.m. was 64° F. The slight shade cover and watershed consists of maple, willow, alder, cedar, fir and mixed understory. Conifers predominate as watershed vegetation higher on the slopes. Silt, boulders, bedrock and rubble constitute the creek bed material. Dinner Creek flows into Layng Creek from the left at mile 3.0. Its flow was 1.0 cfs. Five square yards of marginal trout spawning gravel and 20 square yards of marginal salmon and steelhead spawning gravel were recorded for the section. There are two pools 2 feet deep, eight 3 feet deep, five 4 feet deep and four 5 to 6 feet deep. The stream gradient is moderate to steep. Obstructions to fish passage include a 3-foot cascade and a 10-foot falls over a sloping concrete dam. Even though there is a pool 3 feet deep at the base of the falls, the spillway is regarded as impassable. The riffle-pool ratio is 59:41.

4.0 - 6.0 miles

Layng Creek has an average width of 8 feet in this section. At 11:30 a.m. the water temperature was 62° F. and the air temperature 76° F. The flow at mile 6.0 was 10 cfs. The slight shade cover and watershed vegetation consist of alder, maple, willow and mixed conifers, with conifers predominant above the creek banks. Creek bed material consists mainly of silted boulders and bedrock. There are two tributaries. Juanita Creek flows from the right at mile 4.7, had a flow of 2.5 cfs and a water temperature of 64° F. It is 10 feet wide at the mouth and has a 6-foot falls there. Harvey Creek enters from the left at mile 5.5. Its flow was 0.7 cfs. This section of Layng Creek contains 18 square yards of good and 10 square yards of marginal trout spawning gravel, and 10 square yards of good and 40 square yards of marginal salmon and steelhead spawning gravel. There are six pools 3 feet deep, six 4 feet deep, three 5 feet deep and one 10 feet deep. At mile 5.2 there are four falls 8 to 12 feet high and cascades that would be impassable to all fish except perhaps steelhead. A small passable logjam exists at mile 6.0. The stream gradient is steep. Riffle-pool ratio is 77:23.

(more)

Layng Creek continued

6.0 - 8.5 miles

At stream mile 8.0 Layng Creek had a flow of 3 cfs. Above Alex Creek the flow was 2.5 cfs and the water temperature at 1:10 p.m. was 64° F. Conifers are the predominant vegetation. The shade cover over the creek is sparse. The bottom material from mile 6.0 to the headwaters is largely silted rubble. There are five tributaries in this section: Doris Creek from the left with 0.5 cfs flow, Herman Creek from the right with 1.0 cfs flow, Patterson Creek from the right with 0.3 cfs flow, Saltpeter Creek from the right with 0.3 cfs flow and a water temperature of 62° F., and Alex Creek from the right with 0.5 cfs flow and a water temperature of 60° F. at 2:30 p.m. Alex Creek appears to have considerable trout spawning potential from cursory examination. This 2.5-mile section of Layng Creek surveyed has 6 square yards of good and 18 square yards of marginal trout spawning gravel, and 5 square yards of good and 10 square yards of marginal salmon and steelhead spawning gravel. There are pools 3 to 5 feet deep about every 150 yards. The gradient is steep. The water quality is poor due to the high turbidity caused by logging operations at the headwaters. Because the road following Layng Creek is cut out of a slope about 300 feet above the stream, accessibility is limited. Riffle-pool ratio is 65:35.

September 1959

Surveyor: Oregon Fish Commission

Stream: Mosby Creek
Tributary to: Row River
Stream System: Willamette

Mouth at: T. 20S, R. 3W, Sec. 35
County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 21.5 (all surveyed)

Bottom Type: See Comments section.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
7-13-64	80			

Gradient: Slight to moderate

Possible Limiting Factors: Two diversion ditches, one screened and one unscreened.
(See report by Willis, Collins & Sams, 1960, for location.)

Fish Species Present: Cottids, dace, largemouth bass, redbside shiners, suckers,
rainbow trout, squawfish, cutthroat trout.

Comments: Gravel (walnut to baseball size) covers about 25 percent of the bottom
between miles 1.5 and 21.5.

Mosby Creek enters Row River from the left at mile 3.8. A water stage recorder installed at the mouth since 1946 shows extremes of 7,260 cfs on February 10, 1961, and 3.9 cfs on August 21-23, 1961. The main stem of Mosby Creek is 21.5 miles long. The bottom is bedrock and boulders for the first 1.5 miles above the mouth. Gravel (walnut to baseball size) covers about 25 percent of the bottom between miles 1.5 and 21.5. There were no major obstructions to fish passage. Two diversion ditches were recorded, one screened and one unscreened. The physical features of Mosby Creek are probably suitable for coho salmon and steelhead. Summer rearing potential for salmonids, however, may be somewhat limited due to warm water temperatures (Willis, Collins & Sams, 1960). A thermograph installed by the Game Commission 0.75 mile above the mouth from May 20 to October 20, 1964, recorded a maximum temperature of 80° F. on July 13.

July 14, 15, 16, 1964

Surveyors: Thompson & others

Stream: Sharps Creek
Tributary to: Row River
Stream System: Willamette

Mouth at: T. 22S, R. 1W, Sec. 5
County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 4.0 miles</u>	<u>At 10.0 miles</u>
Width (Feet)	30	18	12
Total Stream Length (nearest 0.25 mile): 15.0 (lower 11 miles surveyed)			
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	2,068 (trout) 1,523 (salmon)	764 (trout) 1,684 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	48	52	

Water Temperature and Flow Data:

Time	Temperatuer (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	66		24	Mouth
1:30 p.m.	67			2.0 miles
3:00 p.m.	67			4.0 miles

Gradient: Slight

Possible Limiting Factors: 4-foot falls within a narrow, swift channel at mile 5.2;
5-foot falls at mile 7.0; 6-foot-high cascade at mile 9.0.

Fish Species Present: Many blackside dace, many native cutthroat trout, cottids.

Accessibility: A well-kept logging road parallels Sharps Creek for its entire length.

Watershed Cover: Alder, vine maple, willow and mixed conifers.

Comments: Of the streams surveyed on the Row River system above Dorena Reservoir, Sharps Creek has the most potential for anadromous fish. The water is of high quality and there is adequate spawning gravel.

0.0 - 2.0 miles

Sharps Creek enters Row River at mile 17.0 at a point 5.5 miles above Dorena Reservoir. It is 15 miles long. At the mouth it was 30 feet wide and had a flow of 24 cfs with a temperature of 66° F. The watershed cover consists of alder and willow with conifers predominating higher on the slopes. There is very little shade.

Bedrock and rubble characterize the creek bed. Boulder Creek flows into Sharps Creek at mile 1.5. One hundred thirty-four square yards of good and 18 square yards of marginal trout spawning gravel, and 235 square yards of good and 87 square yards of marginal salmon and steelhead spawning gravel were recorded for the 2-mile section. There are eight pools 1 foot deep, six 2 feet deep, three 4 feet deep, eight 5 feet deep and two 7 to 8 feet deep. For 10 yards at the mouth of Sharps Creek there is a low cascading falls with a 40 percent gradient. At 150 yards from the mouth a

(more)

Sharps Creek continued

bulldozer has graded an earthen dam 6 feet high to provide a small reservoir from which to pump water into a large log pond adjacent to the creek. The cascade produced by water flowing over one side of the dam may temporarily form an impassable barrier to fish migration. High water will inevitably wash out this structure. The stream gradient of this section is slight. Blackside dace and cutthroat trout were sighted throughout the section. A logging road provides easy access to the creek at any point from the mouth to the headwaters. The water is very clear. Riffle-pool ratio is 41:59.

2.0 - 4.0 miles

The average width of this section is 18 feet. The water temperature at 3:00 p.m. was 67° F. The watershed is consistently alder, willow and conifers. There is little shade cover over the creek. The bottom consists of rubble, bedrock, boulders and gravel. There are 105 square yards of good and 386 square yards of marginal trout spawning gravel, and 123 square yards of good and 69 square yards of marginal salmon and steelhead spawning gravel. Damewood Creek has its confluence with Sharps Creek at mile 2.0 and Table Creek enters at mile 2.7; both are small. Within the section are seven pools 2 feet deep, six 3 feet deep, nine 4 feet deep, three 5 to 7 feet deep and two 10 feet deep. There are no obstructions to fish passage. The stream gradient is slight. Sharps Creek recreation area is at mile 3.5. Riffle-pool ratio is 44:56.

4.0 - 6.0 miles

The average width is 20 feet. The water temperature at 11:15 a.m. was 61° F. The watershed cover consists of alder, vine maple, ninebark and mixed conifers. The bottom material consists mostly of rubble, boulder and bedrock. Pony Creek enters from the right at mile 4.6. Fifty-three square yards of good and 206 square yards of marginal trout spawning gravel, and 122 square yards of good and 243 square yards of marginal salmon and steelhead spawning gravel occur in this section. There are seven pools 2 feet deep, twelve 3 feet deep, four 4 feet deep, four 5 to 6 feet deep and two 8 to 10 feet deep. A cascade 3 feet high and a 5-foot falls may hinder fish passage. At mile 5.2 the water flows through a narrow channel and over a 4-foot falls. The water velocity produced may also impede fish passage. The gradient in this section is slight. Native cutthroat trout were noted. Blackside dace were very numerous. The riffle-pool ratio is 57:43.

6.0 - 8.0 miles

The average width here is 15 feet. At 1:30 p.m. the water temperature was 61° F. The watershed vegetation includes alder, vine maple, willow and mixed conifers. Conifers predominate everywhere except adjacent to the creek. The bottom consists primarily of rubble and silted gravel with some boulder and bedrock. Two tributaries occur on Sharps Creek here. Buck Creek flows from the left at mile 7.5, had a flow of 2.0 cfs and a water temperature of 59° F. at 2:30 p.m. Lick Creek flows from the right at mile 7.7, had a flow of 0.5 cfs and a water temperature of 59° F. at 2:30 p.m. There were 1,656 square yards of good and 48 square yards of marginal trout spawning gravel, and 886 square yards of good and 121 square yards of marginal salmon and steelhead spawning gravel. Almost 1,300 square yards of the good trout spawning gravel occur on one gravel bar at mile 7.2. There are five pools 3 feet deep, three 4 feet deep, five 6 to 8 feet deep, and one 10 feet deep. One 5-foot falls occurs at mile 7.0. The stream gradient is slight. Blackside dace and native cutthroat trout are found throughout the section. The water remains clear. Riffle-pool ratio is 47:53.

(more)

Sharps Creek continued

8.0 - 11.0 miles

Sharps Creek has an average width of 12 feet in this section. The water temperature at 3:30 p.m. was 60° F. Vine maple and cedar furnish a sparse shade cover over the creek. The watershed is predominantly coniferous. The creek bed material consists of gravel, rubble and some boulders. One hundred twenty square yards of good and 106 square yards of marginal trout spawning gravel, and 157 square yards of good and 1,164 square yards of marginal salmon and steelhead spawning gravel occur. There are four pools 2 feet deep, six 3 feet deep, five 4 feet deep and three 5 to 6 feet deep. A cascade 6 feet high and 20 feet long is located at mile 8.9. There is also a 4-foot falls and a 2-foot falls in the section. The stream gradient is moderate. Many native cutthroat trout from fingerling size to 8 inches were observed. The water flow at the upper end of the section was 15 cfs. Riffle-pool ratio is 52:48. The survey was terminated at mile 11 at a point where Martin Creek enters from the left.

July 17, 1964

Surveyor: Thompson

Stream: Martin Creek
Tributary to: Sharps Creek
Stream System: Row River - Willamette

Mouth at: T. 23S, R. 1W, Sec. 12
County: Lane

Characteristics:

	<u>At Mouth</u>	<u>At 1.0 mile</u>
Width (Feet)	10	10
Total Stream Length (nearest 0.25 mile):	5.75 (lower 2.3 miles surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	27 (trout) 5 (salmon)	65 (trout) 32 (salmon)
Riffle-pool Ratio	<u>Riffle</u>	<u>Pool</u>
Percentage	38	62

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	67		2	Mouth
1:00 p.m.	67		1.5	One mile

Gradient: Moderate

Possible Limiting Factors:

Falls: Nothing more than 2 feet high.

Logjams: Four logjams, three are near the mouth.

Fish Species Present: Native cutthroat trout.

Accessibility: A logging road provides access to the entire surveyed portion of the creek.

Watershed Cover: Alder, maple, willow and mixed conifers.

0.0 - 1.0 mile

Martin Creek is 5.8 miles long. It flows into Sharps Creek at mile 10.6. The flow was 2 cfs and water temperature 67° F. at 11:00 a.m. The width at its mouth is 10 feet. There is a slight to moderate shade cover of alder, maple, willow and mixed conifers. The watershed is predominantly coniferous. The bottom material consists of rubble, boulders and bedrock. Clark Creek enters from the left at mile 0.2. It is seven feet wide at the mouth and had a flow of 1 cfs. Its bottom consists of rubble and boulders. Twenty-five square yards of good and 49 square yards of marginal trout spawning gravel, and 2 square yards of good and 17 square yards of marginal salmon and steelhead spawning gravel were recorded for the section of Martin Cr. There are two pools 1 foot deep, six 2 feet deep,

(more)

Martin Creek continued

and one 3 feet deep. Three logjams are located in this section. All are small and do not currently obstruct fish passage. One jam at mile 0.4 is man-caused and has a 1 foot water head. There are two falls 1 foot high and two 2 feet high. The stream gradient is moderate. Legal-sized native cutthroat were seen throughout this section. Riffle-pool ratio is 28:72.

1.0 - 2.3 miles

Martin Creek had a flow at mile 1.0 of 1.5 cfs. At 1:00 p.m. the water temperature was 67° F. The average width of this section is 10 feet. There is a light shade cover of alder, maple, willow and mixed conifers. The creek bed consists of rubble and boulders. Quartz Creek enters Martin Creek at mile 2.1. The survey of Quartz Creek is covered on a separate sheet. Puddin' Rock Creek flows into Martin Creek at mile 1.8. Its flow was 1 cfs. Two square yards of good and 16 square yards of marginal trout spawning gravel, and 3 square yards of good and 15 square yards of marginal salmon and steelhead spawning gravel were tallied. Thirteen pools 1 foot deep, eleven 2 feet deep and two 3 feet deep occur here. Possible hindrances to anadromous fish migration might be a 2-foot cascade at mile 1.2 and a medium-sized logjam at mile 2.2. The stream gradient is moderate to steep. Native cutthroat trout from fingerling size to 7 inches were observed throughout the section. The dry creek bed is much wider than that portion now carrying water. The survey of Martin Creek ends where the creek flows beneath a new concrete bridge at the mileage indicated. Riffle-pool ratio is 48:52.

July 20, 1964

Surveyor: Thompson

Stream: Quartz Creek

Mouth at: T. 23S, R. 1W, Sec. 24

Tributary to: Martin Creek (on Sharps Cr.)

County: Lane

Stream System: Row River - Willamette

Characteristics:

	<u>At Mouth</u>	
Width (Feet)	5	
Total Stream Length (nearest 0.25 mile):	2.6 (lower 1.4 miles surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	Negligible	Negligible
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	68	32

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:00 p.m.	66		1	Mouth
			0.6	1 mile

Gradient: Moderate.

Possible Limiting Factors:

Logjams: For about one quarter of a mile beginning 200 yards upstream from the mouth, logs, debris and dirt obstruct the flow.

Other: Lack of spawning gravel and low flows limit the value of the creek.

Fish Species Present: Native cutthroat trout.

Accessibility: A logging road provides access to most of the creek.

Watershed Cover: Alder and maple along all banks. Clear-cut slopes above once supported conifers.

Comments:

0.0 - 1.4 miles

Quartz Creek, tributary of Martin Creek, enters at mile 2.1. Quartz Cr. is 3.0 miles long and had a flow of 1.0 cfs at the mouth. The stream width averages 5 feet. The water temperature at 2:00 p.m. was 66° F. The watershed is primarily clear-cut but alder and maple predominate along the creek banks. Rubble over bedrock characterizes most of the creek bed. At mile 0.9 a tributary enters from the left. Its flow was 0.3 cfs. There is no spawning gravel and only two pools 2 feet deep existed in the section surveyed. For about one quarter mile beginning some 200 yards upstream from the mouth, logs, debris and dirt obstruct the flow. The stream gradient is moderate. Small native cutthroat trout were seen throughout most of the

(more)

Quartz Creek continued

area surveyed. A paucity of gravel limits the value of this stream for game fish. At mile 1.0 the flow was 0.6 cfs. A logging road provides access to most of the creek. Riffle-pool ratio is 68:32.

July 7, 1964

Surveyors: H. Roberts & Howerton

Stream: Short Ridge Creek

Mouth: T. 22S, R. 3 W, Sec. 20

Tributary to: Coast Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

2

Total Stream Length (nearest 0.25 mile): 2.5 (spot check near mouth)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

Negligible

Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:30 p.m.	66		0.1	Mouth

Accessibility: A logging road crosses creek at mile 1.8.

Comments: Negligible value to fish.

Short Ridge Creek is 2 feet wide at the mouth, had a 0.1 cfs flow and a water temperature of 66° F. at 1:30 p.m. There was no shade cover or spawning gravel for the 300-yard section surveyed. No fish were seen. Short Ridge Creek flows into the Coast Fork Willamette River from the right just above Cottage Grove Reservoir.

Summer 1964

Surveyor: Ralph Swan ^{1/}

Stream: Silk Creek
Tributary to: Coast Fork Willamette River
Stream System: Willamette

Mouth at: T. 20S, R. 3W, Sec. 28

County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 7.0

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yard		Some in upper portion

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			2.0	Mouth

Gradient: Slight

Possible Limiting Factors:

Logjams: Much debris in creek.

Fish Species Present: Native cutthroat trout.

Comments: Lower portion flows through Cottage Grove.

^{1/} From Swan's general knowledge of the stream.

August 22, 1963

Surveyors: Opp and DeShon

Stream: South Fork of Big River

T. 23S, R. 2W, Sec. 18

Tributary to: Big River (Coast Fk. Willamette R.) County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At Mile 4.25</u>
Width (Feet)	12	2
Total Stream Length (nearest 0.25 mile):	4.25 miles surveyed	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	357	214
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	75	25

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:00 a.m.	50	60	1.5	Mile 4.25
4:00 p.m.	56	70	3.6	Mouth

Gradient: Moderate in lower sections, steep in upper.

Possible Limiting Factors:

Falls: 20-foot falls at mile 4.25, 10-foot falls 100 yards below two more falls about 1.5 miles from the mouth.

Logjams: Logjams are numerous.

Fish Species Present: Cutthroat are very abundant though not observed above mile 4.0. Dace found up to mile 1.0, shiners found in last half mile, sculpins scattered throughout the section.

Accessibility: A road crosses creek just above the mouth and swings around the head of the canyon. It does not cross the creek again.

Watershed Cover: Coniferous forest with broadleaf understory.

Comments:

0.0 - 1.0 mile

Many logjams occur in this section. The stream gradient is moderate. Thick brush lines the banks. Rough fish were observed up to mile 0.8. Two small tributaries enter from the left but fish were not observed in either.

(more)

South Fork Big River continued

1.0 - 2.0 miles

Several large logjams and a few bedrock falls occur in this section. The gradient varies from moderate in the lower portion to steep in the upper portion. Accessibility is poor. A small tributary which enters from the left at mile 1.0 has a moderate gradient, brushy stream banks and fish which were unidentified as to species.

2.0 - 3.0 miles

A portion of the stream in this section lies within a steep-walled bedrock canyon with several falls. The stream banks are brushy. The gradient is steep with much windfall and many logjams in the stream. Fish, unidentified as to species, were observed at the mouths of a few of the many small tributaries which enter from the right in this section.

3.0 - 4.3 miles

The upper end of the section becomes very steep with a 10-foot and a 20-foot falls. Cutthroat trout were not observed above mile 4.0. Much windfall and many logjams occur in the creek.

July 8, 1964

Surveyors: H. Roberts and Howerton

Stream: Williams Creek
 Tributary to: Coast Fork of Willamette R. (Cottage Grove Reservoir)
 Stream System: Willamette
 Mouth at: T. 21S, R. 3W, Sec. 32
 County: Lane

Characteristics:

At Mouth

Width (Feet)

3

Total Stream Length (nearest 0.25 mile): 2.5 (lower 0.14 mile surveyed)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

Negligible

Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:10 a.m.	53		0.2	Mouth

Gradient: Steep

Accessibility: Logging road parallels entire creek.

