Return to Index

Pend Oreille River

- Runs of salmon were reported to have been heavy, but declined after 1878, although some fish were present until Grand Coulee Dam was built.
- Steelhead abundant at the mouth of this river in 1894.
- Hydroelectric plant at falls at RM 20 supplied power to towns of Trail and Nelson.

AREA 5: SNAKE RIVER BELOW HELLS CANYON DAM

Palouse River (No Survey Date)

- Enters Snake River at RM 60 and is 150 miles long.
- High falls at RM 6 rendered the stream inaccessible to migratory fish.

Tucannon River (1935 Survey)

- Enters Snake River at RM 63 and is 60 miles long.
- Difficult for fish to enter river at low water stages at time of survey because of delta formed at the mouth by flood action.
- Of little salmon-producing value at time of survey; last large run of chinook occurred in 1915 when 500 salmon per day entered the river during the spawning migration.
- Chinook spawning peaked in mid-August at time of survey. Until 1922 or 1923 a run of fall chinook also entered the stream; last run of coho occurred in October 1929.
- Counting weir installed at RM 2 in 1938 showed the chinook run had been depleted to a negligible size; only 24 were counted.
- Power and irrigation diversion dam near Starbuck, Washington, at RM 5.5, was a barrier at lower water; almost entire flow taken by the screened power diversion at low water stages.
- 1-mile section of river channel between intake and power house tailrace virtually dry during summer months at time of the survey.
- 5-foot DeRuwe dam at RM 16 was a barrier to fish at low water; built to supply water for a power diversion, but at time of survey used to supply irrigation diversion; old fish ladder was entirely useless, blocks at least part of the chinook run.
- During summer, most of the flow at DeRuwe dam was diverted into unscreened irrigation ditch.
- 31 diversions withdrew 128 cfs at the time of the survey; irrigation ditches took 72 cfs, remainder used for power; 3 ditches had been screened.
- Steelhead used river January-April, small fall run also observed at time of survey. Although steelhead still entered the river in 1935, these runs were not nearly as abundant as in earlier years.

- 2 small irrigation diversions found on Cummings Creek at RM 0.5 and 1 had no fish protective devices; wing dams in connection with these diversions were not barriers to fish. Cummings Creek was 12 miles long and entered Tucannon River at RM 34.

- Cummings Creek formerly supported a good chinook population; good spring run of steelhead still present when surveyed.

Several small intermittent streams enter the Snake River in the 77-mile section between the mouths of the Tucannon and Clearwater Rivers; none is of value to salmon. Five of these streams are: Alkali Flat Creek -- enters at RM 67; Deadman Creek -- RM 85; Penawawa Creek -- RM 93; Almota Creek -- RM 105; and Steptoe Creek -- RM 129.

Alpowa Creek (1937 Survey)

- Enters Snake River at RM 131 and is 22 miles long.

- Often no flow in lower section during summer months due to diversion of water into several small, unscreened irrigation ditches, and semi-arid nature of watershed.

- Upper section supported small spring run of steelhead at time of survey; no salmon present when surveyed.

Asotin Creek (1935 Survey)

- Enters Snake River at RM 146 and is 14.5 miles long.

- Formerly supported excellent runs of salmon and steelhead; had a good spring run of steelhead and a very small summer run of chinook at the time of the survey.

- 2 permanent dams and 13 irrigation diversions on the main stream at the time of the survey; the only screened diversion was at the Washington Water Power Company Dam (see below).

- A 2-foot permanent dam at RM 4 was installed to prevent the migration of suckers from the Snake River into Asotin Creek; dam did not prevent the migration of steelhead during high water, but during periods of extreme low water it is doubtful if salmon and trout were able to pass this obstruction.

- 6-foot Washington Water Power Company Dam at RM 7.5 was used for irrigation and as a source of domestic water supply for the towns of Clarkston and Asotin; intakes to the diversion pipeline were adequately screened and a fish ladder installed.

- In periods of extremely low water the dam diverted the entire stream flow, leaving the stream bed dry except for deep pools.

- During August 1934 the State of Washington did considerable fish salvage work in the area below the dam; 3 miles of ditches were dug; fish seining methods were also used, and it was estimated that 250,000 steelhead fingerlings and 25 adult chinook spawners were saved from destruction.

- At the time of the survey North Fork provided the principal spawning area for the run of steelhead that ascended Asotin Creek. The North Fork is about 13 miles long, and joins the South Fork to form Asotin Creek at RM 14.5 of Asotin Creek.

- Runs of chinook had been depleted almost to the point of extinction on the North and South Fork at the time of the survey.

- 4 small irrigation diversions on the 12-mile long South Fork were all screened.

- Log jam 4 feet high at RM 1 of South Fork was a barrier except at high water stages.

- South Fork formerly supported a good run of steelhead and a reasonably good run of chinook; both had become very scarce by the time of the survey.

Tenmile Creek (1937 Survey)

- Enters the Snake River at RM 151 and is 20 miles long.

- No value to salmon at time of survey, and questionable value to steelhead trout.

Couse Creek (1937 Survey)

- Enters Snake River at RM 158 and is 10 miles long.

- No salmon or steelhead present when surveyed.

Clearwater River

- Joins the Snake River 140 miles above confluence with the Columbia River and is approximately 75 miles long.

- Clearwater River system formerly supported large runs of chinook, coho and steelhead; runs had been greatly depleted in recent years prior to the survey, and the coho run had been completely exterminated.

- Diversion dam of the Washington Water Power Company at RM 4 was 40 feet high; fish ladder was ineffective for chinook because of poor location and because at low water stages the river channel was almost dry from the diversion dam to the power plan tailrace (1.5 miles).

- Operation of the dam for 13 years without adequate provision for the passage of fish was responsible more than any other single factor for the depletion of the salmon runs in the Clearwater River system.

- An additional ladder was constructed at the diversion dam in 1940, and a ladder was built from the tailrace to the forebay; before these improvements were made, only the lower 2.5 miles of the river were available at low water stages.

North Fork, Clearwater River (1938 Survey)

- Enters Clearwater River at RM 43 and is 135 miles long.

- Formerly supported large run of chinook; run had been greatly depleted for many years, and by 1938 was practically exterminated; a small spring run of steelhead was reported at the time of the survey.

- Log jam 1,200 yards long at RM 20 was a barrier at low water; 2 smaller log jams above were also impassable at low water. Log jams removed at highwater; no permanent barrier to fish.

- Cranberry Creek and Reed Creek enter North Fork at RM 21.5 and 20, and were probably used by steelhead at the time of the survey (1938).

- A 12-foot falls near the mouth of Falls Creek rendered it inaccessible to migratory fish.

- Gold Creek was used by a few steelhead at the time of the survey (1938).

- Little North Fork formerly supported good runs of chinook and steelhead.

- Other tributaries to North Fork that probably supported small runs of steelhead at the time of the survey (1938) were Isabella Creek (RM 62.5); Beaver Creek (RM 63.5); Skull Creek (RM 71); Quartz Creek (RM 73); Deadhorse Creek (RM 83); Washington Creek (RM 84.5); Orogrande Creek (RM 92.5); Sprague Creek (RM 94); Squaw Creek (RM 95); and Jackknife Creek (RM 97).

Orofino Creek (1938 Survey)

- Enters Clearwater River at RM 47 and is 30 miles long.
- Series of impassable falls 6 feet to 12 feet high were at RM 5; of little possible value to migratory fish.

South Fork (1938 Survey)

- Joins Middle Fork to form Clearwater River at RM 75 and is 75 miles long.
- Power dam at RM 21 was provided with a poor fish ladder and was considered a barrier to the upstream passage of fish.
- Extremely turbid at the time of survey due to gold dredging operations.

Middle Fork (1938 Survey)

- Joins South Fork to form Clearwater River at RM 75 and is 24 miles long.
- Accessible to migratory fish throughout the course, but of little value to chinook or steelhead at time of survey. Spring run of steelhead present when surveyed.
- Selway Falls at RM 20 of Selway River was passable to spring steelhead, but difficult or impassable for summer chinook. Selway River enters Middle Fork at RM 24 and is about 100 miles long.
- At the time of the survey Idaho State Department of Fish and Game placed racks across the mouth of Gedney Creek to capture trout for artificial propagation. Gedney Creek enters the Selway River at RM 19.5.

Grande Ronde River (1940-1941 Survey)

- Enters Snake River at RM 170 and is about 200 miles long.
- Formerly an important producer of chinook, sockeye, and coho salmon, as well as steelhead. In 1901 the Grande Ronde was referred to as "one of the greatest chinook breeding feeders that the Council ever had."
- Largest hatchery egg-take was about 4 million chinook from 709 spawners and 7.5 million coho from 2,655 spawners, taken in 1902 near RM 45.5.

- Several obstructions and diversions located around Island City (RM 148) and La Grande (RM 150):
  - -- Debris jam at RM 148, probably impassable to fish at low water stages.
  - -- 3-foot power diversion dam considered impassable at low water furnished power to a flour mill at RM 148.
  - -- Several small irrigation pumps operated intermittently at RM 149.5.
  - -- Stone diversion dam 2.5 feet high was a barrier at low water at RM 150.
  - -- 3 irrigation ditches between RM 151-152.
  - -- Rock dam 2.5 feet high was a barrier to fish at low water at RM 152.5.
  - -- None of the diversions was provided with any fish protective devices; this undoubtedly contributed to the depleted condition of migratory fish runs at the time of the survey.
- Low stone dam in connection with Orodell irrigation diversion was not a barrier to fish at about RM 150.
- At RM 191, 3 log and debris jams were all impassable to fish at low water.
- At RM 192 stream bed was torn up by a gold dredge; gravel tailings were deposited for a distance of 2 miles upstream at the time of the survey.
- In 1941 the flow was entirely beneath the surface of the stream bed in this 2-mile section, due to former dredging operations.
- Debris jam at lower end of the mining tailings was impassable at low water; principal bad effect of the gold dredging operation was excessive silting of areas downstream.
- Since salmon runs in the upper river had been depleted to extinction already, mining operations could not be blamed for the condition at the time of the survey.

