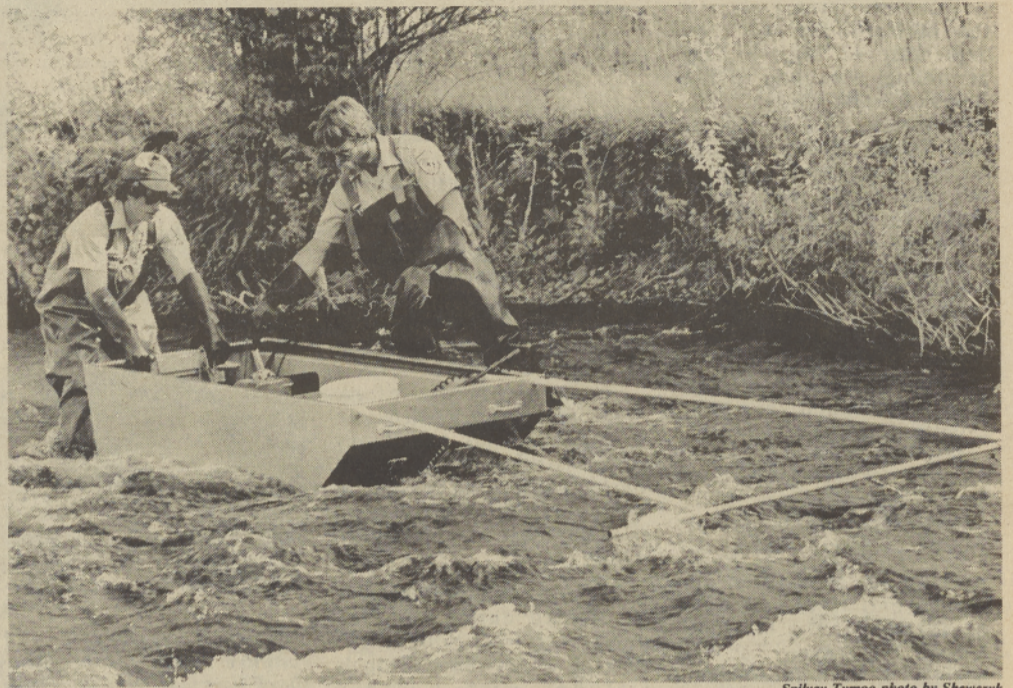


# Warm Springs River tributaries evaluated



**WEIGHING IN**—Bio-technician Louis Pitt, Jr. takes weight of collected fish during evaluation of Warm Springs tributaries.



**SLOWED DOWN**—Shocking fish to make them inactive for a short period of time allows U.S. Fish and Game researchers Brian Cates (left) and Gary Heckman (right) to count fish populations.

by Marsha Shewczyk

With the Warm Springs River and its tributaries being crucial to spring chinook and native steelhead production, utilizing these streams to their fullest is a way of preserving a valuable resource. Columbia River fishermen along with fishermen at Sherar's Bridge will benefit.

The capacity of streams for rearing fish varies. Overstocking or understocking a stream may be either harmful for production or wasteful.

Evaluation of streams to discover productive capacity can provide critical information. With man's activities often located near streams where fish stocks are viable clues to the condition of a fishery can provide information for avoiding impact to sensitive areas.

A habitat evaluation describes conditions and features of habitat, ability of a stream to produce fish and data against which future habitat alteration can be judged.

Such an evaluation called Habitat Quality Index is being conducted on Warm Springs streams by U.S. Fish and Game personnel. The evaluation, coordinated by fisheries biologist Gary Heckman, is funded by Bonneville Power Administration with fisheries enhancement monies allocated in mitigation of Columbia River dams.

Developed by the Wyoming Game and Fish Department, the Habitat Quality Index is a means to predict salmonid standing crop and, secondarily, to assess the effects of habitat alterations.

Nine parameters are used in analysis of the streams in the Habitat Quality Index. They include: width, maximum summer temperature, dissolved nitrates, eroding banks, fish cover, velocity, invertebrates, peak flow to low flow ratio and average critical period flow in ratio to average annual flow.

Requiring several persons, the study is conducted in streams with fish collecting equipment and measuring instruments. Numerical values

are given to measured parameters and compared to fish populations enabling researchers to give values to stream segments. Potential rearing capacity of the stream is predicted.

This information can be utilized in Warm Springs National Fish Hatchery management to program a more successful juvenile fish stocking program. According to Heckman, this would allow the wild habitat to produce the maximum number of fish. More adult salmon would be available for the fisheries and spawning in the wild.

