

STATE OF IDAHO  
DEPARTMENT OF FISH AND GAME  
Joseph C. Greenley, Director

IDAHO SALMON AND STEELHEAD  
STATUS REPORT FOR 1975

by  
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July, 1976

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## PREFACE

This report describes the status of Idaho's salmon and steelhead runs in 1975. That the runs are at their worst condition ever is obvious. If ignored, they will very likely become extinct before the next generation has an opportunity to appreciate them.

While the current status is bleak, the outlook for these runs is improving. Efforts at the lower Snake River and Columbia River dams which are aimed at reducing the kill of fish, such as installation of flow deflectors, turbine screening, and transport of downstream migrants around the dams, are giving promising results. The importance of these and other ongoing efforts cannot be emphasized too strongly, for they will dictate the future status of these fish runs.

## SPRING CHINOOK

The upriver spring chinook run of 104,100 fish into the Columbia River in 1975 was the smallest since 1945. The main-stem Columbia River and the Snake River and its tributaries were closed to commercial and sport fishing for upriver spring chinook. Treaty Indian ceremonial and subsistence catches occurred but are unquantifiable.

A large discrepancy between fish counts at Bonneville and The Dalles dams suggests that significant fallback occurred at Bonneville Dam, and that the true run size was less than 104,100 (Oregon Department of Fish and Wildlife and Washington Department of Fisheries, 1976).

Only 17,600 fish were counted over Lower Granite Dam.

Fallback and river flow greatly influence the ability of spring chinook to ascend the Columbia and Snake dams. The 1975 run appears to have negotiated the dams very poorly (Figure 1).

A count of redds in standard routes in spring chinook spawning areas in the Salmon River drainage was better than for 1974, but only 837 of the preceding 5-year average (Figure 2). The poor condition of the run is a direct result of extreme losses of downstream migrants in 1972 and 1973 (Collins, et. al., 1975).

An estimated 1,207 spring chinook returned to the Clearwater drainage (exclusive of returns to Kooskia National Fish Hatchery).

### ARTIFICIAL PROPAGATION

#### Clearwater River

Through state and federal programs over 1.5 million spring chinook were stocked into the Clearwater system in 1975. The majority of these fish were stocked as smolts (Table 1).

Over 400 adults returned to Kooskia NFH, which was its best return yet.

#### Salmon River

Over 5 million spring chinook were stocked in the Salmon River system in 1975 (Table 2).

#### Rapid River Hatchery

5,000 spring chinook returned to the hatchery in 1975. These fish made up 28.4% of the Snake River run as counted at Lower Granite Dam and 4.8% of the Columbia River spring chinook run counted at Bonneville Dam.

3,373,700 smolts were released in the spring of 1975 (Parrish, 1976)