Wenana River (1940 Survey)

- Enters Grande Ronde River at RM 45.5 and is 17 miles long.
- Formerly supported a small run of chinook and a fair run of coho. Small run of steelhead and coho present when surveyed.
- Oregon State Department of Fisheries maintained an egg-taking station in 1901 and 1902 at the mouth where both the Grande Ronde and Wenaha Rivers were racked.
- In 1903 the station was moved several miles up the Wenaha River, where eggs were taken from 25 chinook and 483 coho.

Wallowa River (1940 Survey)

- Enters Grande Ronde River at RM 81.5 and is 55 miles long.
- Good run of chinook, coho and steelhead that formerly used the Wallowa River and many of its tributaries were greatly depleted at the time of the survey.
- Oregon State Fish Commission established a salmon and steelhead eyeing station in 1903 at RM 8.5; a hatchery built at this location in 1905; best yearly egg-takes at this station were 2 million chinook eggs, 4 million coho eggs, and 1 million steelhead eggs.
- Station closed in 1913 due to continued decline in number of salmon.
- In 1921-1922 a hatchery with an excellent spring water supply was established farther upstream, near Enterprise.
- Numerous irrigation diversions, but no dams or other obstructions below the outlet of Lake Wallowa (RM 50).
- None of the water diversions screened at the time of the survey; this condition was one of the chief causes for the depletion of the runs of chinook in the Wallowa, and was recognized as early as 1901.
- 2 principal water diversions (irrigation and industrial) were located near town of Wallowa at RM 23.
- Granger and Big Ben Irrigation canals at RM 48.5 diverted from 0 to 300 cfs and 0 to 120 cfs.
- Farmers Canal was below the dam at the outlet of Lake Wallowa (RM 50); irrigation diversion flow ranged from 0 to 150 cfs.

- Silver Lake Irrigation Ditch was located at the Lake Wallowa dam (RM 50); diversion flow ranged from 0 to about 130 cfs.

- 40-foot dam at the outlet of Lake Wallowa (RM 50) was built in 1929 and was a total barrier to the upstream migration of fish.

- Flow in the stream bed directly below the dam ranged from 0 when there was no irrigation demand to a maximum of more than 500 cfs.

- Stationary screen 200 feet above the dam (RM 50) prevented land-locked sockeye chinook from passing downstream.

- Lake Wallowa formerly provided an excellent rearing area for sockeye salmon; its chief values at time of survey being as recreational area and as a reservoir for irrigation and power uses.

- Minam River enters Wallowa River at RM 10 and is 45 miles long; formerly supported good runs of chinook, coho and steelhead; these runs have been greatly depleted.

- Bear Creek enters Wallowa River at RM 22 and is 25 miles long; several small irrigation diversions occurred in the upper section; because of the low volume of flow at the time of the chinook migration in July and August, Bear Creek was of little potential value to this species, but it was attractive to steelhead at higher water stages.

- Lostine River enters the Wallowa River at RM 26.5 and is 30 miles long; formerly supported good runs of salmon; some steelhead present when surveyed.

- A number of small irrigation diversions occurred in the lower section of Lostine River; none was provided with fish protective devices.

- Domestic water supply dam 3.5 feet high at RM 7 of the Lostine River; this dam was not provided with a fishway, and was passable to fish only at high water stages.

- Hurricane Creek enters Wallowa River at RM 42 and is 18 miles in long; concrete 10-foot irrigation diversion dam at RM 8 was a barrier to fish; 100 feet farther upstream was another low irrigation diversion dam.

- During late summer, there was often no flow in Huricane Creek below the lower dam; all the water was used for irrigation.

- West Fork, Wallowa River joins East Fork to form main river at RM 55 and is 10 miles long; 30-foot waterfall at RM 5.

- East Fork is 5 miles long; impassable 8-foot power dam at RM 1.

Cabin Creek (1940 Survey)

- Enters Grande Ronde River at RM 87 and is 12 miles long.
- Of little possible value to salmon at time of survey; may be used by steelhead at higher water stages.

Clark Creek (1940 Survey)

- Enters Grande Ronde River at RM 96 and is 30 miles long.
- Low wing dam, passable to fish, and a small irrigation diversion at RM 3.5.
- Too small to be of value to salmon, may be of value to steelhead at higher water stages.

Indian Creek (1940 Survey)

- Enters Grande Ronde River at RM 98 and is 22 miles long; no salmon reported to enter in fall, few steelhead ascend during spring high water.
- Town of Elgin maintained a domestic water supply dam and diversion at RM 5.5; this dam was 9 feet high, and was provided with a poor fish ladder which was impassable at low water stages.

Catherine Creek (1941 Survey)

- Enters Grande Ronde River at RM 135 and is 320 miles long; former good runs of chinook were greatly depleted at the time of the survey; fair run of steelhead in spring.
- 19 dams, 11 were at least barriers at low water stages, and several of these partially obstructed the passage of salmon even at high water.
- 29 water diversions, of which only 1, the intake to the hatchery of the Oregon State Game Commission, was screened at the time of the survey.
- Extensive withdrawal of water for irrigation, industrial, and domestic use did not leave a sufficient volume of flow at the time of the upstream salmon migration; water temperature abnormally high in late summer, often above 80°F, and flash floods had become increasingly frequent occurrence due to the removal of timber in the upper section of the watershed.

- Mill Creek enters the Grande Ronde River and Catherine Creek (at RM 1) and is 10 miles long; small power dam at Cove was total barrier to migratory fish.

- Little Creek enters Catherine at RM 10.5 and is 14 miles long; several diversion dams were barriers to the migration of fish; extensive water diversions for irrigation.

- Little Catherine Creek enters Catherine Creek at RM 25 and is 7 miles long; numerous log and debris jams; possible use of lower section by few salmon and steelhead at time of survey.

- North Fork, Catherine Creek, enters Catherine Creek at RM 29 and is 11 miles long; log jams at RM 32 and 3.5 and several other log and debris jams farther upstream caused by road building operations were at least barriers to fish at low water stages; fair sized run of chinook formerly ascended as far as the confluence of the Middle Fork, at RM 3.5, and steelhead ascended much farther upstream; these runs, especially the salmon, were greatly depleted at the time of the survey.

- Middle Fork, Catherine Creek, enters Catherine Creek at RM 3.5 and is 5 miles long; formerly supported small run of chinook, but no salmon present when surveyed (1941); a few steelhead ascended at high water stages.

- Middle Fork was filled with log and debris jams from road building and logging operations that impeded the passage of fish.

- South Fork, Catherine Creek, enters Catherine Creek at RM 29 and is 9 miles long; numerous log and debris jams were impassable to fish at low water stages.

- South Fork formerly supported the largest runs of chinook and steelhead of the 3 branches of Catherine Creek. These runs had been greatly depleted at the time of the survey.

Five Point Creek (1941 Survey)

- Enters Grande Ronde River at RM 156.5.

- Formerly supported small run of salmon and steelhead. No salmon present when surveyed.

Beaver Creek (1941 Survey)

- Enters Grande Ronde River at RM 167 and is 18 miles long.

- Domestic water reservoir supplying the town of La Grande was located in the headwaters of Beaver Creek; this structure did not hinder fish life.

- Inaccessible to migratory fish at low water stages at the time of the survey because of obstructions in the main Grande Ronde River.

Meadow Creek (1941 Survey)

- Enters Grande Ronde River at RM 168.5 and is 24 miles long.

- Numerous beaver dams were low water barriers; a low, temporary, loose rock dam at RM 6 was also a barrier at low water.

- Formerly supported a good run of chinook; this run had been depleted to extermination at the time of the survey; entire stream was inaccessible at lower water stages because of dams in the main Grande Ronde River.

Fly Creek (1941 Survey)

- Enters Grande Ronde River at RM 173.

- No chinook present when surveyed; potential value to steelhead at high water stages.

Sheep Creek (1941 Survey)

- Enters Grande Ronde River at RM 182 and is 10 miles long.

- No salmon present when surveyed; some steelhead at high water; a low, wooden diversion dam at RM 3 was a barrier to fish at low water stages.

Limber Jim Creek (1941 Survey)

- Enters Grande Ronde River at RM 185.

- No salmon present when surveyed; possible value to steelhead at higher water stages.

Clear Creek (1941 Survey)

- Enters Grande Ronde River at RM 187 (where stream of main river was torn up by gold dredges at the time of the survey) and is 8 miles long.

- Possible value to steelhead at higher water stages.

Salmon River (1941 Survey)

- Joins the Snake River 187 miles above the Columbia River confluence and is 400 miles long.
- Salmon River system has always been one of the mainstays in the production of spring chinook.
- At the time of the survey, chinook and sockeye runs in the easily accessible headwaters area were only a small fraction of their former size; a fair spring run of steelhead was reported.
- Stream bed heavily silted for 161 miles from Shoup to Stanley at time of survey due to mining operations, the principal source of silting being a large gold dredge operating on Yankee Fork.
- Spearing salmon on the spawning beds at the headwaters formerly resulted in great economic waste and was one of the principal causes of salmon depletion in this region; a regulation abolishing spearing and snagging of salmon and steelhead was enacted by Idaho Fish and Game Commission in 1945.
- Sunbeam Dam at RM 360 contributed to the depletion of salmon in the headwaters; the 30-foot dam was built in 1913 and constituted a partial barrier to salmon. Attempts to construct a fishway never were satisfactory. Steelhead were able to ascend the fishway during spring high water.
- Sunbeam Dam was especially damaging to the sockeye run, which was entirely dependent upon access to the lakes above; the dam was partially removed in 1934.
- Other dams noted were several small, temporary, irrigation wing dams above Stanley, none of which was a barrier to the upstream migration of salmon.
- No important water diversions on the main Salmon River; 3 small, unscreened irrigation ditches above Stanley.

Little Salmon River (1942 Survey)

- Enters Salmon River at RM 82 and is 43 miles long.
- Formerly supported a fair run of chinook; little or no value as a salmon producer at time of survey.

- No total barriers to fish were found, but several small falls and cascades rendered the upper section difficult for salmon to access during low-water stages.

- Rapids River enters Little Salmon River at RM 4 and is 21 miles long; supported small run of chinook at time of survey.

South Fork, Salmon River (Not Surveyed)

- Enters Salmon River at RM 129 and is 80 miles long.