Watershed Cover: Alder, willow and pasture for first 200 yards.

Comments:

0.0 - 0.14 mile

Williams Creek is 3 feet wide at the mouth. The water temperature at 9:10 a.m. was 53° F. and the flow 0.2 cfs. The watershed cover for the first 200 yards is willow, alder and pasture. Ten square yards of good trout spawning gravel occur within the first 200 yards of the creek. The stream gradient is steep. No fish were seen within the section surveyed. Williams Creek empties into Cottage Grove Reservoir.

July 1 and 6, 1964

Surveyors: Thompson and H. Roberts

Stream: Wilson Creek

Mouth at: T. 22S, R. 3W, Sec. 4

Tributary to: Cottage Grove Reservoir

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 2.5 miles</u>
Width (Feet)	20	6
Total Stream Length (nearest 0.25 mile):	5.25 (lower 2.7 mile surveyed)	
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	80 (trout) 19 (salmon)	58 (trout) 36 (salmon)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	70	30

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:15 a.m.	57		4	0.5 mile
2:45 p.m.	58			1.5 miles
10:00 a.m.	55		3	2.5 miles

Gradient: Slight to mile 1.5; moderate to steep above mile 1.5.

Possible Limiting Factors:

Falls: Six-foot falls and 15-foot cascade in the 1.5-2.0 mile section.

Logjams: Compact logjams may be impassable at miles 1.0, 1.1, 2.1, 2.2, 2.3 and upstream.

Fish Species Present: Cutthroat trout up to dense logjams in the 2.5-2.7 mile section, cottids, dace.

Accessibility: Logging road parallels most of the creek. The large tributary from the left at mile 1.0 is without access roads, however.

Watershed Cover: Alder, maple, willow and mixed conifers.

Comments: Access road is private and is kept locked on weekends, holidays and any other time when loggers are not using it.

0.0 - 0.5 mile

Wilson Creek is 5.1 miles long. It flows into Cottage Grove Reservoir on the east side. The creek is 20 feet wide at the mouth and has an average width of 10 feet. The flow was 4.0 cfs. The shade cover consists of alder, maple and some mixed conifers and

(more)

Wilson Creek continued

is sparse. Much of the watershed in this section is grassland. Rubble and silt over bedrock constitute the bottom material. There are 22 square yards of good and 3 square yards of marginal trout spawning gravel in this section. There are seven pools 2 feet deep and six 3 feet deep. There are fourteen falls 1 to 2 feet high, one 2 to 3 feet, and one stair-stepped falls 3 to 5 feet high. A small passable logjam is located at mile 0.2 and another at mile 0.3. The stream gradient is slight. Riffle-pool ratio is 56:44.

0.5 - 1.0 mile

At 11:15 a.m. the water temperature was 57° F. and the flow 4.0 cfs at mile 0.5. A moderate shade cover of alder, vine maple and mixed conifers exists in this section. The watershed is coniferous forest. A tributary to Wilson Creek, which enters at mile 1.0, is covered on another page. Silted rubble and some boulders over bedrock define the creek bed material. One and a half square yards of good and $3\frac{1}{2}$ square yards of marginal trout spawning gravel occur. There are nine pools 2 feet deep, five 3 feet deep, and seven falls 1 to 2 feet high and four 2 to 3 feet high. Three small passable logjams occur at miles 0.5, 0.9 and 1.0. The stream gradient is slight to moderate. A 4-inch native cutthroat trout was observed. The creek flows under a bridge at mile 0.9. A 30-yard section of bank is being undermined by erosion and could easily collapse into the stream. Much debris has accumulated along the edge of this section. During high water, jams could easily form. The riffle-pool ratio is 61:39.

1.0 - 1.5 miles

The water temperature at 2:00 p.m. was 58° F. at mile 1.0. Much of this section has no shade cover at all and the remainder has a sparse to moderately dense shade cover of alder, maple and willow. Rubble, boulders and some bedrock with silt and sand characterize the creek bed material. A total of 16 square yards of good and 24 square yards of marginal trout spawning gravel, and 15 square yards of good and 17 square yards of marginal salmon and steelhead spawning gravel were recorded. Two pools 1 foot deep, twelve 2 feet deep, one 3 feet deep and one 4 feet deep were counted. There are 8 logjams in this section; three are small and passable with no water head. Another small logjam with a 2-foot water head may be impassable to anadromous fish. There are 2 medium-sized jams that offer no passage problems, but one has a 3-foot water head. An 8-foot logjam is large and is definitely impassable at lower flows. The stream gradient is moderate. Native cutthroat trout of small size were observed throughout the section. Along much of the creek, debris has accumulated that eventually may form barriers to fish. Riffle-pool ratio is 65:35.

1.5 - 2.0 miles

The water temperature at 2:45 p.m. was 58°F. at mile 1.5. This section has a moderate shade cover of alder, maple and willow. Toward the upper end the cover becomes more dense. Boulders with silt over bedrock constitute the bottom material. Only one-half square yard of marginal trout spawning gravel was recorded. Six pools 2 feet deep, six 3 feet deep and two 4 feet deep exist in the section. There are eight falls 1 to 2 feet high, one 5-foot cascade, two falls 6 feet high and one cascade 15 feet high. One logjam at mile 1.6 is 20 yards long but is passable at the current flow. Another jam occurs at mile 1.9, is medium-sized and is passable by fish. The stream gradient is moderate to slight. A rock slide at mile 1.7 may be impassable at all times. The creek flows through a culvert at mile 1.9. A 2-inch cutthroat trout was seen at mile 2.0. The riffle-pool ratio is 70:30.

(more)

Wilson Creek continued

2.0 - 2.5 miles

Average width is 6 feet. The temperature at 9:15 a.m. was 54° F. The degree of shade cover in this section varied from light to dense. The watershed and shade cover includes alder, willow, vine maple and mixed conifers. The conifers are more plentiful higher on the watershed. There are 4 tributaries that flow into Wilson Creek in this section. One at mile 2.0 flows from the left, had a flow of 0.5 cfs and a temperature of 57° F. Another enters from the left, had a flow of 0.5 cfs at the mouth and a temperature of 54° F. at 3:20 p.m. Another tributary occurs at mile 2.2, flows from the right, had a flow of 0.5 cfs at the mouth and a temperature of 55° F. The fourth tributary enters at mile 2.4, had a flow of 1.0 cfs and a temperature of 54° F. at 10:20 a.m. Wilson Creek consists largely of silted rubble and boulders with occasional bedrock. Silt is especially thick under log and debris jams. A total of 19 square yards of good and 11 square yards of marginal trout spawning gravel, and 4 square yards of good and 17 square yards of marginal salmon and steelhead spawning gravel were recorded. There are eight pools 1 foot deep, ten 2 feet deep, two 3 feet deep and one 4 feet deep. Sixteen logjams occur here. Eight of the jams are small; one has a 2-foot water head and 3 of them probably obstruct fish passage. An additional 9 are medium to large in size. Six of these are probably impassable by fish at most flows. The stream gradient is moderate. A beaver dam occurs at mile 2.2. Wilson Creek flows through a culvert at mile 2.2. In several places logs and debris have altered the main flow into several smaller flows. All logjams are composed of cut logs. Much of the watershed is clear-cut. The water in this section was moderately turbid. The riffle-pool ratio is 48:52.

2.5 - 2.7 miles

The average width is 6 feet. The water temperature at 10:00 a.m. was 55° F. Shade and watershed cover consists of willow, maple and mixed conifers. The creek bed in this section consists largely of rubble, boulders and silt over bedrock. Only one square yard of trout spawning gravel occurs. There are two pools 2 feet deep. Four falls 1 to 2 feet high, five 2 to 3 feet high and eight 3 to 5 feet high exist. There are 8 logjams; three are small and one may be impassable. Two logjams are medium-sized, one has a 12-foot water head and both are considered impassable. Three jams are large and impassable. They have water heads of 4 feet, 9 feet and 10 feet. The gradient is moderate to steep. One 1-inch cutthroat trout was observed. No fish were seen during the last quarter mile surveyed. Headwaters lie within a steep-walled canyon and accessibility is poor. Riffle-pool ratio is 76:24.

Unnamed tributary at mile 1.0 from left

0.0 - 0.5 mile

The tributary is 5 miles long. It is 10 feet wide at the mouth, had a flow of 1.0 cfs and a temperature of 56° F. at 12:00 noon. Alder, maple, willow and mixed conifers compose the moderate to dense shade cover and watershed vegetation. Conifers are most abundant higher on the watershed. The creek bed consists of gravel and rubble with silt over bedrock. Eight square yards of good and 9½ square yards of marginal trout spawning gravel, and 2 square yards of marginal salmon and steelhead spawning gravel were recorded. There are six pools 1 foot deep, seven 2 feet deep and one 3 feet deep within the section. Six falls 1 to 2 feet high, one 2 to 3 feet, and one 3 to 5-foot cascade occur here. There are 11 logjams.

(more)

Unnamed tributary of Wilson Creek continued

Eight of them are small although two of them are possible obstructions to fish passage. Two have 2-foot water heads. Three are large, one being 20 x 30 yards. None of these large logjams appear dense enough to hinder fish passage. The stream gradient is slight to moderate. Native cutthroat trout from fingerling size to 6 inches were seen. A cottid was observed at mile 0.1. A beaver dam at mile 0.3 creates a reservoir with a $1\frac{1}{2}$ -acre surface area and a maximum depth of 2 feet. Cutthroat fingerling were abundant in the pond. The riffle-pool ratio is 55:45.

0.5 - 1.0 mile

The water temperature at 1:40 p.m. was 55° F. A dense shade cover of alder, maple, willow and mixed conifers exists in this section. A tributary at mile 0.7 enters from the right, had a flow of 0.3 cfs, is 3 feet wide at its mouth, and had a water temperature of 54° F. at 1:50 p.m. Another tributary flows from the right at mile 0.8, had a flow of less than 0.1 cfs and a water temperature of 55° F. at 2:30 p.m. A third enters from the left at mile 0.9 but is now dry. The bottom composition of this section is boulders and silt over bedrock. There are 12 square yards of good and 5 square yards of marginal salmon and steelhead spawning gravel. There is one pool 1 foot deep, and seven 2 feet deep. Fifteen falls 1 to 2 feet high, one 2 to 3 feet and one 3 to 5 feet occur. There is one cascade 2 to 3 feet high. There are 14 logjams; six are small without a water head and are passable. Three are medium-sized, one with a 3-foot head and one which may limit fish passage. Three others are large (20 yards long) but only one appears to be impassable. The stream gradient is slight to moderate. Cutthroat trout were seen throughout this section. Riffle-pool ratio is 59:41.

July 8, 1964

Surveyors: H. Roberts and Howerton

Stream: Unnamed

Mouth at: T. 21S, R. 3W, Sec. 29

Tributary to: Cottage Grove Reservoir County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

2

Total Stream Length (nearest 0.25 mile): 0.75 (cursory survey near mouth)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

Negligible

Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:00 p.m.	56		0.1	Mouth

Possible Limiting Factors: Low flows, small size, lack of spawning gravel.

Accessibility: Logging road follows creek for lower quarter mile.

Watershed Cover: Mixed broadleaf and conifers.

Comments: This unnamed tributary enters Cottage Grove Reservoir from the left at mile 30.5. The creek is 2 feet wide at the mouth, had a flow of 0.1 cfs and a water temperature of 56° F. at 3:00 p.m. There is no shade cover at the mouth. The watershed is a cutover area of maple, alder and mixed conifers. The water from the reservoir backs up into the creek for 100 yards. There is essentially no spawning gravel.

July 1964

Surveyors: Thompson & H. Roberts

Stream: Unnamed (see Comments)

Mouth at: T. 23S, R. 3W, Sec. 5

Tributary to: Coast Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

10

Total Stream Length (nearest 0.25 mile): 2.0 (lower 0.5 mile surveyed)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

Negligible

Negligible

Riffle-pool Ratio:

Riffle

Pool

Percentage

61

39

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:30 a.m.	54	60	1.0	Mouth
2:20 p.m.	55			Mile 0.5

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: 6-foot cascade at mile 0.4. Many smaller falls between miles 0.3 and 0.5.

Logjams: Two log and debris jams impassable to fish just above the mouth.
Two other impassable jams at miles 0.47 and 0.5.

Other: The creek has been diverted into a new channel 200 yards long through a farmer's pasture just above the mouth. A pond with a dam has been constructed at the lower end of the old channel. (See Comments)

Fish Species Present: Native cutthroat trout (most about 3 inches long) up to mile 0.5.

Accessibility: A logging road provides access to the mouth.

Watershed Cover: Mixed broadleaf at the lower end; conifer and broadleaf above mile 0.3.

Comments: This unnamed creek enters Coast Fork Willamette River from the left at mile 39.3. Livestock utilize the creek. The creek bed material is primarily rubble and boulders with some sand and silt.

A tributary enters from the left at mile 0.4. Its water temperature was 54° F. at 2:20 p.m. and its gradient is steep. Another tributary entering from the right had a flow equal to that in the main channel. Above mile 0.4 the dense overstory of blackberry vines makes access to the stream nearly impossible.

August 1964

Surveyors: Thompson, Slade, Roberts, Howerton
and Arp

Stream: Middle Fork Willamette River Mouth at: T. 18S, R. 3W, Sec. 11
Tributary to main stem Willamette River County: Lane and Douglas
Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 40 miles</u>	<u>At 80 miles</u>
Width (Feet)	150	90	20
Total Stream Length (nearest 0.25 mile):	83.0		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	338 (trout) 140,695 (salmon)	520 (trout) 226,305 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	83	17	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:00 Noon	58	63		Mouth
10:00 a.m.	53	60		40 miles
12:00 Noon	43	62	8	80 miles

Gradient: Moderate.

Possible Limiting Factors:

Logjams: Several passable logjams between miles 75 and 81.

Other: Dexter Dam, Lookout Point Dam, Hills Creek Dam--all without fish passage facilities.

Fish Species Present: 804 chinook salmon adults below Dexter Dam on 9-21 and 9-23-64.
Many native cutthroat trout in tributaries.

Accessibility: Public and private roadways provide excellent access.

Watershed Cover: Broadleaf and mixed conifers.

0.0 - 16.8 miles September 21, 1964

Middle Fork Willamette River is 83 miles long. Its confluence with Coast Fork Willamette River at river mile 187.0 forms the main stem of the Willamette River. The width at the mouth is 150 feet. Average width is 120 feet. At 12:00 noon the water temperature was 58° F. The watershed consists primarily of mixed broadleaves. Shade cover is insignificant. Bottom material is composed of rubble and gravel in this section. Tributaries in this section include Wallace Creek at mile 7.8; Hills Creek from the right at mile 8.1; Rattlesnake Creek from the left at mile 10.2; Alder Creek from the left with two drains, one at mile 10.6

(more)

Middle Fork Willamette River continued

and the other at mile 11.0; Fall Creek from the right at mile 11.3; and Lost Creek from the left at mile 13.6.

In this section there are 119,000 square yards of good and 216,000 square yards of marginal salmon and steelhead spawning gravel. The distribution of gravel is as follows: 22,000 square yards of good and 72,000 square yards of marginal from river mile 0.0 to 4.0; 11,000 square yards of good and 22,000 square yards of marginal between miles 4.0 and 8.0; 35,000 square yards of good and 46,000 square yards of marginal between miles 8.0 and 12.0; and 51,000 square yards of good and 76,000 square yards of marginal spawning gravel between miles 12.0 and 16.8. Holding pools 6 to 12 feet deep occur approximately every 0.3 mile throughout this section. Dexter Dam at mile 16.8 is the first barrier to fish passage. An egg-taking station there is managed by the Oregon Fish Commission.

The gradient is slight to moderate. During the peak of the spawning season 804 adult chinook salmon were counted in this section. The majority were found within one mile of Dexter Dam. Access is provided to many points along the river by public and private roads. Riffle-pool ratio is 60:40

16.8 - 31.0 miles

Dexter Dam at river mile 16.8 creates a reservoir up to Lookout Point Dam at mile 19.9. Lookout Point reservoir at maximum capacity is about 11.0 miles long. Neither dam has fish passage facilities. Tributaries in this section include Rolling Riffle Creek, Hazel Creek, Fern Creek, Goodman Creek, Crale Creek, Harper Creek, North Creek, South Creek, Schweitzer Creek and Duval Creek. Only Goodman Creek is large enough to be of any value to anadromous fish and only three of the ten streams have any value for trout. Each tributary is covered on a separate report form.

31.0 - 45.5 miles September 25, 1964

The average width of this section is 90 feet. The water temperature at 10:00 a.m. was 53° F. and the air temperature 60° F. The watershed is predominantly coniferous with some mixed broadleaves adjacent to the river. Rubble is the characteristic bottom material. Tributaries include Tire Creek, Buckhead Creek, Deception Creek, North Fork of Middle Fork, Gray Creek, Salmon Creek and Salt Creek. The tributaries are all covered on separate report forms. Salmon and steelhead spawning gravel in this section consists of 20,000 square yards of good and 46,000 square yards of marginal gravel. It is distributed evenly throughout the section. Holding pools 4 to 8 feet deep occur every 400 yards. Lookout Point Dam and Hills Creek Dam are major barriers to fish passage in this section. Neither has fish passage facilities. The gradient is moderate. Highway 58 and other public roads provide good access in this section. Riffle-pool ratio is 70:30.

45.5 - 52.9 miles August 27, 1964

Water is backed for 7.4 miles above Hills Creek Dam while the reservoir is at maximum capacity. Tributaries to Hills Creek reservoir include Hills Creek, Larison Creek, Packard Creek, Big Willow Creek, Coffeepot Creek and Snow Creek. The tributaries are covered on separate report forms. Logging roads paralleling both sides of the reservoir provide good access.

(more)

Middle Fork Willamette River continued

52.9 - 57.0 miles

The average width of the river in this section is 65 feet. The flow was 190 cfs and the water temperature at 9:00 a.m. was 46° F. The watershed consists primarily of conifers with some mixed broadleaves adjacent to the river. Shade cover is slight to moderate. The riverbed consists of large rubble. Windfall Creek, Gold Creek, Buck Creek, Cone Creek, Bills Creek and Bohemia Creek are tributaries to this section. Each are covered on separate report forms. This 4-mile section contains 30 square yards of good trout spawning gravel and 400 square yards of good and 885 square yards of marginal salmon and steelhead spawning gravel. Holding pools 3 to 6 feet deep occur about every 400 yards throughout the section. No obstructions to fish passage were recorded. The gradient is slight to moderate. A logging road running parallel with the river provides fair access. Riffle-pool ratio is 80:20.

57.0 - 61.0 miles

The river has an average width of 60 feet in this section. The water temperature was 46° F. The watershed and bottom composition are unchanged from the previous section. Tributaries include Estep Creek, Pine Creek, Fir Creek, Snake Creek, Butcherknife Creek, Boulder Creek, Spring Butte Creek, Dry Creek and Indian Creek. Each is covered on a separate report form. There are 225 square yards of marginal spawning gravel for salmon and steelhead. Holding pools 3 to 6 feet deep occur approximately every 300 yards. There are no fish passage obstructions in this section. Logging roads along each side of the river provide excellent access. Riffle-pool ratio is 80:20.

61.0 - 64.0 miles

The average width of this section is 50 feet. The water temperature at 9:15 a.m. was 46° F. and the air temperature 50° F. The watershed is predominantly coniferous with some mixed broadleaves adjacent to the river. The shade cover is sparse to moderately dense. The river bottom is composed of large rubble and boulders. Tributaries include What Creek, Youngs Creek, Jims Creek, Coal Creek and Deadhorse Creek. Each are reviewed on a separate report form. This section contains 40 square yards of marginal trout spawning gravel and 420 square yards of good and 675 square yards of marginal salmon and steelhead spawning gravel. Holding pools 3 to 6 feet deep occur approximately every 250 yards. There are no obstructions to fish passage. The gradient is moderate. Good access is provided by logging roads. Riffle-pool ratio is 85:15.

