

UPPER COLUMBIA UNITED TRIBES
COEUR D'ALENE KALISPEL KOOTENAI SPOKANE

FISHERIES TECHNICAL REPORT NO. 2
DECEMBER 1985

COMPILATION OF INFORMATION ON SALMON AND STEELHEAD TOTAL
RUN SIZE, CATCH AND HYDROPOWER RELATED LOSSES IN THE
UPPER COLUMBIA RIVER BASIN, ABOVE GRAND COULEE DAM.

BY:

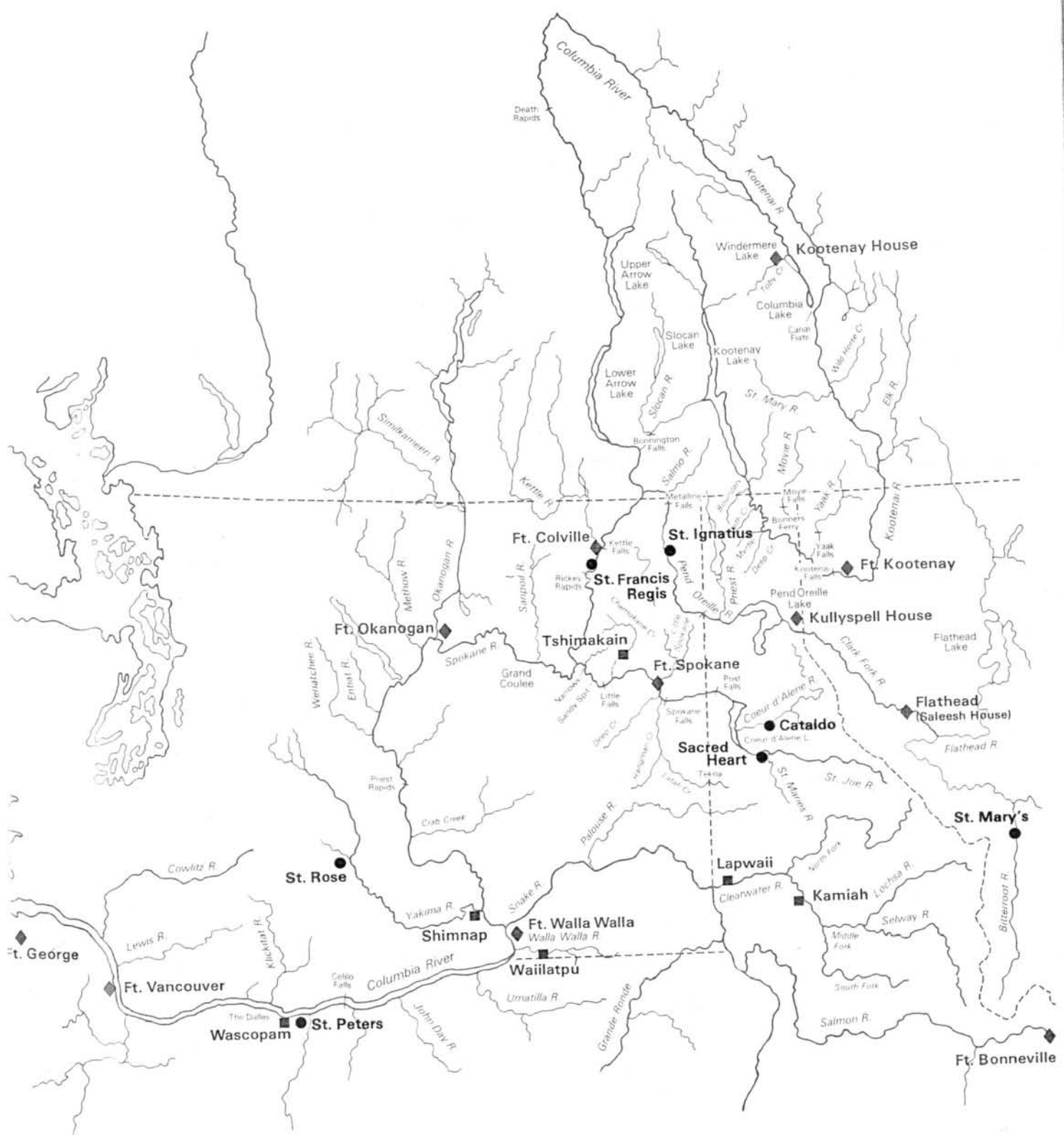
ALLAN SCHOLZ
KATE O'LAUGHLIN
DAVID GEIST
JIM UEHARA
DEE PEONE
LUANNA FIELDS¹
TODD KLEIST
INES ZOZAYA
TIM PEONE
AND
KIM TEESATUSKIE