- East Fork tributary reported to be silted from mining activities 26 miles above confluence with South Fork.

- Formerly supported large runs of chinook and steelhead.

Middle Fork, Salmon River (1941 Survey)

- Enters Salmon River at RM 191 and is 106 miles long.

- Only obstacle to migratory fish was Sulphur Creek Falls at RM 96; passable with difficulty at high water. Salmon and steelhead have always spawned above Sulphur Creek Falls, and the falls cannot be considered a barrier.

- Fairly good run of spring chinook into the larger tributaries through Camas Creek at RM 35; run was very small in upper section in 1941.

- Good run of steelhead appeared in the river in April and May and ascended most of the tributaries at the time of the survey; these fish have apparently suffered much less depletion than chinook.

- Big Creek enters Middle Fork at RM 18 and is 50 miles long; supported chinook and spring steelhead at the time of the survey.

- Monumental Creek enters Big Creek at RM 25 and is 25 miles long; chinook and steelhead present when surveyed.

- Crooked Creek enters Big Creek at RM 25 and is 15 miles long; turbid from mining silt, numerous beaver dams; no salmon present when surveyed.

- Camas Creek enters Middle Fork at RM 35 and is 38 miles long; chinook present when surveyed.

- West Fork of Camas Creek enters at RM 15 and is 13 miles long; and irrigation diversion dam at RM 2 was not a barrier to fish, the ditch was unscreened; several beaver dams found about RM 4 were considered to be barriers at low water.

- West Fork of Camas Creek had chinook present when surveyed.

- Loon Creek enters Middle Fork at RM 45.5 and is 34 miles long; small, unscreened irrigation ditch was at RM 10.

- Warm Spring Creek enters Loon Creek at RM 14 and is 17 miles long; chinook and a spring run of steelhead present when surveyed.

- Trapper Creek enters Warm Spring Creek at RM 10 and is 7 miles long; chinook present when surveyed; several beaver dams, log jams, and small falls were considered barriers at low water or passable only with great difficulty.

- Mayfield Creek enters Loon Creek at RM 23.5 and the main stream is 2.5 miles long; chinook and steelhead present when surveyed, but it was not of importance as a salmon producer; several log jams and beaver dams were considered to be passable only with great difficulty. There were 3 small unscreened irrigation ditches.

- Numerous beaver dams on the West Fork of Mayfield Creek were passable with great difficulty. Chinook and steelhead present in East and West forks at time of survey.

- Trail Creek enters Loon Creek at RM 24 and is 6.5 miles long; impassable beaver dam 950 yards above the mouth; 2 small, unscreened irrigation ditches and numerous other beaver dams were observed.

- Little Loon Creek enters Middle Fork at RM 55.5 and is 11 miles long; a falls 6 feet high located at the mouth was probably a barrier at low water; numerous beaver dams formed impassable barrier at RM 3; formerly supported small run of chinook.

- Marble Creek enters Middle Fork at RM 63 and is 24 miles long; considerable mining pollution at the time of the survey.

- Indian Creek enters Middle Fork at RM 69 and is 22 miles long; 2 log jams were possible barriers to fish at low water; a 7-foot falls at RM 11.5 was considered a barrier at low water; little or no value as salmon producer at the time of the survey.

- Pistol Creek enters Middle Fork at RM 74 and extends 3.5 miles to forks; chinook and steelhead present when surveyed. On Big Pistol Creek and Little Pistol Creek log and debris jams and numerous beaver dams were probably barriers at low water; small run of chinook formerly entered the stream, and a fair run of spring steelhead was present when surveyed.

- Rapid River enters Middle Fork at RM 78 and is 20 miles long; chinook and steelhead present when surveyed.

- Soldier Creek enters Middle Fork at RM 85.5 and is 8 miles long; several log and debris jams were considered to be passable to fish only with difficulty; no salmon or steelhead present when surveyed.

- Sulphur Creek enters Middle Fork at RM 94.5 and is 19 miles long; supported a fair run of chinook at the time of the survey; lower 3 miles covered with fallen trees, and log jams had begun to form at the time of the survey.

- Marsh Creek and Bear Valley Creek enter Middle Fork at RM 106.5 and are 14.5 miles and 37 miles long, respectively. Marsh Creek (and tributaries Beaver Creek, Cape Horn Creek, Banner Creek, and Knapp Creek) and Bear Valley Creek (and tributary Elk Creek) formerly supported large runs of chinook, but by the 1930s the runs had been almost exterminated by the former unrestricted practice of spearing salmon on the spawning beds; spring steelhead present when surveyed. A log jam at RM 1 of Banner Creek was considered a barrier to fish.

- Cape Horn Creek was of no value and inaccessible to salmon above 6 miles upstream due to the small volume of flow and numerous beaver dams.

- 2 beaver dams in the lower 200 yards of Sand Creek (tributary to Bear Valley Creek) were considered to be passable with difficulty; of no value to salmon because of small stream size.

Panther Creek (1941 Survey)

- Enters Salmon River at RM 203 and is 43 miles long.

- 3 low irrigation diversion dams, 1 abandoned mining diversion dam, and several beaver dams and log jams were found; none were total barriers to fish, but 2 of the irrigation dams and a log jam appeared to be passable only with difficulty at low water stages.

- Formerly supported a good run of chinook; the run had declined steadily at the time of the survey.

- Napias Creek enters Panther Creek at RM 20 and is 13 miles long; inaccessible to salmon a short distance above mouth because of many falls and cascades; silt from gold mines at headwaters; no salmon present when surveyed.

North Fork, Salmon River (1941 Survey)

- Enters Salmon River at RM 229 and is 23 miles long.

- Fomerly supported run of chinook; extreme turbidity due to a large gold mine at RM 11 and smaller mining operations at various points along the stream; as a result it was of no value to salmon at the time of the survey.

Lemhi River (1941 Survey)

- Enters Salmon River at RM 251 and is 60 miles long.

- Idaho Power Company had a 6-foot diversion dam at RM 1 not equipped with fishways, and was a barrier to salmon except during the June high water stage.

- During low water periods entire flow diverted except for seepage; the diversion was not equipped with any fish protective devices.

- Irrigation diversion about RM 3; dam in connection with diversion was not a barrier to fish.

- 3-foot irrigation dam at RM 7.5; no fishway was provided and the dam was a barrier at low water.

- Numerous other low irrigation dams were all passable to fish; no fish screens were on any of the water diversions.

- Formerly supported excellent run of chinook; run had been depleted at the time of the survey.

Pahsimeroi River (1941 Survey)

- Enters Salmon River at RM 295 and is 30 miles long.

- Numerous small irrigation ditches found throughout, none equipped with fish screens; the total amount of water being diverted was considerable.

- Silting of the stream bed due mainly to returns from irrigation ditches and partly to placer mining on several small tributaries.

- Formerly supported a good run of chinook and steelhead; no salmon or steelhead present when surveyed due to extensive irrigation withdrawals.

East Fork (Salmon River) (No Survey)

- Enters Salmon River at RM 336 and is 32 miles long.
- Small run of chinook present when surveyed.

Yankee Fork (Salmon River) and Valley Creek (1941 Survey)

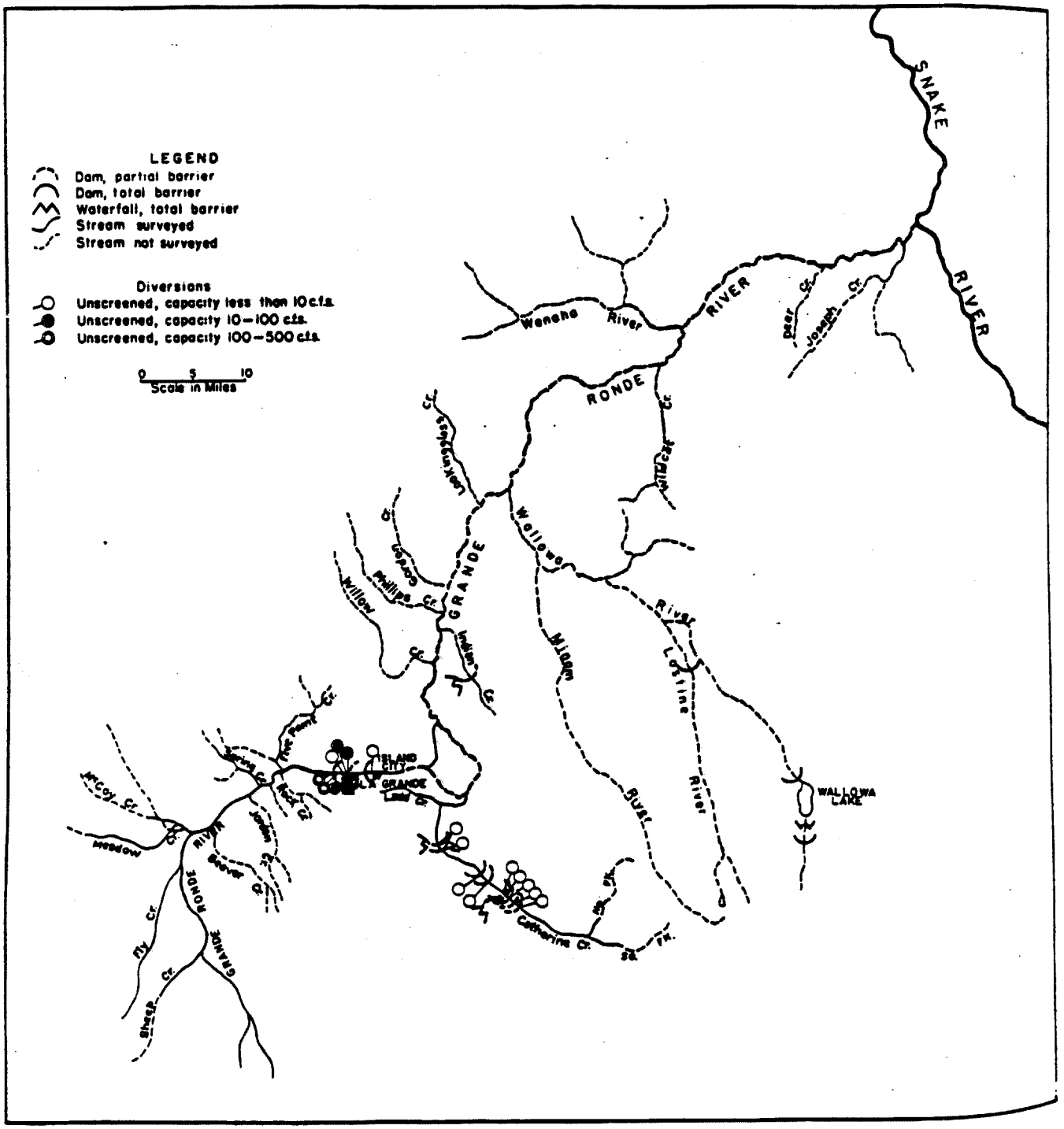
- Enter Salmon River at RM 360 and RM 372, and are 25 and 21 miles long, respectively.
- Extremely muddy at the time of observation due to the extensive operations of large gold-mining dredges.
- Small runs of chinook present when surveyed.

