

Obstruction and Stream Evaluation
Elk Creek
West Fork Millicoma, Coos River System
August 10, 1967

1. Prior Reports: Summer Survey by Breuser and Lenarz dated July 15, 1953; consisted of spot checks for 5.1 miles from the mouth upstream.
2. Location: a. Stream; Elk Creek enters the West Fork Millicoma River in the NW $\frac{1}{4}$ of Sec. 7; R10W; T23S
X b. Obstructions: There are four major obstructions plus log jams (see attached map and obstruction list). The major obstructions are: (1) a boulder cascade caused by quarry operation located 1.0 miles above the mouth in the NW $\frac{1}{4}$, Sec. 13, R11W, T23S, (2) A 20' bedrock falls in four stages located 0.1 mile above the cascade (NW $\frac{1}{4}$, Sec. 13, R11W, T23S), (3) a bedrock cascade/falls located 0.4 miles above the 20' falls and 50 feet above a main road bridge in the SW $\frac{1}{4}$ of Sec. 13, R11W, T23S, and (4) a 6 foot bedrock falls located 0.1 mile above the last cascade--NW $\frac{1}{4}$, Sec 24, R11W, T23S, and (5) scattered debris and jams of various sizes.
3. Access: Elk Creek can be reached via the Coos River road from Eastside Oregon to Allegany, then the Marlow Creek access road to the Elk Ridge Road Junction, then left on the Elk Creek Road to the upper end of Elk Creek. A gravel road parallels the stream.
4. Ownership: The entire stream is on Elliot State Forest (Forest Revenue Account and State School Land) Administered by Oregon State Department of Forestry.
5. Description of Work Required:
 - (a) Rock cascade (1.1 mile above mouth) requires removal of boulders both natural and those dropped in the stream from the quarry across the road.
 - (b) Bedrock Falls (1.15 miles above mouth) requires a rock cut ladder and/or pools blasted in the bedrock steps of the falls. The Game Commission has done some improvement work on this obstruction but it will probably not benefit coho. Specifics of ladder installation should be determined from an on-the-spot inspection by Engineers and Biologists. Generally, 3 jump pools and 2 rock cuts are needed as a minimum for passage of coho.
 - (c) The rock Cascade 0.4 miles above the 20' falls should be modified by blasting 3 resting holes in the face of the cascade or next to one bank. The 4' falls at the top of the cascade may require some modification such as a sill but there is a good jump pool below this falls now.
 - (d) A 6-foot falls approximately 0.1 mile above the cascade has a good jump pool and is passable to steelhead but may require provision of one rock cut step to facilitate coho passage.

6. Photographs: Attached are photographs of Elk Creek Falls and the major cascade 0.4 mile upstream.
7. Available mileage: There are approximately 6 miles of main stream and 1.0 mile of tributary streams available for spawning and rearing in the area above the obstructions. In addition, utilization of the spawning area can contribute fish to rear in Elk Lake and in the main West Fork below the mouth of Elk Creek.
8. Other required clearance: A series of log jams, several beaver dams and debris in the lake should be removed to assure passage and water quality (attached sheet shows location of log jams).
9. The stream is shaded by alder, maples and conifers alternating with open areas through cut over land. The tributaries are shaded by alder, maple and conifer cover. The stream banks are covered to varying degrees with salmonberry, thimbleberry, blackberry vines and vine maple.
10. Condition of the stream: Elk Creek and its tributaries have good shade through much of the area surveyed and present forest harvest plans call for thinning rather than clear cutting. The temperature at the mouth was 65 F in the morning of August 3, 1967, with a flow of 3 cfs. In the afternoon a temperature of 63F was recorded just above the lake (5.0 miles from the mouth) with a flow of 1+ cfs. No minimum flow data are available but previous observations indicate the present 3.0 cfs is about minimum.

Spawning area is limited in the 1.1 mile of stream below the 20' falls; about 16% from the falls to the lake and 21% above the lake.

11. Estimated number and species expected to utilize the stream: Wallis' method for estimating rearing potential gives approximately 5,700 yearling coho from the main stream and about 600 from the tributaries for a total of 6,300 stream-reared yearlings. A lake potential of 2,000 fish (500 fish/acre x 4 acres) increases the system potential to 8,300 yearling coho. This estimate is believed to be low because of the extensive pool area available.

Although steelhead now ascend the 20' falls, improved passage should increase the availability of the upper stream. With the envisioned stream improvements, the numbers of steelhead using the stream would probably surpass the estimates for adult coho.