64.0 - 68.0 miles August 28, 1964

The average width of this section is 45 feet. The water temperature at 9:30 a.m. was 46° F. and the air temperature 50° F. Conifers are more predominant as the watershed vegetative species with increased elevation. Alder, vine maple and bigleaf maple are the principal broadleaf species adjacent to the river. Cedar, Douglas fir, pine and hemlock are the principal coniferous species. Large rubble and boulders are found in the riverbed in this section. Tributaries include Simpson Creek, Maple Creek, Staley Creek and Echo Creek. The survey reports for these tributaries appear on separate report forms. There were 60 square yards of good and 100 square yards of marginal trout spawning gravel, and 370 square yards of good and 1,060 square yards of marginal salmon and steelhead spawning gravel.

(more)

Middle Fork Willamette River continued

In this section 120 square yards of dry gravel of suitable size for salmon and steelhead spawning were also recorded. Holding pools 3 to 5 feet deep occur about every 100 yards. There are no obstructions to fish passage. The gradient is steep. A logging road provides good access to the river. The riffle-pool ratio is 90:10.

68.0 - 72.0 miles

The average width in this section is 40 feet. The water temperature was 44° F. and air temperature 53° F. The watershed and bottom composition are the same as the previous section. Noisy Creek, Swift Creek, Skunk Creek, Round Creek are tributaries in this section. Each is covered on a separate report form. There are 20 square yards of good and 40 square yards of marginal trout spawning gravel, and 320 square yards of good and 1,030 square yards of marginal salmon and steelhead spawning gravel. Holding pools 3 to 5 feet deep are numerous. The steep gradient may hinder fish passage but this section is without complete barriers to fish passage. Access to the river is provided by a logging road. Riffle-pool ratio is 90:10.

72.0 - 75.1 miles

The mean width in this section is 30 feet. At 2:00 p.m. the water temperature was 43° F. and the air temperature was 55° F. The watershed vegetation is almost entirely mixed conifers from this point to the headwaters. Bottom material consists of large rubble and boulders with some bedrock. Indigo Creek, Pioneer Gulch Creek, Tumblebug Creek and Beaver Creek are the tributaries in this section. There are 30 square yards of good and 35 square yards of marginal trout spawning gravel, and 70 square yards of good and 400 square yards of marginal salmon and steelhead spawning gravel. Pools 2 to 4 feet deep occur approximately every 30 yards in this section. Pools large enough for holding adult chinook salmon are few. The steep gradient and numerous cascades hinder fish passage but do not completely obstruct it. A logging road provides good access throughout this section. Riffle-pool ratio is 95:5.

75.1 - 81.0 miles August 29, 1964

The average width of this section is 20 feet. The water temperature at 12:00 noon was 43° F. and the air temperature 62° F. The watershed and bottom composition are the same as the previous section. The shade cover over the water becomes increasingly dense in this section but does not limit access to the stream. Numerous spring-fed streams are tributary to this river section. All of the tributaries, excluding those flowing from the lakes forming the headwaters, are typically small in size (not over 0.2 cfs) and have extremely steep gradients. They add very little direct value to the sport fishery. This 6-mile section contains 198 square yards of good and 305 square yards of marginal trout spawning gravel, and 115 square yards of good and 440 square yards of marginal salmon and steelhead spawning gravel. The spawning gravel is spread evenly throughout the section. Pools 2 to 4 feet deep are numerous, occurring approximately once every 30 yards. There are several logjams but all seem passable. Due to the steep gradient, small cascades are numerous. Between miles 79.5 and 80.0 the river spreads out into a slow-flowing swamp. Parts of the swamp would provide excellent salmonid rearing conditions. A logging road provides access up to mile 81.0. Riffle-pool ratio is 95:5.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Beaver Creek

Mouth at: T. 24S, R. 5E, Sec. 20

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

	<u>At Mouth</u>	<u>At 100 yards</u>
Width (Feet)	5	3
Total Stream Length (nearest 0.25 mile):	3.5 (lower 0.6 mile surveyed)	
Bottom Type:	Bedrock and boulder; negligible gravel.	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:55 p.m.	47	48	0.5	Mouth

Gradient: Steep

Possible Limiting Factors: Steep gradient and minimum flow.

Accessibility: Logging roads provide access to midsection of the creek only.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Offers slight value to nonanadromous sport fish.

October 13, 1964

Surveyor: Thompson

Stream: Big Willow Creek

Mouth at: T. 22S, R. 3E, Sec. 26

Tributary to: Middle Fork Willamette River - Hills Creek Reservoir

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

Width (Feet)

3

Total Stream Length (nearest 0.25 mile): 3.5 (lower 0.5 mile surveyed)

Bottom Type: Bedrock and boulders; gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	54	57	0.8	Mouth

Gradient: Steep

Possible Limiting Factors: Steep gradient.

Fish Species Present: A few native cutthroat trout.

Accessibility: Logging road follows creek for a half mile.

Watershed Cover: Mixed broadleaf and conifers.

Comments: The current flow is low for adequate rearing.

September 2, 1964

Surveyor: Thompson

Stream: Bills Creek

Mouth at: T. 23S, R. 3E, Sec. 16

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Rubble; gravel negligible.

Water Temperature and Flow Data: Dry at mouth.

Gradient: Steep.

Possible Limiting Factors: Low flow and steep gradient.

Accessibility: To mouth by logging road.

Watershed Cover: Predominantly coniferous.

Comments: No value to game fish.

September 2, 1964

Surveyor: Thompson

Stream: Bohemia Creek

Mouth at: T. 23S, R. 3E, Sec. 21

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 7

Total Stream Length (nearest 0.25 mile): 4.5 (lower 0.75 mile surveyed)

Bottom Type: Boulders, rubble and silt. Five square yards of marginal trout spawning gravel. Good gravel negligible.

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	60	40

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:45 a.m.	54	55	0.8	Mouth
11:30 a.m.	54			0.5 mile

Gradient: Slight to moderate.

Fish Species Present: Some native cutthroat trout 5 to 7 inches long though not abundant. Blackside dace.

Accessibility: Logging road provides access to lower 0.75 mile.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream is of moderate value for trout only.

September 2, 1964

Surveyor: Thompson

Stream: Boulder Creek

Mouth at: T. 23S, R. 3E, Sec. 34

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 4

Total Stream Length (nearest 0.25 mile): 2.0 (lower 0.1 mile surveyed)

Bottom Type: Bedrock and boulders. Gravel negligible.

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	90	10

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:10 p.m.	50	57	0.3	Mouth

Gradient: Very steep.

Possible Limiting Factors:

Falls: Several falls 3 to 4 feet high and cascades in the first 30 yards.

Other: Steep gradient and low flow.

Accessibility: Logging road provides access to mouth only.

Watershed Cover: Predominantly coniferous.

Comments: Stream is of negligible value to fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Bridge Creek

Mouth at: T. 20S, R. 2E, Sec. 34

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Bedrock. Gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:10 p.m.	54	58	0.1	Mouth

Gradient: Very steep.

Possible Limiting Factors: Minimum flows and steep gradient.

Accessibility: To mouth by Highway 58.

Watershed Cover: Predominantly conifers.

Comments: Has no value for game fish.

September 1, 1964

Surveyor: Thompson

Stream: Buck Creek

Mouth at: T. 23S, R. 3E, Sec. 9

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth At 3 miles

Width (Feet) 15 6

Total Stream Length (nearest 0.25 mile): 6.0 (lower 4.0 miles surveyed)

Bottom Type: Boulder and rubble. Negligible amount of gravel.

Riffle-pool Ratio: Riffle Pool

Percentage 80 20

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:30 p.m.	51	53	4 1.5	Mouth 3 miles

Gradient: Moderate to steep.

Possible Limiting Factors: Steep gradient above 2.0 miles.

Fish Species Present: Native cutthroat trout, cottids, dace, rainbow trout, redbreast shiners.

Accessibility: Logging road parallels most of the creek but does not provide easy access due to its location on a steep slope above the creek.

Watershed Cover: Mixed broadleaf and conifers.

Comments:

0.0 - 4.0 miles

Buck Creek, tributary to the Middle Fork Willamette River at mile 53.8, is 6 miles long, 15 feet wide at the mouth, and had a flow of 4.0 cfs. At 12:30 p.m. the water temperature was 51° F. The watershed is predominantly conifers with some mixed broadleaves adjoining the creek. The bottom composition is largely boulders and rubble. There is practically no spawning gravel in Buck Creek. Pools 1 to 2 feet deep occur every 30 yards on the average. The gradient is moderate up to Tea Creek. Above that point increased gradient, cascades 3 to 5 feet high, and impassable log jams greatly reduce the value of the creek. Native cutthroat trout were seen and sampled throughout this section. A logging road runs parallel to Buck Creek for most of its length, but because of its location high on a steep slope above the creek, access is poor. Riffle-pool ratio is 80:20.

Noon Creek, Tea Creek and Powder Creek are tributaries. None had a flow over 0.1 cfs and all have steep gradients.

September 2, 1964

Surveyor: Thompson

Stream: Butcherknife Creek

Mouth at: T. 23S, R. 3E, Sec. 34

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 4

Total Stream Length (nearest 0.25 mile): 2.0 (lower 0.1 mile surveyed)

Bottom Type: Bedrock and boulder. Good and marginal gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	51	55	0.2	Mouth

Gradient: Very steep.

Possible Limiting Factors:

Falls: 35-foot falls 30 yards from the mouth.

Other: Steep gradient and low summer flow.

Accessibility: Logging road provides access to mouth only.

Watershed Cover: Predominantly coniferous.

Comments: Holds little value for game fish.

October 13, 1964

Surveyor: Thompson and Arp

Stream: Chilly Creek

Mouth at: T. 21S, R. 2E, Sec. 14

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Bedrock. Negligible amount of gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:30 p.m.	57	58	Less than 0.1	Mouth

Gradient: Very steep.

Possible Limiting Factors: Steep gradient and minimum flow.

Accessibility: To mouth by Highway 58.

Watershed Cover: Predominantly coniferous.

Comments: Stream is of no value to game fish.

September 2 and 3, 1964

Surveyors: Thompson and Howerton

Stream: Coal Creek

Mouth at: T. 24S, R. 3E, Sec. 11

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 5 miles</u>	
Width (Feet)	25	10	
Total Stream Length (nearest 0.25 mile):	8.5	(lower 5.5 miles surveyed)	
Bottom Type:	Boulder and rubble.	<u>Good Gravel</u> 259 (trout) 400 (salmon)	<u>Marginal Gravel</u> 100 (trout) 240 (salmon)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	90	10	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:00 p.m.	54	57	15	Mouth

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: Many falls and cascades 2 to 3 feet high. Two 5-foot falls at creek mile 4.7.

Logjams: Two small impassable logjams and two large impassable logjams between creek miles 2.9 and 3.4.

Fish Species Present: Native cutthroat trout, many 6 to 11 inches long; cottids and rainbow trout.

Accessibility: Logging road parallels creek but is located high on a ridge above the creek in most places.

Watershed Cover: Predominantly coniferous.

Comments: Good for either anadromous or nonanadromous fish.

0.0 - 0.5

Coal Creek is a tributary to the Middle Fork Willamette River at river mile 62.7. It is 8.5 miles long and had a flow of 15 cfs at the mouth. The flow at mile 4.0 was 7 cfs. The width at the mouth is 25 feet. Average width is 15 feet. At 2:00 p.m. at the mouth the water temperature was 54° F. Shade cover over the stream is sparse.

(more)

Coal Creek continued

The watershed is predominantly conifers. Rubble and boulders characterize the creek bed. The section surveyed contains 259 square yards of good and 100 square yards of marginal trout spawning gravel, and 400 square yards of good and 590 square yards of marginal salmon and steelhead spawning gravel. Holding pools 3 to 6 feet deep occur on the average of one every quarter mile. Due to the moderate to steep gradient, falls and cascades 2 to 3 feet high are numerous. Two 5-foot falls were recorded at mile 4.7. The creek loses most of its value above mile 5.0 because of the steep gradient, numerous cascades and waterfalls, and impassable logjams. Two small impassable and two large impassable logjams occur between creek miles 2.9 and 3.4. Native cutthroat trout 6 to 11 inches long were sampled throughout the section surveyed. A logging road parallels most of Coal Creek but due to its location high on a ridge above the stream, access from the road is not easy in most places. Riffle-pool ratio is 90:10.

A tributary from the left enters at creek mile 2.0 and had a flow of 2.0 cfs. Deadwood Creek, a tributary from the left at creek mile 5.0 had a flow of 3.0 cfs. All other tributaries to Coal Creek in the 5.5 miles surveyed had a flow less than 1.0 cfs.

October 13, 1964

Surveyor: Thompson

Stream: Coffeepot Creek

Mouth at: T. 22S, R. 3E, Sec. 34

Tributary to: Middle Fork Willamette River at Hills Creek Reservoir

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

At 1 mile

Width (Feet)

8

6

Total Stream Length (nearest 0.25 mile): 3.5 (lower 1.0 mile surveyed)

Bottom Type: Boulder and rubble, Fifty yards of good and 60 yards of marginal trout spawning gravel.

Riffle-pool Ratio:

Riffle

Pool

Percentage

80

20

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	51	57	3.0	Mouth

Gradient: Moderate to steep.

Possible Limiting Factors: A culvert near the mouth is impassable to upstream fish movement when Hills Creek Reservoir is drawn down.

Fish Species Present: Many native cutthroat trout were seen and sampled.
Cottids, dace and rainbow trout were also present.

Accessibility: Logging road parallels creek for lower 1 mile.

Watershed Cover: Predominantly coniferous.

Comments: Coffeepot Creek in the lower 1 mile surveyed provided good trout habitat.
Steep gradient above mile 1.0 would limit potential use by anadromous fish.

September 2, 1964

Surveyor: Thompson

Stream: Cone Creek

Mouth at: T. 23S, R. 3E, Sec. 9

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth At 0.3 mile

Width (Feet) 6 3

Total Stream Length (nearest 0.25 mile): 1.5 (lower 0.5 mile surveyed)

Bottom Type: Gravel negligible.

Riffle-pool Ratio: Riffle Pool

Percentage 90 10

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:00 a.m.	51	53	2.0	Mouth
			0.5	0.3 mile

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: Three-foot falls from a road culvert 500 yards upstream from the mouth.

Accessibility: Logging road parallels creek for lower half mile.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Because of the steep gradient beginning at about 0.3 mile, the value of Cone Creek is limited for game fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Crale Creek

Mouth at: T. 20S, R. 1E, Sec. 11

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Rubble. Negligible amount of gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:00 p.m.	57	59	Less than 0.1	Mouth

Gradient: Moderate.

Possible Limiting Factors: Minimum flow.

Accessibility: At mouth by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Value limited by low flow.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Deadhorse Creek

Mouth at: T. 24S, R. 3E, Sec. 11

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Rubble and bedrock. Spawning gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:15 p.m.	50	49	Less than 0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and minimum flow.

Accessibility: Logging road provides access to mouth only.

Waterhshed Cover: Mixed broadleaf and conifers.

Comments: Stream is of little value to game fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Deception Creek

Mouth at: T. 21S, R. 2E, Sec. 11

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 15

Total Stream Length (nearest 0.25 mile): 4.0 (lower 1.5 miles surveyed)

Bottom Type: Rubble. Negligible amount of good spawning gravel; fifteen square yards of marginal trout spawning gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:45 p.m.	56	58	5	Mouth
			4	1.5 mile

Gradient: Moderate.

Possible Limiting Factors: Low flow limits potential use by anadromous fish.

Fish Species Present: Native cutthroat trout.

Accessibility: At mouth by Highway 58 and upper portions via Deception Creek road.

Watershed Cover: Mixed broadleaf and conifers.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Dell Creek

Mouth at: T. 20S, R. 2E, Sec. 35

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Rubble and boulder. Negligible amount of spawning gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:00 p.m.	57	58	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Low flows and steep gradient.

Accessibility: To mouth by Highway 58.

Watershed Cover: Predominantly mixed conifers.

Comments: Stream is of no value to game fish.

September 2, 1964

Surveyor: Thompson

Stream: Dry Creek

Mouth at: T. 23S, R. 3E, Sec. 34

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Rubble and silt. Spawning gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:20 p.m.			Dry	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Logging road provides access to the mouth only.

Watershed Cover: Predominantly coniferous.

Comments: Stream is of no value to game fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Duval Creek

Mouth at: T. 20S, R. 2E, Sec. 20

Tributary to: Middle Fork Willamette River at Lookout Point Reservoir

Stream System: Willamette

County: Lane

Characteristics: At Mouth

Width (Feet) 4

Total Stream Length (nearest 0.25 mile): 3.0 (lower 1.0 mile surveyed)

Bottom Type: Mud, Negligible amount of spawning gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:25 p.m.	60	58	0.2	Mouth

Gradient: Slight to moderate at mouth; moderate to steep at mile 1.0.

Possible Limiting Factors: Minimum flow.

Accessibility: Highway 58 provides access to the mouth.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Minimum flow and steep gradient above 1.0 mile limit the value of the creek.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Echo Creek

Mouth at: T. 24S, R. 4E, Sec. 16

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth At mile 1.7

Width (Feet) 10 6

Total Stream Length (nearest 0.25 mile): 5.5 (lower 2.0 miles surveyed)

Bottom Type: Boulder and rubble. Negligible amount of spawning gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:20 p.m.	48	48	3.0	Mouth

Gradient: Steep.

Possible Limiting Factors:

Falls: Many cascades and falls 2 to 4 feet high from the mouth upstream hinder fish passage.

Accessibility: Logging road provides access to a half-mile section of stream between miles 1.5 and 2.0.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream is of moderate value for nonanadromous fish only.

September 2, 1964

Surveyor: Thompson

Stream: Estep Creek

Mouth at: T. 20S, R. 3E, Sec. 21

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At mouth

Width (Feet) 6

Total Stream Length (nearest 0.25 mile): 2.5 miles (lower 0.5 mile surveyed)

Bottom Type: Boulder and rubble. Negligible amount of spawning gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:00 a.m.	51	53	1.0	Mouth

Gradient: Steep.

Possible Limiting Factors:

Falls: Two-foot falls from culvert just above the mouth. Two-foot falls 100 yards above culvert.

Fish Species Present: Native cutthroat trout.

Accessibility: First 0.6 mile accessible by road.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Some value as a trout stream.

June 19, 1959

Surveyor: Fish Commission of Oregon

Stream: Fall Creek

Mouth at: T. 18S, R. 1W, Sec. 30

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 32.0 (30.5 miles surveyed)

Bottom Type: See Comments section.

Water Temperature and Flow Data:

Date	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
	74			Mouth
12-11-56			24,700 (max.)	USGS Gage 14-1510
12-1-36			19 (min.)	" " "

Gradient: Slight to moderate,

Possible Limiting Factors:

Falls: Eight to 10-foot falls 0.9 mile below mouth of Delp Creek.

Logjams: Impassable logjam 8 feet high 6.5 miles above the mouth at Winberry Creek.

Fish Species Present: Sixty adult chinook salmon counted by Game Commission in 1964. Other species present include cottids, cutthroat trout, dace, redbside shiners, rainbow, whitefish, suckers.

Comments: Mile 0.0 - 23.5 - 5 percent of the bottom area has gravel suitable for salmon and steelhead spawning. The upper 7 miles contain excellent spawning gravel.

Fall Creek (Lower):

Fall Creek, 32 miles long, enters Middle Fork Willamette River from the right at mile 11.3. The USGS has maintained a water-stage recorder on Fall Creek 6.0 miles above its mouth since 1935. The maximum and minimum flows recorded were 24,700 cfs and 19 cfs, respectively. A thermograph maintained at this gage since 1950 recorded a maximum temperature of 79° F. on July 28, 1958. The U. S. Fish and Wildlife Service maintained a thermograph at mile 16.5 in the summer of 1962 which recorded a maximum temperature of 73° F. in July. Boulders and bedrock are the principal materials found in the creek bed. In the lower 23.5 miles, about 5 percent of the streambed contains gravel suitable for salmon and steelhead spawning. The upper seven miles contain excellent salmon spawning gravel. Probable barriers to fish passage include a logjam about 8 feet high located about 6.5 miles above the mouth of Winberry Creek, and an 8- to 10-foot vertical falls located 0.9 mile below the mouth of Delp Creek. The stream gradient is slight in the lower 8 miles and moderate from mile 8.0 upstream. The main tributaries are Little Fall, Winberry,

(more)

and Portland Creeks. All were surveyed by the Fish Commission during June and July 1959 (Willis, Collins and Sams, 1960). Sixty adult spring chinook were counted by the Game Commission in the summer of 1964. All of these occurred above the damsite. The Fall Creek Dam under construction at stream mile 7.1 has provisions for fish passage.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Fern Creek

Mouth at: T. 20S, R. 1E, Sec. 3

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 0.75 (spot check at mouth)

Bottom Type: Rubble and mud. Gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:45 p.m.	56	58	Less than 0.1	Mouth

Gradient: Moderate to steep.