Redfish Lake Creek (1941-1942 Surveys)

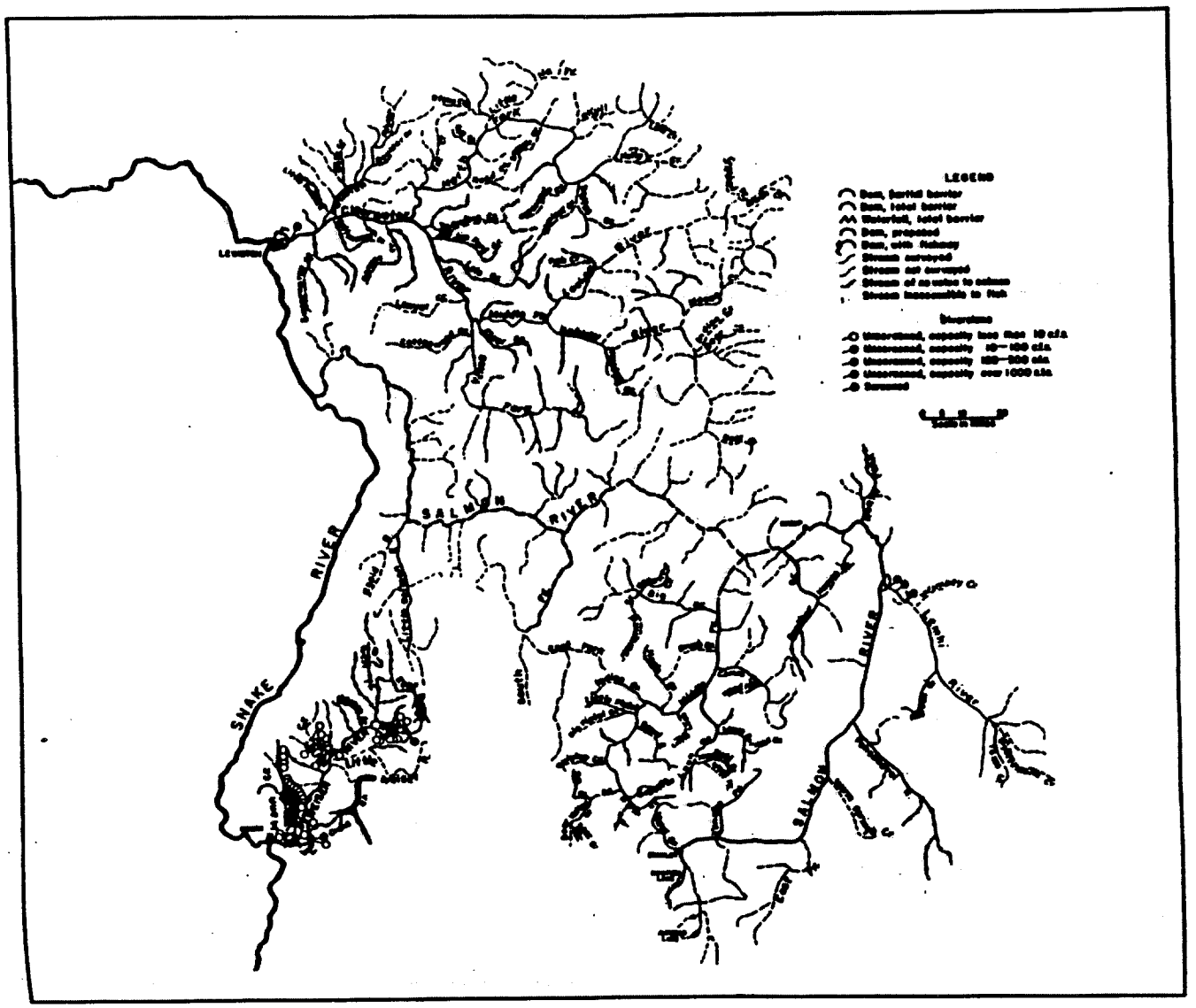
- Enters Salmon River at RM 337 and extends 0.75 miles to Little Redfish Lake
- Impassable to salmon above the head of Big Redfish Lake because of falls and cascades; log jam 500 yards below lake outlet was passable with difficulty.
- No chinook present when surveyed. 200 sockeye were reported spawning in Big Redfish Lake in October 1942.
- Chief value to salmon at time of survey was use as a passageway by the small, greatly depleted run of sockeye that entered Big Redfish Lake.

Imnaha River (Not Surveyed)

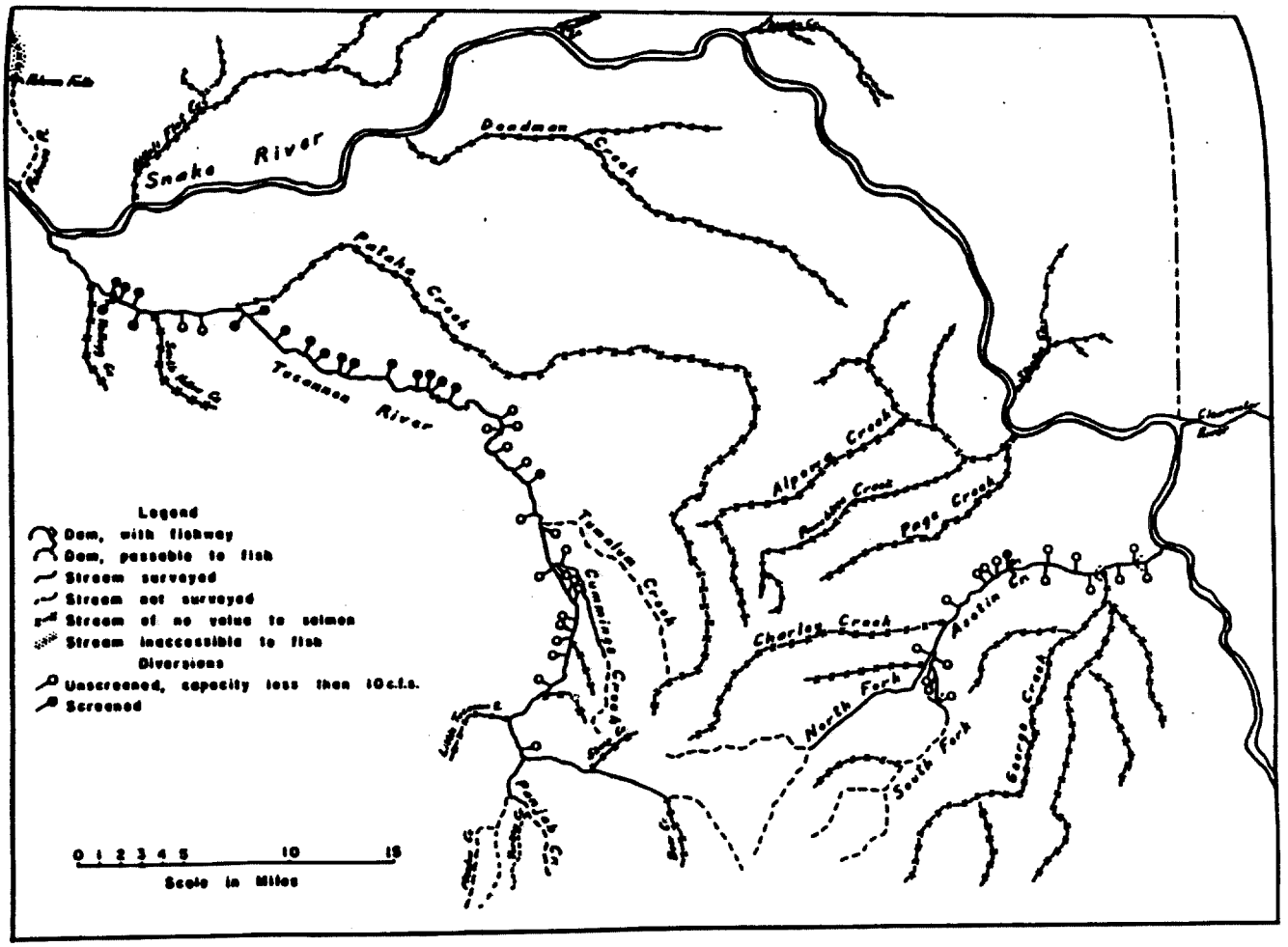
- Enters Snake River at RM 190 and is 75 miles long.
- At the time of the survey, with the exception of the Imnaha River, there were no streams of present or potential major importance to salmon on the Oregon side of the Snake River in this area, mainly due to extensive irrigation use.
- Formerly supported good runs of chinook and steelhead, but runs were very small in 1942.
- Imnaha Falls at RM 65 was a barrier to salmon.