UPPER COLUMBIA UNITED TRIBES FISHERIES CENTER
EASTERN WASHINGTON UNIVERSITY
DEPARTMENT OF BIOLOGY
CHENEY, WASHINGTON 99004

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1. Present address: Science Department, North Central High School, Spokane, Washington.

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Name	Alternative
Kettle Falls	Iltih-koy-ape
Albeni Falls	Senniawateen
Kootenai River	McGillivrays River, Arc's-a-plats
Spokane	Skeetshoo

THE COLUMBIA BASIN: 1807 - 1860

- ◆ Fur Trading Posts
- Protestant Missions
- Catholic Missions

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1.0 INTRODUCTION.

The Northwest Power Planning and Conservation Act (Public Law 96-501, 1980) mandated the Northwest Power Planning Council¹ to balance the needs of fish and wildlife in the Columbia River Basin with water requirements necessary for generating hydroelectric power. Public Law 96-501 further mandated that the Bonneville Power Administration, a federal project operator/regulator agency responsible for transmission and sale of electric energy generated by the Federal Columbia River Power Supply System, shall fund mitigation and compensation projects approved by the Council from power sales revenue. The act also specified that hydroelectric rate payers are to be held accountable only to the extent that fish and wildlife losses are due to the development, operation and management of hydroelectric facilities in the basin.

Pursuant to Section 4(h) of the Power Act the Council implemented the Columbia River Basin Fish and Wildlife Program to redress losses of fish and wildlife caused by the construction and operation of hydroelectric dams. In terms of: (1) the scope of the geographic area contained within the Columbia River drainage basin; (2) the magnitude of the funding to achieve program goals; and (3) the large number of concerned parties participating, including 3 federal and state fisheries agencies, 3 federal project operator/regulators, 3 federal land management agencies, 11 Columbia Basin Indian Tribes and over 100 northwestern utilities²; the Fish and Wildlife Program is the most ambitious comprehensive planning effort for restoration of natural resources ever attempted in the United States. The key element of this program is Section 201 which describes the procedures to be used for estimating losses of salmon and steelhead and developing a "systemwide framework" for program measures and action items to replace these losses. The objectives of Section 201 include:

- (1) a compilation of losses, that determines the Indian catch, the total run-size before major development occurred in the Columbia Basin, circa 1850, and the current (1985) total run size. Subtraction of the current run size from the total run size circa 1850 provides an estimation of losses;

1. The Northwest Power Planning Council consists of eight members, two each appointed by the Governor's of the states of Idaho, Montana, Oregon and Washington.
2. Federal and State fisheries agencies include: National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), Washington Department of Fisheries (WDF), Washington Department of Game (WDG), Oregon Department of Fish and Wildlife (ODFW), Idaho Department of Fish and Game (IDFG), and Montana Department of Fish, Wildlife and Parks (MDFWP). Federal project operator/regulators include: Bonneville Power Administration (BPA), U.S. Bureau of Reclamation (USBR), and U.S. Army Corps of Engineers (COE). Federal land management agencies include: U.S. Forest Service (UFS), U.S. Bureau of Land Management (BLM) and National Park Service (NPS). Columbia Basin Tribes include: Coeur d'Alene, Kalispel, Kootenai (Idaho), Spokane, Colville Confederated Tribes, Warm Springs Confederated Tribes, Yakima Indian Nation, Umatilla, Shoshone Bannock, Shoshone Piute, and Confederated Salish Kootenai and Flathead Tribes (Montana). The utilities are represented by the Pacific Northwest Utilities Conference Committee (PNUCC).