Possible Limiting Factors: Minimum flow.

Accessibility: Only at mouth by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: No value to game fish.

September 2, 1964

Surveyor: Thompson

Stream: Fir Creek

Mouth at: T. 23S, R. 3E, Sec. 21

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile) 2.0 (lower 0.2 mile surveyed)

Bottom Type: Rubble and silt. Gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:45 a.m.	57	57	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors:

Logjams: A debris jam near the mouth backs water for 100 yards.

Accessibility: Logging roads provide access to the creek at several points.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Holds little value for game fish.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Found Creek

Mouth at: T. 24S, R. 4 E, Sec. 12

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At 0.2 mile

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.5 (lower 1.0 mile surveyed)

Bottom Type: Boulder. Spawning gravel negligible.

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
2:30 p.m.	46	48	0.5	0.2 mile

Gradient: Steep.

Possible Limiting Factors: Steep gradient and minimum flow limit passage.

Accessibility: Logging roads provide access to points at mile 0.2, 0.4 and 1.0.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream has slight value to nonanadromous fish only.

September 1, 1964

Surveyor: Thompson

Stream: Gold Creek

Mouth at: T. 23S, R. 3E, Sec. 9

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 6

Total Stream Length (nearest 0.25 mile): 5.0 miles (lower 3 miles surveyed)

Bottom Type: Bedrock and rubble. Ten square yards marginal trout spawning gravel and 50 square yards marginal salmon spawning gravel.

Riffle-pool Ratio: Riffle Pool

Percentage 80 20

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:30 a.m.	55	51	1.0	Mouth
			0.6	Mile 3.0

Gradient: Moderate,

Possible Limiting Factors:

Logjams: Impassable jams at mile 0.7 and 1.2. Each jam has a 2 to 3-foot water head.

Fish Species Present: Native cutthroat trout.

Accessibility: Logging road provides access to lower 3 miles.

Watershed Cover: Predominantly coniferous.

Comments: Pools 1 to 2 feet deep occur on the average of one every 50 yards.

October 13, 1964

Surveyor: Thompson

Stream: Goodman Creek

Mouth at: T. 20S, R. 1E, Sec. 2

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth At 1.0 mile

Width (Feet) 5 5

Total Stream Length (nearest 0.25 mile): 4.0 (lower 1.0 mile surveyed)

Bottom Type: Bedrock and rubble. Thirty square yards of good and 45 square yards of marginal trout spawning gravel.

Riffle-pool Ratio: Riffle Pool

Percentage 70 30

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:15 p.m.	56	58	2.5	One mile

Gradient: Moderate to steep.

Possible Limiting Factors: Some riffles over bedrock may be too shallow to permit anadromous fish to pass at low flows.

Fish Species Present: Many native cutthroat trout.

Accessibility: A logging road parallels most of the creek.

Watershed Cover:: Mixed broadleaf and conifers.

Comments: Has value only for nonanadromous fish.

October 13, 1964

Surveyor: Thompson

Stream: Gray Creek

Mouth at: T. 21S, R. 3E, Sec. 18

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 6

Total Stream Length (nearest 0.25 mile): 5.0 (spot check near mouth)

Bottom Type: Boulder and rubble. Spawning gravel negligible.

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
2:20 p.m.	54	58	1.0	Mouth

Gradient: Moderate,

Fish Species Present: Native cutthroat trout.

Accessibility: Road crosses creek near mouth.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream is of moderate value to trout but not to anadromous fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Harper Creek

Mouth at: T. 20S, R. 2E, Sec. 18

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Mud. Spawning gravel negligible.

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
2:50 p.m.	57	59	Less than 0.1	Mouth

Gradient: Moderate.

Possible Limiting Factors: A dense vegetative canopy limits access. Minimum flow limits passage.

Accessibility: Accessible at mouth by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Little value to game fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Hazel Creek

Mouth at: T. 20S, R. 1E, Sec. 3

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.0 (spot check at mouth)

Bottom Type: Rubble and mud. Spawning gravel negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:50 p.m.	57	58	Less than 0.1	Mouth

Gradient: Moderate.

Possible Limiting Factors: Minimum flow.

Accessibility: Only at mouth by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: No value to game fish.

August 25, 1959

Surveyor: Oregon Fish Commission

Stream: Hills Creek (lower)

Mouth at: T. 18S, R. 2W, Sec. 22

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 10.0 (lower 2.1 miles surveyed)

Bottom Type: See Comments.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
	67			Mouth
	64		3	1.9 miles

Gradient: Slight to moderate,

Possible Limiting Factors:

Falls: Cascade 7 feet high at mouth.

Other: An unscreened diversion ditch at mile 2.0 used by Hills Creek Lumber Company to supply water to its log pond, a log dam 5 feet high located 2.0 miles above the mouth, a dam 2.5 feet high near mile 2.0.

Fish Species Present: Cottids, cutthroat trout, dace.

Comments: Some spawning area suitable for salmon and steelhead is present.

Hills Creek, a tributary to Middle Fork Willamette River, enters from the right at river mile 8.2. The creek is 10.0 miles long and on August 25, 1959 had a flow of 3 cfs at mile 1.9 and a temperature of 64° F. The temperature at the mouth was 67° F. The bottom is primarily boulders and bedrock with patches of silt. Some spawning area suitable for salmon and steelhead is present. A cascade about 7 feet high located at the mouth (still present in 1964) might limit anadromous fish access during periods of lower flows in the Middle Fork Willamette River. No anadromous fish are known to utilize Hills Creek. A log dam about 5 feet high located 2 miles above the mouth, diverted about 2 cfs for the Hills Creek Lumber Company log pond. The dam may be passable at high flows. The intake structure was unscreened. A dam near the same location diverted water for a private waterwheel. This structure was 2.5 feet high and 50 feet wide. It appeared impassable at a flow of about 3 cfs. The stream gradient is slight to moderate. The potential for salmon and steelhead production in Hills Creek appeared to be rather poor (Willis, Collins and Sams, 1960).

August 17 and 18, 1964

Surveyor: Thompson

Stream: Hills Creek (upper)

Mouth at: T. 22S, R. 4E, Sec. 6

Tributary to: Middle Fork Willamette River - Hills Creek Reservoir

Stream System: Willamette

County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 8 miles</u>	<u>At 13 miles</u>
Width(Feet)	25	10	8
Total Stream Length (nearest 0.25 mile):	15.5	(lower 15 miles surveyed)	

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	517 (trout) 1,095 (salmon)	20 (trout) 252 (salmon)

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	80	20

Water Temperature and Flow Data:

Time	Temperatuer (°F.)		Flow (cfs)	Location
	Water	Air		
10:00 a.m.	56	64	35	Mouth
3:00 p.m.	56	86	9	11 miles
2:00 p.m.	51	57	1	13.9 miles

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: A 3-foot, 4-foot, 5-foot, two 6-foot and a 10-foot falls occur between miles 4 and 7. The 6-foot and 10-foot falls are probably impassable.

Logjams: Moderately frequent from mile 9.0 to end of survey. Some are definitely impassable.

Fish Species Present: Native cutthroat trout, cottids.

Accessibility: Logging road provides easy access up to mouth of Pinto Creek.

Watershed Cover: Predominantly conifers. Mixed broadleaf along creek.

Comments: The high falls before mile 7.0 and the impassable logjams beyond limit the value of Hills Creek.

3.0 - 7.0 miles

Hills Creek is a tributary to Hills Creek Reservoir. It is 15.5 miles long and is 25 feet wide at the mouth. The flow on August 17 was 35 cfs. Except for the property adjacent to the creek immediately downstream from the mouth and the property belonging to Kitson Hot Springs resort area just upstream from the mouth, Hills Creek flows entirely within the boundaries of the Willamette National Forest.

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Hills Creek 3.0 - 7.0 miles continued

At 10:00 a.m. the water temperature at the mouth was 56° F. The surface water temperature of the reservoir just below the mouth was 70° F. Mixed broadleaf vegetation, such as alder, vine maple, bigleaf maple, willow and ninebark, is typical along the creek banks. Conifers are the principal varieties on the higher watershed. The stream shade cover is sparse to moderately dense. The creek bed consists of boulders, rubble and silt with some bedrock. In this section there are 347 square yards of good trout spawning gravel, and 880 square yards of good and 42 square yards of marginal salmon and steelhead spawning gravel. Eighty-seven percent of this gravel is found in the upper mile of this section, however. Pools 2 to 3 feet deep occur approximately every 200 yards, and pools 4 feet deep and deeper occur approximately once every mile. One pool 8 feet deep is located between stream miles 3.0 and 4.0. There are six waterfalls in this section. All occur in the last three miles. One is 3 feet high, one is 4 feet with a 7-foot jump pool, one is 6 feet high with a 5-foot jump pool, one is 5 feet with a 5-foot jump pool, one 6 feet with an adequate jump pool, and one 10 feet high with a 10-foot jump pool. The latter is located between miles 6.0 and 7.0. The stream gradient is moderate. Excellent access is provided by a logging road which runs parallel with the creek. The water is moderately turbid with some deposit of silt on the bottom. Riffle-pool ratio is 70:30.

The tributaries to Hills Creek in this 4-mile section include Shady, Tufti, Gate, Crabapple, Landes and Mike Creeks. Mike Creek had a flow of 0.8 cfs and all the others were flowing at 0.1 cfs or less. Each of these tributaries is steep and has no value to game fish.

7.0 - 11.0 miles

The average width of this section is 15 feet. The flow is 25 cfs. At 1:00 p.m. the water temperature was 60° F. The moderate shade cover and watershed vegetation consist of mixed broadleaf and conifers. Rubble and boulders characterize the creek bed. This section contains 125 square yards of good trout spawning gravel and 215 square yards of good and 200 square yards of marginal salmon and steelhead spawning gravel. Pools 2 to 3 feet deep occur about every 100 yards. Towards the upper end of this section the stream gradient becomes steeper and small pools more frequent. The lowest logjam on Hills Creek occurs between miles 9.0 and 10.0. Near mile 11.0 the jams occur about every 300 yards. Most of the logjams are passable, but some are currently impassable. One large jam at mile 11.0 has a 4-foot water head and is considered impassable. Cascades one to two feet high occur about every 200 yards between mile 10.0 and 11.0. Riffle-pool ratio is 80:20.

Tributaries include Skipper, Juniper, Warfield, Groundhog, TNT and Burro Creeks. Skipper, Juniper, TNT and Burro Creeks all had flows of less than 0.2 cfs. Warfield Creek had a flow of 1.0 cfs and a water temperature of 54° F. at 3:00 p.m. Because of the steep gradient and much debris collected in the creek, Warfield Creek is of little value to game fish. Groundhog Creek had a flow of 3.5 cfs at the mouth derived from two separate flows 150 yards from the mouth. Both forks contain much debris and have steep gradients, thus being of little value to game fish.

11.0 - 15.0 miles

The average width of Hills Creek in this section is 10 feet. The flow was 9 cfs at mile 11.0 and 1.0 cfs at the mouth of Pinto Creek. Mixed broadleaf and conifers constitute the moderate shade cover and watershed vegetation. Conifers, however, predominate as the watershed vegetative species. Boulders and rubble characterize.

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the creek bed material. Forty-five square yards of good and 20 square yards of marginal trout spawning gravel, and 10 square yards of marginal salmon and steelhead spawning gravel were recorded. Pools 2 to 3 feet deep occur about every 80 yards. Pools 4 feet deep and deeper are uncommon. Cascades and falls 1 to 2 feet high occur about every 200 yards. Logjams, most passable, occur on the average of once in every 300 yards throughout the section. The stream gradient is steep. Native cutthroat trout 5 to 7 inches long were seen and sampled up to mile 15.0. No roads or trails provide access to Hills Creek above the mouth of Pinto Creek. The logging road that runs parallel to Hills Creek to this point and continues to follow Pinto Creek for three miles. Riffle-pool ratio is 90:10.

Tributaries to Hills Creek in this section include Andy, Tumbledown, Pool, Wolf and Pinto Creeks. Andy, Tumbledown and Pool Creeks had flows less than 0.2 cfs, are steep and of no value to game fish. Wolf Creek had a flow of 1.5 cfs but is steep and likewise of little value. Pinto Creek had a flow of 1.0 cfs at the mouth but less than 0.1 cfs three miles above the mouth.

September 3, 1964

Surveyor: H. Roberts and Slade

Stream: Indigo Springs Creek

Mouth at: T. 24S, R. 5E,, Sec. 18

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth At 100 yards

Width (Feet) 15 10

Total Stream Length (nearest 0.25 mile): 0.8 (all surveyed)

Bottom Type: Bedrock and rubble. Spawning gravel negligible.

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	90	10

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:45 p.m.	40	48	12 (spring fed)	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient.

Accessibility: Logging road provides access to stream at mile 0.1.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Average depth is 1.5 feet. Because of the stream's relative shortness, steep gradient and lack of spawning gravel, it is of little value to anadromous or nonanadromous fish.

October 13, 1964

Surveyor: Arp

Stream: Larison Creek

Mouth at: T. 22S, R. 3E, Sec. 21

Tributary to: Middle Fork Willamette River (Hills Creek Reservoir)

Stream System: Willamette

County: Lane

Characteristics: At Mouth At 1.0 mile

Width (Feet) 5 5

Total Stream Length (nearest 0.25 mile): 5.0 (lower 3.5 miles surveyed)

Bottom Type: Mixed; 42 square yards good trout spawning gravel and 104 square yards marginal salmon spawning gravel.

Riffle-pool Ratio: Riffle Pool

Percentage 70 30

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:45 a.m.	53	56	2	Mouth

Gradient: Moderate.

Fish Species Present: Native cutthroat trout.

Accessibility: Forest Service trail parallels creek for lower 3.5 miles.

Watershed Cover: Vine maple, bigleaf maple, alder, fir, hemlock, cedar and pine.

Comments:

0.0 - 3.5 miles

Larison Creek enters Hills Creek Reservoir from the west and extends 5 miles above the reservoir. At 9:45 a.m. the water temperature was 53°F., air temperature 56°F. and flow 2 cfs at the mouth. Average stream width in the lower 1.5 miles is 5 feet. The watershed cover is preominantly coniferous. The shade cover is sparse for the first half mile, but becomes moderately dense beyond. Bedrock, rubble, gravel and sand characterize the bottom material. Three small tributaries each flowing at 0.3 cfs enter in the section surveyed. None offer any value to game fish. Spawning gravel includes 42 square yards of good trout gravel and 104 square yards of marginal gravel for salmon and steelhead. Pools 2 to 4 feet deep occurred approximately every 100 yards. There are no obstructions to fish passage in this section. The gradient is moderate. Native cutthroat trout 6 to 8 inches long were seen throughout. A logging road provides access to the mouth at the edge of the reservoir. A Forest Service trail provides access to the lower 3.5 miles of creek. Larison Creek lies within the boundary of Willamette National Forest. Riffle-pool ratio is 70:30.

August 28, 1959

Surveyor: Oregon Fish Commission

Stream: Lost Creek

Mouth at: T. 19S, R. 1W, Sec. 6

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 14.0 (8.6 miles surveyed)

Bottom Type: See Comments section.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
	70		5.0	Mouth

Gradient: Moderate.

Possible Limiting Factors:

Falls: Falls 8 feet high at mile 8.5.

Other: Debris piled against a fence 4 miles above the mouth on the upstream side of a railroad culvert formed a possible barrier to upstream fish passage.

Fish Species Present: Cottids, cutthroat trout, dace, redbside shiners.

Comments: The first 10 miles have about 10 percent good spawning area. The last 4 miles have about 3 percent good spawning area.

September 2, 1964

Surveyors: H. Roberts and Slade

Stream: Noisy Creek

Mouth at: T. 24S, R. 4E, Sec. 11

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth At 2 miles

Width (Feet) 10 6

Total Stream Length (nearest 0.25 mile): 5.0 (lower 2.0 miles surveyed)

Bottom Type: Rubble and boulder.	<u>Good Gravel</u>	<u>Marginal Gravel</u>
	15 (trout)	20 (trout)
	10 (salmon)	20 (salmon)

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	90	10

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	50	55	5.0	0.5 mile

Gradient: Steep.

Possible Limiting Factors:

Logjams: Several passable jams in cutover area between mile 0.3 and 0.5.

Accessibility: Logging roads provide access to points near the mouth, near the middle section, and again near the headwaters, but do not parallel the creek.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Due to the steep gradient and lack of spawning gravel, Noisy Creek has only moderate value for trout.

October 13, 1964

Surveyors: Thompson and Arp

Stream: North Creek

Mouth at: T. 20S, R. 2E, Sec. 18

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 2.5 (spot check at mouth)

Bottom Type: Bedrock and silt. Negligible amount of spawning gravel.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:45 p.m.	56	59	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: At mouth only by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

August 26 and 27, 1964

Surveyors: Thompson, Arp, H. Roberts and Howerton.

Stream: North Fork of Middle Fork Willamette River Mouth at: T. 21S, R. 2E, Sec. 12
Tributary to: Middle Fork Willamette River County: Lane
Stream System: Willamette

Characteristics: At Mouth At 15 miles At 35 miles

Width (Feet) 120 30 40

Total Stream Length (nearest 0.25 mile): 43.6 (lower 38.4 miles surveyed)

Bottom Type: Good Gravel Marginal Gravel

Square Yards 393 (trout) 280 (trout)
 3,683 (salmon) 7,025 (salmon)

Riffle-pool Ratio: Riffle Pool

Percentage 66 34

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	62	63	210	Mouth
9:50 a.m.	55	54	160	15 miles
9:45 a.m.	48	49	65	35 miles

Gradient: Moderate

Possible Limiting Factors:

Falls: Eight-foot cascade 15 yards long between miles 3.0 and 4.0; 6-foot cascade between miles 6.5 and 7.5; several cascades between miles 11.5 and 12.5.

Logjams: Two impassable logjams between miles 30.6 and 34.6.

Other: A dam with an inadequate fish ladder at Westfir. Steep gradient from mile 36.1 through the end of the survey.

Fish Species Present: Native cutthroat trout 7 to 9 inches long, though not abundant.

Accessibility: Road parallels river up to mile 33.3.

Watershed Cover: Mixed broadleaves adjacent to the river; conifers predominant.

0.0 - ^{5.0}~~0.5~~ mile

The North Fork of Middle Fork Willamette River is 43.6 miles long, entering the Middle Fork at mile 37.5. It is 120 feet wide at the mouth and had a flow of 210 cfs. At 1:00 p.m. the water temperature at the mouth was 62° F. and the air temperature 63°F. The watershed is predominantly coniferous with some mixed broadleaf species adjacent to the river. Boulders, bedrock and rubble with a moderate amount of silt are the

(more)

North Fork of Middle Fork Willamette River

0.0 - ~~5.0~~^{5.0} mile continued

typical materials found in the streambed in the first 5 miles. In this section there are 35 square yards of good and 20 square yards of marginal trout spawning gravel, and 100 square yards of good and 700 square yards of marginal salmon and steelhead spawning gravel. There are no distinct holding pools. The average depth of the section extending about 0.5 mile above the reservoir created by Hines Lumber Company at Westfir is 5 feet. The depth of the reservoir itself is unknown. Obstructions to fish passage in this section include an 8-foot cascade 15 yards long and the Hines Lumber Company log pond dam at Westfir which is 30 feet high. The wooden fish ladder appurtenant to the dam is without steps and is completely impassable.

The stream gradient is slight to moderate. A logging road paralleling the river provides excellent access up to mile 34.2. Except for the lower two miles of the river the North Fork is bounded entirely by Willamette National Forest property. Riffle-pool ratio is 55:45.