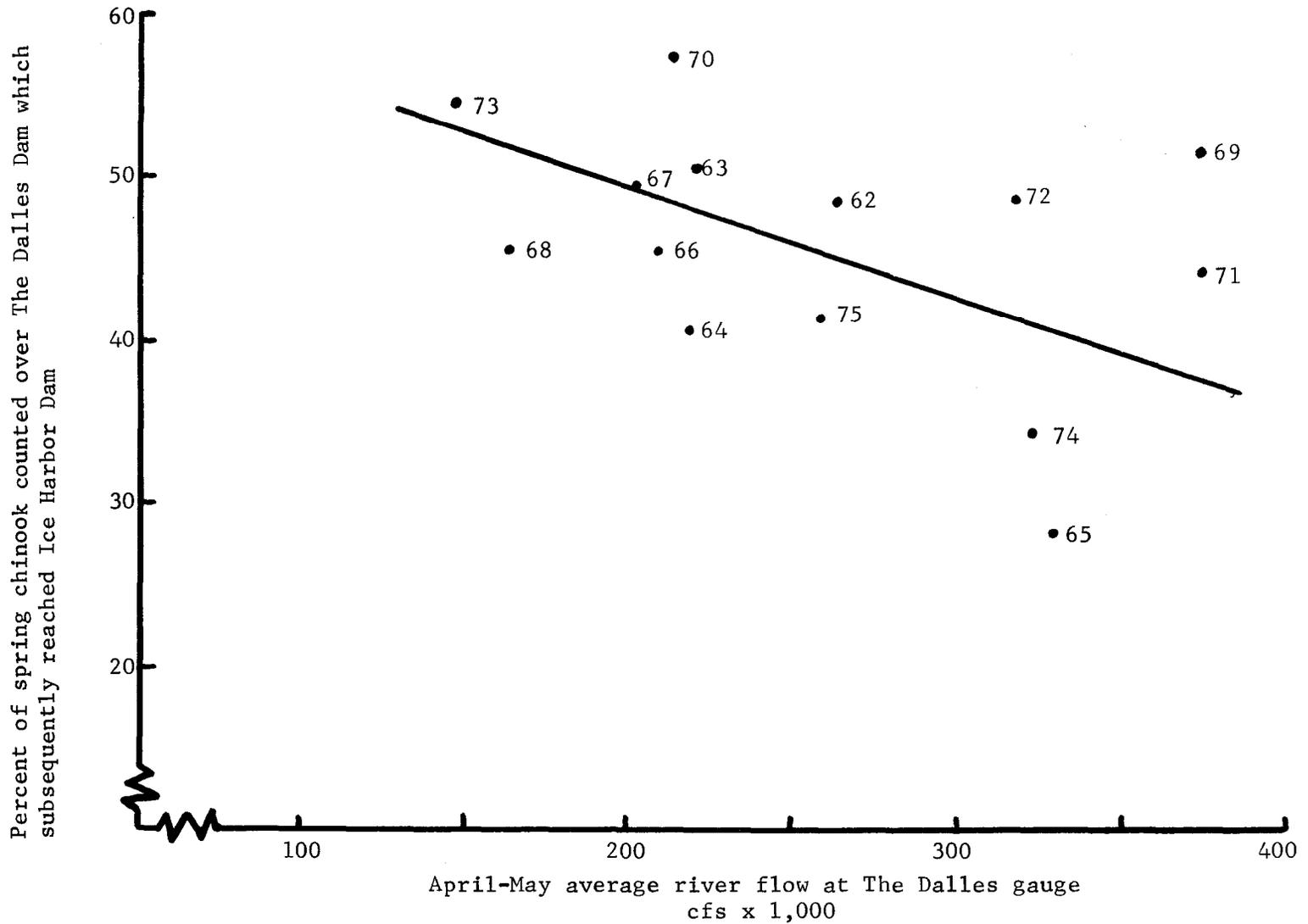
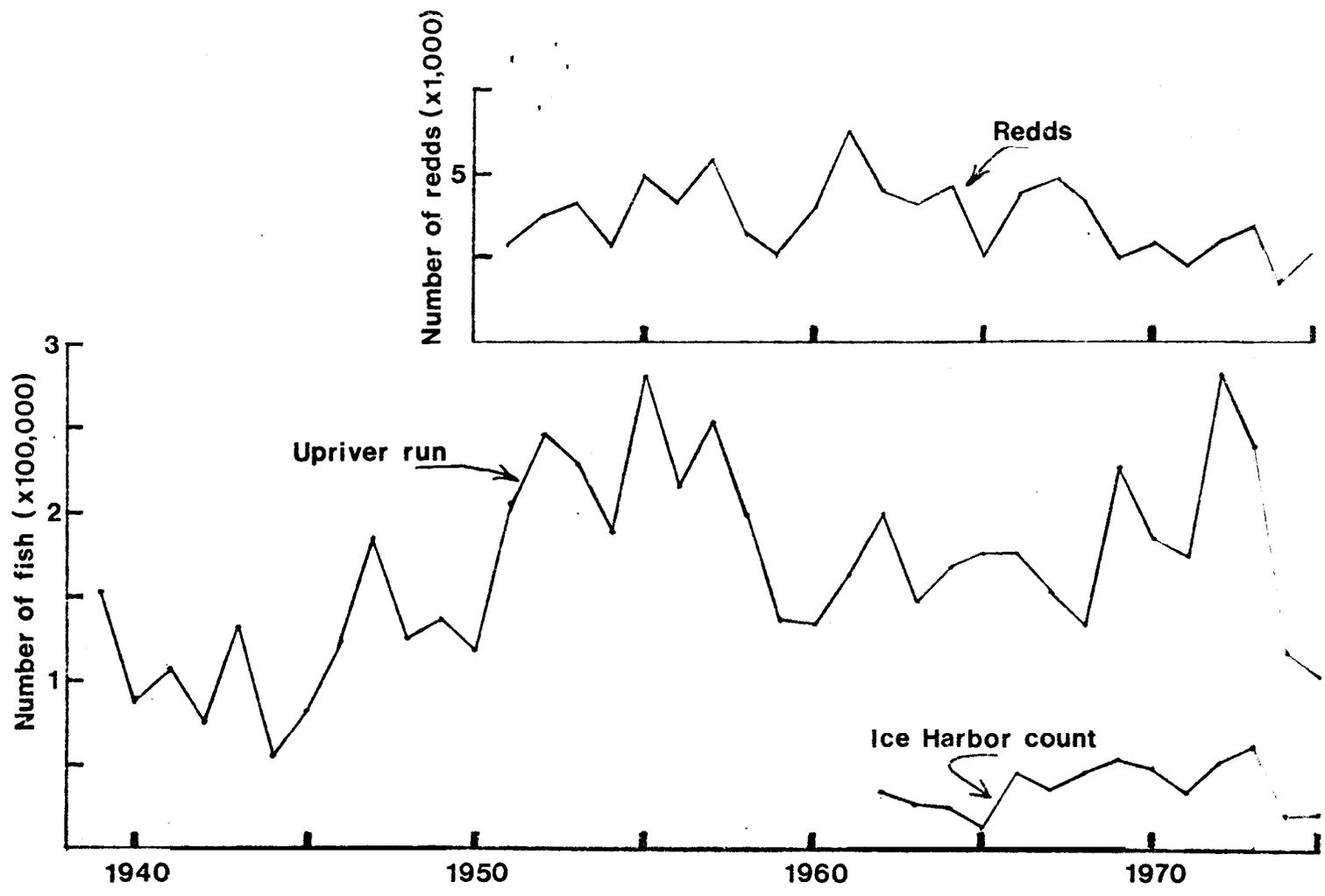