- (2) a compilation of information about factors, such as hydroelectric dam construction and operation, logging, farming, mining, pollution, irrigation, and overfishing, that destroyed salmon and steelhead runs and habitat;
- (3) an assessment of the relative contribution of these various factors in salmon and steelhead runs and habitat to arrive at an estimate for hydropower-related losses;
- (4) a statement of goals and system wide objectives indicating the extent of fish production to be funded and types and location of production to be emphasized, and;
- (5) methods for measuring and accounting progress towards goals and production objectives that will cancel the hydropower debt.

In September 1985 the Council released a compilation of information to address objectives 1 and 2 above, which prompted the preparation of the present report by the Upper Columbia United Tribes (Coeur d'Alene, Kalispel, Kootenai and Spokane Tribes).

This report deals with losses of anadromous fisheries resources in the Upper Columbia Basin above Chief Joseph and Grand Coulee Dams, including estimates of the total run size and Indian catch before major developments occurred on the Columbia River system (circa 1850). The report also examines factors contributing to the declines of salmon and steelhead from 1860 to the present time (1985), including the effect of power dams built along the Spokane River from 1890 to 1916, before their total elimination by Grand Coulee Dam in 1939. Additionally, the report contains historical and ethnographic information relating to the Coeur d'Alene, Kalispel, Kootenai, and Spokane Indian Tribe's salmon and steelhead fisheries together with notes on their resident fisheries.

1.1 NOTES ON INFORMATION SOURCES: CHRONOLOGY OF HISTORICAL EVENTS.

"A few years ago a statement was telegraphed to the eastern newspapers that a stage had been capsized by salmon while endeavoring to ford the Rogue River. This statement was literally true, and the impossibility of crossing smaller streams when a run of salmon is passing is well known to residents of this locality, but it created a storm of incredulous and humorous comments, one illustrated eastern newspaper publishing a picture of a stage attacked by fish, one ferocious fellow having climbed over the front wheel and seized the driver by the ear." (From The West Shore Portland Oregon, Number 10, October 1889).

The above anecdote provides an indication of the magnitude of former salmon runs in the Columbia Basin, which were recently estimated by the Bonneville Power Administration (1984) to be as high as 35 million fish annually. In order to develop a portrait of the loss in the Upper Columbia Basin from the period before major development occurred to the present, a variety of source material was used, including primary fisheries journal

publications, agency fisheries reports, anthropological, archaeological, ethnographic, and ethnohistorical journal publications and reports; historical journal articles and books, archival records; government documents (e.g., government survey expeditions, congressional records, etc.); autobiographical accounts of early explorers, Protestant missionaries, Catholic priests, and fur trappers; newspaper accounts; and legal documents. From this information we feel that we have been able to piece together an accurate and realistic picture of the importance of salmon and steelhead resources to the Upper Columbia Tribes, the pattern of their loss in the Upper Columbia Basin, and the contribution of the Columbia River hydroelectric power supply system in causing the decline and subsequent elimination of anadromous stocks in the Upper Columbia Basin.

Meinig (1968) in his treatise on the "The Great Columbia Plain: An Historical Geography, 1805-1910", provides an excellent overview of the human occupation of the Columbia Basin from the period of contact (1805) to 1910. He illustrates the precision with which many of the early explorers recorded observations.