Grande Ronde River Basin



Clearwater, Salmon and Weiser river basins



Tucannon and Asotin river basins

AREA 6: SNAKE RIVER ABOVE HELLS CANYON DAM

Weiser River (1941 Survey)

- Joins Snake River 342 miles above confluence of Columbia and Snake rivers, and is 82 miles long.
- Extensive use of irrigation facilities; on several streams practically all water diverted at certain points during the summer, leaving sections of dry stream bed.
- 167 irrigation diversions in the river system; none were screened.
- Stream bed in lower part of the river covered with a layer of silt resulting from the turbid discharge of several reservoirs on tributary streams; upper part was more often clear.
- 13 irrigation diversions on the main Weiser; 6 had water rights ranging from 9 to 240 cfs.
- Mill Ditch irrigation diversion dam at RM 11 passable at high water, and not equipped with a fishway.
- Short distance above Mill Ditch was the 4-foot Galloway diversion dam of the Weiser Irrigation Project with poorly designed fishway; passable to steelhead during spring runoff.
- Usually little or no spill over the dam during August and September, and the stream bed below was practically dry; a large part of the chinook run had sometimes been blocked at this dam, and the fish caught in large numbers (e.g., 1939).
- Galloway ditch had a carrying capacity of 240 cfs, and rights to all the water in the river except for 9 cfs which was supplied to the Mill ditch.
- Other major irrigation diversions were the Middle Valley ditch, 60 cfs; the Robertson-Levey ditch, 30 cfs; and the Allison-Jewell ditch, about 9 cfs.
- In the early days, the Weiser River system was a valuable area for the reproduction of salmon; large runs of chinook formerly used the extensive spawning area in both the main stream and its principal tributaries.
- Runs gradually have become depleted, the last fair-sized run of chinooks being reported in 1931.

- A fairly good run of steelhead trout entered the river during the spring high water period and ascended the tributaries to spawn at the time of the survey.

Mann Creek (1941 Survey)

- Enters Weiser River at RM 5.5 and is 33 miles long.

- 20 irrigation diversions were found; 13 of the dams associated with these diversions, as well as several falls and log jams, were considered to be barriers at the low water. Each of the dams diverts practically the entire stream at that point during low water stages, leaving a dry channel.

- Many years ago Mann Creek supported good runs of chinook and steelhead; at time of survey salmon run was practically exterminated and small spring run of steelhead was reported.

Crane Creek (1941 Survey)

- Enters Weiser River at RM 14 and is 33 miles long.

- Crane Creek Dam at RM 12 was built for irrigation in 1920; not equipped with fishways and a total barrier to migratory fish. The stream bed below the dam often practically dry when water was being impounded.

Keithley Creek (Not Surveyed)

- Enters Weiser River at RM 29.5 and is 15 miles long.

- 13 irrigation diversions diverted almost the entire flow during the late summer at the time of the survey.

- Small late summer run of chinook formerly used stream, and a spring run of steelhead was reported; of little value to salmon at time of survey.

Little Weiser River (Not Surveyed)

- Enters Weiser River at RM 36 and is 38 miles long.

- In earlier years chinook and steelhead spawned all along the stream from the vicinity of Indian Valley to the headwaters some 24 miles above; chinook had been greatly depleted at the time of the survey, although some used upper portion.

- Before the C. Ben Ross Reservoir was built near Indian Valley in 1937, the portion of the stream below the lowest diversion was often dry during the summer. Reservoir maintained some flow in the lower part of the stream at the time of the survey.

- 18 irrigation diversions on the stream.

- Grays Creek enters Little Weiser River at RM 11 and is 25 long; single diversion took the entire flow during irrigation season, leaving the lower portion of the stream bed practically dry.

- Water carried into Grays Creek from diversions on Fall Creek and the Little Weiser River; without these 2 supplemental supplies for irrigation, Grays Creek would be dry for almost its entire length in late summer.

Pine Creek (1941 Survey)

- Enters Weiser River at RM 36.5 and is 15 miles long.

- Stream formerly supported good runs of chinook and steelhead; few chinook and small spring run of steelhead reported at time of survey.

- 21 small irrigation diversions; diversion dams were all small, low structures; several were barriers to fish at low water.

Spring Creek (Not Surveyed)

- Enters Weiser River at RM 37.

- 1 small irrigation diversion.

- No salmon present when surveyed.

Rush Creek (Not Surveyed)

- Enters Weiser River at RM 37.5 and is 17 miles long.

- Good runs of chinook and steelhead formerly used spawning areas, but these runs had been greatly depleted at the time of the survey.

- Power plant and an impassable falls at RM 9; 21 small irrigation diversions.

Grizzly Creek (Not Surveyed)

- Enters Weiser River at RM 42.5 and is 8 miles long.

- 1 small irrigation diversion.
- Too small to be of value to salmon; slight value to steelhead.

Cow Creek (Not Surveyed)

- Enters Weiser River at RM 43.5 and is 8 miles long.
- 3 irrigation diversions.
- Too small to be of value to salmon; slight value to steelhead.

Bacon Creek (Not Surveyed)

- Enters Weiser River at RM 44.5 and is 7 miles long.
- Excess water from the Mesa diversion of the Middle Fork of the Weiser River flowed into a pool at the head of Bacon Creek; if it were not for this supplemental flow, Bacon Creek would be dry during the summer.
- No salmon present when surveyed.

Goodrich Creek (Not Surveyed)

- Enters Weiser River at RM 45.5 and is 13 miles long.
- 3 small irrigation diversions.
- Formerly supported runs of chinook and steelhead; of little value to salmon at time of survey.

Johnson Creek (Not Surveyed)

- Enters Weiser River at RM 48 and is 13 miles long.
- 1 small irrigation diversion.
- Good runs of chinook and steelhead formerly used the spawning area; of slight value to salmon at time of survey.

Middle Fork, Weiser River (1941 Survey)

- Enters Weiser River at RM 49.5 and is 25 miles long.
- Good runs of chinook and steelhead formerly entered the Middle Fork; no value to migratory fish at time of survey due to water withdrawals.

- 8 irrigation diversions, most important being the Mesa ditch, located about RM 8; this diversion had a legal right to all the water in the stream during the irrigation season and was the source of domestic water supply for the town of Mesa.

- Stream bed often dry below the diversion point during part of July, August, and September; diversion was a barrier to fish at low water.

- Falls 25 feet in height at RM 13 was a total barrier to fish.

- Fall Creek enters Middle Fork at RM 7 and is 6 miles long; all water from the upper part of Fall Creek diverted into the North Fork of Grays Creek and used to irrigate land in the vicinity of Indian Valley; 2 miles above the mouth another diversion carried the remainder of the stream into the Mesa Ditch; no value to salmon at time of survey because of agricultural use.

Cottonwood Creek

- Enters Weiser River at RM 52 and is 11 miles long.

- 6 irrigation diversions on main stream and 1 on North Cottonwood Creek.

- Extensive water withdrawals and unscreened diversions made creek of no value to salmon and slight value to steelhead when surveyed.

Hornet Creek (1941 Survey)

- Enters Weiser River at RM 54.5 and is 18 miles long.

- 13 irrigation diversions; 3 were of fair size.

- Formerly supported good runs of chinook and steelhead; headwaters were of some value to steelhead at the time of the survey, although the irrigation diversions present hazards to downstream migrants; no salmon present when surveyed.

Mill Creek (Not Surveyed)

- Enters Weiser River at RM 58 and is 7 miles long.

- 9 irrigation diversions.

- No salmon present when surveyed.

Fort Hall Creek (Not Surveyed)

- Enters Weiser River at RM 60 and is 3 miles long.
- 3 irrigation diversions.
- No salmon present when surveyed.

West Fork, Weiser River (1941 Survey)

- Enters Weiser River at RM 61 and is 14 miles long.
- Formerly supported good runs of chinook and steelhead; chinook run had been greatly depleted at the time of the survey because of extensive withdrawal of water for irrigation, but still of some value to steelhead.
- 3 irrigation diversions on the stream.
- Lost Creek enters West Fork at RM 8 and is 21 miles long. Lost Valley reservoir dam at RM 10 was 40 feet high; no fishways were provided and the dam was a total barrier to fish. Dam used to provide sufficient water for irrigation diversions on the West Fork and the main Weiser River.
- Practically the entire discharge from the reservoir diverted during the irrigation season.

Warm Spring Creek (Not Surveyed)

- Enters Weiser River at RM 64 and is 7 miles long.
- Impassable dam about RM 1.
- No salmon present when surveyed.

East Fork, Weiser River (Not Surveyed)

- Enters Weiser River at RM 68.5 and is 14 miles long.
- 2 irrigation diversions on the stream; probably no flow at times during the winter.
- Formerly supported runs of chinook and steelhead; no value to salmon at time of survey because of the withdrawal of water for irrigation.

Payette River (1938 Survey)

- Joins Snake River 357 miles above Columbia River confluence and is 72 miles long.
- Most valuable asset was large amount of spawning and rearing area provided by the lakes in its headwaters for the large runs of sockeye salmon that the system formerly supported (pointed out as early as 1896, 1897). Sockeye runs in this system were exterminated many years ago and the chinook runs more recently met the same fate.
- At least 35 years ago (about 1915) a former diversion dam located a few miles below Horseshoe Bend prevented salmon from passing upstream above that point, thus blocking the entire run of bluebacks from the headwater lakes and confining the chinook run to the main stream below the dam.
- For the next 15 years the chief chinook spawning areas were located near Montour and the mouth of Squaw Creek; when the Black Canyon Dam was built (1923) these spawning areas were rendered inaccessible; the dam at Horseshoe Bend was later removed.
- Main Payette formerly supported a good run of chinook and provided a passageway for a good run of blueback salmon.
- 96-foot Black Canyon Dam was constructed at RM 41 in 1923 by the U.S. Bureau of Reclamation as a power and irrigation project and was a total barrier to migratory fish. No salmon reported at Black Canyon Power Plant since 1937.
- No fish-protective devices at the time of the survey, diversions were unscreened.
- 11 irrigation diversions and 1 power diversion in operation on the main Payette at the time of the survey; 8 diversions were of large size.
- Sewage was discharged into the stream at the town of Payette near the mouth, and at Emmett at RM 32; sawmill waste also entered at Emmett.

Little Will Creek (Not Surveyed)

- Enters Payette River at RM 9 and is 23 miles long.
- Paddock Valley reservoir at RM 18.
- No salmon present when surveyed.

Willow Creek and Squaw Creek (Not Surveyed)

- Entire Payette River at RM 13 and RM 45, and are 23 miles and 45 miles long.
- Almost entire flows diverted for irrigation.
- No salmon present when surveyed.