Figure 1. Relationship between Columbia River flow and efficiency of upstream passage of spring chinook



### SPRING CHINOOK

Figure 2. Columbia River spring chinook salmon upriver run size, Ice Harbor Dam counts, and Idaho redd count trend.

Table 1. Spring chinook stocking summary, Clearwater River drainage, 1975.

Stocking area	Number	Size	Rearing facility
Selway drainage	310,080	fry	Indian Creek channel
Middle Fork Clearwater River	802,165	smolts	Kooskia NFH
South Fork Clearwater drainage	217,962	smolts & fingerlings	Rapid River
Lochsa River	180,900	smolts	Sandpoint
<b>Total</b>	<b>1,511,107</b>		

Table 2. Spring chinook stocking summary, Salmon River drainage, 1975.

Stocking area	Number	Size	Rearing facility
Salmon River	400,000	fingerlings	Decker Pond
Hayden Creek	276,000	fingerlings	Hayden Creek Research Station
Rapid River	3,373,700	smolts	Rapid River
Lemhi River	1,140,300	fry	Rapid River
<b>Total</b>	<b>5,190,000</b>		

### Decker Flat Rearing Pond

In June the pond was stocked with 400,000 fish at 70 per pound. The fish were reared through the summer and released in late September at 29 per pound.

A high incidence of blindness due to eye flukes (Diplostomum sp.) was diagnosed when the fish were released. Control of the intermediate host snails will be attempted in 1976 (Reingold, 1976a).

### Hayden Creek Research Station

The 1975 run returned 151 spring chinook to the station. About that many more were thought to have bypassed the station to run farther up Hayden Creek. In early October, 276,000 fingerlings were released in an experimental fall release of fish in apparent "smolt" condition.

Adult returns from fish released in 1972 were estimated at about 0.1% (Anderson, 1976).

## SUMMER CHINOOK

The 1975 count over Bonneville Dam improved a little, but the counts over the lower Snake River dams reached record lows for the third consecutive year (Figure 3). The count of only 8,600 over Lower Granite Dam is a precarious level.

Fishing closures were maintained on all fisheries except treaty Indian ceremonial and subsistence.

A record low of only 512 redds were counted on the trend routes of the Salmon River drainage.