For example, David Thompson, the first white man to explore the Upper Columbia Basin, spent four years (1807-1811) "*amidst the labyrinth of ranges and trenches trying to sort out the remarkable trellised patterns of the Upper Columbia system*" (Meinig 1968). Among Thompson's achievements was the discovery of the source of the Columbia at Lake Windermere, British Columbia. He also worked out the complicated relationships of the tributaries in the upper portion of the basin. At this time there was competition between Alexander McKenzie's Northwest Fur Company (Great Britain), for whom Thompson worked, and John Jacob Astor's Pacific Fur Company (United States). David Thompson, "*with his sextant, chronometer, and barometer impressed the Astorians as more like a geographer than a fur trader*" (Meinig 1968). His reports are incredibly accurate as will be demonstrated in a later section of this report (Section 2.1.1.4.). As Thompson kept the company books, his accounts are detailed and precise.

The Pacific Fur Company was headquartered in the Lower Columbia Basin while the Northwest Company operations were centered in the fur district of the Upper Columbia Basin above the Okanogan River. Trading posts were established by Thompson at Kootenai House (at the Columbia Lakes in British Columbia in 1807), Kootenai Falls (on the Kootenai River in 1808), Kullyspell House (on the Clarkfork River near Hope, Idaho in 1809), Spokane House (at the confluence between the Spokane and Little Spokane Rivers in 1809), Fort Okanogan (at the confluence of the Okanogan and Columbia in 1811), and Fort Colville (at Kettle Falls on the Columbia in 1810). These sites represented areas where large concentrations of Indians gathered at important fisheries. For many years Spokane House was the most important trading post of the Pacific Fur Company. This was later shifted to Fort Colville. David Thompson's associates included Alexander Henry, Finan McDonald and Jacko Finlay. Astor's Pacific Fur Company failed after two years of operation. Two of his fur traders, Ross Cox and Alexander Ross, later joined the ranks of the Northwest Fur Company.

Following the merger of the Northwest Company with Hudson Bay Company in 1821, George Simpson led an expedition to the Upper Columbia Basin from 1824 to 1825 to inspect the Hudson Bay Company holdings. He commented that "*the mild climate and availability of salmonid resources made the Indians*

perfectly independent of us." Simpson also commented about "eatables, drinkables and other domestic comforts" he found at the various trading posts which "grated like a rasp on his Scotch soul" (Merk 1968). Meinig (1976) writes, "At post after post Simpson was shocked at the neglect of local subsistence and curtly ordered a change. At Spokane House he observed, 'they have an abundance of the finest salmon in the world besides a variety of fish within 100 yards of their door.'" Simpson's contemporaries included John Work and Alexander Ross, both of whom recorded copious notes on the Native American fisheries.

Hudson Bay Company continued to occupy the Fort Colville post at Kettle Falls into the 1880's. Angus McDonald was the head factor at Fort Colville for about 30 years from 1845 onward and made several commentaries about the fish runs and Indian fishery. Edward Ermatinger and George Kittson were Hudson Bay Company traders at Fort Colville and Fort Okanagan (Coyne 1911).

The political scene played an important role in Hudson's Bay Company activities. England and the United States were vying for control of the "Oregon territory". At the time the Hudson's Bay Company could have been considered the enforcement arm of the British Government's policy in the Pacific Northwest. It was Hudson Bay Company's avowed intent to lay a beaver wasteland in Oregon, Idaho and Washington to discourage U.S. trappers from coming into the Columbia Basin drainage, and their fur trappers and traders ravaged up and down the Columbia River and its tributaries trapping and destroying beavers. To strengthen their claim to the area the British Government sponsored several scientific explorations. For example, at the time George Simpson and John Work were canvassing the Upper Basin, in 1824 and 1825, David Douglas, the botanist for whom the Douglas fir was named, explored virtually the entire Columbia River system classifying plants and animals. Douglas's trip was under the auspices of the Royal Horticulture Society (London). He made several important quantified observations of the Indian salmon fisheries in the upper portions of the Basin.

Meanwhile, the Americans continued to express interest in the area. Nathaniel J. Wyeth led an expedition into the area from 1832 to 1834 for the purpose of assessing its potential for development. Naturalists on his expedition included Thomas Nuttall and John K. Townsend.

