

FOR IMMEDIATE RELEASE  
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#### LIBBY NEWS RELEASE

Twenty-five years ago Libby Dam only existed on paper. That was the year the project was authorized by Congress in the 1950 Flood Control Act. Between 1950 and 1967, when the construction contract was awarded for the main dam structure, plans and designs were formulated and negotiations with the Canadian Government went forward. By 1961 an agreement had been reached with Canada, and the Columbia River Treaty was signed by President Dwight D. Eisenhower and Prime Minister John George Diefenbaker. However, the matter of the Canadian share of downstream hydroelectric power had not been settled. Negotiations were once more undertaken and an agreement was reached in 1964 with an exchange of documents by President Lyndon B. Johnson and Prime Minister Lester B. Pearson, agreeing to a cash payment to Canada.

The Seattle District of the Corps of Engineers, builder of the dam, hired an architectural consultant to assist with the design of the damsite structure and treatment of surrounding areas. Following normal Governmental procedures, the Corps selected Paul Thiry, a Seattle architect. Thiry's instructions were to prepare a basic concept that combined the beauty of the site with the forcefulness and simplicity of the dam. He furnished

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the Corps a comprehensive plan for the architectural treatment of the dam and powerhouse, visitors facilities, and landscaping. From this, Corps engineers prepared final plans.

When construction of the main dam was begun, work was already in progress on the 7-mile Flathead Tunnel. Working from both ends and using a laser beam for alignment, the tunnel was holed through in June 1968. So accurate was the beam, that the two bores were only a few inches out of alignment when they met. The tunnel, including the ventilation and communications systems, and the 60 miles of relocated Burlington Northern main line track, were put into service in November 1970.

Before Lake Kootenai appeared behind the dam, two road systems had to be revised. Montana State Highway 37 was rerouted along the eastern shore of the new lake, with Forest Development roads on the west bank. Connecting the two systems is the Lake Kootenai Bridge, 34 miles above the dam. Completed in 1971, it is the longest and highest bridge in Montana. It was named by the American Institute of Steel Construction the "Prize Bridge for 1972" in the long span category.

Mother Nature controlled construction progress on the project. Montana winters all but closed down activities, but contractors moved ahead at full speed during the warmer months. In June 1968 the first mass concrete pour was made. The dam then grew upward in sections, or monoliths, as concrete was mixed at a nearby batch plant and hauled to the site aboard "dinky" trains.

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One of the concrete pours was out of the ordinary. When the 3.5 millionth cubic yard was poured on September 25, 1971, then-President Richard Nixon was on hand to pull bucket release lanyard. Helping him dump the concrete were Montana Senator Mike Mansfield and First Congressional Representative Richard Shoup.

One of the outstanding features of the dam structure is the Treaty Tower beside the spillway extending 57 feet above the top of the dam. Currently being installed on the upstream face of the tower is a mammoth sculpture commemorating the United States-Canada Treaty. The Vermont granite relief art piece was conceived by Encino, California sculptor Albert Wein. He was commissioned to execute his design after winning the Corps' international sculpture design competition in 1972.

The powerhouse, last phase of the dam to be built, is almost complete. The four initial generation units of eight are now being installed.

The first generator will be placed in service during dedication ceremonies at the dam, culminating 31 years of proposals, studies, investigations, negotiations, and construction activities.

The formal ceremony has been set for Sunday, August 24, at 1:00 p.m. with pre-ceremony entertainment beginning at 10:00 a.m. Visitors can take self-guided tours of the dam, powerhouse, treaty tower, and visitors center.

The Air Force NORAD Band from Colorado Springs, Colorado, will join local and Canadian musical groups in presenting entertainment. John McIntire of TV and movie fame, has accepted the role of Master of Ceremonies.

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## DATES, RELOCATIONS, AND MAJOR CONTRACTORS

LIBBY DAM, located on the Kootenai River in the northwestern corner of Montana, is 17 miles upstream of Libby, Montana and 219 river miles upstream from the confluence of the Kootenai and Columbia Rivers. This \$470,000,000 project provides local flood control in Montana and Idaho, regional flood control on the entire Columbia River in conjunction with the Canadian Treaty Dams, hydroelectric power generation and recreation. Construction of the dam has been completed, with minor finishing work progressing on schedule. Approximately 3,700,000 cubic yards of concrete were used in the construction of the dam.

### IMPORTANT DATES

Construction of Dam began April 1967  
One-millionth cubic yard of concrete placed 25 July 1969  
Flathead Tunnel Completion 1969  
Burlington Northern traffic switched to new relocated line 1 November 1970  
Lake Koocanusa Bridge completed September 1971  
Montana State Highway 37 traffic temporarily detoured over new Forest Development Road and Lake Koocanusa Bridge 6 November 1971  
Initial pool raise started 21 March 1972  
The dam was completed in December 1972  
Full operation of dam, as required by Canadian Treaty, scheduled 30 June 1973  
First power on line 24 August  
Dedication

### RELOCATIONS

Roads: 118 miles  
Montana State Highway - 52 Miles  
Forest Development Roads - 50 Miles  
Miscellaneous County and Other Roads - 16 Miles  
Railroads - Burlington Northern 60 miles (includes 7-miles Flathead Tunnel)

