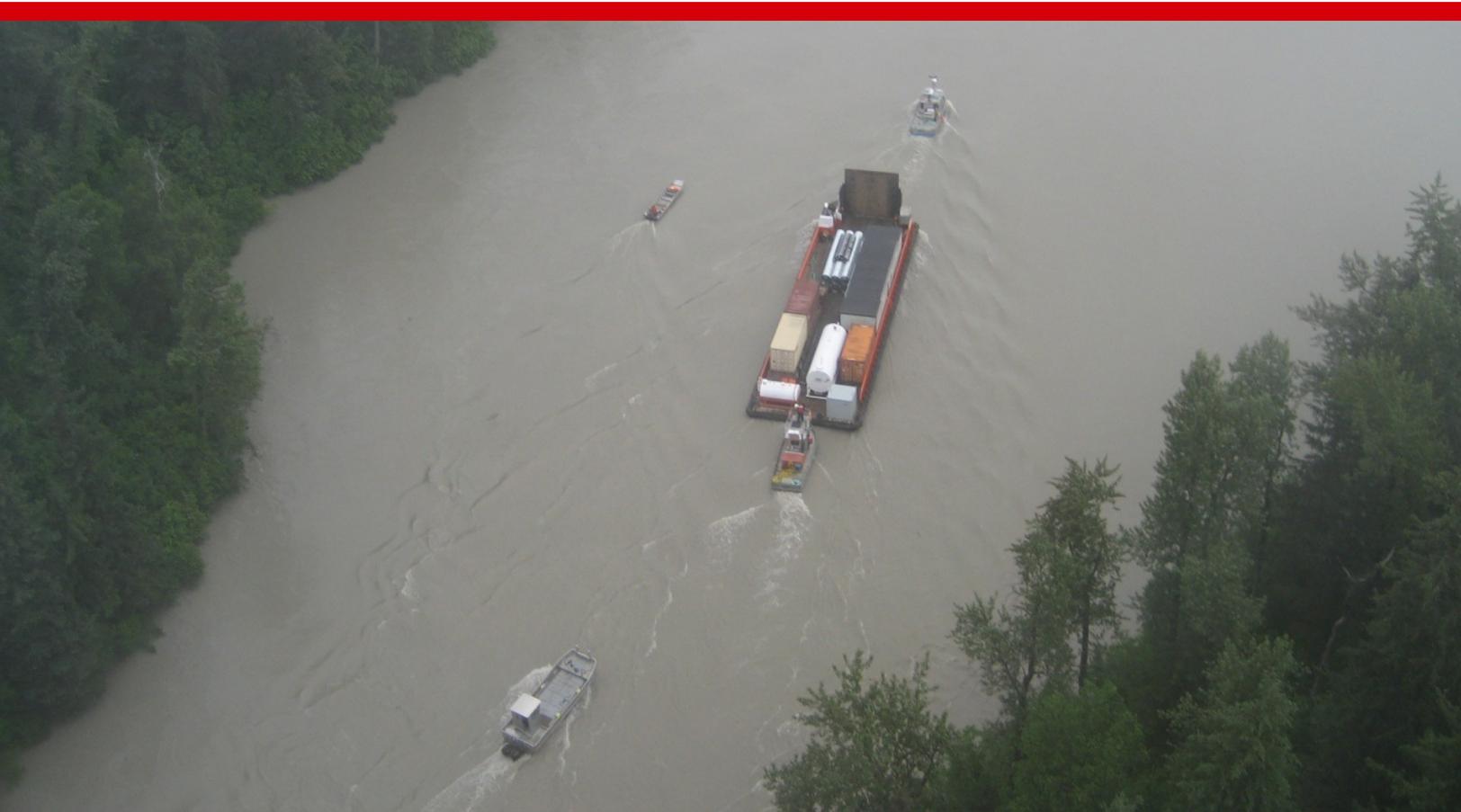


Taku River Barge Activity Report 2007



February 2008

During the summer and fall of 2007 Redfern barged 10 loads of equipment in two phases to the Tulsequah Project. During each phase, ocean barges were stationed in Taku Inlet and loads were transferred to a river barge and brought from the Taku Inlet to a temporary barge landing, east of the confluence of the Taku and Tulsequah Rivers. The first round of barging, totalling seven trips began in June and continued until mid July. In September, an additional three trips were made before water levels dropped preventing further transportation.

The average estimated travel time for each upstream and downstream trip was approximately 8 hours and 3 hours respectively. Round trips from Taku Inlet to the barge landing site, including the time required for loading and unloading the barges varied from 24 to 48 hours, and was dependant on weather and water levels.