### ARTIFICIAL PROPAGATION

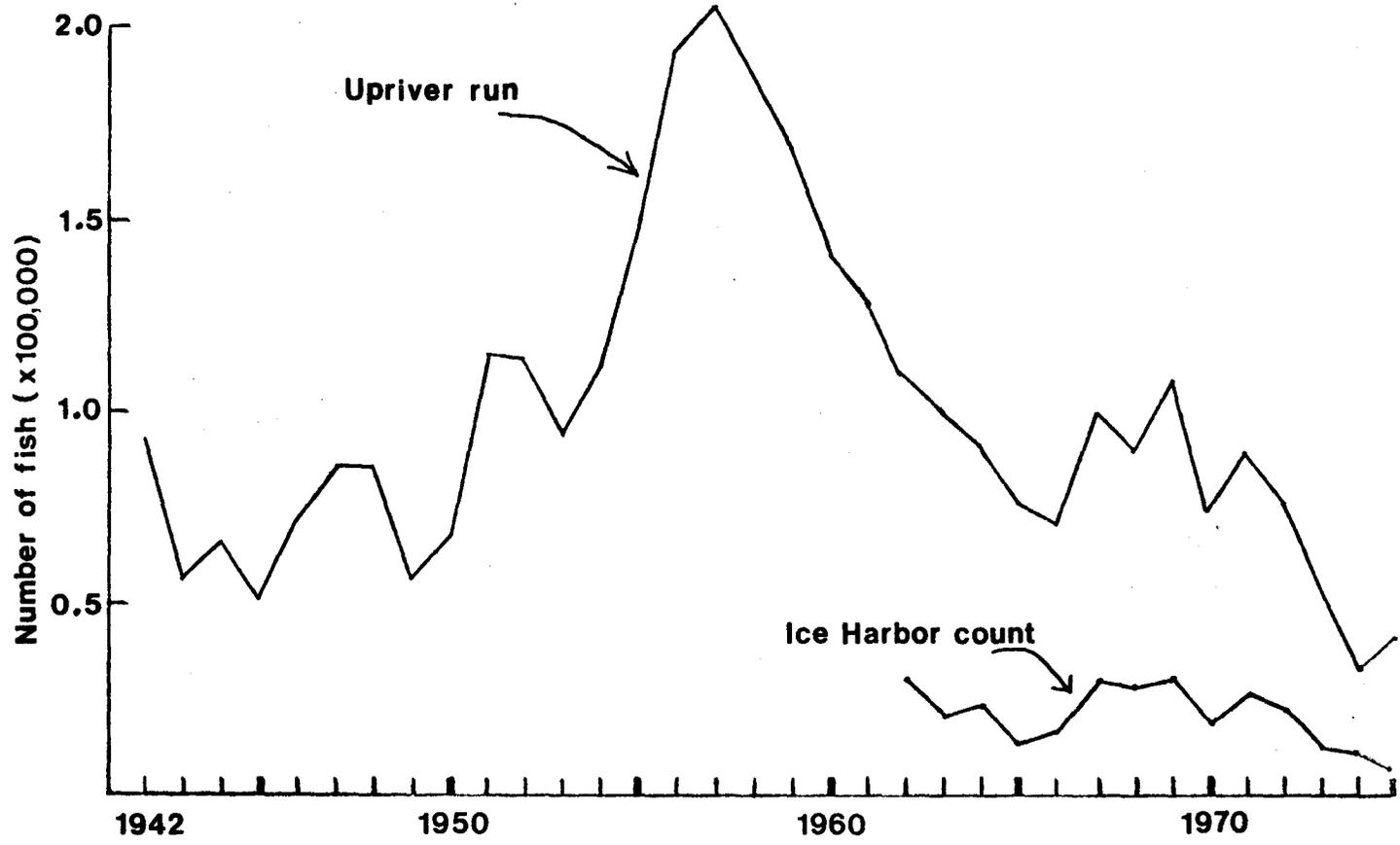
#### Pahsimeroi River

At the Pahsimeroi station we are trying pond rearing of summer chinook with release in their first spring of life. In late May, approximately 115,000 chinook were released at 40 per pound.

The production program has been hurt by the small runs of summer chinook. Only 89 fish were trapped in 1975. Forty-three females were spawned, giving 240,000 eggs for the 1976 release.

