

Kantishna River Tag Deployment Fish Wheel Operations for Fall Chum Salmon Mark Recapture Abundance Estimation

R&M# 12-06

Project Proponent: Eric Barnhill, Bering Sea Fishermen's Association, 705 Christensen Drive, Anchorage, Alaska 99501, eric@cdqdb.com

Project Partners: The Bering Sea Fishermen's Association contractor worked with the Alaska Department of Fish and Game in a support position. The Kantishna River wheel operation is a part of the overall Alaska Department of Fish and Game Tanana Tagging project.

1. Introduction:

Objectives:

The Kantishna tag deployment fish wheel operates for fall chum salmon abundance estimation on the Kantishna River as part of the Tanana River drainage mark-recapture project. The following are project objectives:

- Capture and tag (with spaghetti tags) fall chum at each tag deployment site from 16 August through approximately 30 September.
- Provide to fishery managers in season abundance estimates and confidence intervals for the number of chum in the Kantishna River.
- Estimate migration rates of fall chum between tag deployment and recovery wheel sites in the Kantishna River drainage.
- Estimate the timing Toklat River stocks pass the Kantishna River tag deployment site.
- Estimate the timing Toklat River stocks pass the Kantishna River tag deployment site.

2. Study Area:

The Kantishna River tag deployment fish wheel is located on the Kantishna River, approximately five kilometers upstream of its confluence with the Tanana River. (See map)

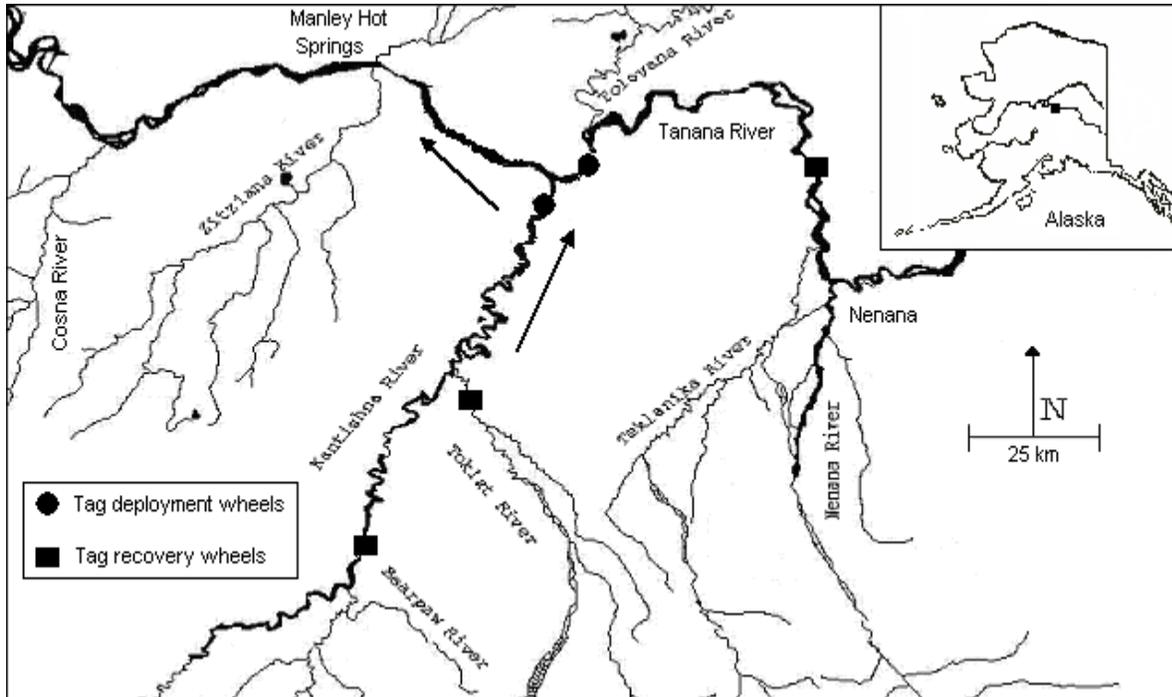


Figure 1. Location of tag deployment and recovery wheels used in the Tanana and Kantishna River fall chum salmon mark-recapture project.

3. Methods:

Funds received by the Bering Sea Fishermen’s Association from the Yukon River Salmon Research and management fund will pay a contractor to operate the Kantishna tag deployment fish wheel for the ADF&G mark-recapture project. The ADF&G crew will be responsible for tag deployment at this fish wheel.

The contractor was responsible for ensuring that the wheel was operating properly and efficiently. The contractor will take necessary measures, e.g., raising or lowering the axles, or reposition the wheels as necessary. The contractor also installed and adjusted inshore fish leads, repaired baskets and live box, and remove accumulated debris as was needed to accommodate changes in river currents and debris loads. The tag deployment wheel contractor reported to the local ADF&G field crew any time the wheel needed to be stopped for maintenance.

The Kantishna tag deployment wheel has three baskets and was equipped with a live box. The live-box was constructed of spruce poles and milled lumber and one-half inch plywood, and placed on the offshore side of the wheel. Fish leads were installed shoreward as needed. The fish wheel contractor examined the wheel a minimum of once daily to ensure that they were operating efficiently. This included examination of the live box and chutes for any holes or missing slats.

The contractor for the Kantishna fish wheel was Mr.Charlie Boulding. Mr. Boulding and his wife Robin have operated fish wheels for the Alaska Department of Fish and game for a number

of years. The Bouldings operated the tag deployment wheel at both the Tanana and Kantishna locations in the previous (2005) season as well as the 2006 season.

The Tanana River drainage mark-recapture project is overseen by Alaska Department of Fish and Game research biologists Bonnie Borba and Pete Cleary. Ms. Borba and Mr. Cleary deploy a team of three or four technicians that are responsible for the day to day data collection.

4. Results:

Mr. Charlie Boulding Operated the Kantishna River tag deployment fish wheel for the complete 2006 season. The wheel was built and operated without incident. Mr. Boulding's performance was found to be more than acceptable by the Bering Sea Fishermen's association as well as by the Alaska Department of Fish and Game.