North Fork, Payette River (1938 Survey)

- Enters Payette River at RM 72 and is 120 miles long.
- North Fork together with the lakes in its headwaters formerly supported large runs of chinook and sockeye salmon; region was inaccessible to salmon at the time of the survey.
- Mill dam at the town of Cascade built in 1926, about RM 40; 4 feet high, no fish ladder, and passable only at high water.
- Power dam 1 mile above the town of Cascade (RM 41); 7 feet high, no fish ladder, and impassable to fish; power diversion unscreened.
- Water control dam constructed at the outlet of Payette Lake in 1943; no fishways were provided, and the dam was barrier to migratory fish.
- Water control dam at the outlet of Upper Payette Lake, 9 feet high, no fish ladder, and impassable to fish.
- Small diversion 500 yards below outlet of Payette Lake provided water for a fish hatchery.
- Untreated sewage from the town of McCall discharged 0.5 miles downstream from the outlet of Payette Lake.
- Clear Creek enters North Fork at RM 32 and is 16 miles long; several beaver dams in the lower section were barriers to fish; 2 small unscreened diversions for irrigation and stock watering; completely inaccessible to migratory fish at time of survey.
- Big Creek enters North Fork at RM 32 and is 19 miles long; series of beaver dams and log jams considered impassable to fish at low water; irrigation diversion dam at RM 4, 25 feet high, no fishway, and a total barrier to fish; inaccessible to migratory fish at time of survey.

- Gold Fork Creek enters North Fork at RM 58 and is 28 miles long; 15-foot irrigation diversion dam at RM 12; no fishway, unscreened ditch, and impassable to fish; inaccessible to fish at the time of the survey.

- Lake Fork Creek enters North Fork at RM 64 and is 24 miles long.

  -- 2-foot dam at RM 16.5 was a barrier at low water.

  -- 2-foot irrigation diversion dam at RM 17.5 was a barrier at low water.

  -- Irrigation wing dam at RM 18.5.

  -- 2-foot irrigation diversion dam at RM 22.5 was a barrier at low water.

  -- 15-foot water control dam built in 1926 at the outlet of Little Payette Lake was impassable to fish.

  -- No dams or diversions were equipped with any fish-protective devices.

  -- Run of sockeye salmon formerly entered Little Payette Lake; inaccessible to migratory fish at time of survey.

  -- 90 percent of the flow diverted for agriculture.

- Impassable 20-foot power dam 2 miles above Little Payette Lake on North Fork, Lake Fork Creek; no fish-protective devices.

South Fork, Payette River (1938 Survey)

- Enters Payette River at RM 72 and is 77 miles long.

- Lower portion of the South Fork formerly supported a good run of chinook; inaccessible to migratory fish at time of survey.

- Grimes Pass power dam at RM 16 was 60 feet high and was not provided with any means for passage of fish; middle third of this structure washed out in 1943.

- Series of natural falls about RM 25.

- Middle Fork of the South Fork enters South Fork at RM 7 and is 40 miles long. Floods deposited large amounts of sand and silt throughout much of the stream bed on the Middle Fork, damaging many former good spawning areas.

- Middle Fork formerly supported a large run of chinook; entire stream was inaccessible to migratory fish when surveyed.

- Silver Creek enters Middle Fork at RM 18 and is 15 miles long; several beaver dams and log jams were found to be impassable at low water.

- A few chinook formerly entered Silver Creek; entire stream was inaccessible to migratory fish when surveyed.

- Deadwood River enters South Fork at RM 30 and is 40 miles long. Deadwood Dam was built in 1931 at RM 23; 120 feet high, not equipped with fishways; no salmon present when surveyed.

- Tenmile Creek enters South Fork at RM 50 and is 13 miles long; 2-foot dam at RM 2 with an unscreened irrigation ditch; inaccessible to migratory fish when surveyed.

Pine Creek (1942 Survey)

- Enters Snake River at RM 269 and is 32 miles long.

- No salmon had been seen for 15 years preceding the survey (1927-1942); small winter and early spring run of steelhead still ascended at the time of the survey; 5 to 11 tributaries reported possible use by steelhead in spring.

  Section 1 -- Lower Pine Canyon (RM 0-12)

  -- Diversion dam 2 feet high at RM 3 was not a barrier to fish; unscreened ditch for irrigation and stock watering.

  Section 2 -- Pine Valley (RM 12-24)

  -- Large number of small, unscreened irrigation diversions in late summer took practically all of the water in both the main stream and the side channel.

  Section 3 -- Carson to Cornucopia, Oregon (RM 24-29)

  -- No obstructions or diversions.

  Section 4 -- Cornucopia, Oregon, to Headwaters (RM 29-31.5)

  -- Of little value as spawning area for salmon.

North Pine Creek (1942 Survey)

- Enters Pine Creek at RM 7 and is 15 miles long; no salmon present when surveyed; some steelhead reported during spring high water period.

Fish Creek (1942 Survey)

- Enters Pine Creek at RM 7.5 and is 14 miles long.
- Several small, unscreened irrigation diversions near the source at Fish Lake (RM 14)
- A few steelhead and no salmon present when surveyed.

Powder River (1942 Survey)

- Enters Snake River at RM 294 and is 114 miles long; originally an excellent salmon stream.
- Irrigation diversion dam 2 feet high at RM 37.5 not a serious obstacle to fish.
- Several irrigation dams and diversions in the lower part of Thief Valley Canyon:
  - -- 6-foot irrigation diversion dam at RM 41; dam was a barrier to fish during low water; 2 irrigation diversions, each withdrew 30 cfs.
  - -- 3-foot Basche Irrigation Diversion Dam at RM 42.5; barrier to fish during low water.
  - -- 3-foot Miles Irrigation Diversion Dam at RM 44; barrier to fish during low water.
  - -- 70-foot Thief Valley Reservoir Dam at RM 52 was a total barrier; Bureau of Reclamation began construction of this storage dam for irrigation in 1931 and completed it in 1932. No salmon or steelhead reported at base of dam for several years prior to survey.
- Number of small open irrigation ditches in the Baker Valley section in addition to several larger installations.
  - -- 4-foot Estes Irrigation Diversion Dam at RM 81 was a barrier to fish.

-- Another similar low irrigation diversion dam 300 yards above the Estes Dam may be a barrier to fish at certain seasons.

-- 2-foot Old Pioneer Irrigation Diversion Dam within the city limits of Baker may be a barrier to fish during the irrigation season.

o Above Baker Valley near headwaters, stream was heavily silted due to mining activities.

-- 4-foot irrigation diversion dam at RM 87 was probably a barrier to fish during low water.

-- 2-foot Stewart-Shaw Irrigation Diversion Dam at RM 92; impassable to fish during low water.

-- 3-foot Smith Brothers Irrigation Diversion Dam 100 yards above the Stewart-Shaw Dam; probably impassable to fish during low water.

o From McEwen upstream to Sumpter, a distance of somewhat more than 6 miles, the stream bed was either torn up or in the process of being torn up by gold dredges at the time of the survey, which caused heavy silting downstream.

Eagle Creek (1942 Survey)

o Enters Powder River at RM 9 and is 36 miles long.

o Eagle Creek was one of the few streams in eastern Oregon reported to maintain a fairly good run of chinook at the time of the survey; also had a good run of steelhead.

o Log wing dam at RM 7 was not a barrier to fish.

o Irrigation diversions at RM 9 and RM 11.

o Little Eagle Creek enters Eagle Creek at RM 12.5 and is 9 miles long; of value to a small number of salmon at the time of the survey.

o East Fork enters Eagle Creek at RM 21.5 and is 14 miles long; lower portion of some value to salmon at the time of the survey.

o West Fork enters Eagle Creek at RM 26.5 and is 9 miles long; irrigation ditch at RM 1.5 withdrew good portion of stream; lower portion of some value to salmon at time of survey, although ditch was a hazard to downstream migrants.

Kirby Creek (1942 Survey)

- Enters Powder River at RM 10.
- Adult salmon and fingerlings present when surveyed.

North Powder River (1942 Survey)

- Enters Powder River at RM 61 and is 26 miles long; originally an excellent salmon stream.
- Extensive diversion of water for irrigation purposes during late summer and fall, discharge at the mouth often less than 5 cfs; no salmon present when surveyed.
- Construction of the impassable Thief Valley Dam on the main Powder River rendered the North Powder inaccessible at all times to salmon and steelhead.
- 1-foot irrigation diversion dam at RM 1.5 was not a barrier to fish except during low water.
- 2-foot irrigation diversion dam was not a barrier to fish.
- 2-foot irrigation diversion dam at RM 7 was not a barrier to fish except during low water.
- 3-foot Big Bulger Irrigation Diversion Dam at RM 16 was a barrier to fish during low water.
- Hartung-Nicholson Irrigation Ditch at RM 16.5.
- Big Mansfield Irrigation Ditch and Warfield-Burnside Irrigation Ditch about RM 17.
- Little Mansfield Irrigation Ditch at RM 17.5

Muddy Creek, Rock Creek, and Pine Creek (1942 Survey)

- Enter Powder River at RM 71, 72, and 75; and were 8 miles, 15 miles and 10 miles long.
- Small open ditches took most of flow for irrigation and stock watering at time of survey; of no value to salmon.

Deer Creek (1942 Survey)

- Enters Powder River at RM 105 and is 12 miles long.
- Irrigation diversion dam at RM 1 was not a barrier to fish.
- Little potential value to salmon at time of survey.

Burnt River (1941-1942 Surveys)

- Enters Snake River at RM 326 and is 78 miles long.
- Once supported good run of chinook; greatly depleted for many years prior to the survey; of little value as salmon producer at time of survey.
- Impassable Unity Dam 78 miles upstream (see below).
- 39 direct irrigation diversions between the mouth and Unity Dam, and 46 irrigation diversions on tributaries that flow into the reservoir above the dam; none equipped with fish-protective devices.
- Almost all the diversion dams were of a temporary nature; few more than 3.5 feet high; none of those below Unity Point were barriers to salmon.

Section 1 -- Huntington Valley (RM 0-23)

-- 9 irrigation ditches, with total diversion of slightly more than 15 cfs.

Section 2 -- Durkee Valley (RM 23-29)

-- 7 irrigation ditches, with a total water diversion of almost 32 cfs.

