

ARROW LAKES LOG TRANSPORTATION By Capt. Don Rose

The upper and lower Arrow Lakes are a widening of the Columbia River situated between the Selkirk Mountains to the east and the Monashee Mountains to the west. The Columbia River flows into the north end of the lakes and discharges at the south end.

Before completion of the **HUGH KEENLEYSIDE DAM**: 12 Km 6.48 Nautical miles upstream from Castlegar: there were nineteen (19) tugs working on the Arrow Lakes.

Originally they were two lakes 22.53 Km. 12.16 nautical miles apart joined by a narrow stretch of water known as the Narrows.

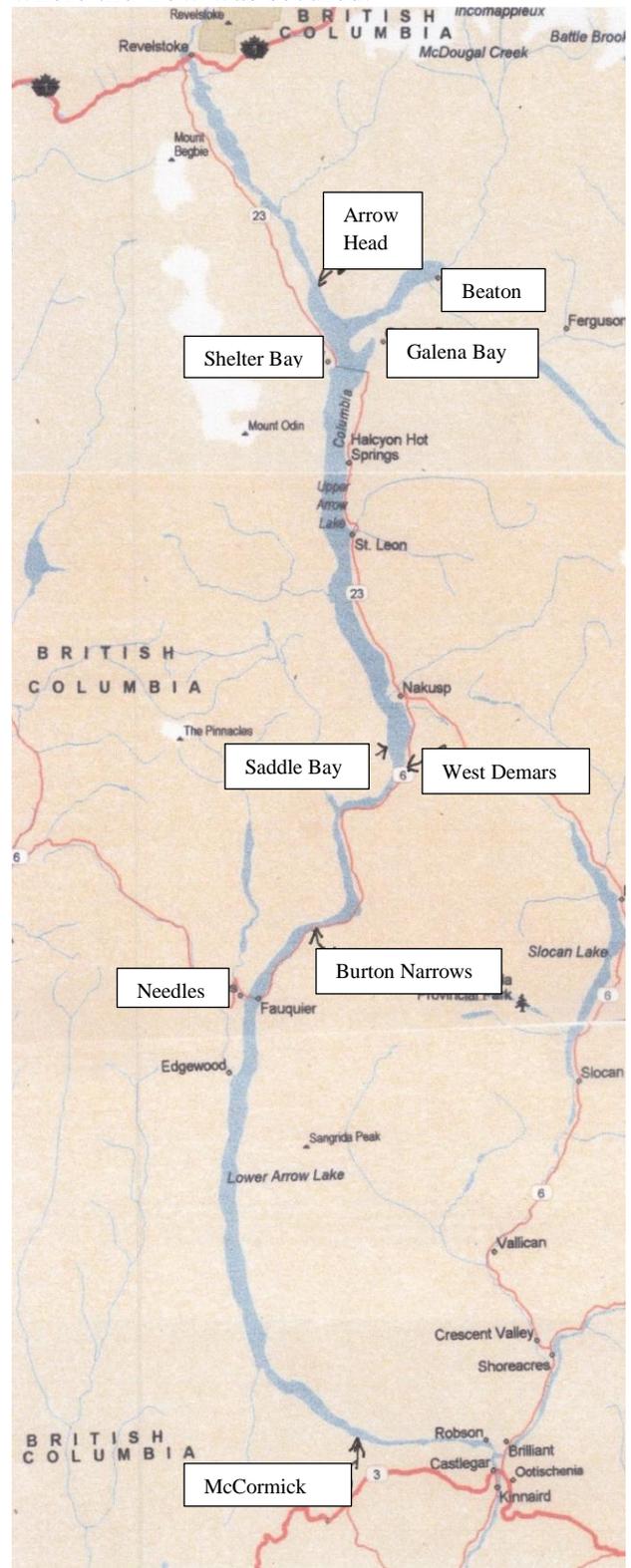
Loose logs and bundles were placed on the Columbia River shores up to 128.75 Km 69.52 nautical miles north of Revelstoke. When high water freshet came the logs and bundles were floated south to Arrow Head. Position #1 on map. This was known as the Columbia River Drive. At Arrow Head the north end of Upper Arrow Lake a catch boom collected the logs and bundles. Everything that came down river was collected in bags and secured to dolphins in Galena Bay.

At Galena Bay the bundles were sorted by species into rafts of 30 bundles each. The loose logs were moved to a bundler where they were also sorted by species and bundled. After being bundled they were also sorted by species into rafts of 30 bundles each.

