



# Lheidli Fisheries News

Lheidli T'enneh  
Fisheries Program

Spring, 2008

## Planned Activities and Focus for 2008

The fisheries program is in the planning stages for another busy year. The focus of this year's fisheries program will be the following activities:

1. Management of the food, social and ceremonial (FSC) fishery
2. Conducting Chinook enumeration in the upper Fraser
3. Working with DFO towards the development of an improved indicator stock program for upper Fraser Chinook—including working towards establishing a Chinook hatchery in the upper Fraser
4. Continuing research and assessment efforts in relation to the Upper Fraser white sturgeon population
5. Working with other Band programs in support of various environmental assessment activities
6. Fisheries Program staff capacity development.

We will keep the community informed of the program's activities as they unfold and will be working closely with the

Band's fishers as the salmon fishery begins. Unfortunately, this year's fishery is not looking optimistic. In June or July we'll be hosting a community meeting focused on fisheries matters.

In 2007 the fisheries staff were kept busy with a number of projects and the ongoing monitoring of Lheidli T'enneh's FSC fishery (as meager as the fishery was). Program staff also undertook several training programs, including the Aboriginal Environmental Techni-

cian Certificate Program (Carl Frederick and Sean Nome). Staff were also involved in a number of non-fisheries program (but related) matters including environmental assessment processes for several projects including the PNG-PTP gas line twinning, Graymont Limestone Quarry, and several wind energy proposals.

This newsletter provides a summary of 2007's activities and highlights the sockeye forecasts for the coming season.

## Inside this issue:

**2008 Sockeye Stock Forecasts for the Prince George Area**

**Summary of 2007 Fisheries Program Activities**

**Copies of this document are available from the Lheidli T'enneh Band Office;  
Contact Carl Frederick; 565-1667  
or [cfrederick@lheidli.ca](mailto:cfrederick@lheidli.ca)**



Irvin (Chukar) Gagnon and Lisa Hardy (UFFCA) pose with a white sturgeon in the upper Fraser before measuring and weighing the fish, collecting aging (fin ray) structures and DNA samples, and implanting a radio tag in the fish. Lheidli T'enneh completed an assessment of the upper Fraser's white sturgeon population in 2007. The Upper Fraser's population was classified as Endangered and added to Schedule 1 of Canada's *Species at Risk Act* in 2006.



## 2008 Sockeye Stock Outlook; FSC Opportunities for Prince George and Area

Each year DFO (PSC) develops forecasts or runsize projections for Fraser sockeye stocks. With changing environmental conditions and other factors, predicting what actually materializes has become increasingly challenging over the last decade. The following sockeye runsizes are predicted:

- Early Stuart – 24,000 – 35,000
- Bowron – 3,000 – 5,000
- Nadina – 59,000 – 103,000
- Late Stuart – 355,000 – 177,000
- Stellako – 361,000 – 477,000

Note that these are total runsize predictions (i.e. what is expected to return in the marine area) and reflect predictions at the 50% (larger number) and 75% (smaller number) probability levels. What manages to migrate upstream to Prince George is of course subject to many fisheries and en route challenges and losses. Based on DFO's targets, the following forecasts of terminal escapement are the best estimates of what might make it back to this area.

- Early Stuart – 24,000 – 35,000
- Bowron – 2,000
- Nadina – 38,000 – 43,000
- Late Stuart – 78,000 – 142,000
- Stellako – 159,000 – 191,000