Short Creek enters the North Fork from the right at mile 4.7 and is the only tributary in this section. The flow was 0.2 cfs.

5.0 - 11.0 miles

The average width is 70 feet. The water temperature at 11:30 a.m. was 56°F. at mile 5.0. The watershed is predominantly coniferous, but along the river banks broadleaf species such as vine maple, willow, alder and bigleaf maple are common. The shade cover is sparse. Boulders and large rubble with silt characterize the riverbed. In this section there are 89 square yards of good and 88 square yards of marginal trout spawning gravel, and 108 square yards of good and 2,685 square yards of marginal salmon and steelhead spawning gravel. Pools 4 to 6 feet deep occur about every 500 yards, and pools 6 to 12 feet deep occur about once every mile. A cascade 6 feet high and 8 yards long occurs between miles 6.5 and 7.5. The stream gradient is moderate. Good access is provided by the logging road paralleling the river. Riffle-pool ratio is 60:40.

Tributaries include Dartmouth, First, Huckleberry, Leapfrog, Maple, Eighth, High and Ninth Creeks. Dartmouth, Huckleberry and High Creeks had flows of about 0.2 cfs each. The others were flowing less than 0.2 cfs. Because of the steep gradient and low flows characteristic of these tributaries, none could be considered of significant value to game fish.

11.0 - 14.6 miles

The river's average width is 35 feet. At 9:30 a.m. the water temperature was 55°F. and the air temperature 54°F. at mile 11.0. Watershed vegetation consists of mixed broadleaf and conifers, with conifers predominating. Boulders and bedrock are the typical bottom materials. In this section there are 50 square yards of good and 25 square yards of marginal trout spawning gravel, and 60 square yards of good and 180 square yards of marginal salmon and steelhead spawning gravel. Pools 2 to 4 feet deep occur on the average of one every 150 yards. Pools 4 feet deep and deeper occur about once every half mile. Four of the pools would be excellent as resting areas for adult anadromous fish. Because of the moderate to steep stream gradient there are several cascades. One of these is 8 feet high but passable. Access to this section is provided by the logging road paralleling the river. The riffle-pool ratio is 80:20.

(more)

North Fork of Middle Fork Willamette River

11.0 - 14.6 miles continued

Tributaries include Hamner, McKinley, Chalk and Christy Creeks. Hamner, McKinley and Chalk Creeks each have flows of about 1.0 cfs, but because of their steep gradient they are of little value to game fish. Christy Creek had a flow of 15.0 cfs and is covered on a separate report form.

14.6 - 18.6 miles

The average width is 30 feet. The flow was about 160 cfs and the water temperature at 9:50 a.m. was 55° F. The slight shade cover consisted of willow, alder, vine maple and mixed conifers. The watershed is predominantly coniferous. Boulders, bedrock and rubble are the typical bottom materials. There are 4 square yards of good and 30 square yards of marginal trout spawning gravel, and 1850 square yards of good and 325 square yards of marginal salmon and steelhead spawning gravel. Pools 4 to 6 feet deep occur about every 20 yards and pools 6 to 7 feet deep occur approximately once every 200 yards. Three of the latter are 8 to 9 feet deep. There are many cascades 1 to 3 feet high. The stream gradient is moderate. Easy access to the river is provided by the logging road paralleling the river. The riffle-pool ratio is 70:30.

Tumble, Coffee, Sidewalk, Whiterock and Plateau Creeks are tributaries in this section. Tumble Creek is dry and the others have flows of less than 0.1 cfs, are steep, and are of no value to game fish.

18.6 - 22.6 miles

The average river width is 35 feet. The flow was about 145 cfs. At 12:00 noon the water temperature was 54° F. Mixed broadleaves and conifers constitute the watershed and slight shade cover. The riverbed material is largely rubble and boulders with some gravel bars. There are 40 square yards of good and 24 square yards of marginal trout spawning gravel, and 525 square yards of good and 520 square yards of marginal salmon and steelhead spawning gravel in this section. Two pools 4 feet deep, two 6 feet deep, one 8 feet deep and one 10 feet deep and 30 yards long are present. There are no obstructions to fish passage. The stream gradient is slight to moderate. Good access to the river is provided by a paralleling logging road. Riffle-pool ratio is 50:50.

Cedar Creek and Devils Canyon are tributaries. Cedar Creek had a flow of 1.0 cfs, is steep and of no value to game fish. Devils Canyon had a flow of 0.3 cfs and likewise is of no value.

22.6 - 26.6 miles

The North Fork has an average width of 35 feet in this section. The flow at mile 22.6 was about 115 cfs. At 8:30 a.m. the water temperature was 46° F. The slight shade cover and watershed vegetation consists of mixed broadleaves and conifers. Broadleaf species are common along the river banks while conifers predominate over the rest of the watershed. Boulders and rubble characterize the creek bed material. Spawning gravel includes 35 square yards of good and 18 square yards of marginal for trout, and 390 square yards of good and 555 square yards of marginal for salmon and steelhead. There are pools 3 to 4 feet deep about every 150 yards. Two of these are 5 feet deep. There are no obstructions to fish passage. The stream gradient is

(more)

North Fork of Middle Fork Willamette River

22.6 - 26.6 miles continued

slight to moderate. A logging road paralleling the river provides good access. Riffle-pool ratio is 50:50.

Tributaries to the North Fork in this section include Major, Parker, Brock, and Captain Creeks. Major Creek and Brock Creek were dry. Parker Creek had a flow of 2.0 cfs, a 5-foot falls at the mouth and a gradient too steep to be of much value. Captain Creek had a flow of 1.0 cfs and was likewise steep and of little value.

26.6 - 30.6 miles

The average river width is 35 feet. The flow was about 90 cfs. At 9:30 a.m. the water temperature was 45°F. The watershed is predominantly coniferous. Rubble, boulders and some gravel constitute the creek bed material. There are 70 square yards of good and 30 square yards of marginal trout spawning gravel, and 300 square yards of good and 900 square yards of marginal salmon and steelhead spawning gravel. Pools 2 to 5 feet deep occur about every 100 yards. Seven other pools over 5 feet deep also exist. Several medium-sized logjams, all passable, are found between river miles 26.6 and 28.0. The gradient is moderate. Riffle-pool ratio is 60:40.

Glade, Cayuse and Fisher Creeks are tributaries. Glade Creek is dry. Cayuse Creek and Fisher Creek have flows of 5.0 cfs and 12.5 cfs, respectively.

30.6 - 34.6 miles

The river has an average width of 40 feet in this section. The flow was about 75 cfs and the water temperature at 12:30 p.m. was 48° F. Conifers are the main watershed and shade cover vegetation. Predominant varieties are Douglas fir, cedar, hemlock and white pine. The sparse broadleaf varieties adjacent to the river include alder, vine maple, big leaf maple and willow. The bottom material is largely silted rubble and boulders with some bedrock. Within this 4-mile section 30 square yards of good and 20 square yards of marginal trout spawning gravel, and 250 square yards of good and 500 square yards of marginal salmon and steelhead spawning gravel were tallied. Pools 2 to 4 feet deep are found about every 100 yards and pools 4 feet deep and deeper about once every mile. There are 8 logjams all between miles 30.6 and 32.6. Two of these are impassable to anadromous fish. In most cases the jams are small and could be removed with a minimum of difficulty. The stream gradient is moderate. Three anglers encountered had a total of 9 native cutthroat trout 7 to 9 inches long. At river mile 33.3 the logging road that paralleled the North Fork now turns away to the north. Shale Ridge Trail is the only improved access facility to the North Fork above mile 33.3. Riffle-pool ratio is 80:20.

Tributaries include Moolack, Tiny, Small, Minute and Box Canyon Creeks. Tiny, Small and Minute Creeks were dry. Moolack and Box Canyon Creeks had flows of less than 0.2 cfs. All have steep gradients, thus being of no value to game fish.

34.6 - 38.4 miles

The average width of the stream is 40 feet. The flow was about 65 cfs and the water temperature 48° F. at 9:45 a.m. Mixed broadleaves and conifers constitute the moderate shade cover. Conifers are the predominant watershed vegetation. Boulders, rubble,

(more)

North Fork of Middle Fork Willamette River

34.6 - 38.4 miles continued

gravel and sand characterize the riverbed. Fifty square yards of good and 25 square yards of marginal trout spawning gravel, and 100 square yards of good and 100 square yards of marginal salmon and steelhead spawning gravel were recorded. Above mile 36.1 where the stream gradient becomes steep, pools 2 to 4 feet deep are numerous. From mile 36.1 through the end of the survey the current is swift and turbulent. Between miles 34.6 and 36.1 the river flows through a swamp 50 yards to one-quarter mile wide. The flow is divided into numerous channels that would provide ideal salmonid rearing conditions. Access to this portion is provided only by the Shale Ridge Trail that roughly parallels the river at a distance of 50 to 400 yards. Riffle-pool ratio is 90:10.

Tributaries include Skookum Creek and the Otter and Erma Bell Lakes drainage system. Skookum Creek had a flow of 0.5 cfs but is too steep to be of any value to game fish. The flows from the lakes are too small and the gradients too steep to be of value to game fish.

August 26, 1964

Surveyor: Thompson

Stream: Cayuse Creek

Mouth at: T. 19S, R. 5E, Sec. 35

Tributary to: North Fork of Middle Fork Willamette R.

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

At 1 mile

Width (Feet)

10

10

Total Stream Length (nearest 0.25 mile): 4.5 (lower 1 mile surveyed)

Bottom Type: Rubble and boulder. Gravel negligible.

Riffle-pool Ratio:

Riffle

Pool

Percentage

70

30

Water Temperature and Flow Data:

Time	Temperature(°F.)		Flow (cfs)	Location
	Water	Air		
4:05 p.m.	50	58	5	Mouth
10:00 a.m.	48			1 mile

Gradient: Slight to moderate at mouth. Steep above 120 yards.

Possible Limiting Factors:

Logjams: Four small passable logjams in lower 1 mile.

Fish Species Present: Native cutthroat trout.

Accessibility: Cayuse Creek trail is obscure, thus Cayuse Creek has no improved access facility.

Watershed Cover: Predominantly coniferous.

August 28, 1964

Surveyors: H. Roberts and Howerton

Stream: Christy Creek

Mouth at: T. 19S, R. 4E, Sec. 30

Tributary to: North Fork of Middle Fork Willamette R.

Stream System: Willamette

County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 3 miles</u>	<u>At 6 miles</u>
Width (Feet)	25	10	6
Total Stream Length (nearest 0.25 mile):	12.0 (lower 11.0 miles surveyed)		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	85 (trout) 130 (salmon)	75 (trout) 620 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	87	13	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
8:15 a.m.	50	60	25	Mouth
12:30 p.m.	48	50	18	5 miles
			0.8	11 miles

Gradient: Steep.

Possible Limiting Factors:

Falls: Many small cascades due to the steep stream gradient.

Accessibility: Several logging roads provide limited access.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Gradient is generally steep and the stream has limited spawning gravel.

0.0 - 3.0 miles

Christy Creek enters North Fork of Middle Fork Willamette River at river mile 14.8. It is 25 feet wide at the mouth and had a flow of 25.0 cfs. At 8:15 a.m. the water temperature was 50° F. The slight shade cover consists of mixed broadleaf and conifers. The watershed is predominantly coniferous. Boulders and rubble are common bottom materials. There are 40 square yards of good and 45 square yards of marginal trout spawning gravel, and 80 square yards of good and 270 square yards of marginal salmon and steelhead spawning gravel. Pools 1 to 3 feet deep occur about once every 150 yards. A large pool is located at the mouth. The gradient is steep with many small cascades between the mouth and mile 1.0. From miles 1.0 to 2.0 the stream gradient is moderate, and from miles 2.0 to 3.0 it becomes increasingly steep. A logging road provides fair access. Riffle-pool ratio is 80:20.

(more)

Christy Creek continued

Several tributaries in this section have significant flows but because of steep gradients are of little value to game fish.

3.0 - 6.0 miles

The average stream width is 10 feet. The flow at mile 5.0 was 18.0 cfs and the water temperature was 48° F. at 12:30 p.m. The watershed and bottom composition are the same as in the previous section. The tributaries to Christy Creek in this section are small and steep. There are 45 square yards of good and 30 square yards of marginal trout spawning gravel, and 150 square yards of good and 350 square yards of marginal salmon and steelhead spawning gravel. Pools 1 to 3 feet deep occur about every 100 yards. The numerous cascades would be a hindrance to fish passage. Access is limited because the only road is on a ridge high above the creek. The riffle-pool ratio is 90:10.

6.0 - 11.0 miles

Because of the low flow and steep stream gradient commencing at about mile 5.0, Christy Creek was given only a cursory survey from miles 6.0 to 11.0. The average width in this section is 5 feet. The flow at mile 6.0 was 8.0 cfs and 0.8 cfs at mile 11.0. Except for increased shade cover and conifer predominance, the watershed is very similar to that near the mouth. Large rubble and boulders characterize the creek bed material. Spawning gravel density is negligible. Small pools 1 to 3 feet deep are numerous. The practice of leaving a border of trees standing adjacent to the stream when logging has left the creek relatively free of log and debris jams. Access is limited in this section because the road does not closely parallel the creek. The creek lies entirely within Willamette National Forest boundaries. Riffle-pool ratio is 90:10.

Grassy Creek at mile 7.3, Sardine Creek at mile 7.5 and Lowell Creek at mile 8.3 have adequate rearing flows for trout but their gradients are steep.

August 27, 1964

Surveyor: Thompson

Stream: Fisher Creek

Mouth at: T. 19S, R. 5E, Sec. 36

Tributary to: North Fork of Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 1 mile</u>	<u>At 4 miles</u>
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Width (Feet)	20	8	6
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Total Stream Length (nearest 0.25 mile): 6.5 (lower 2.0 miles surveyed)

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
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Square Yards	340 (trout)	60 (trout)
	500 (salmon)	400 (salmon)

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	60	40

Water Temperature and Flow Data

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:00 noon	49	58	12.5	Mouth

Gradient: Moderate; steep at mile 2.0.

Fish Species Present: Native cutthroat trout 5 to 8 inches long.

Accessibility: Logging road provides access from mile 0.5 to 1.2. Fisher Creek Trail is obscure and not reliable.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Appears to be a good trout stream.

October 13, 1964

Surveyor: Thompson

Stream: Packard Creek

Mouth at: T. 22S, R. 3E, Sec. 21

Tributary to: Middle Fork Willamette River (Hills Creek Reservoir)

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

At 1 mile

Width (Feet)

4

12

Total Stream Length (nearest 0.25 mile): 5.0 (lower 2.0 miles surveyed)

Bottom Type: Bedrock, boulder and rubble. Good gravel was negligible. There are 75 square yards of marginal salmon & steelhead spawning gravel.

Riffle-pool Ratio:

Riffle

Pool

Percentage

80

20

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:00 a.m.	51	55	2.0	Mouth
			3.5	2 miles

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: Two cascades 4 feet high. One occurs within a logjam at mile 1.5.

Logjams: Two logjams, one small and one medium-sized. Both are passable.

Fish Species Present: A few native cutthroat trout; dace.

Accessibility: Forest Service trail parallels creek for about 2 miles.

Watershed Cover: Mixed broadleaf and conifers.

Comments:

0.0 - 2.0 miles

Packard Creek, a tributary to Hills Creek Reservoir, is 5 miles long when the reservoir is full. The average width for the 2 miles surveyed is 12 feet. The flow was 2.0 cfs at the mouth and the water temperature at 10:00 a.m. was 51° F. Watershed cover species include vine maple, alder, big leaf maple, fir, pine, hemlock and cedar. The shade cover over the creek is slight. Bedrock, boulders and rubble characterize the creek bed. A tributary to Packard Creek at mile 2.0 flows from the right at 0.4 cfs. Several smaller, insignificant tributaries were noted throughout the section. There are 75 square yards of gravel suitable for anadromous fish use. Pools 2 to 4 feet deep occur about once every quarter mile. Only one pool 6 feet deep occurs in the first 2 miles. There are two logjams; the

(more)

Packard Creek continued.

first at mile 1.0 is small and passable, the second at mile 1.5 is medium-sized and passable in itself except for a 4-foot cascade within it that is impassable. Another cascade near mile 1.5 is 4 feet high and impassable at the current flow. The gradient is moderate to steep. Native cutthroat trout 6 to 9 inches long were seen and sampled in the upper half-mile of the survey. A Forest Service trail provides access to the stream up to a point about 2.0 miles above the reservoir. Packard Creek lies within the boundaries of the Willamette National Forest. The water lacked any sign of turbidity. Riffle-pool ratio is 80:20.

September 2, 1964

Surveyor: Thompson

Stream: Pine Creek

Mouth at: T. 23S, R. 3E, Sec. 21

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

4

Total Stream Length (nearest 0.25 mile): 3.0 (lower 0.5 mile surveyed)

Bottom Type: Boulder and rubble. Gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:30 a.m.	52	55	0.3	0.5 mile above mouth

Gradient: Steep.

Possible Limiting Factors:

Falls: 4-foot falls from lower end of culvert where road crosses the creek near mouth.

Fish Species Present: Many native cutthroat trout 5 to 7 inches long.

Accessibility: Logging road parallels lower half-mile of creek.

Watershed Cover: Predominantly coniferous.

Comments: Is of moderate value for trout.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Rock Creek

Mouth at: T. 20S, R. 2E, Sec. 21

Tributary to: Middle Fork Willamette River (Lookout Point Reservoir)

Stream System: Willamette

County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 1 mile (cursory survey).

Bottom Type: Bedrock and boulder. Gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature(°F.) Water	Air	Flow (cfs)	Location
			less than 0.1	Mouth

Gradient: Very steep.

Possible Limiting Factors: Low flow and steep gradient.

Accessibility: At mouth only by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Is of no value to game fish.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Rolling Riffle Creek

Mouth at: T. 19S, R. 1E, Sec. 33

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width(Feet) 3

Total Stream Length (nearest 0.25 mile): 2.5 (spot check near mouth)

Bottom Type: Rubble and boulder. Gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
4:00 p.m.	55	58	0.1	Mouth

Gradient: Moderate.

Possible Limiting Factors: Low flows.

Accessibility: Only at mouth by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Value is limited by low flow.

August 18 and 24, 1964

Surveyors: Thompson, et al

Stream: Salmon Creek

Mouth at: T. 21S, R. 3E, Sec. 16

Tributary to: Middle Fork Willamette River

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 9 miles</u>	<u>At 18 miles</u>
Width (Feet)	200	40	20
Total Stream Length (nearest 0.25 mile):	23.5 (lower 21.0 miles surveyed).		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	475 (trout) 2,300 (salmon)	588 (trout) 4,946 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	92	8	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
9:15 a.m.	55	57	120	Mouth
3:00 p.m.	49	71	80	9 miles
12:00 noon	49	62	20	18 miles

Gradient: Moderate.

Possible Limiting Factors:

Falls: 3-foot sloped concrete spillway at mile 2.5. Salmon Creek Falls at mile 5.6 (10-foot falls with 9/10 of the flow, 6-foot cascade with 1/10 of the flow).

Logjams: Medium-sized logjam at mile 18.0. Passage may be difficult for anadromous fish at low flows.

Fish Species Present: Native cutthroat trout 5 to 8 inches long are abundant.

Accessibility: Good access provided by logging roads up to the mouth of Ranger Creek.

Watershed Cover: Mixed broadleaf and conifers adjacent to creek; conifers predominate.

Comments: Except for Salmon Creek Falls at mile 5.6, there are 20 to 30 miles of moderately good stream passable by all game fish.