#### South Fork Salmon River

Due to the imperiled status of Snake River summer chinook salmon the Idaho Department of Fish and Game entered into contract in 1974 with the U. S. Army, Corps of Engineers for artificial propagation of these fish. The project proposal stated that the effort would be ". . . a pilot project. . . and would provide information which could be essential to a successful final lower Snake River compensation plan for summer chinook."



### SUMMER CHINOOK

Figure 3. Columbia River summer chinook salmon upriver run size and Ice Harbor Dam counts.

The year 1975 marked the second effort to obtain brood stock and rear fish to smolt size for release into the South Fork Salmon River. The National Marine Fisheries Service assisted by Idaho Department of Fish and Game personnel trapped 571 adults at Little Goose Dam. These fish were transported to Rapid River Hatchery for holding and spawning. 551,464 eggs were taken and transferred to McCall Hatchery for incubation and rearing. This number was less than desired due to the low number and poor health of fish in the run.

The first release of smolts from this program will be 1974 brood year fish in 1976.

#### SUMMER STEELHEAD (1974-1975 RUN)

A run of 151,500 summer steelhead entered the Columbia River in 1974. The commercial fishery below Bonneville Dam took 4,000 and the Indian commercial fishery above Bonneville Dam took 12,900 fish (Figure 4). Oregon and Washington anglers below Bonneville Dam took an estimated 10,900 fish (Oregon Department of Fish and Wildlife and Washington Department of Fisheries, 1976).

For the second consecutive year a record low run was counted over Ice Harbor Dam, amounting to only 12,000 fish (Figure 5).

Due to the jeopardized status of the run, Idaho's steelhead fishing season was terminated on October 28, 1974. The estimated catch of fish from the 1974-1975 run in Idaho was 726 fish, an all-time low.

#### ARTIFICIAL PROPAGATION

##### Clearwater River

A run of 1,560 adult steelhead returned to Dworshak National Fish Hatchery which was the smallest run in the history of the station. About 5.5 million eggs were taken for the 1975 brood year rearing program.

About 1,761,000 smolts were released in the spring of 1975 (Table 3). Large revisions in the operation of Dworshak NFH were initiated in 1975. The hatchery does not appear to be capable of producing more than 2.5 million smolts, rather than 3.36 million as was previously attempted.

##### Salmon River

##### Niagara-Pahsimeroi

Approximately 1.3 million 1974 brood year steelhead smolts were trucked from Niagara Springs Hatchery and released into the Pahsimeroi River in the spring of 1975. Research activities explored release timing, pre-release temperature regime, and size at release.

In the spring of 1975, 691 adults returned to the Pahsimeroi station. These fish yielded over 2.2 million eggs (Reingold, 1976b).