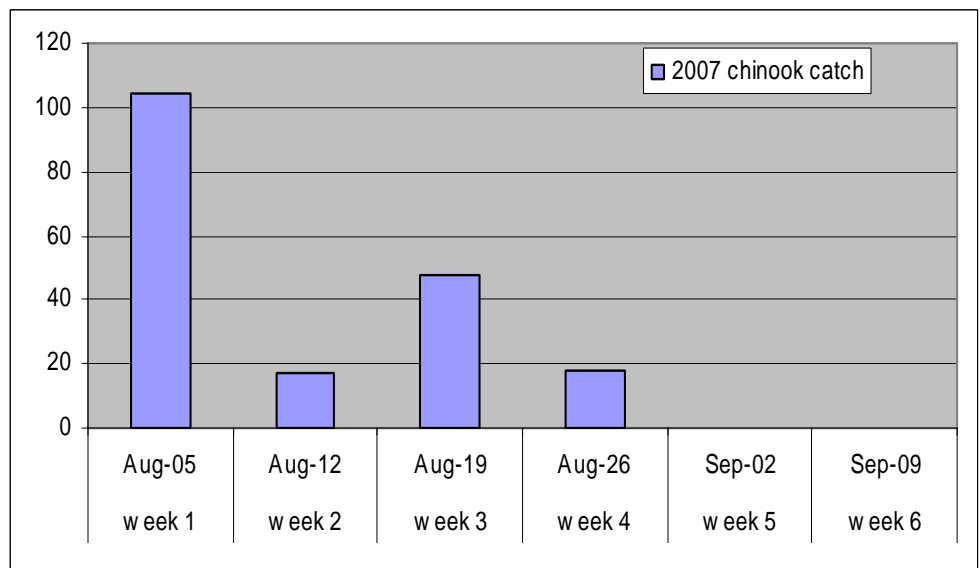
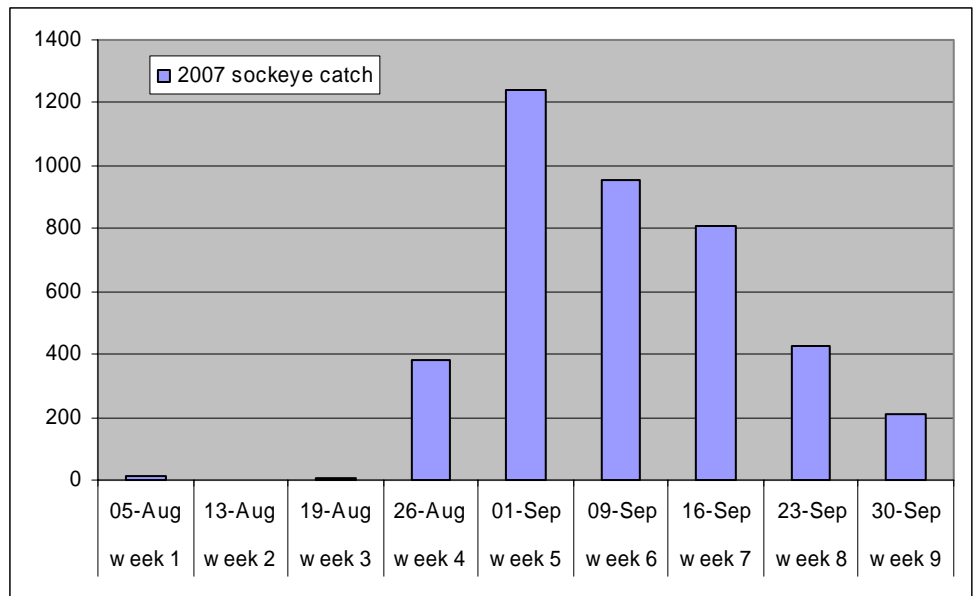
Based on these projections approximately 277,000 – 376,000 sockeye may migrate to Prince George during the period when FSC fishing may be allowed. Fish returning at these levels of abundance will create substantial difficulty for First Nations trying to meet their food requirements in this area. DFO has been

informed that escapements to this area at these levels will constrain FSC harvesting needs. We will work to provide you with the most up-to-date in-season information as it begins to develop.

**Note that gillnetting and sockeye harvesting closures to protect Early Stuart sockeye in 2008 are in place in**

**Lheidli's area from mid-July to early August 2008. Portions of the Fraser River upstream of the Nechako will remain open to Chinook fishing during this period - see Carl Frederick for specific dates & details.**

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## 2008 Season/Program Review

Reporting is now either ongoing or complete for all activities conducted in 2007. The following provides a summary of the activities undertaken.

