# NEZ PERCE TRIBE
## Department of Fisheries Resources Management
**Administration • Enforcement • Harvest • Production • Research • Resident Fish • Watershed**

**RESEARCH**
P.O. Box 365 • Lapwai, ID 83540
Phone: (208) 843-7145 • Fax: (208) 843-9184




January 19, 2006

Mr. Russ Kiefer
Fish Passage Advisory Committee
Idaho Department of Fish & Game
600 South Walnut
Boise, ID 83707

The Johnson Creek Artificial Propagation and Enhancement Project (JCAPE) #199604300, the Lower Snake River Compensation Plan (LSRCP) project cooperative agreement 14110-4-J010, and the Imnaha Smolt Monitoring Project (SMP) #199701501 administered by the Nez Perce Tribe are requesting to use the Separation by Code system (SbyC) in Lower Granite, Little Goose, Lower Monumental, and McNary Dams. This request will utilize several action codes for our hatchery and natural chinook salmon and steelhead trout emigrating in the year 2006 and into the future.

The JCAPE project is a safety-net supplementation program attempting to preserve and recover summer chinook salmon in Johnson Creek. An aggressive monitoring and evaluation component of this project is also in place and utilizes PIT tags to evaluate a portion of this supplementation program. PIT tags in natural and hatchery juvenile summer chinook salmon and steelhead trout are used to generate efficiency estimates of emigrating fish through a screw trap, to provide life history specific survival estimates (parr, pre-smolt, and smolt) to Lower Granite Dam and other down river projects, and to calculate smolt to adult returns (SAR) and returning adult abundance (Johnson Creek to Johnson Creek) for natural and supplemented fish.

The LSRCP and SMP Monitoring Project are in place to perform emigration studies on the Imnaha River to determine and compare hatchery reared and natural fish smolt performance variables such as travel time, arrival timing, and estimated survival to Lower Granite Dam and McNary Dam. Arrival timing information allows salmon managers to make meaningful flow and spill management requests to maximize survival potential through the hydroelectric corridor. We also propose to estimate relative smolt to adult return rate (SAR) of spring and fall emigrating natural chinook salmon and steelhead smolts back to Lower Granite Dam.

The JCAPE, LSRCP, and SMP studies are covered under the NOAA Fisheries Northwest Region Protected Resources Division Endangered Species Act (ESA) Section 10 Permit #1134.

Current Default Operations for Juvenile Fish

Juvenile fish emigrate through each hydro-facility in one of three ways; fish emigrate through a facility undetected (through spill or turbines); emigrate through the bypass system and get placed in the transport system; or emigrate through the bypass system and gets placed back in-river.

Using the current default settings, PIT tagged fish, are always bypassed back into the river while untagged fish are transported. This results in the PIT tagged fish no longer representing the general population of fish. This eliminates our ability to calculate accurate SAR and returning adult abundance of the general non-tagged juvenile population. To generate accurate SAR's and adult abundance information we need a means of representing non-PIT tagged fish that emigrate through the system undetected, are detected and placed on a barge, or detected and bypassed (lower dams).

Objectives for JCAPE, LSRCP and SMP projects:

1: Continue to obtain life stage specific survival estimates to Lower Granite Dam utilizing detections to calculate survival with the SURPH model.

2: Obtain SAR and returning adult abundance information on the general population of migrating fish (largely transported) using a representative group of PIT tagged fish.

These projects are going to PIT tag two separate representative groups at the natal stream, one group for each of the above objectives.

Objective 1: Will be implemented by utilizing the current default SbyC settings (bypass PIT tags back to the river) at each hydro-facility. Detections from his group will be modeled through the SURPH program to obtain life-stage specific survival estimates from natal stream to Lower Granite Dam. No special SbyC action is required for this objective.

Objective 2: Will require use of the SbyC system to represent the general population of fish to obtain accurate SAR's and adult abundance information. These projects will utilize a predefined group of PIT tags from the Imnaha River and from Johnson Creek in conjunction with the SbyC system, to accurately represent each river systems general population of juvenile spring/summer chinook salmon and steelhead trout in their different migration routes through the hydro-system. These PIT tagged fish from the two groups will be designated in the SbyC system into a "monitor mode" (no action). These specific PIT tags will be transported, bypassed, or remain undetected in the same relative proportion as non-PIT tagged fish. Therefore, returning PIT tagged adults would accurately represent non-tagged adults regardless of juvenile detection rates, transportation rates, in river-survival rates, and potential delayed mortality of in-river and transported fish. These adult PIT tag detections can then be used to calculate accurate SAR's and adult abundance estimates.

Below is a list of the specific SbyC facilities and required actions at each facility.

| | |
|---|---|
| Location of Actions: | Lower Granite, Little Goose, Lower Monumental, and McNary Dams |
| Duration and State Date: | Entire Season SbyC is operational in 2006 |
| General Action Request: | Place all tag codes (100%) into "Monitor Mode", No Action is taken |
| Action 1: | Johnson Creek natural juvenile chinook parr/presmolt group<br>Approximate number of PIT tags released at stream = 8,000 |

| | |
|---|---|
| Action 2: | Johnson Creek hatchery juvenile chinook salmon group<br>Approximate number of PIT tags released at stream = 10,000 |
| Action 3: | Johnson Creek natural juvenile chinook salmon smolt group<br>Approximate number of PIT tags released at stream = 3,000 |
| Action 4: | Imnaha River natural juvenile chinook salmon group<br>Approximate number of PIT tags released at stream = 7,000 |
| Action 5: | Imnaha River natural juvenile steelhead group<br>Approximate number of PIT tags released at stream = 4,000 |
| Action 6: | Imnaha River hatchery juvenile steelhead group<br>Approximate number of PIT tags released at stream = 3,000 |

The request of these actions and the resulting information will be critical in the analysis of these populations using representative SAR's and adult return information for both projects. The PIT tagged fish that are transported will also complement the Comparative Salmon Survival Study (CSS) that is currently in need of transported natural PIT tagged fish.

If you have any questions or concerns, please contact me at (208) 843-7145.

Sincerely,

Jason Vogel

Jason Vogel
Nez Perce Tribe
Department of Fisheries Resource Management

cc: Carter Stein, PSMFC
Jay Hesse, Craig Rabe, Brian Michaels, NPT