

Study examines turbine effects on Yukon River salmon

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Fairbanks, Alaska—A University of Alaska Fairbanks fisheries scientist has teamed up with Alaska Power and Telephone to study how a new power-generating turbine affects fish in the Yukon River.

So far, the news looks good for the fish.

“In the brief testing that we have been able to accomplish, we have no indication that the turbine has killed or even injured any fish,” said Andrew Seitz, project leader and assistant professor of fisheries.

Alaska Power and Telephone installed the in-stream river turbine near Eagle, Alaska, this summer. They are testing its effectiveness as a power source for the village. A parallel project led by Seitz is studying the devices’ potential effects on fish moving through the river channel. Graduate student Parker Bradley and research technician Mark Evans have been in Eagle conducting the fisheries research since May.

The vertical-axis turbine is 16 feet wide and 8 feet tall. It’s suspended from an anchored pontoon barge in the deepest and fastest part of the river. The turbine has four blades that spin at about 22 revolutions per minute.

“The community of Eagle, residents along the Yukon River and Alaska Power and Telephone have all been very supportive of the fish studies,” said Seitz. “Everyone’s biggest consideration is the fish.”

Seitz and Bradley are using nets to capture fish at the turbine site and near the shore. The captured fish are identified, counted, measured and released alive back into the river. This information allows the scientists to determine the path downstream-migrating fish—such as juvenile salmon—take through the river channel. It also allows them to determine how many of the different fish species are in the channel and when they migrate.

“This data allows us to determine the relative likelihood of a fish to pass through the turbine,” said Seitz.

If a fish does pass through the turbine, Seitz and Bradley examine it for general health and indication of injury. Seitz says that preliminary results show that very few fish are passing through the turbine and those that do are not showing any signs of injury.

The project was funded by UAF and Alaska Power and Telephone via grant funding secured through Alaska's Denali Commission.

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- 30 -

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NOTE TO EDITORS: Photos, video and journal entries from the field are available online at www.uafnews.com.

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