

## SOCKEYE 2008:

### The rollercoaster ride might be starting to flatten out

By Neil Todd, FRAFS Operations Manager

After last week's edition of WST, there was a small surge in numbers of sockeye approaching the Fraser. However, it didn't last for more than a couple of days; and since Tuesday, a stabilizing pattern seems to be emerging.

At the Fraser River Panel meeting today, it was reported that the Summer Run timing group numbers appear to be dropping off. Catches in the Area 20 test fishery are slowly declining, and the proportion of Late Run sockeye appears to be increasing within the test fishery catches.

The increase in test fishery catches last weekend was not sustained, as noted above. However, the effect was to stimulate some revisions to the in-season run size estimates. The following run sizes were adopted by the Fraser Panel at today's meeting:

1. Early Summer Run timing group: 440,000
2. Summer Run timing group: 1,000,000
3. Birkenhead: 30,000
4. "True" Lates: 232,000

We now have an interesting situation that may be developing, although it is too soon to provide anything definitive. The newly-adopted run sizes clearly indicate that there are still significant numbers of sockeye available for harvest without infringing on spawning escapement targets. However, there are two unavoidable constraints that would interfere with actually attempting to harvest all that are theoretically available:

#### Constraint #1: Timing

The fish are well into their migration and many are now moving up river. Some fish are now physically unavailable to some First Nations, particularly those in the marine areas and, to some extent, some in the lower River.

#### Constraint #2: Conservation of Late Run sockeye

There is a 20% exploitation rate ceiling on the harvesting of Late Run stocks. This ceiling may make it impossible for some groups to harvest all the available Summer Run TAC where Late Run sockeye are mixed in.

The result? Too soon to tell, but if all the numbers are close to being right (and how often does that occur?), there may be a few more fish make it to the spawning grounds than had been planned for. And most people would agree that that is not a bad thing in a year such as this.

### FIRST NATIONS IN-SEASON TECHNICAL CONFERENCE CALLS

Unless otherwise noted, the 2008 First Nations In-season technical conference calls will be at 4PM every Thursday until mid-Sept.

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## Nicola Tribal Association Fisheries Project Update

By Jess Urquhart, NWSFA Quality Control Technologist

The Nicola Tribal Association is working in a partnership with the Okanagan, Secwepemc, and Northern Shuswap fisheries organizations to study the relationship between groundwater infiltration into stream mainstem channels, and fish behaviour during summer periods when mainstem temperatures can rise significantly. The Nicola fisheries crew conducting this project are Oliver Hewitt, Dave Tom, and Robert MacLean.

Crews began, in July, walking the Coldwater and Nicola Rivers looking for groundwater infiltration sources. Using a thermocouple unit and probe, a very sensitive type of thermometer, sections of the river were walked. The detection of groundwater infiltration sites was determined by a colder temperature than that of the mainstem temperature. Once the site was determined to be a groundwater infiltration source, crews installed temperature loggers at the groundwater source, to record daily temperature fluctuations. Another temperature logger was placed 50 meters upstream, to be used as a control, recording the temperature of the mainstem.

Nicola crews found two sites on the Nicola River and one site on the Coldwater River. Crews were then required to conduct three afternoon and night snorkel surveys of both the groundwater source and control site. One survey was to be conducted before the mainstem temperatures reach their summer peak, one to be done during peak temperatures, and one to be done after peak temperatures. Surveys were to be conducted between 4:00pm and midnight, when daily temperatures are at their maximum. While snorkeling, the crews were identifying and enumerating any fish seen at the groundwater and control sites. The crews were also to make notes of fish behaviour.

What we are expecting to see is that during the peak summer water temperatures, when they can become lethal to fish in the mainstem, is a congregation of fish at the groundwater infiltration sites, using them as refuge from mainstem temperatures. And to see these fish displaying the unusual behaviour that has been previously noted by other studies. When taking refuge at these groundwater sites, fish have been photographed with their nose right down to the gravel getting as close to the groundwater as they can.

These groundwater infiltration sites are often overlooked, but it is expected they can be an important microhabitat for fish, especially juveniles rearing in fresh water, during the hot summer temperatures. By conducting this study we hope to identify and record these sites, and protect them from future misuse or destruction.

While the Watershed Talk is a useful source of technical fisheries information, we also welcome articles and updates on community fisheries projects and events.

Submission guidelines are available at [www.frafs.ca](http://www.frafs.ca) under Watershed Talk.

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