### MAJOR CONTRACTORS

ZOOK BROTHERS CONTRACTING COMPANY  
Great Falls, Montana  
Forest Development Unit 1 and Barron Creek Detour

E. F. MATELICH CONSTRUCTION COMPANY  
Kalispell, Montana  
United States Forest Service Ranger and Weck Center Canoe Gulch

FIFTH WEST, INC.  
Seattle, Washington  
Resident Engineer and Visitor,  
Center

LIBBY DAM BUILDERS  
Boise, Idaho  
Libby Dam and Montana State Highway  
37, Unit 3A

KING-PAOLA & ASSOCIATES, INC.  
Kalispell, Montana  
Great Northern Railroad - Stryker  
to Swamp Creek

BREZINA CONSTRUCTION COMPANY, INC.  
Salt Lake City, Utah  
Aircraft Landing Field

BEAVER STATE CONTRACTORS, INC.  
Eugene, Oregon  
Great Northern Railroad Creek  
to Little Wolf Creek

MURPHY BROTHERS, INC.  
Spokane, Washington  
Forest Development Unit 4A and  
4B

PETER KIEWIT SONS' COMPANY  
Vancouver, Washington  
Montana State Highway 37,  
Unit 3B(1)  
Left Abutment Instrumentation

KEARNEY BROTHERS, INC.  
Tigard, Oregon  
Rexford Water Supply Line

HALVORSON - MASON CONSTRUCTION  
Portland, Oregon  
Powerhouse

GEORGE A. GRANT  
Richland, Washington  
Selective Withdrawal II

R. A. HEINTZ CONSTRUCTION COMPANY  
Portland, Oregon.  
Reservoir Bridge and Approach  
Roads  
Montana State Highway 37,  
Unit 1 and Unit 3B-2  
Great Northern Railroad Ariana  
Creek to Jennings

SLATE - HALL (Joint Venture)  
Portland, Oregon  
Great Northern Railroad - Little  
Wolf to Ariana

MOTTNER, McCUTCHEN & OSBERG CONSTRUCTION  
COMPANY -- Woodinville, Washington  
Tunnel Ventilation Swamp Creek -  
Rock Creek

MORGAN & OSWOOD CONSTRUCTION CO., INC.  
Great Falls, Montana  
Libby Junior High School & Music  
Room Addition to Asa Wood Junior  
High School

MacGREGOR TRIANGLE COMPANY  
Boise, Idaho  
Forest Development Road, Unit 2 and  
Unit 3

MORRISON-KNUDSON COMPANY, INC.  
Boise, Idaho  
Track Laying and Communications  
System

STEWART-ERICKSON  
Seattle, Washington  
Montana State Highway, Unit 3C-D  
Rock Buttress at Left Abutment

HALVORSON - BERG  
Spokane, Washington  
Visitors Accommodations

PACIFIC VENTURES, INC.  
Bellevue, Washington  
Selective Withdrawal III

LIBBY DAM AND RESERVOIR

## INFORMATION SHEET

Libby Dam is a hydroelectric power installation at river mile 219 on the Kootenai River, Montana, authorized by the Flood Control Act of 17 May 1950. Construction was initiated in 1965. It consists of a concrete gravity dam and powerhouse which encloses the four indoor-type Francis turbines and power generation facilities. Substructure is provided for four additional units.

GENERAL

Stream	Kootenai River, Montana and British Columbia
State, Province	Montana and British Columbia
River mile above mouth	219
Drainage area	9070 sq. miles
Discharge, mean annual	11,140 cfs
Flood peak, historical (1894)	130,000 cfs
Flood peak, maximum recorded (1916) (Libby)	121,000 cfs
Discharge, minimum recorded (1930) (Libby)	895 cfs
Average annual flow (Libby)	11,840 cfs
Spillway design flood	206,000 cfs

LIBBY DAM AND RESERVOIR

Project Construction Time	Years (under construction)
Years in operation	1972 Flood Control 1975 Power (estimated first unit) 1977 Completion (estimated)
Storage and principal elevations	
Reservoir gross capacity (El. 2459)	5,850,000
Joint use storage for flood control & power	4,965,000 acre-feet
Powerhead and incidental recreation (El 2287)	885,000 acre-feet
Normal full pool elev.	2459 feet, msl
Minimum pool elev.	2287 feet, msl
Normal tailwater elev.	2115 feet, msl

RESERVOIR

Area normal full pool (El 2459)	46,500 acres
Length of reservoir	90 miles
Shoreline of reservoir	224 miles

DAM

Type of dam	Concrete gravity, gate controlled
Elevation of top of dam	2472 feet, msl
Length:	3055 feet
Height - foundation to roadway	370 feet
Volume of concrete	3,800,000 cu yds

Spillway

Type	Gated ogee, concrete, gravity
Elevation - top of gate	2460 feet, msl

Spillway (continued)

Control gates, type	Tainter
Control gates, number	Two
Control gates, size	48' x 59'
Crest elevation	2407 feet, msl
Sluice Gates (four)	10 x 19.5 gates
Emergency Sluice Gates (1)	Vertical lift, tractor 12 x 18