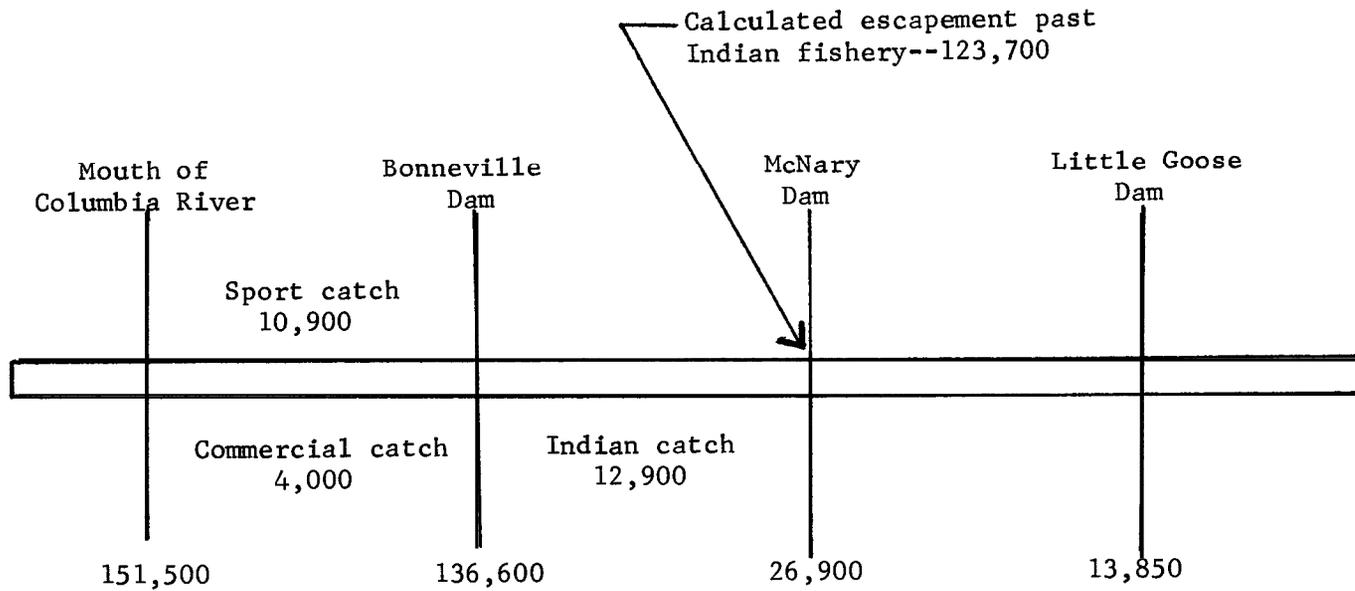


Figure 4. Harvest and escapement levels of 1974 summer steelhead run into Columbia River.