Record of River discharge at Canyon Island during barging operations:

Trip Date 2007	Actual Discharge (m3/s)	Gauge height at Canyon Island (m)
June 30	1248.77	11.69
July 02	1155.33	11.55
July 03	1078.87	11.43
July 05	1042.06	11.37
July 13	1588.58	12.14
July 15	1523.45	12.06
July 18	1520.61	12.05
Sept 25	574.83	10.49
Sept 26	628.63	10.61
Sept 29	259.38	9.60

Fleet of Vessels

Redfern contracted the barging activity to Wainwright Marine Services Ltd. based out of Prince Rupert, BC. The fleet of vessels included two ocean barges (approx 50 ft x 200 ft) and one river barge (approx 36 x 120) as well as three tugs. Wainwright ferried loads from June 30th, to July 18th.

In addition to the Wainwright barges, Redfern also used its own vessels the Arctic Eagle tug and the Pelagic No. 1 barge which was supported by Tadpole Towing. The Arctic Eagle is currently being retrofitted with larger engines, and an improved hull to allow for further work on the Taku River.



Description of Operations

The purpose of the barging activity was to deliver construction equipment to site in support of developing the Tulsequah Chief Mine Project. Supplies and equipment delivered included construction and earth moving equipment and supplies, crew quarters and fuel. During the barging operations, the barges and tugs were stationed in Taku Inlet. The ocean barges anchored in the inlet while equipment and supplies were moved from the ocean barges to the river barges as deliveries were made. A ramp lowered from the larger ocean barge to the river transport barge was used for ease in moving the equipment and supplies.

The barge and tugs were accompanied by a pilot boat captained by a local river resident. The pilot boat was responsible for guiding the tugs and barges on the river and communicating with other river users.

All materials were off loaded on Redfern's private property at the temporary barge landing site. The shoreline was armoured to prevent erosion by 3 bumper logs ovetop of a layer of geotech material. Additional geotech material was placed on the barge landing area to limit disturbance to the substrate. The bumper logs were removed after the final barge trip of the year. Independent environmental monitors were on site during the offloading of the barges at the temporary barge landing and no incidents were noted. The company consulted with Fisheries and Oceans Canada and received a Letter of Advice in relation to appropriate clearing and preparation of the barge landing area. The company followed this advice under the guidance of a third party environmental monitor.

During the operations in September, natural river erosion activity located several snags in the mouth of the Big Bull Slough; after consultation with Fisheries and Oceans Canada these snags were relocated to the edge of the wetted channel following instructions from that agency in a Letter of Advice. The relocated snags were kept within the wetted width of the channel in order to maintain their function as fish habitat. The relocation activity was overseen by a third party environmental monitor. These snags did not pose a challenge during the June/July activity as river levels were higher.

Challenges

During the June and July trips high water levels and fast current in the west channel around Canyon Island made the trips difficult for the two Wainwright Tugs. Local river operators assisted with the movement of the tugs and barges through the fast waters of Canyon Island.

Further challenges were faced with the vessels used during the September barging activity. The Arctic Eagle was underpowered to push the barge through the fast waters of Canyon Island. As a result, Redfern suspended its operations temporarily while an additional tug was mobilized. Upon the arrival of the second tug three loads were brought up to site. As a result of this experience the Arctic Eagle is being modified to improve performance and allow for it to push the Air Cushion Barge. As well, comments received from local river residents advised Redfern that the noise level of the tug was louder than expected. Redfern is also modifying this in order to try and dampen the sound level of the Arctic Eagle. Redfern is also planning on purchasing a second shallow draft tug to work in conjunction with the Arctic Eagle to ensure appropriate efficiency, mobility and safety of operations is maintained.

Incidents

At the Canyon Island Fish & Game Camp an incident was reported of the barge trying to pass through the Narrows while Fish & Game staff sampled and marked fish. As Redfern's pilot boat approached the Narrows, the pilot informed Fish & Game staff of the approaching barge and asked them to briefly suspend their operation and allow the barge to pass by. Redfern appreciates the importance of the Fish and Game activities as they affect both Alaskan and Canadian fishers. Efforts were made to avoid transit of this area during normal fish sampling periods. Improved communication of company activities to both the Department of Natural Resources (DNR) and Department of Fish and Game (ADFG) was the result of this incident. This lesson of improved communication will be carried forward to any future barging activity.

Boom logs located at one of the ADFG Canyon Island fish wheels were damaged during a transit through the Narrows. The boom logs are strategically placed to protect the fish counter wheel from floating debris and on one occasion, a barge did damage the logs. At no time was there any damage to the fish wheel caused by the barging activity. Further incidents of this nature are not expected as the Air Cushion Barge will be travelling around the east side of Canyon Island away from the fish wheel. If conventional barging is undertaken then the improved power of the Arctic Eagle tug and accessory tug are expected to minimize this type of occurrence.

Assistance

Several local residents provided assistance during the summer barging activities. Their knowledge of the river, support and assistance was greatly appreciated and Redfern will continue to seek the advice as we move forward.