Section 3 - Burnt River Canyon (RM 29-43)

-- At the time of the survey several large-scale gold dredging projects were located in Burnt River Canyon and operated directly in the stream channel, forming conical mounds of gravel tailings 5 to 8 feet high as they slowly progressed upstream.

-- High summer water temperature (70°F) at lower canyon.

-- 3 small irrigation ditches

Section 4 -- Bridgeport Valley (RM 43-58)

-- 7 irrigation ditches, with a total diversion of about 62 cfs.

Section 5 -- Hereford Valley (RM 58-78)

-- 11 irrigation ditches, with a total diversion of slightly more than 56 cfs.

Section 6 -- Unity Valley and Headwaters (RM 78)

-- Construction of 76-foot Unity Dam was begun in 1936 and was completed in 1939; no fishways provided and dam was a total barrier to upstream migration.

Job Creek (1941 Survey)

- Enters Unity Reservoir 1 mile above dam and is 7 miles long; no possible value to salmon at time of survey.
- 6 small irrigation ditches.

South Fork, Burnt River (1941 Survey)

- Enters Unity Reservoir 2 miles above dam and is 16 miles long.
- 8 irrigation ditches with a total diversion of 48 cfs.
- 40-foot Whited Reservoir Dam built in 1921 was a total barrier, no fishways were provided.
- 6 irrigation ditches with a total diversion of about 65 cfs.
- 5 small irrigation ditches on Pole Creek tributary.
- 3 irrigation ditches on Bullrun Creek tributary diverted practically the entire flow.
- 2 small irrigation ditches on Amelia Creek tributary.
- 1 small irrigation ditch on Barney Creek tributary.

Middle Fork and West Fork, Burnt River (1941 Survey)

- Enter Unity Reservoir 3 miles above dam and are 10 and 6 miles long.
- 2 and 8 irrigation ditches, respective; inaccessible to salmon at time of survey.

North Fork, Burnt River (1941 Survey)

- Enters Unity Reservoir 4 miles above dam and is 25 miles long; inaccessible at the time of the survey.
- 4 irrigation ditches diverted more than 35 cfs.
- Two 3-foot irrigation diversion dams at RM 3 and 5 were barriers to fish at low water.
- 1 small irrigation ditch on China Creek tributary.

Snake River Mainstem (1942 Survey from Payette River to Upper Salmon Falls)

- In early 1900s river was racked in vicinity of Ontario and large numbers of fall chinook taken for artificial propagation by Oregon Fish Commission; in one year of record, more than 20 million eggs were taken.
- Last good run of fall chinook prior to survey occurred in 1929 and 1930; a few spawners were observed in September/October in 1941 and 1942.
- Swan Falls 30-foot dam (1910) and power plant (Idaho Power) at RM 444; dam at this point first obstructed salmon and steelhead fish passage about 1907. A poor fishway was provided, but runs above the dam were exterminated. Fishway was improved in 1940, and was possible for fish to ascend at the time of the survey.
- Bliss Dam (Idaho Power) was constructed in 1950 5 miles downstream of Bliss. The 104-foot dam had no fish passage facilities.
- Lower Salmon Falls and a 53-foot power dam (completed in 1949 by Idaho Power) at RM 565 formerly constituted the upstream limit of anadromous fish migration. Migration limit had been moved downstream by other power projects at the time of the survey.
- Upper Salmon Falls and a 10-foot power dam (Idaho Power, 1937) were located 9 miles above Lower Salmon Falls. A fishway near the center of the dam was passable at all times at the time of survey.

Malheur River (1942 Survey)

- Enters Snake River at RM 359 and is 167 miles long.
- Large runs of chinook and steelhead formerly used extensive spawning areas; however, fish were a rare occurrence at the time of the survey.

- Numerous dams and diversions obstructed passage of fish and used river flow for irrigation; none of the water diversions had fish protective devices at the time of the survey.

Sections of Malheur drainage basin:

1) Vale or Lower Malheur Valley

   -- No value for salmon spawning; little stream cover and high summer water temperature, 71°F.

   -- Nevada Dam (6 feet high) and irrigation canal 1.5 miles below Vale. Dam was passable to fish except at low water stages during irrigation.

   -- 3 other irrigation canals above Nevada Dam (between RM 381 and 389).

2) Canyon below Harper

   -- Heavily silted and summer water temperatures of 71°F made it unsuitable for salmon.

   -- 2 principal irrigation diversions with 2 temporary 3-foot dams of loose rock, passable to fish except at low water.

3) Harper Valley

   -- Heavily silted and 71°F summer water temperature resulted in little possible value to salmon.

   -- 2 ditches had 2-foot and 3-foot diversion dams; no fish protection devices associated with either ditch; passable to fish except at low water.

4) Canyon Below Juntura

   -- Heavy silt layers.

   -- Small, unscreened diversion ditch had temporary 1-foot rock wing dam.

   -- Harper Dam and Reservoir and the Vale-Oregon Irrigation Canal constituted diversion works for the Vale Project. Dam was 17 feet high, and was a barrier to fish. No fish protection devices in connection with the diversions.

5) Juntura Valley and headwaters

-- Riverside Dam and Warm Springs reservoir completed in 1919. The concrete dam was 91 feet high and was a total barrier to fish.

-- Turbid water due to discharge from dam at the time of survey.

- Willow Creek enters Malheur River at RM 15; turbid water from many small irrigation diversions with no fish screens; no salmon present when surveyed.

- Bully Creek enters Malheur River at RM 16; heavily silted from small irrigation diversion returns; no salmon present when surveyed.

- North Fork enters Malheur River at RM 79 and is 50 miles long; lower areas had heavy layer of silt; no present or potential value to anadromous fish; 2 irrigation diversions near RM 6.5, neither with a dam or fish protection devices; Beulah Dam and reservoir completed in 1935 at RM 15.7; earth-fill, rock-faced dam was 89 feet high. Concrete spillway was fitted with 18-foot steel cantilevered gates. No fishways; dam was impassable to fish at the time of the survey.

- South Fork had insufficient flow at low water stages; 86°F summer water temperatures measured at mouth of stream; no salmon or steelhead present when surveyed.

Boise River (No Survey)

- Enters Snake River at RM 379 and is 76 miles long.

- Formerly supported good runs of chinook and steelhead; runs have been exterminated since 1900 due to extensive irrigation diversion and intense pollution by cities and towns.

- Barber Dam and power plant at RM 54; 21-foot dam was barrier to fish.

- New York canal diversion dam was 28 feet high (at RM 57); poor fishway was impassable.

- 253-foot Arrowrock Dam constructed at RM 72 was a barrier to fish.

- On the South Fork, Anderson Ranch Dam raised water level to 322 feet and was impassable to fish; no value to salmon due to irrigation projects and pollution.

Owyhee River (1942 Survey)

- Enters Snake River at RM 380 and is 150 miles long.
- Several small unscreened irrigation diversions in lower 12 miles.
- "Old Owyhee" irrigation dam and diversion at RM 12 were unscreened; 2-foot rock dam only a barrier at low flow.
- Below Owyhee Dam heavily silted due to turbine discharge.
- Temporary, loose rock irrigation dam and unscreened diversion ditch at RM 16; only a barrier at low flow.
- Owyhee Dam completed in 1933 at RM 26 for irrigation storage. The dam was 330 feet high and was total barrier to fish. Reservoir extended 23 miles upstream.
- North and South Canal diversions from the reservoir; sufficient discharge from outlet gates to supply "Old Owyhee" diversion downstream; however, inadequate flow for fish in lower 12 miles from Old Owyhee canal to the north.
- From October to March, stream bed below Owyhee Dam mostly uncovered.
- No salmon or steelhead present when surveyed.
- Formerly supported good run of salmon.

Sucker Creek, Jump Creek, Squaw Creek, Reynolds Creek, Rabbit Creek, Sinker Creek, Castle Creek, Birch Creek, and Shoo Fly Creek

- Enter Snake River upstream of Owyhee River; no salmon or steelhead present when surveyed.

Bruneau River (No Survey)

- Enters Snake River 8 miles upstream of Grand View.
- Used extensively for irrigation. Several reservoirs and numerous unscreened irrigation diversions.
- No salmon or steelhead present when surveyed

Canyon Creek

- Enters Snake River 2.5 miles above Bruneau river.

- Largely diverted for irrigation and at times no flow in lower portion at the time of the survey.

- No salmon or steelhead present when surveyed.

Rattlesnake Creek

- Enters Snake River 12 miles above Canyon Creek; impounded by Mountain Home Reservoir for irrigation.