0.0 - 3.0 miles

Salmon Creek enters Middle Fork Willamette River at Oakridge, Oregon. It is 23.5 miles long. Upper Salmon Lake marks its headwaters. The width at the mouth is

(more)

Salmon Creek

0.0 - 3.0 miles continued

200 feet and the flow about 120 cfs. The water temperature at 9:15 a.m. on August 18 was 55° F. The watershed consists of mixed broadleaf and conifers adjacent to the creek, and conifers as the predominant species higher on the watershed. There is no shade cover in this section. Rubble and silt characterize the creek bottom. The water supplies for OSGC and OFC fish hatcheries at Oakridge are taken from Salmon Creek at mile 2.5 and return at mile 0.9. There are 100 square yards of good and 60 square yards of marginal trout spawning gravel, and 70 square yards of good and 400 square yards of marginal salmon and steelhead spawning gravel in the section. A large amount of gravel which perhaps could be utilized by chinook salmon or steelhead is also present. There are four pools 4 feet deep. A 3-foot sloped concrete spillway at the hatchery water intake could be a significant obstruction during low flows. The stream gradient is slight. Highway 58 crosses Salmon Creek 200 yards above the mouth. A railroad trestle crosses the creek at mile 1.0. The stream is wide (average 60 feet) and shallow, and the water is clear. Except for the first mile, Salmon Creek runs entirely through Willamette National Forest land. The lower mile of Salmon Creek is probably adjacent to privately owned and/or publicly owned land. Riffle-pool ratio is 85:15. Flat Cr. enters from the right at mile 2.1. Its flow was 0.1 cfs.

3.0 - 6.0 miles

The mean width is 40 feet and the flow at mile 3.0 was about 120 cfs. At 12:30 p.m. the water temperature was 51° F. Alder and mixed conifers constitute the watershed vegetation. There is little shade cover along this section. The creek bed consists of boulders and rubble with some silt. There are 200 square yards of good and 330 square yards of marginal trout spawning gravel, and 1,300 square yards of good and 1,600 square yards of marginal salmon and steelhead spawning gravel. Eighteen pools 3 feet deep, sixteen 4 feet deep, one 5 feet deep and two 7 feet deep are present. There were many pools 1 to 2 feet deep. The only obstruction to fish passage is Salmon Creek Falls at mile 5.6. It consists of two separate spills. Nine tenths of its flow spills over a falls 10 feet high. The other one tenth spills over a 6-foot cascade 15 feet long and 25 feet wide. Both the cascade and the falls have deep jump pools below. During high flows most anadromous fish would not be seriously impeded. The stream gradient is slight to moderate. Accessibility is fair to good by logging roads up to the confluence of Ranger Creek at mile 19.9. Riffle-pool ratio is 90:10.

Tributaries include Slide Creek at mile 4.4, Needle Creek at mile 5.4 and Alluvial Creek at mile 5.8. All three have flows of less than 0.2 cfs.

6.0 - 9.0 miles

The mean width is 40 feet and the flow at mile 6.0 was about 100 cfs. At 2:00 p.m. the water temperature was 51° F. Mixed broadleaf and conifers border the creek banks while stands of conifers predominate higher on the adjacent slopes. Shade cover is completely lacking. Rubble, gravel and some silt characterize the creek bed material. There are 50 square yards of good and 30 square yards of marginal trout spawning gravel, and 150 square yards of good and 950 square yards of marginal salmon and steelhead spawning gravel. Six pools 3 feet deep, eighteen 4 feet deep and one 8 feet deep occur. A medium-sized logjam is a potential obstruction to fish passage. There are falls 2 and 3 feet high, and a 4-foot cascade 15 feet long. The stream gradient is moderate. Much of this section is practically inaccessible

(more)

Salmon Creek

6.0 - 9.0 miles continued

due to the steep slopes adjacent to the creek. Riffle-pool ratio is 95:5.

Shitepoke Creek and Polallie Creek are the only named tributaries. Neither has flows of more than 0.1 cfs.

9.0 - 12.0 miles

The average width is 50 feet and the flow at mile 9.0 was about 80 cfs. At 3:00 p.m. the water temperature was 49° F. The watershed vegetation is not appreciably different from the previous section. Shade cover is lacking. Rubble, boulders and gravel with some silt constitute the bottom material. There are 120 square yards of marginal trout spawning gravel, and 380 square yards of good and 1,780 square yards of marginal salmon and steelhead spawning gravel. Pools 3 to 5 feet deep occur about every 200 yards. There are no obstructions to fish passage. The stream gradient is moderately steep. Native cutthroat 5 to 7 inches long were common. The water to this point is clear. The riffle-pool ratio is 85:15.

Eagle Butte, Wall, Sitkum, Tillicum, Warble and Moss Creeks are the tributaries in this section. The specifications of each are covered on separate forms.

12.0 - 15.0 miles

The average width is 20 feet and the flow at mile 12.0 was 50 cfs. At 10:15 a.m. the water temperature was 50° F. A slight shade cover is provided by the alder, vine maple, big leaf maple and mixed conifers bordering the creek. Conifers predominate the watershed, however. The creek bed consists mainly of boulders and rubble. There are 40 square yards of good trout spawning gravel, and 220 square yards of good and 80 square yards of marginal salmon and steelhead spawning gravel. Pools 2 to 3 feet deep occur about every 100 yards. Falls 2 to 3 feet high occur about every 30 yards. The stream gradient is steep. Native cutthroat trout 5 to 8 inches long exist towards the upper end of this section. Fallen logs span the creek every 30 or 40 yards but offer no obstruction to fish passage. Riffle-pool ratio is 95:5.

Tributaries in this section include Trapper, Crevice, Halo, Kelsey, Black, Mule, Curley and Boomer Creeks. Kelsey Creek and Mule Creek were flowing at about 3 cfs, while Black Creek had a flow of 80 cfs. The other tributaries had flows of less than 1.0 cfs.

15.0 - 18.0 miles

The average width of this section is 20 feet. The flow at mile 15.0 was about 25 cfs and the water temperature at 2:00 p.m. was 49° F. The moderate shade cover and watershed vegetation consist almost entirely of conifers. Rubble and boulders constitute the creek bed material. Seventy square yards of good and 40 square yards of marginal trout spawning gravel, and 180 square yards of good and 125 square yards of marginal salmon and steelhead spawning gravel are found in this section. There are many pools 1 to 2 feet deep, seven 3 feet deep and five 4 feet deep. Three 1-foot cascades and three small passable logjams may hinder fish passage. The stream gradient is moderate to steep. Native cutthroat trout 6 to 8 inches long were observed throughout the section. Salmon Creek Trail, which roughly

(more)

Salmon Creek continued

15.0 - 18.0 miles continued

parallels the creek at a distance of 200 to 300 yards, provides access from the confluence of Furnish Creek to a point where a logging road on the opposite side of the stream converges upon Salmon Creek at the confluence of Ranger Creek. Riffle-pool ratio is 90:10.

There are four tributaries in this section. Furnish Creek had a flow of 17 cfs while the others had flows of less than 1.0 cfs.

18.0 - 21.0 miles

The average width is 20 feet and the flow was about 20 cfs. At 12:00 noon the water temperature was 49° F. The moderate to dense shade cover and watershed vegetation are predominantly mixed conifers. Rubble, boulders and bedrock typify the creek bed. There are 15 square yards of good and 8 square yards of marginal trout spawning gravel, and 11 square yards of marginal salmon and steelhead spawning gravel. This section contains many pools 1 to 2 feet deep. Pools 3 to 5 feet deep occur about every 200 yards. Cascades 1 to 2 feet high occur about every 80 yards. A cascade 10 feet high and 50 feet long and another 8 feet high and 40 feet long occur at mile 18.2. These may be impassable to fish. There are nine small passable logjams and one medium-sized jam which appears impassable. The stream gradient is moderate to steep. Native cutthroat trout 5 to 8 inches long were observed throughout the section. The water is clear. Riffle-pool ratio is 95:5.

Ranger Creek at mile 19.0 is the only significant tributary.

August 25, 1964

Surveyors: H. Roberts and Howerton

Stream: Black Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 32
County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 6 miles</u>	<u>At 12 miles</u>
Width (Feet)	35	12	10
Total Stream Length (nearest 0.25 mile): 14 to Waldo Lake (lower 11.0 miles surveyed)			

Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	430 (trout) 420 (salmon)	290 (trout) 1,480 (salmon)
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	80	20

Water Temperature and Flow Data:

	Temperature (°F.)		Flow	
<u>Time</u>	<u>Water</u>	<u>Air</u>	<u>(cfs)</u>	<u>Location</u>
3:15 p.m.	53	61	80	Mouth
1:15 p.m.	52	61		3 miles
10:00 a.m.	46	59	8	11 miles

Gradient: Moderate to steep. Very steep in some sections.

Possible Limiting Factors:

Falls: Falls and cascades 2 to 4 feet high are numerous.

Logjams: There are some logjams but all are passable.

Fish Species Present: Native cutthroat trout.

Accessibility: Gravel-surfaced road runs parallel with stream for 11 miles providing excellent access.

Watershed Cover: Predominantly coniferous with some mixed broadleaf species.

Comments: Apparently has all the qualities of a moderately good trout stream. Black Creek may also have limited value for anadromous fish.

0.0 - 4.0 miles

Black Creek, tributary to Salmon Creek, is 14 miles long and enters from the left at stream mile 14.5. It is 35 feet wide at the mouth and has an average width of 15 feet for the first 6 miles. A tunnel from Waldo Lake to upper Black Creek was constructed (but apparently never used) to supply water for downstream power generation. This was recently sealed with concrete by the Forest Service.

(more)

Black Creek

0.0 - 4.0 miles continued

The entire creek lies within the boundaries of the Willamette National Forest. At 3:15 p.m. the water temperature at the mouth was 53° F. and the air temperature was 51° F. The moderate shade cover and watershed vegetation consist of conifers with some mixed broadleaf varieties. Rubble, boulders and bedrock characterize the creek bed. There are 100 square yards of good and 115 square yards of marginal trout spawning gravel, and 270 square yards of good and 750 square yards of marginal salmon and steelhead spawning gravel. Pools 1 to 3 feet deep occur about every 30 yards, pools 3 to 4 feet deep every 70 yards, and pools over 4 feet deep about every 0.5 mile. The only obstructions to fish passage would be the 3 to 4-foot cascades and falls in places where the gradient temporarily becomes steep. Native cutthroat trout were observed throughout this section. The gravel-surface road that runs parallel to the creek for 11 miles provides excellent access. The riffle-pool ratio is 90:10.

There are three tributaries to Black Creek in this section. One at mile 2.5 has a flow of 3 cfs and a steep gradient and the other two flow less than 0.3 cfs.

4.0 - 8.0 miles

This section of Black Creek has an average width of 12 feet. At 1:00 p.m. the water temperature was 52° F. and the air temperature 61° F. The watershed and shade cover are predominantly coniferous with some mixed broadleaf varieties. The creek bed is composed of rubble, boulders and bedrock with some gravel. No tributaries of significant size were noted. There are 70 square yards of good and 65 square yards of marginal trout spawning gravel, and 70 square yards of good and 130 square yards of marginal salmon and steelhead spawning gravel. Pools 1 to 3 feet deep occur about every 50 yards and those over 4 feet deep about every 150 yards. The occasional steep gradient causes numerous cascades 2 to 4 feet high. There are two passable logjams. None of these are absolute barriers to fish passage. From stream mile 5.0 to 7.0 the creek is almost entirely bedrock channel 10 to 12 feet wide. Native cutthroat trout are common. Riffle-pool ratio is 70:30.

8.0 - 11.0 miles

The average stream width is 10 feet. At stream mile 11.0 the flow was 8.0 cfs. At 10:00 a.m. the water temperature was 46° F. and the air temperature 61° F. This section has a heavy shade cover of mixed broadleaf and conifers. The watershed is predominantly coniferous. The creek bed consists of bedrock and boulders with some large patches of gravel. Spawning gravel includes 260 square yards of good and 115 square yards of marginal for trout, and 80 square yards of good and 600 square yards of marginal for salmon and steelhead. Pools 1 to 3 feet deep occur about every 30 yards and pools 4 feet and deeper about every 0.5 mile. Black Creek flattens into a broad swamp about 0.5 mile long at mile 9.5. No barriers to fish passage were evident here. Throughout much of the section the gradient is steep with numerous falls and cascades 2 to 4 feet high. Native cutthroat trout are common up to mile 11.0. Due to the increased gradient the stream has lost most of its value for spawning purposes, as well as its over-all value for game fish. From stream mile 11.0 to the headwaters the main flow rapidly attenuates. Riffle-pool ratio is 70:30.

Several tributaries enter but only one is of significant size. Its flow was 1.0 cfs, but because of steep gradient and no spawning gravel a thorough survey was not merited.

August 24, 1964

Surveyor: Thompson

Stream: Boomer Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 32
County: Lane

Characteristics: At Mouth

Width (Feet) 4

Total Stream Length (nearest 0.25 mile): 2.0 (spot check near mouth)

Bottom Type: Rubble and boulder. Gravel is negligible.

Water Temperature and Flow Data: Less than 0.1 cfs at the mouth.

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flows.

Accessibility: Logging roads provide access to creek at miles 0.1 and 1.2.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the values.

August 24, 1964

Surveyor: Thompson

Stream: Crevice Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 31
County: Lane

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.5 (cursory survey near mouth)

Bottom Type: Boulder. Gravel is negligible.

Water Temperature and Flow Data: Less than 0.1 cfs at the mouth.

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging roads provide access to Crevice Creek at several points.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the value of Crevice Creek.

August 24, 1964

Surveyor: Thompson

Stream: Curley Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 32
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Boulder. Gravel is negligible.

Water Temperature and Flow Data: Less than 0.1 cfs at the mouth.

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging roads provide good access at several points on the creek.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the value of Curley Creek.

August 24, 1964

Surveyor: Thompson

Stream: Delate Creek

Mouth at T. 20S, R. 5E, Sec. 34

Tributary to: Salmon Cr.

County: Lane

Stream System: Willamette (upper)

Characteristics: At 0.5 mile

Width (Feet) 0.5

Total Stream Length (nearest 0.25 mile): 2.0 (spot checked at mile 0.5)

Bottom Type: Gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	58		0.7	mile 0.5

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flows.

Accessibility: Logging road provides access to creek at mile 0.5.

Watershed Cover: Predominantly coniferous.

Comments: Bottom material largely boulder and rubble.

August 18, 1964

Surveyor: Thompson

Stream: Eagle Butte Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 34
County: Lane

Characteristics: At Mouth

Width (Feet) 6

Total Stream Length (nearest 0.25 mile): 2.75 (spot check near mouth)

Bottom Type: Boulder. Gravel is negligible.

Water Temperature and Flow Data

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:00 p.m.	51	57	0.7	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient.

Accessibility: By logging road to a point at stream mile 0.2.

Watershed Cover: Coniferous.

Comments: May have some value for trout but because of the steep gradient and probable difficult passage, the value of the stream is limited.

August 18, 1964

Surveyor: Thompson

Stream: Flat Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 21S, R. 3E, Sec. 12
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 3.0 (lower 0.3 mile surveyed)

Bottom Type: Gravel and sand. Gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:35 p.m.	53	57	0.2	Mouth

Gradient: Slight at mouth.

Possible Limiting Factors: Low flows limit value.

Accessibility: By logging road crossing at miles 0.3 and 1.5.

Watershed Cover: Mixed broadleaf and conifers.

August 24, 1964

Surveyors: H. Roberts and Howerton

Stream: Furnish Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 34
County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 1.5</u>
Width (Feet)	20	8
Total Stream Length (nearest 0.25 mile): 5.25 to Gander Lake (lower 1.5 miles surveyed)		

Bottom Type: Bedrock and boulder		
	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	10 (trout) 30 (salmon)	20 (trout) 100 (salmon)

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	95	5

Water Temperature and Flow Data:

	Temperature (°F.)		Flow	
<u>Time</u>	<u>Water</u>	<u>Air</u>	<u>(cfs)</u>	<u>Location</u>
1:30 p.m.	49	61	17	Mouth

Gradient: Steep.

Possible Limiting Factors:

Falls: Many 2- to 4-foot cascades and falls.

Other: Steep gradient and lack of adequate spawning gravel.

Fish Species Present: Native cutthroat trout, many 5 to 7 inches in length.

Accessibility: Logging road provides fair access to lower 3.5 miles of the creek.

Watershed Cover: Coniferous. Mixed broadleaf adjacent to the creek.

Comments: The steep gradient and lack of spawning gravel limit the value of Furnish Creek.

August 24, 1964

Surveyor: Thompson

Stream: Halo Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 31
County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 0.5 mile (spot check near mouth)

Bottom Type: Rubble and boulder. Gravel amount is negligible.

Water Temperature and Flow Data: Stream was dry at the mouth.

Gradient: Steep.

Possible Limiting Factors: No flow and steep gradient.

Accessibility: Logging roads provide access to points on stream at miles 0.1 and 0.4.

Watershed Cover: Coniferous.

Comments: Because of the lack of flow and steep gradient, Halo Creek has no value for game fish.

August 25, 1964

Surveyor: Thompson

Stream: Kelsey Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 31
County: Lane

Characteristics: At Mouth

Width (Feet)

6

Total Stream Length (nearest 0.25 mile): 6.0 (spot check near mouth)

Bottom Type: Rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
4:00 p.m.	60		3.0	Mouth

Gradient: Moderate.

Accessibility: Logging road provides access to lower 0.3 mile.

Watershed Cover: Coniferous.

Comments: Kelsey Creek has a sufficient flow to be of moderate value to trout.

August 18, 1964

Surveyor: Thompson

Stream: Moss Creek

Mouth at: T. 20S, R. 4E, Sec. 36

Tributary to: Salmon Creek

County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

6

Total Stream Length (nearest 0.25 mile): 3.0 (spot check near mouth)

Bottom Type: Boulder and rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:30 p.m.			0.5	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging roads provide access to most of creek.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the value of Moss Creek.

August 24, 1964

Surveyor: Thompson

Stream: Mule Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 31
County: Lane

Characteristics: At Mouth

Width (Feet) 8

Total Stream Length (nearest 0.25 mile): 3.0 (spot check near mouth)

Bottom Type: Rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
10:15 a.m.	54	61	3.0	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient beginning at stream mile 1.0.

Accessibility: Logging road provides access to stream at several points.

Watershed Cover: Coniferous.

Comments: The steep gradient limits the value of Mule Creek.

August 18, 1964

Surveyor: Thompson

Stream: Needle Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 7
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.25 (spot check near mouth)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.) Water	Air	Flow (cfs)	Location
4:00 p.m.	52	57	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: By logging road to miles 0.1 and 0.3.

Watershed Cover: Primarily mixed conifers.

Comments: Low flows and steep gradient limit value.

August 24, 1964

Surveyor: Thompson

Stream: Pitch Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 5E, Sec. 33
County: Lane

Characteristics: At Mile 0.2

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.0 mile (spot checked at mile 0.2)

Bottom Type: Good Gravel Marginal Gravel

Square Yards Negligible Negligible

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:50 p.m.	57		0.5	Mile 0.2

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging roads provide access to creek at mile 0.2 and again at the headwaters.

Watershed Cover: Predominantly coniferous.

Comments: Bottom material is largely boulder and rubble.

August 18, 1964

Surveyor: Thompson

Stream: Polallie Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 33
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 0.75 (spot check near mouth)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:15 p.m.	53		0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flow.

Accessibility: From miles 0.1 to 0.3 by logging road.

Watershed Cover: Coniferous.

Comments: Low flow and steep gradient limit value of the stream.

August 25, 1964

Surveyor: Arp

Stream: Ranger Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 21S, R. 5E, Sec. 1
County: Lane

Characteristics: At Mouth At 0.25 mile

Width (Feet) 10 8

Total Stream Length (nearest 0.25 mile): 3.0 (lower 0.3 mile surveyed)

Bottom Type: Rubble and boulders. Amount of gravel is negligible.

Riffle-pool Ratio: Riffle Pool

Percentage 98 2

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
2:30 p.m.	52	51	5	Mouth

Gradient: Steep.

Possible Limiting Factors:

Falls: Cascade 50 feet long and 15 feet high impassable to fish.

Logjams: One large logjam at mile 0.3 has an 8-foot water head and is impassable.

Other: Steep gradient would hinder fish passage.

Fish Species Present: Many native cutthroat trout 5 to 7 inches long.

Accessibility: A logging road provides access to the mouth only.

Watershed Cover: Coniferous.

Comments: The gradient is too steep to merit further investigation beyond the 0.3-mile section surveyed above the mouth.

August 18, 1964

Surveyor: Thompson

Stream: Shitepoke Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 5
County: Lane

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.25 (spot check near mouth)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	53		0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flows.

Accessibility: At mouth by logging road.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit value.

August 18, 1964

Surveyor: Thompson

Stream: Sitkum Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 35
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile) 1.25 (spot check near mouth)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:00 p.m.	54		0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging road to miles 0.2, 0.5 and 1.0.