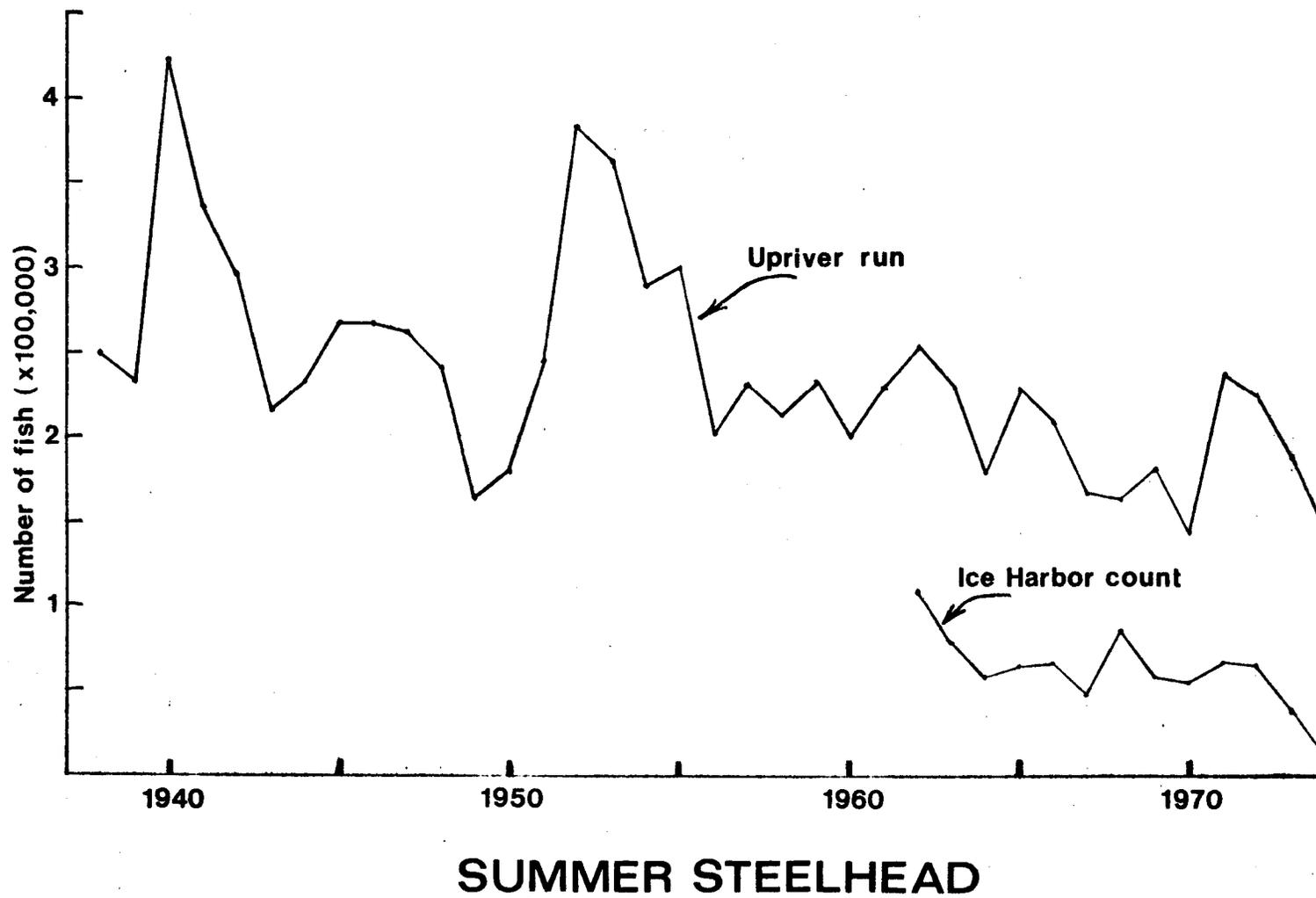


Figure 5. Columbia River summer steelhead upriver run size and Ice Harbor Dam counts.

Table 3. Steelhead stocking summary, Idaho, 1975.

Stocking area	Number	Size	Rearing facility
North Fork Clearwater River	1,761,878	smolts	Dworshak NFH
Hayden Creek	250,156	smolts	Hayden Creek Research Station
Rapid River	110,976	fry	Rapid River
Snake River	40,977	fingerlings	Niagara Springs
Pahsimeroi River	1,331,280	smolts	Niagara Springs
Salmon River	174,204	smolts	Hagerman
Valley Creek	179,205	smolts	Hagerman
Lemhi River	64,975	smolts	Hagerman
<b>Total</b>	<b>3,913,651</b>		

### Hayden Creek Research Station

The research effort is to identify the relative advantages and disadvantages of releasing Age I or Age II smolts. Efforts are to perfect rearing regimes by varying water temperatures, feeds and duration of rearing.

In 1975 the station released 89,000 Age I smolts and 140,000 Age II smolts. Only 4 adults returned to the station in 1975. It is suspected that returnees are bypassing the station. In years of lower runoffs Hayden Creek will be weired to allow a more complete accounting for returns (Anderson, 1975).

### Hagerman Hatchery

Yearly rearing of steelhead at Hagerman Hatchery for stocking as smolts into the Salmon River headwaters began in 1973. The production goal is 1 million smolts. In 1975 we stocked 353,400 into the upper Salmon River and Valley Creek (Table 3). Short supplies of eggs have made the goal of 1 million unattainable.

Additionally, the Lemhi River was stocked with 65,000 Hagerman-reared smolts. These were Skamania strain steelhead recieved from Washington Department of Game in 1974.

### Snake River

Thirty-four steelhead entered the fish trap below Hells Canyon Dam from mid-September, 1974 to mid-February, 1975. The trap was also operated for three days in March and no more fish were caught. For most of the spring the Snake River flow was high and the trap was inoperable (John Siple, inter-department correspondence). 54,000 eggs were taken which provided a plant of 41,000 to the Snake River in the fall of 1975.

### FALL CHINOOK

About 2,140 fall chinook were counted over Lower Granite Dam in 1975. Thirteen jacks and no adults entered the Hells Canyon Dam fish trap. Consequently, no rearing of fall chinook was done.

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APPENDIX

Table 1. Estimated sport catch of chinook salmon and steelhead, Idaho, 1954 to 1975.

Year	Chinook salmon catch	Steelhead catch
1954	15,000	12,000
1955	19,000	13,000
1956	21,000	8,000
1957	39,000	20,000
1958	24,000	30,000
1959	20,000	31,000
1960	21,000	30,000
1961	13,000	25,000
1962	12,000	19,000
1963	12,000	26,000
1964	8,000	18,000
1965	SEASON CLOSED	19,500
1966	8,500	20,500
1967	6,500	22,500
1968	10,000	23,000
1969	11,500	15,500
1970	5,500	20,500
1971	3,500	17,500
1972	6,500	13,500
1973	9,500	10,500
1974	1,500	3,000
1975	SEASON CLOSED	SEASON CLOSED

Table 2. Anadromous fish stocking in Idaho, 1960 to 1975.