12. Value for downstream production: Fish spawning above the falls could contribute to rearing areas in 1.1 miles of Elk Creek below the falls and 1.2 miles of West Fork Millicoma below the mouth of Elk Creek through areas in which spawning gravels are now minimal. An estimated 2,300 yearlings could rear in these areas. Large pools present through the section of main river may increase the estimated number of coho able to rear to yearling size.

13. Priority: To be assigned.

PREDICTION

#2

#3

14. Remarks: The State Department of Forestry is interested in the potential of Elk Creek as a spawning and rearing area and has considered the area above the falls as a spawning stream when planning earlier road construction and logging operations although it was not available to all species at that time. There are several log jams which should be removed along with downed alders through the lake area but some assistance may be available from the Department of Forestry for at least part of this clean up planned for the summer of 1968.

There are two areas along the stream which are now used as camp sites and several potential park sites including the vicinity of the 20' falls. The area receives heavy use by Elk hunters in the fall and light fishing pressure early in the trout season.

The "4 stage" nature of the 20' falls lends itself to improvement by a rock cut ladder-pool combination at relatively low cost. The bedrock cascade has a small channel along the left side or could be improved with two or three pools cut in the right side. The 6-foot falls has an excellent jump pool and if necessary could be improved with a sill log below or a rock cut pool. The log jams would require current cost estimates during the stream improvement planning stage.

State Forest personnel have commented on this future expansion of the area near the 20' falls as a park and will do some jam removal in 1968.

Reference:

Wallis, Joe. 1961. A biological basis for stocking streams and ponds with silver salmon fingerlings and allowing natural spawning in hatchery streams. Ore. Fish. Comm. Res. Div. mimeo. 16 p. 1*

Elk Creek
West Fork Millicoma River
August 7, 1967

I. Location and Accessibility:

- A. Location: Elk Creek enters the West Fork Millicoma River (Coos River system) in Sec. 7, R 10W, T23S
- B. Accessibility: A good road follows Elk Creek from its mouth to the head waters. This road connects the Joes Creek—upper west fork road and the Elk Peak road.

II. Interviews: None

III. Survey:

- A. Distance: Elk Creek was surveyed for 8.1 miles and tributaries were surveyed for 0.8 miles for a total of 8.9 miles

NOTE: This survey constitutes a resurvey and extension of a prior survey dated July 15, 1963

B. Temperature and Flow Data:

BREUSER & LENARZ
 July 15, 1963

Location	Date	Time	Weather	Flow est. cfs	Temp. F		Vis.
					Air	Water	
At mouth	8/7/67	1030	O'cast	3	68	65	1
At upper end of lake	"	1445	Clear	1	72	63	1

IV. Description of Basin and Stream:

A. Basin: The stream is mostly shaded by alder and conifers with several open areas through logged over land. Under brush consists of salmonberry, thimbleberry and blackberry vines.

B. Stream: The stream has a moderate gradient except for the falls noted in the obstruction section.

V. Bottom Description--see attached sheet

VI. Obstructions--see attached sheet

VII. Observations of Fish: Coho were noted to the first falls (see obstruction sheet). Steelhead were abundant to the lake.