Watershed Cover: Primarily coniferous.

Comments: The steep gradient and low flow limit stream value.

August 18, 1964

Surveyor: Thompson

Stream: Slide Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 7
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.25 (spot check near mouth)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
4:00 p.m.	52	57	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flows limit value.

Accessibility: Logging road crosses creek near mouth.

Watershed Cover: Primarily mixed conifers.

August 18, 1964

Surveyor: Thompson

Stream: Tillicum Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 35
County: Lane

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.25 (spot check near mouth)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flow.

Accessibility: Logging road to stream miles 0.2 and 0.5.

Watershed Cover: Coniferous.

Comments: Steep gradient and low flows limit value.

August 24, 1964

Surveyor: Thompson

Stream: Trapper Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 36
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 2.75 (spot check near mouth)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging roads provide access to several points on Trapper Creek.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the value of Trapper Creek.

August 24, 1964

Surveyor: Thompson

Stream: Triangle Creek

Mouth at: T. 20S, R. 5E, Sec. 34

Tributary to: Salmon Creek

County: Lane

Stream System: Willamette (Middle Fork-upper)

Characteristics: At mile 0.4

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.0 (spot checked at mile 0.4)

Bottom Type: Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F)		Flow (cfs)	Location
	Water	Air		
1:10 p.m.	58		0.5	Mile 0.4

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flows.

Accessibility: Logging roads provide access to creek at mile 0.4 and again at the headwaters.

Watershed Cover: Predominantly coniferous.

Comments: Bottom material largely boulder and rubble.

September 9, 1964

Surveyor: Thompson

Stream: Wall Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 34
County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 1 mile</u>	<u>At 2.5 miles</u>
Width (Feet)	20	15	10
Total Stream Length (nearest 0.25 mile):	7.0 (lower 1.0 mile surveyed, spot checked at mile 2.5 and 2.6)		

Bottom Type: Rubble, bedrock and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
11:15 a.m.	49		5	Mouth

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: Many small cascades and falls may hinder passage.

Fish Species Present: Cutthroat trout, cottids,

Accessibility: Logging road parallels creek for first 0.5 mile. From mile 2.5 to headwaters, logging roads provide good access.

Watershed Cover: Primarily coniferous.

August 18, 1964

Surveyor: Thompson

Stream: Warble Creek
Tributary to: Salmon Creek
Stream System: Willamette

Mouth at: T. 20S, R. 4E, Sec. 36
County: Lane

Characteristics: At Mouth At mile 0.7

Width (Feet) 10 6

Total Stream Length (nearest 0.25 mile): 3.0 (spot checked at mouth and mile 0.7)

Bottom Type: Amount of gravel is negligible.

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
3:00 p.m.	48		2.0	Mouth

Gradient: Moderate to steep. Steep above mile 0.7.

Possible Limiting Factors: Steep gradient above mile 0.7.

Accessibility: Logging road provides access to section of stream from mile 0.5 to 0.7 above the mouth.

Watershed Cover: Predominantly coniferous.

Comments: Bottom material is largely rubble.

August 3, 4, 7, 20 and 21, 1964

Surveyors: Thompson and others

Stream: Salt Creek

Mouth at: T. 21S, R. 3E, Sec. 22

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 10 miles</u>	<u>At 24 miles</u>
Width (Feet)	40	20	9
Total Stream Length (nearest 0.25 mile):	33.0 (lower 27.5 miles surveyed)		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	337 (trout)	205 (trout)	
	1,782 (salmon)	1,703 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	87	13	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:15 a.m.	56	67	165	Mouth
11:00 a.m.	52	62	90	10.5 miles
10:00 a.m.	50	67	12	24.4 miles

Gradient: Moderate.

Possible Limiting Factors:

Falls: Salt Creek Falls at mile 22.4 is 286 feet high. There is a 15-foot cascade at mile 21.6, a 12-foot cascade at mile 25.6, and a 9-foot falls at mile 26.5.

Logjams: Four impassable logjams between stream miles 25.9 and 27.1.

Other: Two swamps where the flow is divided into several small channels near miles 24.5 and 25.5.

Fish Species Present: Many native cutthroat trout up to 10 inches long; hatchery-reared rainbow trout.

Accessibility: Access good from Highway 58 except between miles 17.5 to 22.4 and 25.9 to 27.5.

Watershed Cover: Mixed broadleaf and conifers.

Comments: The physical features of Salt Creek offer a fair potential for anadromous fish and good potential for trout. Almost 30 miles of stream and 1,372 square yards of good and 1,567 square yards of marginal salmon and steelhead spawning gravel are available. Because Highway 58 parallels the stream for almost its entire length, access for fishing is excellent.

(more)

Salt Creek, 0.0 to 5.0 miles

Salt Creek, a tributary to the Middle Fork Willamette River at Oakridge, is 33.0 miles long. It is 40 feet wide at the mouth and had a flow of 165 cfs on August 3, 1964. At 11:15 a.m. the water temperature was 56° F. and the air temperature 67° F. The watershed vegetation adjacent to the creek consists of alder, willow, maple and mixed conifers. The watershed above the stream is predominantly coniferous. Boulders and rubble constitute the creek bed material. This section of Salt Creek contains 101 square yards of good and 70 square yards of marginal trout spawning gravel, and 490 square yards of good and 1,064 square yards of marginal salmon and steelhead spawning gravel. There are pools 3 to 4 feet deep about every 100 yards and pools 4 to 5 feet deep about every 200 yards. The gradient is slight to moderate. Hatchery-reared rainbow trout and native cutthroat trout were seen throughout the section. There are no obstructions to fish passage. The entire creek lies within Willamette National Forest land. Highway 58 provides easy access. The riffle-pool ratio is 95:05.

Tumble Creek enters from the left at mile 3.9. It is the only named tributary to Salt Creek in this section. Like many other tributaries to this stream, Tumble Creek is relatively short and steep. It is dry during the summer. Even at higher flows, cascades and falls would hinder fish passage.

5.0 - 10.5 miles

In this section Salt Creek had an average width of 20 feet. The flow at mile 5.0 was about 120 cfs. At 2:40 p.m. the water temperature was 58° F. and the air temperature 70° F. The watershed vegetation and degree of shade cover have been fairly consistent with those in the first section. The bottom material consists mostly of boulders and rubble. Pools 3 to 4 feet deep occur about every 150 yards and pools 4 to 5 feet deep about every 200 yards. Log and debris accumulations have altered the flow in some places and improved fish habitat by forming holes and pools. These accumulations have not obstructed fish passage. The stream gradient is slight to moderate. Hatchery-reared rainbow trout and native cutthroat trout were seen throughout the section. Blue Pool Forest Camp is located at mile 8.6. The fishing pressure is probably heaviest at this point in the section. There are 85 square yards of good and 66 square yards of marginal trout spawning gravel, and 700 square yards of good and 398 square yards of marginal salmon and steelhead spawning gravel. The riffle-pool ratio is 90:10.

Sage, Pepper, Sugar, Gobel, Basin, Fin Roberts, Warner and McCredie Creeks are tributaries to Salt Creek in this section. All had flows of 1.0 cfs or less and have steep gradients. Each tributary is covered individually on separate forms.

10.5 - 17.4 miles

The mean width of Salt Creek remains at 20 feet throughout this section. The section was broken at 17.4 miles because it is here that access is limited and fishing pressure is probably light from here up to Salt Creek Falls. The flow at mile 10.5 was 90 cfs and the water temperature at 11:00 a.m. was 52° F. Broadleaf vegetation is typical along the creek banks while conifers predominate on the watershed. The shade cover remains sparse. Rubble characterizes the creek bed material. Sixteen square yards of good and 2 square yards of marginal trout spawning gravel, and 163 square yards of good and 65 square yards of marginal salmon and steelhead spawning gravel were recorded. Pools 3 to 4 feet deep occur approximately every 150 yards. There are no obstructions to fish passage. The

(more)

Salt Creek continued

10.5 - 17.4 miles continued

stream gradient is moderate to steep. Rainbow and native cutthroat trout were observed in this section. Highway 58 parallels Salt Creek up to the end of this section, never straying more than 200 yards from the creek. Riffle-pool ratio is 90:10.

Tributaries to Salt Creek in this section include Eagle Creek, Coyote Creek, South Fork Salt Creek and Swamp Creek. All are covered in detail on separate forms.

17.4 - 22.4 miles

This section has an average width of 15 feet. The flow was 50 cfs and the water temperature at 11:10 a.m. was 52° F. Salt Creek Falls is located at mile 22.4. The slight shade cover over the creek consists of vine maple and mixed conifers, while conifers predominate as watershed vegetation. Boulders and rubble characterize the bottom. Pools 2 to 3 feet deep occur approximately every 150 yards. Due to the moderate to steep gradient, rapids and cascades are frequent. A cascade 5 feet high occurs near the middle of this section and a 10-foot cascade occurs near the upper end of the section. There is a cascade 40 feet high just downstream from Salt Creek Falls. Three of 8 logjams in this section are impassable at the current flow. One of these occurs at mile 16.2 and the other two are at mile 17.5. There are 29 square yards of good and 9 square yards of marginal trout spawning gravel, and 19 square yards of good and 40 square yards of marginal salmon and steelhead spawning gravel. Native cutthroat trout were seen throughout. Salt Creek is practically inaccessible in this section due to the location of Highway 58 high above the creek. Evidence of this section having been fished was completely lacking. Riffle-pool ratio is 95:05.

Twin and Diamond Creeks enter Salt Creek at mile 17.4 and 22.0, respectively. These are covered in detail on separate sheets.

22.4 - 25.9 miles

The mean width of Salt Creek in this section is 30 feet. The flow at mile 22.5 was 30 cfs and the water temperature at 10:00 a.m. was 51° F. Except for two swamps at miles 24.5 and 25.5, the watershed consists of sparse mixed broadleaf and conifers adjacent to the creek and conifers at higher elevations. Shade cover is sparse. Boulders, rubble and some bedrock typify the bottom material. There are 106 square yards of good and 46 square yards of marginal trout spawning gravel, and 410 square yards of good and 136 square yards of marginal salmon and steelhead spawning gravel. Pools include 19 one foot deep, 28 two feet deep, 21 three feet deep, 5 four feet deep, and 2 five feet deep. Obstructions to fish passage include Salt Creek Falls (286 feet high) at mile 22.4, a cascade 70 yards long with a 45 percent slope at mile 31.6, a steep section of cascades and falls at mile 23.6, and two swamps where the flow is divided into several channels making the volume in each very small. The stream gradient is generally moderate. native cutthroat trout were seen throughout the section. Highway 58 provides fair access to this entire section. Riffle-pool ratio is 70:30.

Fuji and Deer Creeks are tributaries, but neither has much value for trout.

(more)

Salt Creek continued

25.9 - 27.5 miles

The mean width of Salt Creek in this section is 9 feet. The flow at mile 25.9 was 12 cfs on August 20 and the water temperature at 10:00 a.m. was 50° F. Alder and maple predominate on the creek banks, while conifers are common higher on the watershed. The creek bed consists of boulders, silt and some rubble and bedrock. The entire section contains only 12 square yards of marginal trout spawning gravel. Pools two to three feet deep occur approximately every 100 yards. Obstructions include a 12-foot cascade in two steps at mile 24.5, two 4-foot cascades, a 2-foot falls, and a 9-foot falls with a jump pool 3 feet deep at mile 26.5. There are also 11 logjams, 4 of which are impassable. The stream gradient is moderate up to 0.25 mile downstream from Gold Lake (mile 27.5) where it becomes slight. Native cutthroat trout from fingerling size to 10 inches are abundant throughout this section. Highway 58 crosses Salt Creek for the last time at mile 25.9. Gold Lake marks the end of the section surveyed. The stream was not surveyed above Gold Lake. The flow from Gold Lake was 3 cfs on August 20, 1964. Riffle-pool ratio was 80:20.

There are no named tributaries in this section. The drainage from Marilyn Lakes contributes less than 0.1 cfs to Salt Creek.

September 9, 1964

Surveyor: Thompson

Stream: Basin Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 27
County: Lane

Characteristics: At Mouth

Width (Feet) 5

Total Stream Length (nearest 0.25 mile): 2.5 (spot check near mouth)

Bottom Type: Boulder and rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.) Water	Air	Flow (cfs)	Location
1:00 p.m.	47	55	0.8	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient causes many cascades and falls.

Accessibility: Highway 58 provides access to the mouth. Gobel Creek road provides access to the headwaters.

Watershed Cover: Coniferous.

Comments: Low flow and steep gradient limit the value of the creek.

September 9, 1964

Surveyor: Thompson

Stream: Coyote Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 22S, R. 5E, Sec. 8
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 2.0 (spot check at mouth)

Bottom Type: Boulder and rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:30 p.m.	52	55	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flows.

Accessibility: Accessible at mouth only by Highway 58 on opposite side of Salt Creek.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the value of the stream.

September 9, 1964

Surveyors: H. Roberts and Howerton

Stream: Eagle Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 22S, R. 5E, Sec. 8
County: Lane

Characteristics:	<u>At Mouth</u>	<u>At 2 miles</u>	<u>At 3.5 miles</u>
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Width (Feet)	25	15	10
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Total Stream Length (nearest 0.25 mile): 5.0 (lower 3.5 miles surveyed)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Riffle-pool ratio:	<u>Riffle</u>	<u>Pool</u>
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Percentage	95	5
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Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:30 p.m.	42	54	30	Mouth
3:00 p.m.	42	54	10	3.5 miles

Gradient: Steep.

Possible Limiting Factors:

Falls: Many falls and cascades limit fish passage.

Fish Species Present: Cottids and rainbow trout.

Accessibility: Mouth is on Highway 58 and points above may be reached by Eagle Creek road.

Watershed Cover: Coniferous.

Comments: The degree of slope is too steep for easy fish passage.

September 9, 1964

Surveyor: Thompson

Stream: Fin Roberts Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 35
County: Lane

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Boulder and rubble. Amount of gravel is negligible.

Water Temperature and Flow Data: Stream was dry at mouth.

Gradient: Steep.

Possible Limiting Factors: Steep gradient.

Accessibility: Mouth is can be reached from Highway 58.

Watershed Cover: Coniferous.

Comments: Low flow and steep gradient limit value for game fish.

September 9, 1964

Surveyor: Thompson

Stream: Gobel Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 27
County: Lane

Characteristics: At Mouth

Width (Feet) 6

Total Stream Length (nearest 0.25 mile): 2.5 (lower 0.1 mile surveyed)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	49	55	1.0	Mouth

Possible Limiting Factors:

Falls: There is a 5-foot falls from the lower end of a culvert that passes under Highway 58. Falls and cascades 1 to 4 feet high are common.

Other: Steep gradient.

Accessibility: Mouth only by Highway 58.

Watershed Cover: Coniferous.

Comments: The steep gradient causes many falls and cascades and is the principal limiting factor. Gobel Creek may have some limited value for trout.

September 9, 1964

Surveyor: Thompson

Stream: McCredie Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 36
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.75 (spot check near mouth)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	49	55	0.2	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient.

Accessibility: Highway 58 and McCredie Creek road provide access to lower 0.25 mile.

Watershed Cover: Coniferous.

Comments: Low flows and steep gradient limit the value of the creek.

September 9, 1964

Surveyor: Thompson

Stream: Pepper Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 28
County: Lane

Characteristics: At Mouth

Width (Feet)

2

Total Stream Length (nearest 0.25 mile): 1.25 (spot check at mouth)

Bottom Type: Boulders. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:30 p.m.	49	55	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Mouth only by Highway 58.

Watershed Cover: Coniferous.

Comments: Low flow and steep gradient limit its value for game fish.

September 9, 1964

Surveyor: Thompson

Stream: Sage Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 28
County: Lane

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:30 p.m.	49	55	0.2	Mouth

Gradient: Very steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Mouth only by Highway 58.

Watershed Cover: Coniferous..

Comments: Sage Creek has little value to game fish because of low flow and extreme gradient.

August 21 and September 9, 1964

Surveyors: Thompson, Hutchison and Christianson

Stream: South Fork Salt Creek

Mouth at: T. 22S, R. 5E, Sec. 21

Tributary to: Salt Creek

County: Lane

Stream System: Willamette

Characteristics:	<u>At Mouth</u>	<u>At 1 mile</u>	<u>At 3 miles</u>
Width (Feet)	8	9	6
Total Stream Length (nearest 0.25 mile):	7.0 (lower 3.9 miles surveyed)		
Bottom Type:	<u>Good Gravel</u>	<u>Marginal Gravel</u>	
Square Yards	821 (trout)	819 (trout)	
	1,958 (salmon)	562 (salmon)	
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>	
Percentage	57	43	

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	54		8.0	Mouth
4:55 p.m.	56	65	7.0	1 mile
1:45 p.m.	46	65	0.5	3 miles

Gradient: Steep at mile 0.9 and from miles 2.9 to 3.9.

Possible Limiting Factors:

Logjams: Four dense logjams between miles 0.9 and 2.9.

Other: At mile 2.1 where the road crosses the creek for a second time, the creek bed contains such loose gravel that the 2.0 cfs flow runs completely under the surface for 100 yards. The culvert under the railroad at mile 0.5 is 150 feet long and has a 5 percent gradient which produces water velocities too high for proper passage during high flows and a depth too shallow for passage during low flows.

Fish Species Present: Many native cutthroat trout, cottids.

Accessibility: Logging road crosses stream at miles 0.9, 2.9 and 3.9. Elsewhere the access is limited.

Watershed Cover: Mixed broadleaf and conifers. More deciduous varieties occur between miles 0.9 and 2.9.

Comments: The section between stream miles 0.9 and 2.9 is an excellent spawning area for trout and salmon. All of the spawning gravel is found in this section. The stream here flows through privately owned land.

(more)

South Fork Salt Creek

0.0 - 0.9 miles

The South Fork of Salt Creek is 6.9 miles long. Its confluence with Salt Creek occurs at mile 15.3. The width at the mouth is 8 feet and the flow was 8.0 cfs. At 1:00 p.m. the water temperature was 54° F. Mixed broadleaf and conifers constitute the moderately dense shade cover and watershed along the creek. Rubble, boulders and bedrock characterize the creek bed material. There is negligible spawning gravel in the first 0.75-mile section. Because of the steep stream gradient this entire section is a series of short riffles and small pools 1 to 3 feet deep, separated by 1- to 3-foot cascades. All of the cascades are passable except during the lowest summer flows. A concrete culvert under the railroad at mile 0.4 is 150 feet long and has a 5 percent gradient. This produces water velocities too high for proper passage during high flows and water depths too shallow for passage during low flows. Native cutthroat trout 5 to 8 inches long were sampled throughout this section. Accessibility is limited at all points except at mile 0.75 where an old logging road crosses the creek. The stream, except between miles 0.75 and 1.75, runs entirely through Willamette National Forest land. The riffle-pool ratio is 95:05.

Tributaries to the South Fork are small and insignificant in value.

0.9 - 2.9 miles

The average width of the creek is 9 feet. The flow at mile 0.9 was 7.0 cfs. At 4:55 p.m. the water temperature was 56° F. The banks are lined with a dense growth of mixed broadleaf vegetation that provides a moderate to dense shade cover over the creek, but also limits access for fishing. The bottom composition is mostly gravel and some sand. There were 821 square yards of good and 819 square yards of marginal trout spawning gravel, and 1,958 square yards of good and 562 square yards of marginal salmon and steelhead spawning gravel. Pools one to two feet deep occur approximately every 30 yards, 3-foot pools approximately every 75 yards, and 4-foot pools approximately every 400 yards. At mile 2.1 where the road crosses the stream for the second time, the creek bed contains gravel so loosely packed that the flow of 2.0 cfs runs completely under the surface for 100 yards. This feature creates a complete barrier to fish passage at this time of year. Four dense debris jams may also obstruct fish passage during low flows. The stream gradient in this section is slight. Native cutthroat trout up to 10 inches long were seen throughout this section. Much of this section of the creek is on private land. Due to the dense growth of vine maple, willow and other native deciduous varieties along the creek, and because the road does not lie close by at this point, access is limited. The riffle-pool ratio is 20:80.

Tributaries to South Fork include Noisy Creek at mile 1.3, and Shady Creek at mile 2.4. Neither had a flow of more than 0.2 cfs. Other unnamed tributaries were likewise insignificant in size and value to game fish.