Two tugs, one on each side of the raft would push towards each other to make the rafts as close to rectangular as possible. When this was accomplished a swifter wire was run across the raft to hold its shape. Each raft was then identified with a number board.

The main line tug would pick up two or three rafts at Beaton and then pick up two or three more at Galena Bay. The tug would also pick up more rafts along the way at other log dumps until

they had a full tow. This was towed to Saddle Bay where the Tow was secured.



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From Saddle Bay a maximum of three rafts at a time were towed through the Narrows during times of high water. From there they were towed through Burton Narrows, two rafts at a time during times of high water. The water levels varied 1.5 m to 3.05 m 5' to 10' depending on the snow pack.

At times one could see the water dropping .3 m 1ft. through Burton Narrows.

From the start of Burton Narrow to around the east side of Burton Bar and Mount Lenard is approximately 0.8 Km .43 Nautical miles. This is the north end of the Lower Arrow Lake. At this point the rafts were secured to a tie up known as the Rock Slide.

At the Rock Slide the mainline tug would make up a tow with a destination of Castlegar. At times rafts would be picked up at other log dumps along the Lower Arrow Lake. On average the tug would arrive at Castlegar with up to sixteen rafts of thirty bundles each.

At Castlegar tugs would take one or two rafts at a time to either the Saw Mill or Pulp Mill. The end product was delivered to customers via Rail or Trucks.

At times during the winter the lakes were subject to freezing over with ice which slowed the movement of log rafts.

After completion of the **HUGH KEENLEYSIDE DAM:**

The dam was completed in 1967 and the water started to rise in 1968. The water level in the Arrow Lakes rose approximately 21.3 m (70 ft.) At present the water level on the Arrow Lakes can vary approximately 16.8 m (55 ft.) depending on the amount of water released at the dam. At the time of writing there were nine (9) tugs working on the Arrow Lakes. Previously there were three (3) Mainline tugs now there is only one (1).

The Columbia River Log Drive was eliminated by completion of the Hugh Keenleyside Dam.

Presently the tug starts picking up rafts of approximately fifty (50) bundles per raft at Shelter Bay. The majority of the rafts use boom sticks to corral the bundles, however, there are a few that are corralled with lacing wire.

There are approximately six (6) log dumps along the upper and lower Arrow Lakes where rafts are picked up, the last one is at Needles on the Lower Arrow Lake. Final destination for the Mainline Tug and it's tow is McCormick.

At McCormick the rafts are towed two at a time to lockage pens where they are made up into rectangular rafts, three (3) bundles wide by five (5) long. The rectangular rafts are moved into the lock at the Hugh Keenleyside Dam.

During July of 2017 I had the opportunity to go up into the tower at the Hugh Keenleyside Dam where the gates and water level in the lock is controlled. Derek Berisoff was the operator and our host who gave an excellent description of the operation. Derek informed me that the Arrow Lake water level at that time was 16.8 m (55 ft.) higher than the Columbia River.

When the water level in the lock was equal to the Arrow Lakes the lake end gate is opened and the log raft is guided into the lock.

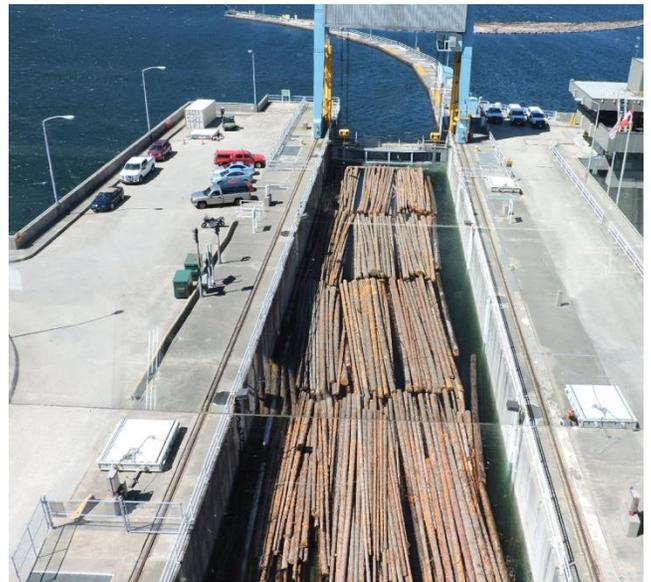
From time to time the lock is operated for other marine traffic between the Arrow Lakes and Columbia River.