Along with basic data, those working on the study have learned that juvenile chinook are higher in streams than previously thought. In Mill Creek many juvenile chinook have been seen due to stocking last year, indicated Heckman. This will likely show an increase in the return of adult fish in 1986, he says.

Those actively working on the study include coordinator Gary Heckman, Jake Schlepfer, Louie Pitt and Brian Cates.

## Water board accepting applications

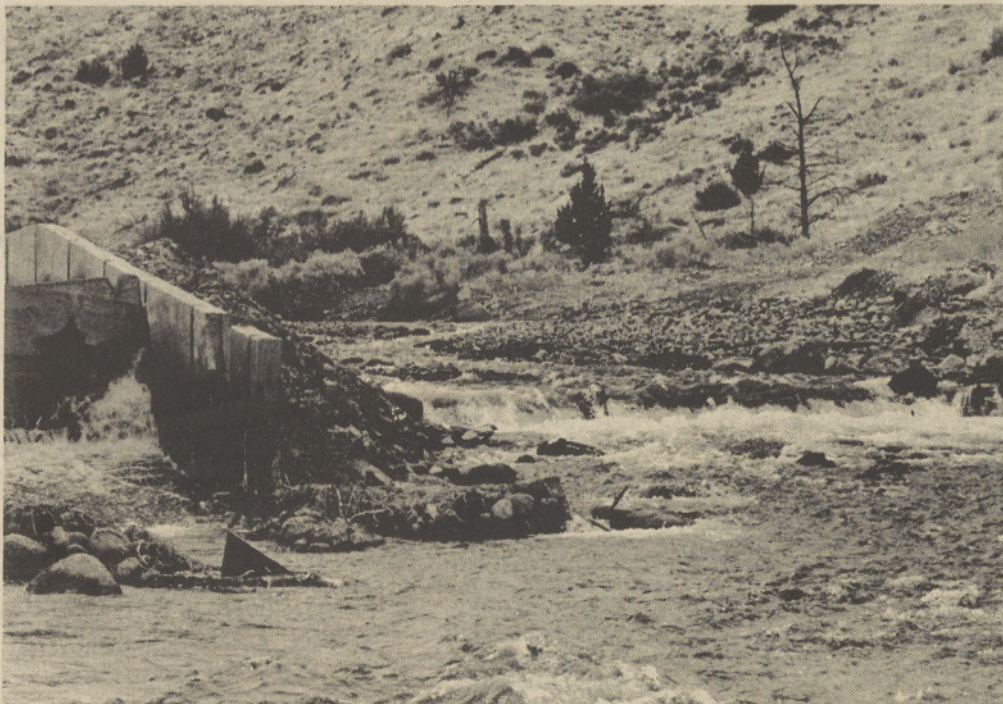
A three year term on the Board is open for Tribal member applicants. The Water Control Board is responsible for the administration of water on the Reservation according to the Water Code and Implementing Provision to that Code.

This three-member Board acts to protect the water quality and quantity on the Reservation by approving uses of water, activities inside the Reservation of important watersheds and recommending measure which will reduce

impacts to water. This Board does not become directly involved in Tribal water rights policy which is the responsibility of the Tribal Council and BIA.

Persons applying for the vacant position should become knowledgeable about water characteristics and how these are affected by actions of humans, animals and nature.

Interested Tribal members please send your application to the Tribal Council office; be sure to include your phone number and address.



**BARRIER REMOVED**—Headworks on Shitike Creek were removed recently allowing the migration of spring chinook and steelhead further up the creek.

## Shitike Creek headworks removed

Since use of the new Warm Springs domestic water treatment plant began in 1982 the old domestic water intake system has become a white elephant. It has been more bothersome than beneficial.

Removal of the dam in August of this year pleased many who wish to see Shitike Creek return to a more natural state.

At first there was discussion that the intake at the headworks on Shitike Creek could be used as a backup should the new system fail. It was estimated, however, that the time spent cleaning silt and gravel from the dam would equal the time necessary to locate and alleviate any problems in the new domestic water system.

Another negative aspect of the concrete obstruction was its failure to allow the migration

of fish upstream. The ladder on the dam was constructed too far down stream for the fish to find it once they arrived at the dam itself.

Natural Resource workers spent much time at the dam site raising and lowering a make-shift gate to allow these migrating fish to make it over the dam once they did find the ladder.

With removal of the headworks fish do not have to surmount obstacles any longer. They merely have to swim upstream. Spring chinook have already been discovered five miles above this point.

A gabion will be constructed downstream from the previous dam site for stabilization of the stream bed. The gabion will hold the gravel and at the same time allow fish passage upstream.