Rev. Samuel Parker conducted a reconnaissance of Snake River, Spokane River, and Upper Columbia mainstem for the American Board of Missions in 1835 with the aim of selecting sites for future missions. Subsequently, Dr. Marcus Whitman, a Presbyterian missionary, and his wife established a Protestant mission at Waiilatpu (Walla Walla) in 1836. He was soon joined by Rev. Henry Spalding, Rev. Asa Smith, Rev. Elkanah Walker, and Rev. Cushing Eells and their wives. In a program to "enlighten" and "benefit" the Indians by "bringing them scriptures and the plough," Spalding established a mission at Lapwai and Smith at Kamiah on the Clearwater River, in Nez Perce country, and Walker and Eells established a mission at Tshimakain on Chamokane Creek about six miles from the Spokane River in Spokane territory. The missionaries lived among the Indians for ten years and kept diaries. They recorded information about fishing seasons, levels of abundance, and numbers of Indians at specific fisheries (Drury 1963, 1976).

For example, during 1839 Elkanah Walker wrote in a letter to Rev. David Greene, Secretary of the American Board of Commissioners for Foreign Missions:

"It is astonishing the number of salmon which ascend the Columbia yearly and the quantity taken by the Indians. These are one of their great means of subsistence . . . The Indians are quite expert in taking them . . . Their mode in the Spokane River is to make a weir and then spear them . . . They catch 400 - 800 per day in their weir at Little Falls, where often 1000 or more Indians gather during the salmon season from June to August " (Drury 1976).

Rev. Henry Spalding was the first to grasp what was about to happen to the Indian salmon subsistence fishery as a result of changes produced by the white invasion:

"The salmon will be arrested in their upward course by some measure which the untiring invention of man will find out and which is not necessary here to conjecture. That day will be the universal starvation of nearly all the tribes of this vast country, if they be not timely settled upon their lands and furnished with means of a substantial subsistence . . . " (Drury 1963).

Meinig (1968) speculated, *"such a stark view was reason enough for insistence on an agricultural policy. The missionaries viewed their endeavors along this line as a charitable act and as their Christian duty."* In this endeavor the missionaries were to receive their greatest disappointment because the Indians steadfastly refused to forego their fishing for an agrarian way of life.

From 1838 to 1842 the government of the United States sponsored an exploring expedition to the Columbia Basin under the supervision of Capt. Charles N. Wilkes, U.S.N.. Wilkes and his associate Lt. Johnson contributed several important observations about the Indian salmon fisheries on the Spokane River and mainstem Columbia. Another visitor to the Upper Columbia Basin during this period was the Canadian artist, Paul Kane, who composed portraits of the Indian fishery at Kettle Falls and estimated numbers of fish taken by the Indians there.

Also at this time, Jesuit priests, Father DeSmet and Father Point, established missions at Sacred Heart (on the St. Joe River) and later Cataldo (on the Coeur d'Alene River) in the Coeur d'Alene territory, and Saint Ignatius (on the Pend Oreille River) in Kalispel territory. The tactics used by the Jesuit missionaries for converting *"souls"* were considerably different than their Presbyterian counterparts. They did not insist on the tribes becoming farmers, but instead, recognized the importance of their fisheries as gathering places where God's word could be conveyed to a large number of the Indians. They, thus, spent a great deal of time at the important fishing sites and recorded detailed observations.

The fur trade and Protestant missionary movement came to a temporary halt in 1847 with the massacre of Dr. Whitman and his family at Waiilatpu by the Cayuse Indians. The remaining missionaries were evacuated by the U.S. Army and Hudson Bay Company withdrew its employees from the Columbia Basin, although the Fort Colville Trading Post, now run by Angus McDonald, remained open through the 1880's. The Catholics continued unabated through this entire period and the Protestants, notably Rev. Henry Spalding, later returned.