Raft approaching the lock with gate open and water at Arrow Lakes level.



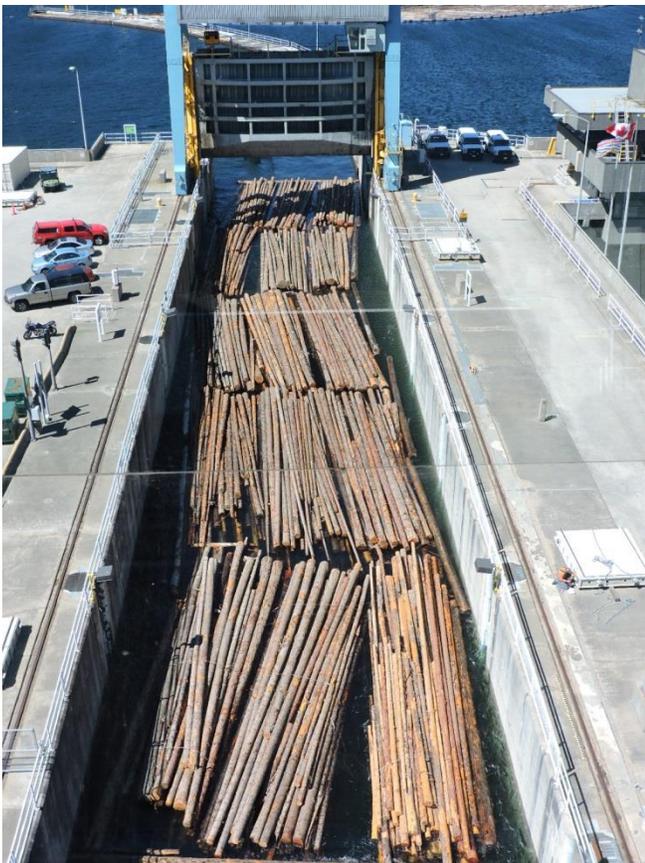
Raft entering the lock.



Arrow Lakes end of lock gate closed.

Water in the lock is now being discharged into the Columbia River. When the level in the lock is equal to the river, the gate at the Columbia River end will be opened and a tug will tow the raft out of the lock.

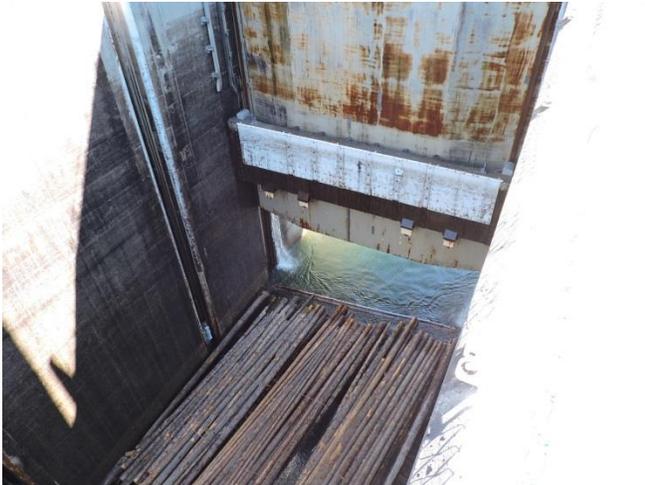
Water levels in the lock is controlled by opening and closing valves and the force of gravity to either raise or lower the level.



Raft completely in the lock.



The water level in the lock is now equal to the level of the Columbia River. This gate will now be opened.



The gate is open, a tug will now pull the raft out of the lock.



Tug pulling the raft out of the lock.

After leaving the lock the raft is delivered to either the Sawmill or Pulp Mill.

The boom sticks that come with the raft to McCormick are secured at the boom stick tie up. The main line tug will on a north bound trip take the boom sticks in tow and deliver where required at log dumps. There they will be recycled to make up rafts for another south bound tow.

A trip towing log rafts from Shelter Bay in the north to McCormick in the south averages nine to ten days depending on weather and water levels.

Since the completion of the dam which has slowed the flow of water in the lakes they are now

more subject to freezing . This depends on the temperatures during the winter months. There have been times when marine navigation on the lake has been stopped due to Ice.

Special thanks to Captain Ken Poznikoff who supplied the majority of information for this article.