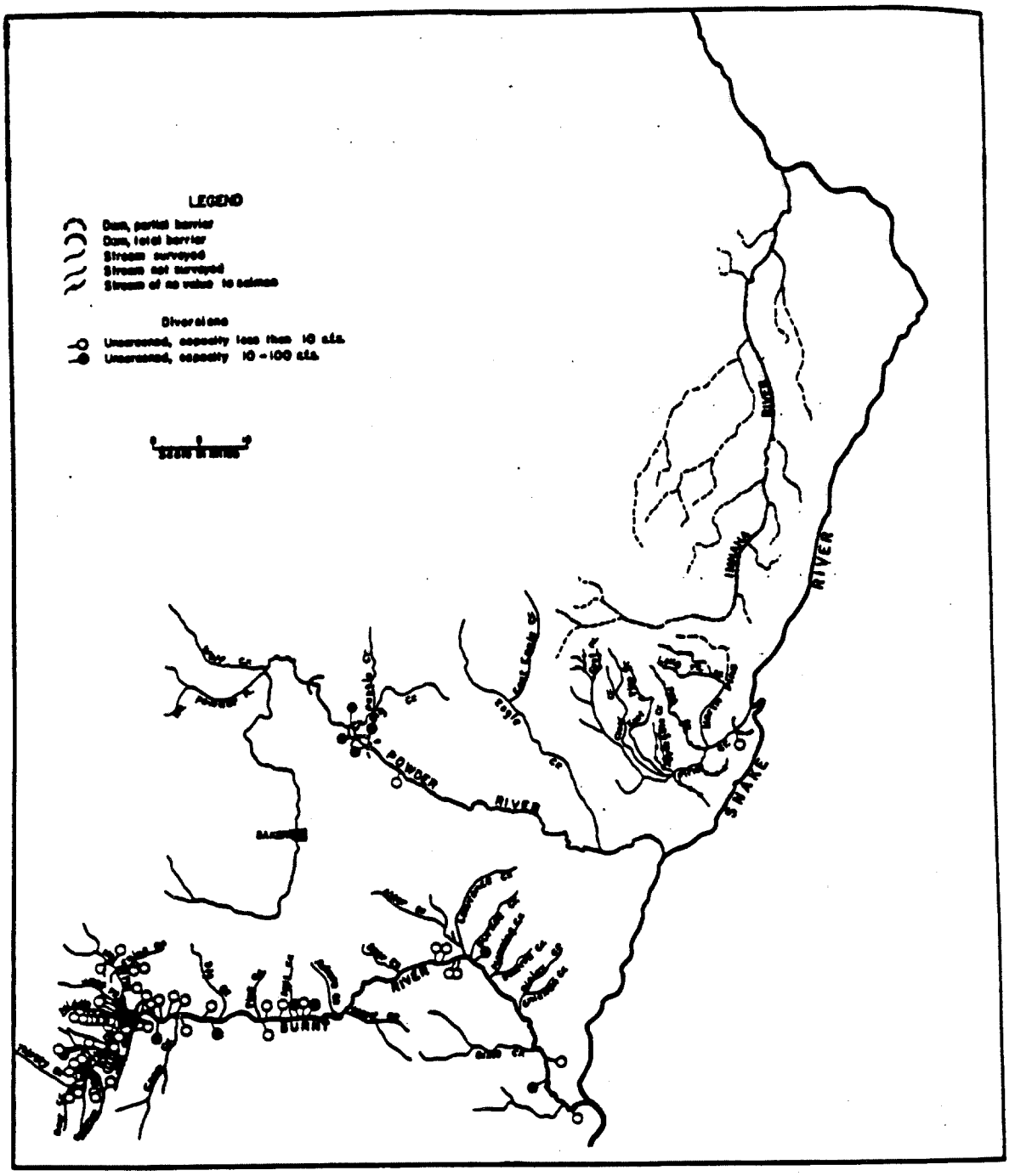
Big Wood River (No Survey)

- Enters Snake River 2 miles downstream of Lower Salmon Falls.

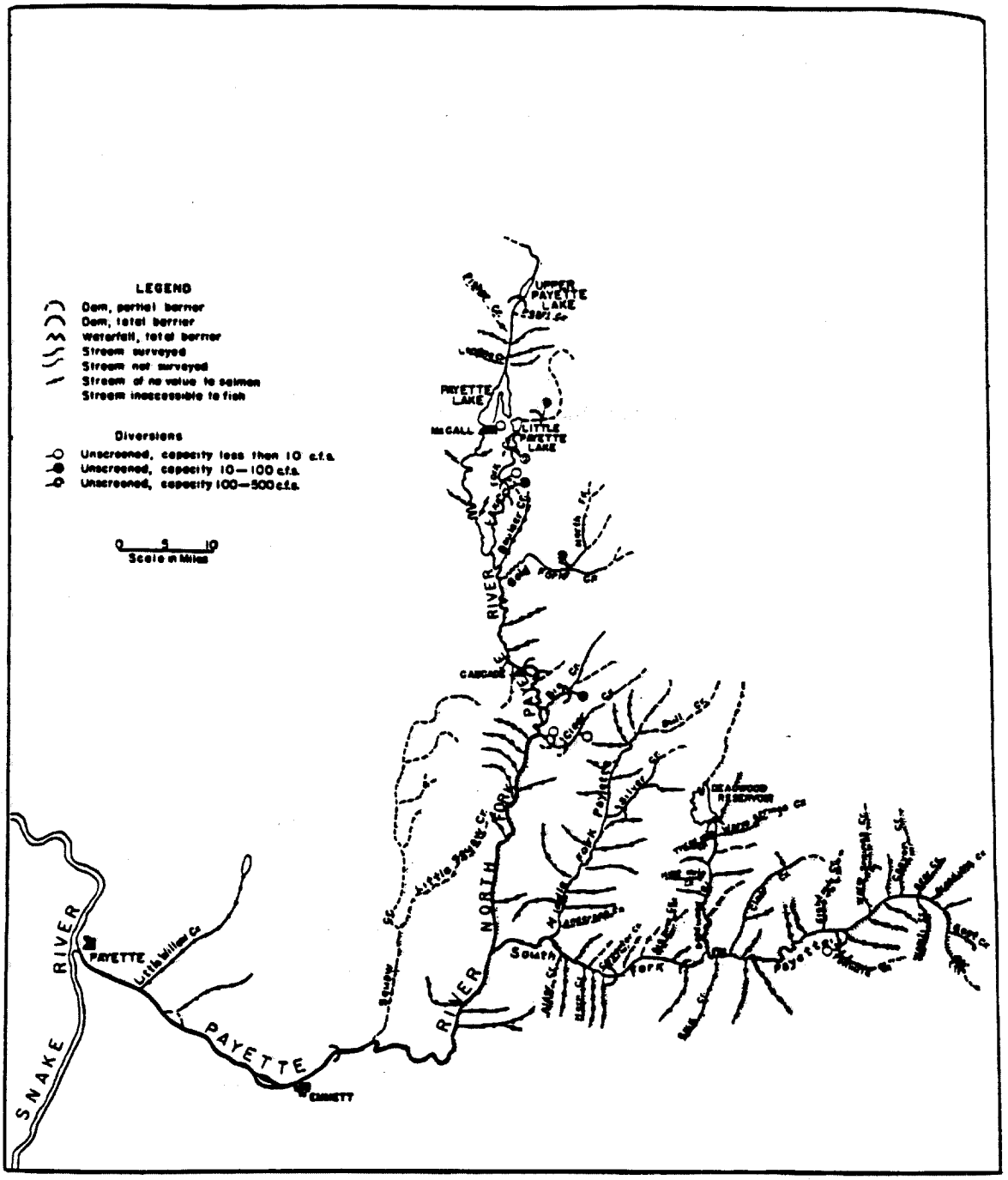
- Upper portion impounded in Magic Reservoir; lower portion received water from canals diverting from Snake River at Milner Dam.

- Numerous impassable dams and unscreened diversions.

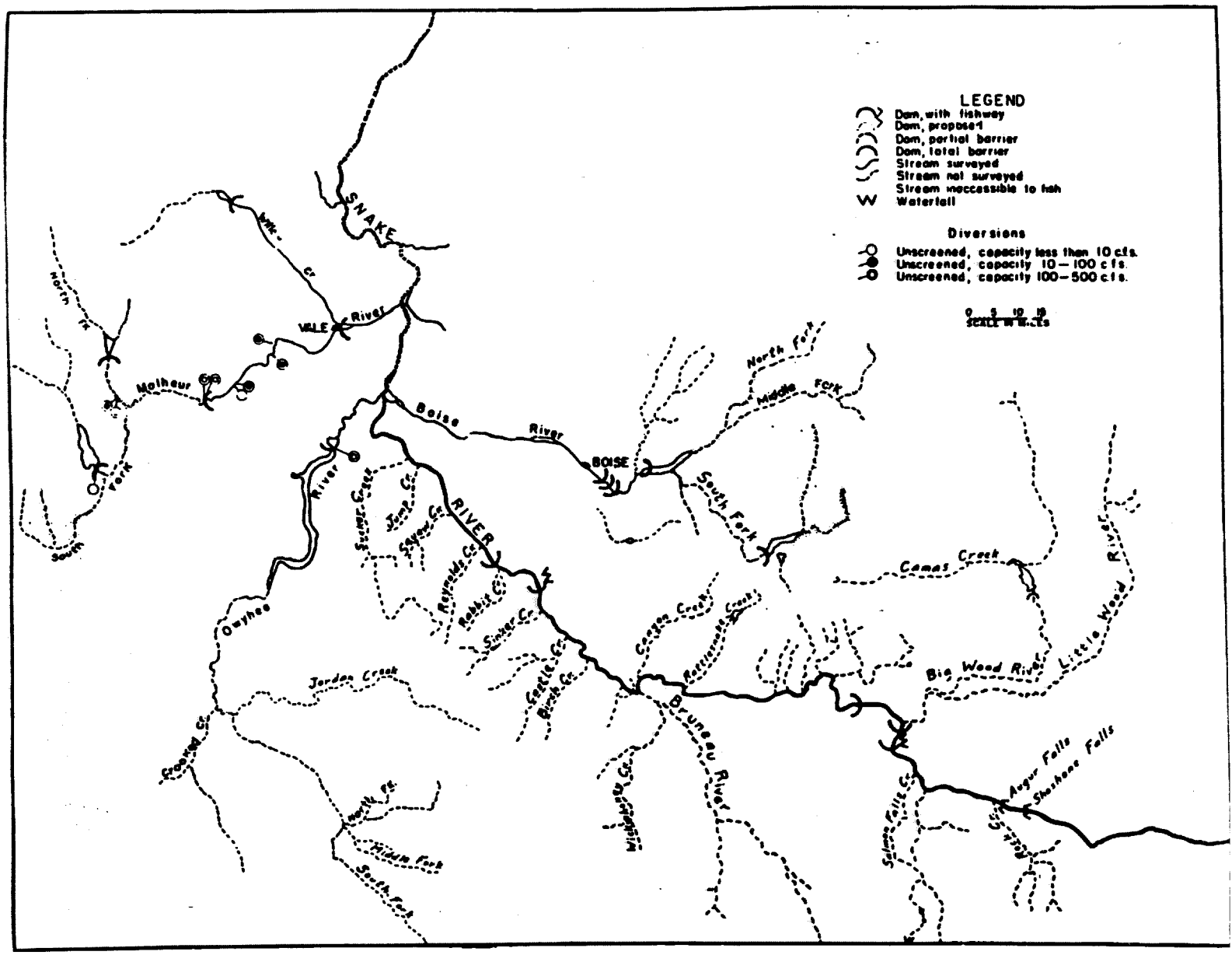
- Entire stream of no value to salmon or steelhead.



Imnaha, Powder, and Burnt river basins



Payette River Basin



Malheur, Boise, Owyhee, Bruneau, and Wood river basins

Return to Index