An influx of settlers, miners, loggers, farmers and stockmen, first a trickle then a flood, poured into the southern portion of the Basin along the Lower Columbia, and Walla Walla and Snake Rivers by the 1850's and 60's. The modern commercial fishery and associated canning industry began in the lower river at The Dalles and Celilo Falls in 1866. By the 1870's civilization had pushed into the Palouse farm country as far as Moscow, ID and Pullman, WA. The Upper Columbia Basin remained unsettled until after 1885. The city of Spokane Falls grew from a population of 350 in 1880 to 20,000 by 1890. Even then, many of the important tributaries remained relatively free from white occupation. This encroachment of white settlers into Indian territory created tension between the two peoples, including several incidents of outright aggression.

Governor Isaac Stevens surveyed the route of the North Pacific Railroad from 1853 to 1858. Gov. Stevens, a strong advocate of settlement of the region, was convinced that a segregation policy (by which the Indians could be cleared from most of the area but would be granted homesteads and security within the confines of reservations) was the only practical solution to the problem of the white intrusion (Stevens 1855, Meinig 1968). This led to the celebrated "Indian wars" including military incursion into the Indian territory of the Upper Columbia Basin during the 1850's. A number of the military commanders, e.g., Lt. John Mullan, recorded observations in their logs about the salmonid and resident fisheries.

Steven's (1855) directive to members of the railroad survey team stated that *"every stream should be explored for fishes, [and the fishes preserved.] All alcohol used [for preserving specimens] should be supplied with tartar emetic. This, besides adding to its preservative powers, will remove any temptation to drinking it on the part of unscrupulous persons."* The naturalists on Gov. Stevens team were Dr. George Suckley and his associate Dr. Cooper, both of whom recorded observations about salmon.

Teams of cadastral surveyors mapped the region several times after 1860. In addition to constructing topographic maps they maintained log books that included information about the fish, wildlife, inhabitants, geology, and other natural features observed in each section. The United States/Canada Boundary Commission surveyed the U.S./Canadian boundary in Washington and Idaho in the 1860's. The Royal Geographical Society (London) also sent an exploring team into the Kootenai River country under the direction of John Palliser. Both Palliser and his naturalist, Dr. John Hector, made several entries in their journals relating to salmonid resources.

In the early 1880's and again in the 1890's the U.S. Fish Commission, out of concern for the depletion in the run caused by the downriver commercial fishery, sponsored two fish surveys of the Columbia River system, including the mainstem and tributaries of the upper portion of the basin. These reports were submitted to Congress and later published in the Bulletin of the U.S. Fish Commission by Stone (1884), McDonald (1884) and Gilbert and Evermann (1895).

The eyewitness reports of settlers, federal employees working for agencies such as the Bureau of Indian Affairs, U.S. Army Corps of Engineers and Bureau of Reclamation, state and federal fisheries agency records, newspaper accounts, publications by fisheries biologists, anthropologists, ethnohistorians, ethnographers and tribal archives and oral testimony

programs complete the historical records from 1890 through 1939 when Grand Coulee Dam permanently blocked salmon runs from the Upper Columbia Basin.

Figure 1.1 Map of the Columbia River Basin circa 1807 - 1860, indicating locations of fur trading posts, missions, and natural features. Alternative place names for rivers and natural features are also listed.