Stilling Basin

Type	Hydraulic jump with sloping end sill, without baffles
Length	170 feet
Width	120 feet
Apron elevation	2060 feet msl
Baffles	None
End sill	10'0" high, one step
Training wall top elev.	2128 feet
Tailwater for project flood	El. 2138 msl
Tailwater for spillway design flood	El. 2144 msl

Intake Structure

Number of units	8
Length	504 feet
Height	420 feet
Deck elevation	2472 feet msl
Gates (size - N/A)	Four (tractor type) plus one emergency



Intake Structure (continued)

Penstock, number of

Four concrete stop logs  
(future units)  
Four - initially  
Eight - ultimately

Penstock, size of

20 feet diameter

Powerhouse

Length

576.5 feet

Turbines

Number

Four - initially  
Eight - ultimately

Type

Francis

Capacity per unit

165,000 hp @ 300 ft  
rated head

Speed

128.6 rpm

Rated net head

300 feet

Generators

Number

Four initially  
Eight ultimately

Rated capacity per unit (nameplate)

105,000 kw

Total rated capacity

420,000 kw - initially  
840,000 kw - ultimately

Transformers

Number

Two

Banks

N/A

Capacity

N/A

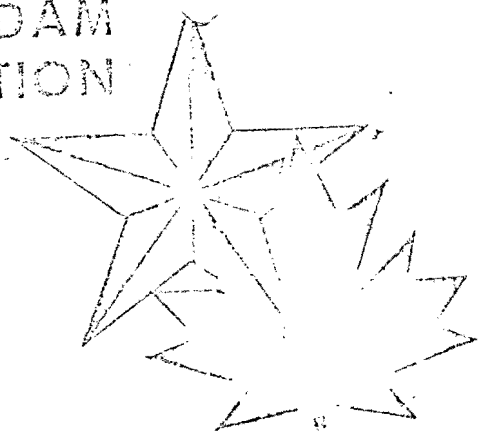
Relocations

Railway

60 (approx) miles

F. D. Roads

56 miles



# FACT SHEET

AUGUST 24, 1975

COLUMBIA RIVER TREATY

The Columbia River Treaty between the United States and Canada concerns international cooperation in water resource development of the Columbia River Basin. It was signed on January 17, 1961, ratified by Congress in April 1961, and formally accepted by Canada and the United States on September 16, 1964.

Terms of the treaty called for Canada to build Duncan, Hugh Keenleyside (formerly Arrow Lakes), and Mica Dams, and gave the United States the option of building Libby Dam. Although terms of the treaty in regard to Libby Dam were not obligatory to the United States, the treaty required that if this country decided to build, construction would have to start within five years of the effective date of the treaty, and full operational storage would have to be provided within seven years of construction start.

The United States took up the Libby Dam option and began construction on June 30, 1966. Full operational storage at Libby Dam-Lake Koochanusa was available June 30, 1973, thereby meeting treaty requirements.

At the time of treaty ratification, an advance payment of \$273.3 million went to Canada for the additional power that would be generated downstream power plants over a 30-year period as a result of Canadian storage. Storage at Canadian dams was available as follows:

- Duncan Dam and Lake - July 31, 1967;
- Hugh Keenleyside Dam and Arrow Lakes - October 10, 1968; and
- Mica Dam and McNaughton Lake - March 30, 1973.

In addition to this advance payment for downstream power, the United States agreed to pay a total of \$64.4 million for the role the three Canadian treaty dams would play in preventing damaging floods in Washington and Oregon. These payments were made in stages as each of the dams became operational.

# FACT SHEET

## FLOODING AND LIBBY DAM

The Kootenai is the third largest tributary of the Columbia River and accounted for 18% of the runoff in major floods. Damaging floods occurred on an average of once every two years on the Kootenai River downstream from Libby Dam, principally affecting Troy, Montana; Bonners Ferry, Idaho; and 34,000 acres of leveed agricultural land in the Kootenai Flats extending from Bonners Ferry, Idaho, downstream to the U.S.-Canadian border.

Flooded land in the U.S. portion of the Kootenai Flats amounted to 32,000 acres in 1948, 4800 acres in 1950, 6600 acres in 1954, 17,000 acres in 1956 and 7000 acres in 1961. During the last 27 years, floods in this area caused ~~\$2.2~~ <sup>22</sup> million in damages.

The two near-record spring runoffs -- 1972 and 1974 -- were held in check by Libby Dam. Flood damages prevented by Libby Dam amounted to about \$20 million in 1974 and over \$12 for 1972.

Without Libby Dam, the downstream water levels in 1974 would have exceeded the disastrous floods of May 1948 and May 1961, and would probably have caused levee failures and flooding in the Bonners Ferry, Idaho area. The Corps of Engineers used the Dam to hold the river levels down to about 22 feet on the Bonners Ferry river gauge. With no regulation the river would have risen to 38 feet, seven feet above major flood level. Similarly, without the dam, the river stage near the town of Libby would have risen to near 20 feet instead of the seven feet observed.