VIII. Roads and Trails: A gravel road follows the stream from its mouth to the headwaters.

IX. Hatchery, Planting and Pond Sites: None.

X. Map--attached

XI. Recommendations: Continue improvement of falls (E-2) and Cascades (E-4), attached sheet; remove log jams.

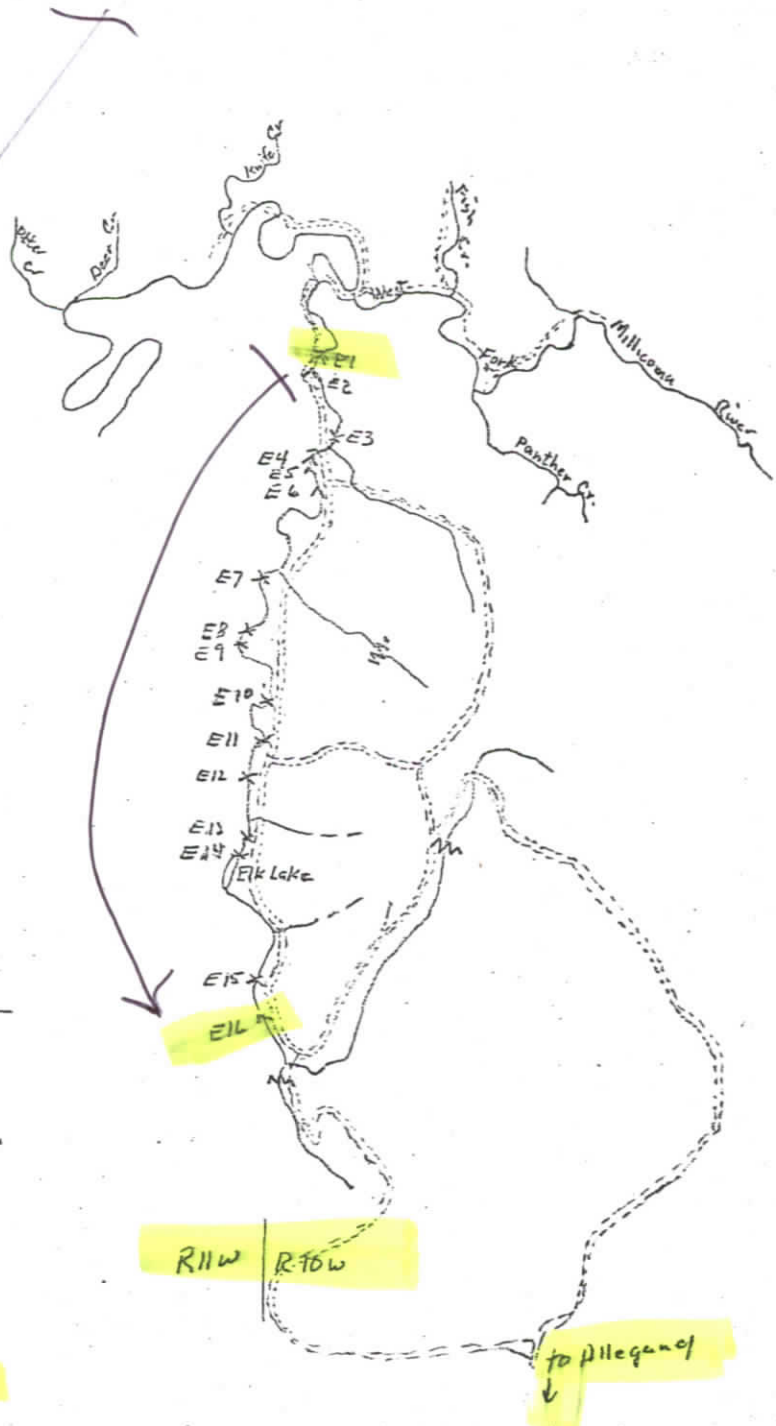
NOTE: Oregon State Forestry with the Game Commission removed several of these log jams in 1968.

Ed Cummings (OFC)

Ed Schwartz (OGC)

Aquatic Biologists

Elk Creek
West Fork Milllicoma
August 7, 1963



+235
+245

Scottsburg Quad.
Scale 1" = 1 mile

- Legend
- Falls >
 - Cascade >>
 - Log jams X
 - End of Survey ≡
 - Roads - - - - -

R11W | R10W

to Allegany
↓

O B S T R U C T I O N S

Symbol	Description	Location	Size	Extent of passability and remarks
E-1	Road fill cascade	1.0 miles above mouth at Rock Quarry	100' long	Passable with difficulty recommend removal
E-2	Bedrock falls (4 stage)	100 yds above E-1	20' high in 4 steps 40' wide 100' long	Impassable to coho. Steelhead observed above. OGC has partially improved this falls
E-3	Log jam	0.2 miles above E-2	30' wide, 60' long, 8' high	Passable—bark, sand & gravel for 60 yards
E-4	Bedrock cascade falls	0.2 mile above E-3	Cascade 12' high 40 yards long	Passable to steelhead probably impassable to coho
E-5	Bedrock falls	100' above E-4	4' high	Passable—deep pool below
E-6	Bedrock falls	0.1 above E-5	6' high	Passable deep pool below
E-7	Log jam	100 yds above 2nd Trib L (Sec 24)	40' L x 20' W x 6' high	Passable
E-8	Log jam	0.2 mile above E-7	15' L, 20' W, 8' high	Passable
E-9	Beaver dam	60' above E-8	15' wide 6' high	(100 yds below cabin)
E-10	Log jam	0.4 mile above E-9	20' W, 60' L, 5' high	Passable
E-11	Log jam	0.3 mile above E-10	20' W, 10' L, 3' high	Passable
E-12	Log jam	0.2 mile above E-11	60' W, 120' L, 6' deep	Loose - passable
E-13	Log jam	0.3 mile above E-13	45' W, 25' L, 8' deep	Impassable
E-14	Beaver dam	at outlet of lake	30' wide, 3' high	--
E-15	Log jam	0.7 mile above lake	30' W, 30' L, 5' deep	Passable
E-16	Rock cascade from road fill	0.2 mile above E-15	10' high in 30' length	Backs up water and gravel
NOTE:	Logs and downed alders are scattered from E-2 throughout the area surveyed.			