<u>Year</u>	<u>Description</u>	<u>Spring Chinook</u>	<u>Summer Chinook</u>	<u>Fall Chinook</u>	<u>Coho</u>	<u>Steelhead</u>
1975	Fish	6,425,107	114,560	--	--	3,913,651
	Eyed Eggs	--	--	--	--	--
	Total	<u>6,425,107</u>	<u>114,560</u>	<u>--</u>	<u>--</u>	<u>3,913,651</u>
1974	Fish	4,912,600	330,000	--	--	6,627,898
	Eyed Eggs	2,207,000	--	--	--	--
	Total	<u>7,119,600</u>	<u>330,000</u>	<u>--</u>	<u>--</u>	<u>6,627,898</u>
1973	Fish	4,725,852	217,100	--	--	12,986,027
	Eyed Eggs	3,511,544	--	--	--	--
	Total	<u>8,237,396</u>	<u>217,100</u>	<u>--</u>	<u>--</u>	<u>12,986,027</u>
1972	Fish	5,535,446	231,690	--	--	5,529,973
	Eyed Eggs	3,047,372	--	--	--	--
	Total	<u>8,582,818</u>	<u>231,690</u>	<u>--</u>	<u>--</u>	<u>5,529,973</u>
1971	Fish	3,626,790	400,318	--	--	3,617,598
	Eyed Eggs	2,423,000	--	--	--	256,000
	Total	<u>6,049,790</u>	<u>400,318</u>	<u>--</u>	<u>--</u>	<u>3,873,598</u>
1970	Fish	3,618,647	--	--	--	2,473,555
	Eyed Eggs	7,578,917	--	--	--	2,007,500
	Total	<u>11,197,564</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>4,481,055</u>
1969	Fish	1,316,063	--	497,298	--	2,076,743
	Eyed Eggs	1,704,826	--	--	--	700,000
	Total	<u>3,120,889</u>	<u>--</u>	<u>497,298</u>	<u>--</u>	<u>2,776,743</u>
1968	Fish	1,652,788	--	255,536	--	2,508,415
	Eyed Eggs	3,680,890	--	--	2,000,000	963,340
	Total	<u>5,333,678</u>	<u>--</u>	<u>255,536</u>	<u>2,000,000</u>	<u>3,471,755</u>
1967	Fish	465,736	--	202,350	--	2,355,263
	Eyed Eggs	2,014,460	--	1,548,000	3,066,000	848,455
	Total	<u>2,480,196</u>	<u>--</u>	<u>1,750,350</u>	<u>3,066,000</u>	<u>3,183,718</u>
1966	Fish	583,883	--	2,061,507	--	142,769
	Eyed Eggs	2,029,000	--	1,500,000	3,000,000	480,598
	Total	<u>2,612,883</u>	<u>--</u>	<u>3,561,507</u>	<u>3,000,000</u>	<u>623,367</u>
1965	Fish	--	--	214,720	--	24,291
	Eyed Eggs	635,000	--	--	1,180,000	249,682
	Total	<u>635,000</u>	<u>--</u>	<u>214,720</u>	<u>1,180,000</u>	<u>273,973</u>
1964	Fish	--	--	2,282,555	--	--
	Eyed Eggs	2,211,000	--	1,000,000	1,000,000	390,897
	Total	<u>2,211,000</u>	<u>--</u>	<u>3,282,555</u>	<u>1,000,000</u>	<u>390,897</u>

Table 2. Anadromous fish stocking in Idaho, 1960 to 1975 (continued).

<u>Year</u>	<u>Description</u>	<u>Spring Chinook</u>	<u>Summer Chinook</u>	<u>Fall Chinook</u>	<u>Coho</u>	<u>Steelhead</u>
1963	Fish	--	--	495,540	--	--
	Eyed Eggs	1,860,000	--	1,000,000	500,000	484,000
	Total	1,860,000	--	1,495,540	500,000	484,000
1962	Fish	--	--	--	--	--
	Eyed Eggs	2,070,000	--	400,000	100,000	102,000
	Total	2,070,000	--	400,000	100,000	102,000
1961	Fish	--	--	--	--	--
	Eyed Eggs	1,455,000	--	750,000	--	--
	Total	1,455,000	--	750,000	--	--
1960	Fish	--	--	--	--	--
	Eyed Eggs	--	--	535,000	--	--
	Total	--	--	535,000	--	--