2.9 - 3.9 miles

The mean width of this section was 6 feet. The flow at mile 3.9 was 0.5 cfs. At 1:45 p.m. the water temperature was 46° F. The moderate shade cover and watershed are composed of mixed conifers. Bedrock and boulders characterize the creek bed material. There is no spawning gravel. Pools 1 to 3 feet deep occur approximately every 15 yards

(more)

South Fork Salt Creek continued

2.9 - 3.9 miles continued

throughout the section. A dense logjam at mile 3.4 and the short cascades and falls throughout the remainder of the section hinder fish passage. Native cutthroat trout up to 8 inches long were seen at the lower end of the section. Access is limited due to the location of the stream in a deep canyon. The logging road is close to the stream for only a small portion of the section. Riffle-pool ratio is 95:5.

The tributaries all have flows of less than 0.1 cfs and have no value for game fish.

September 9, 1964

Surveyor: Thompson

Stream: Sugar Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 28
County: Lane

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Boulders. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:30 p.m.	49	55	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Very steep gradient and low summer flows.

Accessibility: Mouth only by Highway 58.

Watershed Cover: Coniferous.

Comments: The steep gradient and low flows limit the value of the creek.

September 9, 1964

Surveyor: Thompson

Stream: Tumble Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 19
County: Lane

Characteristics:

At Mouth

Width (Feet)

3

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:30 p.m.			Dry	Mouth

Gradient: Very steep.

Possible Limiting Factors:

Falls: When there is a flow there are probably many impassable falls and cascades.

Other: Gradient is too steep for fish passage.

Accessibility: Highway 58 provides access to the mouth.

Watershed Cover: Coniferous.

Comments: Lack of flow and spawning gravel, plus the steep gradient, limit its value.

September 9, 1964

Surveyor: Thompson

Stream: Warner Creek
Tributary to: Salt Creek
Stream System: Willamette

Mouth at: T. 21S, R. 4E, Sec. 35
County: Lane

Characteristics:

At Mouth

Width (Feet)

2

Total Stream Length (nearest 0.25 mile): 2.0 (spot check near mouth)

Bottom Type: Boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:00 p.m.	48	55	0.3	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient.

Accessibility: Highway 58 provides access to the mouth. McCredie Creek Road provides access to the stream about 400 yards above the mouth.

Watershed Cover: Coniferous.

Comments: Low flow and steep gradient limit the value of the creek.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Schweitzer Creek

Mouth at: T. 20S, R. 2E, Sec. 19

Tributary to: Middle Fk. Willamette River at Lookout Point Reservoir

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

At 1 mile

Width (Feet)

5

4

Total Stream Length (nearest 0.25 mile): 3.0 miles (lower 1.0 mile surveyed)

Bottom Type: Rubble and silt. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:30 p.m.	55	58	0.4	Mouth

Gradient: Moderate. Steep at 1.0 mile.

Possible Limiting Factors: Low summer flows; the gradient also limits value beyond mile 1.0.

Accessibility: Logging road parallels creek for 1.0 mile above mouth.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Limiting factors restrict values.

September 2, 1964

Surveyors: H. Roberts and Slade

Stream: Simpson Creek

Mouth at: T. 24S, R. 3E, Sec. 11

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:

	<u>At Mouth</u>	<u>At 2 miles</u>
Width (Feet)	12	10
Total Stream Length (nearest 0.25 mile):	6.0 (lower 4.0 miles surveyed)	
Bottom Type: Bedrock and boulder.		
	<u>Good Gravel</u>	<u>Marginal Gravel</u>
Square Yards	5 (trout)	none
Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	90	10

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
12:30 p.m.	48	65	9.0	Mouth

Gradient: Steep to very steep.

Possible Limiting Factors:

Falls: Short cascades and falls are numerous.

Other: Steep gradient.

Fish Species Present: Native cutthroat trout and cottids.

Accessibility: Logging roads provide access to the mouth of the creek.

Watershed Cover: Predominantly coniferous.

Comments: Moderate value for trout only.

0.0 - 4.0 miles

Simpson Creek is a tributary to the Middle Fork Willamette River at river mile 64.2. It is 6 miles long and had a flow of 9.0 cfs at the mouth. The width at the mouth is 12 feet. The average width is 10 feet. At 12:30 p.m. the water temperature was 48° F. and the air temperature 65° F. The shade cover is sparse in this section. Conifers are the predominant watershed cover species. Bedrock and boulders characterize the creek bed. There are several tributaries but none are large enough to be important to game fish. Spawning gravel is sparse with only 5 square yards of good gravel for trout in the whole section surveyed. Pools 2 to 4 feet deep are

(more)

Simpson Creek 0.0 - 4.0 miles continued

numerous, occurring approximately every 50 yards. Cascades and short falls are numerous, but none are high enough to completely block fish passage. Passage above 4 miles would be difficult, however. The stream gradient ranges from steep at the mouth to very steep from mile 4.0 upstream. Native cutthroat trout were noted throughout the section surveyed. Logging roads provide access to most of the creek up to the headwaters. Much of the stream flows through cutover areas and a lot of debris from logging has accumulated in the creek. Riffle-pool ratio is 90:10.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Skunk Creek

Mouth at: T. 24S, R. 4E, Sec. 12

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

6

Total Stream Length (nearest 0.25 mile): 1.5 (lower 0.8 mile surveyed)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:20 p.m.	45	48	1.5	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient.

Accessibility: Logging roads provide access to points 0.3 mile and 0.8 mile above the mouth.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Has slight to moderate value for trout.

September 2, 1964

Surveyor: Thompson

Stream: Snake Creek

Mouth at: T. 23S, R. 3E, Sec. 33

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

At Mouth

At 1 mile

Width (Feet)

6

3

Total Stream Length (nearest 0.25 mile): 3.0 (lower 1.2 miles surveyed)

Bottom Type: Boulder, rubble and gravel.

Good Gravel

Marginal Gravel

Square Yards

Negligible

20 (trout)

Riffle-pool Ratio:

Riffle

Pool

Percentage

70

30

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
12:00 noon	53	55	0.8	Mouth

Gradient: Moderate.

Fish Species Present: Native cutthroat trout.

Accessibility: Logging road provides access to lower two miles of creek.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Holds some value for trout but is of no value to anadromous fish.

September 1, 1964

Surveyor: Thompson

Stream: Snow Creek

Mouth at: T. 23S, R. 3E, Sec. 4

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

4

Total Stream Length (nearest 0.25 mile): 2.0 (lower 0.5 mile surveyed)

Bottom Type: Boulders and rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:00 a.m.	53	51	0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Logging road crosses near the mouth.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Because of the limiting factors the creek has little value for salmonids.

October 13, 1964

Surveyors: Thompson and Arp

Stream: South Creek

Mouth at: T. 20S, R. 2E, Sec. 18

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

At Mouth

Width (Feet)

2

Total Stream Length (nearest 0.25 mile): 2.5 (spot check near mouth)

Bottom Type: Bedrock and silt. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:40 p.m.	57	59	Less than 0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Low flow and steep gradient.

Accessibility: Access to mouth by Highway 58.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Steep gradient and low flow limit value.

October 13, 1964

Surveyors: Thompson and Arp

Stream: Spot Creek

Mouth at: T. 21S, R. 2E, Sec. 13

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

Total Stream Length (nearest 0.25 mile): 1.0 (spot check near mouth)

Bottom Type: Mud and bedrock. Amount of gravel is negligible.

Water Temperature and Flow Data: Dry at mouth.

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Access to mouth by Highway 58.

Watershed Cover: Predominantly coniferous.

Comments: Stream is of no value to game fish.

September 2, 1964

Surveyor: Thompson

Stream: Spring Butte Creek

Mouth at: T. 23S, R. 3E, Sec. 34

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

	<u>At Mouth</u>	<u>At 1 mile</u>
Width (Feet)	4	2
Total Stream Length (nearest 0.25 mile):	2.0 (lower 1.0 mile surveyed)	
Bottom Type: Boulder and gravel. Amount of gravel is negligible.		

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
12:15 p.m.	53	55	0.2	0.5 mile

Gradient: Steep.

Possible Limiting Factors: Because the water subs under the gravel at mile 1.0 fish movement above this point is impossible at this time.

Accessibility: Logging roads provide access along several points of the stream. Access from the road is difficult in most places due to its location high above the creek.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Spring Butte Creek has little value for game fish.

November 3, 1964

Surveyor: Thompson

Stream: Staley Creek

Mouth at: T. 24S, R. 4E, Sec. 18

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:

At 2 miles

At 8 miles

Width (Feet)

20

10

Total Stream Length (nearest 0.25 mile): 13.5 (lower 8.8 miles surveyed)

Bottom Type:

Good Gravel

Marginal Gravel

Square Yards

400 (salmon)

800 (salmon)

Riffle-pool Ratio:

Riffle

Pool

Percentage

80

20

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:05 p.m.	48	52	25	Mouth
		(8-31-64)	26.5	Mouth

Gradient: Moderate.

Possible Limiting Factors:

Falls: Ten-foot falls at mile 3.0 just below the first bridge over Staley Cr.

Logjams: Two passable logjams at mile 4.7.

Fish Species Present: Native cutthroat trout, cottids, redbreast shiners.

Accessibility: A logging road paralleling the creek from the mouth to the headwaters provides good access.

Watershed Cover: Predominantly coniferous.

Comments: Staley Creek loses its value to game fish above the forks at mile 8.7.

0.0 - 8.8 miles

Staley Creek is a tributary to the Middle Fork Willamette River at river mile 65.5. It is 13.5 miles long and has an average width of 15 feet in the section surveyed. The flow at the mouth on August 31 was 26.5 cfs. The watershed cover is predominantly coniferous. Shade cover is sparse to moderately dense. The bottom composition is rubble and gravel up to mile 1.8, rubble and boulders between miles 1.8 and 2.0, bedrock and boulders between miles 2.0 and 4.4, and rubble and boulders from mile 4.4 to the headwaters. All of the tributaries to Staley Creek have gradients ranging from steep to extremely steep, thus being of little value to either anadromous or

(more)

Staley Creek 0.0 - 8.8 miles continued

nonanadromous fish. The section between the mouth and mile 1.8 contains 400 square yards of good and 800 square yards of marginal salmon and steelhead spawning gravel. Above mile 1.8 gravel is negligible. Pools 2 to 4 feet deep occur approximately every 50 yards throughout the section surveyed. A 10-foot falls with a 5-to 8-foot jump pool is located at mile 3.0, just below the first bridge over the creek. The falls is probably impassable to all fish. Two passable logjams are found at mile 4.6. The stream gradient is moderate. Native cutthroat trout, cottids and redbreast shiners are found in Staley Creek. Access from the mouth to the headwaters is provided by a logging road that parallels the creek. Riffle-pool ratio was 80:20.

October 13, 1964

Surveyor: Thompson

Stream: Stony Creek

Mouth at: T. 22S, R. 3E, Sec. 22

Tributary to: Middle Fork Willamette River, Hills Creek Reservoir

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

Width (Feet)

3

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			0.2	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Access to mouth by logging road.

Watershed Cover: Predominantly coniferous.

Comments: Steep gradient and low flow limit the value.

November 3, 1964

Surveyors: Thompson and Hewitt

Stream: Swift Creek

Mouth at: T. 24S, R. 4E, Sec. 11

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics:

At Mouth

At 2 miles

Width (Feet)

25

10

Total Stream Length (nearest 0.25 mile): 9.0 (lower 7.5 miles surveyed)

Bottom Type: Boulder and rubble.

Good Gravel

Marginal Gravel

Square Yards

27 (trout)

20 (trout)

60 (salmon)

85 (salmon)

Riffle-pool Ratio:

Riffle

Pool

Percentage

90

10

Water Temperature and Flow Data:

<u>Time</u>	<u>Temperature (°F.)</u>		<u>Flow (cfs)</u>	<u>Location</u>
	<u>Water</u>	<u>Air</u>		
1:40 p.m.	44	52	35.0	Mouth

Gradient: Moderate to steep.

Possible Limiting Factors:

Falls: Two 4-foot falls over logjams at miles 0.7 and 0.9.

Logjams: Several logjams occur.

Other: Steep gradient and low flow limit fish passage above mile 5.0.

Fish Species Present: Native cutthroat trout 2 to 8 inches long, planted rainbow trout 10 to 12 inches long, and cottids.

Accessibility: A logging road paralleling most of the creek provides fair to good access.

Watershed Cover: Predominantly coniferous. Some clear-cut.

0.0 - 7.5 miles

Swift Creek, a tributary to the Middle Fork Willamette River at mile 70.4, is 9 miles long and has an average width of 10 feet. The flow at the mouth was 35 cfs. At 1:40 p.m. the water temperature was 44° F. and the air temperature 52° F. The watershed is predominantly coniferous with several clear-cut sections adjacent to the creek. The bottom is largely boulders and rubble. There are 27 square yards of good and 20 square yards of marginal trout spawning gravel, and 60 square yards of good and 85 square yards of marginal salmon and steelhead spawning gravel in this

(more)

Swift Creek 0.0 - 7.5 miles continued

section. Most of the gravel is found within one mile of the mouth. Pools 2 to 4 feet deep occur approximately every 100 yards for the first five miles. Above mile 5.0 the gradient becomes steep and pools decrease in depth and frequency. Logjams that are impassable at the current flow occur at 100 yards, 350 yards, 650 yards, 950 yards, and 0.7, 0.8 and 0.9 miles. Two 4-foot falls flow from the logjams at miles 0.7 and 0.9. The stream gradient is moderate to steep. A logging road paralleling most of the creek provides fair to good access to the stream. The relatively large amount of debris provides excellent fish habitat but may be conducive to logjam formation during high flows. The water is clear. Riffle-pool ratio is 90:10.

Bear Creek enters Swift Creek at mile 4.0. It had a flow of about 15 cfs. Up to mile 2.0 it had moderate value for both anadromous and nonanadromous fish. The survey was discontinued at that point.

The following tributaries to Swift Creek were surveyed by Roberts and Slade on September 4, 1964. Each has an extremely steep gradient.

Name	Temperature (°F.)		Flow (cfs)	Location	Remarks
	Water	Air			
Chako Cr.		75	Dry	Mouth	No value to sport fishery
Coulee Cr.	48	75	0.1	"	" "
Minnehaha Cr.	47	75	1.0	"	" "
Baboon Cr.	48	75	0.3	"	" "
Moss Cr.	46	75	1.5	"	Very little value
Hyah Cr.	47	75	1.0	"	No value to sport fishery

September 2, 1964

Surveyors: H. Roberts and Slade

Stream: Tumblebug Creek

Mouth at: T. 24S, R. 5E, Sec. 19

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

At 1 mile

Width (Feet)

15

10

Total Stream Length (nearest 0.25 mile): 6.5 (lower 0.8 mile surveyed)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:45 p.m.	48	53	7.5	Mile 0.3

Gradient: Steep.

Possible Limiting Factors:

Falls: Numerous 5-foot falls and cascades.

Other: Steep gradient limits passage.

Accessibility: Logging road provides access to the first 0.5 mile. The remainder of the stream is completely inaccessible by means other than walking up the creek.

Watershed Cover: Predominantly coniferous.

Comments: Stream is of little value to either anadromous or nonanadromous fish due to the many falls and cascades that hinder fish passage.

September 2, 1964

Surveyor: Thompson

Stream: What Creek

Mouth at: T. 24S, R. 3E, Sec. 10

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics: At Mouth

Width (Feet) 2

Total Stream Length (nearest 0.25 mile): 1.5 (spot check near mouth)

Bottom Type: Large rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
			less than 0.1	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low summer flow.

Accessibility: Logging road provides access at mouth and mile 0.8.

Watershed Cover: Predominantly coniferous.

Comments: Stream is of negligible value to game fish.

October 13, 1964

Surveyor: Thompson and Arp

Stream: Whitehead Creek

Mouth at: T. 20S, R. 2E, Sec. 34

Tributary to: Middle Fork Willamette River County: Lane

Stream System: Willamette

Characteristics: At Mouth

Width (Feet) 3

Total Stream Length (Nearest 0.25 mile): 2.0 (spot check near mouth)

Bottom Type: Bedrock and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:15 p.m.	54	58	0.1	Mouth

Gradient: Very steep. Impassable by fish near mouth.

Possible Limiting Factors: Low flow and steep gradient.

Accessibility: Highway 58 provides access to mouth only.

Watershed Cover: Predominantly mixed conifers.

Comments: Stream is of no value to game fish due to low flow and steep gradient.

September 1, 1964

Surveyor: Thompson

Stream: Windfall Creek

Mouth at: T. 23S, R. 3E, Sec. 9

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics: At Mouth

Width (Feet) 5

Total Stream Length (Nearest 0.25 mile): 4.0 miles (lower 2.0 miles surveyed)

Bottom Type: Rubble and boulder. Amount of gravel is negligible.

Riffle-pool Ratio:	<u>Riffle</u>	<u>Pool</u>
Percentage	70	30

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
11:05 a.m.	54	51	0.8	Mouth

Gradient: Moderate.

Possible Limiting Factors: Low summer flow.

Fish Species Present: Native cutthroat trout, cottids, dace, rainbow trout and
redside shiners.

Accessibility: Logging road parallels creek between miles 0.5 and 2.0.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Windfall Creek has no value for anadromous fish but moderate value for
trout.

September 2, 1964

Surveyor: Thompson

Stream: Youngs Creek

Mouth at: T. 24S, R. 3E, Sec. 10

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

Width (Feet)

6

Total Stream Length (nearest 0.25 mile): 3.5 (lower 0.1 mile surveyed)

Bottom Type: Amount of gravel is negligible.

Riffle-pool Ratio:

Riffle

Pool

Percentage

80

20

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
1:30 p.m.	52	57	0.7	Mouth

Gradient: Steep.

Possible Limiting Factors:

Falls: Four-foot falls at 150 yards.

Logjams: Impassable logjam at 170 yards.

Other: Sandbags dam creek at 200 yards to provide a reservoir from which water is drawn for road maintenance projects.

Fish Species Present: Many native cutthroat trout observed.

Accessibility: At the mouth and at mile 1.0 by logging roads.

Watershed Cover: Predominantly coniferous.

Comments: Youngs Creek is of moderate value to trout.

September 3, 1964

Surveyor: H. Roberts and Slade

Stream: Unnamed

Mouth at: T. 24S, R. 4E, Sec. 15

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics: At 0.2 mile

Width (Feet) 5

Total Stream Length (nearest 0.25 mile): 2.5 (lower 0.2 mile surveyed)

Bottom Type: Rubble and silt. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:30 p.m.	48	49	0.5	0.2 mile

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flow.

Accessibility: Logging road provides access to a point at mile 0.2.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream is of only slight value to trout.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Unnamed

Mouth at: T. 24S, R. 4E, Sec. 12

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Lane

Characteristics:

At Mouth

Width (Feet)

3

Total Stream Length (nearest 0.25 mile): 1.2 (lower 0.2 mile surveyed)

Bottom Type: Bedrock and boulder. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
2:40 p.m.	47	49	0.3	Mouth

Gradient: Steep.

Possible Limiting Factors: Steep gradient and low flows.

Accessibility: Logging roads provide access to stream at mile 0.2 and at the headwaters.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream is of little value to game fish.

September 3, 1964

Surveyors: H. Roberts and Slade

Stream: Unnamed

Mouth at: T. 25S, R. 5E, Sec. 2

Tributary to: Middle Fork Willamette River

Stream System: Willamette

County: Douglas

Characteristics: At 0.3 mile

Width (Feet) 5

Total Stream Length (nearest 0.25 mile): 2.0 (lower 0.3 mile surveyed)

Bottom Type: Bedrock and rubble. Amount of gravel is negligible.

Water Temperature and Flow Data:

Time	Temperature (°F.)		Flow (cfs)	Location
	Water	Air		
3:00 p.m.	46	49	2.5	0.3 mile

Gradient: Steep.

Possible Limiting Factors:

Falls: Many 2- to 3-foot falls and cascades.

Logjams: Debris has accumulated in creek in clear-cut areas.

Other: Steep gradient.

Accessibility: Logging roads provide access to most of the creek.

Watershed Cover: Mixed broadleaf and conifers.

Comments: Stream is of slight value to trout.