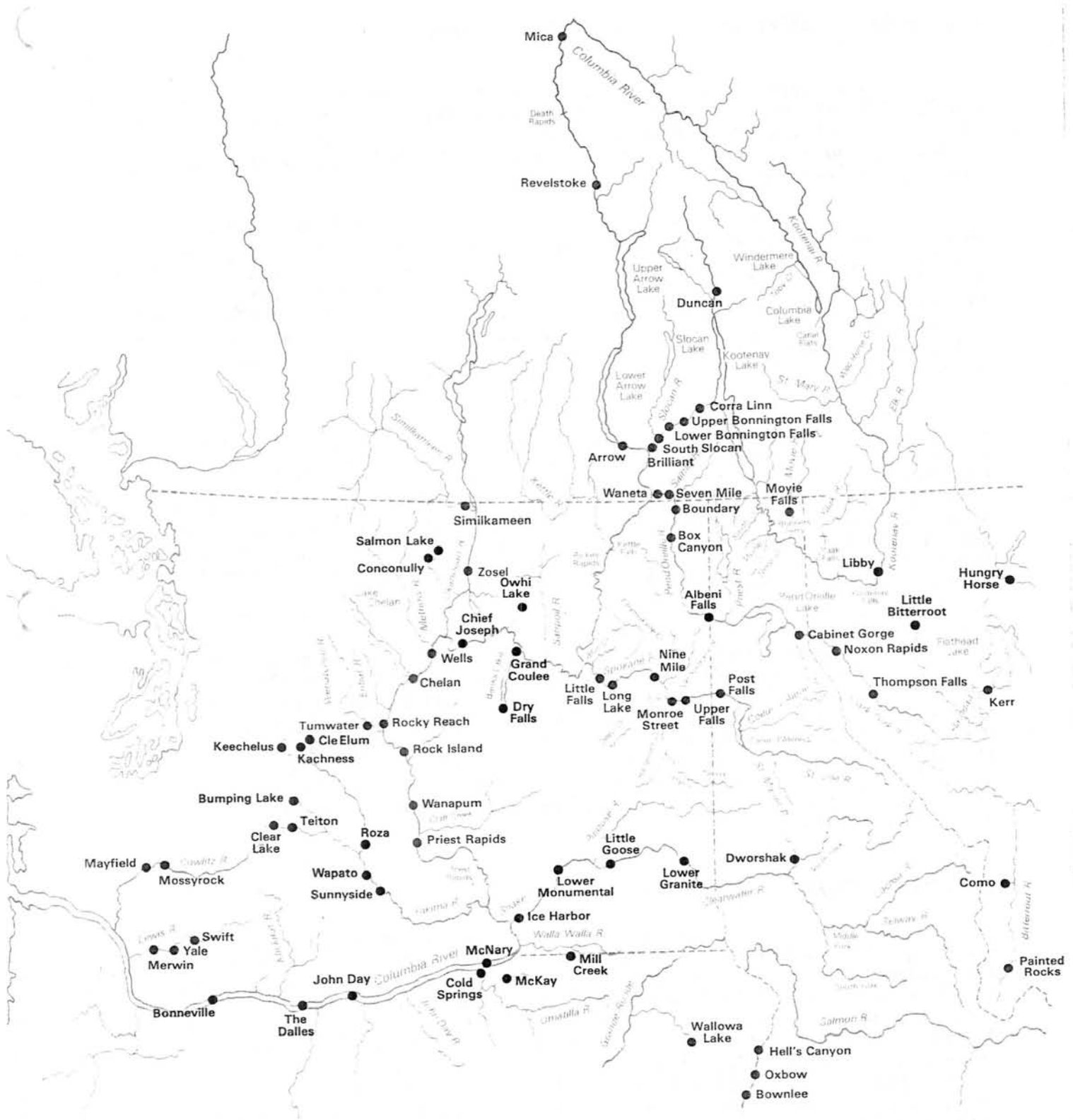
Name	Alternative
Kettle Falls	Ilth-koy-ape
Albeni Falls	Senniawateen
Kootenai River	McGillivray's River,
	Arc's-a-plats
Spokane	Sketshoo

THE COLUMBIA BASIN: 1807 - 1860

- ◆ Fur Trading Posts
- Protestant Missions
- Catholic Missions

Figure 1.2

Map of the Columbia River Basin circa 1985, indicating locations of principal federal and private utility power projects. This map contains fewer than half of the total number of power and irrigation dams present on the Columbia River and its tributaries.



● FEDERAL DAMS
 ● NON-FEDERAL DAMS