### Training and Staff Development

Carl Frederick and Irvin (Chuck) Gagnon continue to be the primary fisheries program staff. Both have completed extensive formal and on-the-job training over the last few years. Both have continued to upgrade their schooling as well, and have participated in a variety of training programs this season. Sean Nome, Jordan Bozoki and Bradley Frederick have also worked seasonally within the program for the last two years.

### FSC Fishery

2007 saw Fraser sockeye run returns that were far below predictions and expectations. All Fraser First Nations failed to achieve their FSC catch targets for sockeye, including Lheidli. Lheidli harvested just over 4000 sockeye and about 187 Chinook. Sockeye were generally slightly later than normal, as has been the trend of late. Fish condition was generally good, although some fishers indicated sockeye were smaller than normal on average.

### Chinook Management

#### **Chinook Run-size Index**

In order to gather additional information about the timing and biology of the various Fraser Chinook stocks that spawn upstream of Prince George, the fisheries program fished a large mesh gillnet for

a short period in July and early August. Chinook were sampled for scales, otoliths, DNA and length/weight measurements were collected from these fish. Fish are distributed to community members. The operation is terminated when a sufficient sample of fish can be collected from the FSC fishery.

#### **Robson Valley Small-Stream Chinook Enumeration**

DFO enumerates adult returns to the larger upper Fraser tributaries by helicopter overview flights. There are a number of smaller streams that can't be counted in this manner. Lheidli crews have conducted ground-based surveys of 8 Chinook spawning streams in the Robson Valley for the last 4 years. These streams are walked 3 times within the spawning period. Irvin Gagnon and Sean Nome conducted the surveys in 2008. In general, Chinook escapement was poor relative to the 2002 brood year.

#### **Chinook Indicator Stock Development**

Lheidli has been actively working with DFO and other groups to develop an effective indicator program for upper Fraser 5<sub>2</sub> Chinook (the Chinook stocks that migrate past Prince George and spawn throughout Lheidli's Territory all the way to Rearguard Falls—30+ stocks). The indicator program is important for understanding the basics of these populations, in terms of their survival rates, exploitation in various fisheries and generally how to manage them. The program will require a hatchery where juveniles can be raised and marked and tagged prior to release. It also requires a Chinook stock that is of sufficient size to withstand the potential impacts of a hatchery

operation, and a situation where returning adults can be annually effectively enumerated. In 2007 Lheidli staff worked with DFO to assess possible candidate stocks, and Lheidli also undertook a mark-recapture feasibility study on the Willow River. To date, it appears that the Willow River may hold promise as the best candidate stream/stock.

### Upper Fraser White Sturgeon Assessment

Lheidli staff undertook extensive sampling in the upper Fraser aimed at assessing the status of this population, last assessed by Lheidli in 2001. Technicians also applied a total of 12 radio tags for the purposes of ongoing telemetry work that will be conducted over the next few years. The intent is to identify the stock's most important habitats. Although the population appears to be reproducing at a sufficient rate and otherwise healthy, its small size makes it highly susceptible to habitat alterations, poaching and other environmental changes.

Lheidli will be continuing research and assessment work on this population in 2008, focusing on applying additional radio tags and monitoring fish movements. FSC fishers are asked to release these fish unharmed when they are captured in nets, and report any captures or mortalities to Carl Frederick (565-1667).



A radio tag is implanted in a white sturgeon's abdomen during last year's work.



### Burbot Fishery Assessment

Lheidli T'enneh received funding from the Province in 2007 to monitor ice fisheries on several local lakes for the purposes of gathering information about the lakes' burbot populations and assessing the fisheries' impacts on these lakes' fish populations. The work was also intended to provide information that would allow for a determination of how the Mountain Pine Beetle epidemic may effect burbot populations in local lakes via its direct and indirect impacts on hydrology and habitat. Reporting on this project is currently being wrapped up.



### Environmental Assessment Support

Lheidli's fisheries staff worked on a number of projects on behalf of the Band in 2007. These included the environmental assessment and monitoring components of the N. side riverbank erosion protection project, and several large-scale projects being proposed within Lheidli's Territory, including, an open pit limestone quarry and lime production plant, the twinning of the PNG gas line (running from Summit Lake west), and

several wind energy projects proposed in the area.

Projects of this nature generally have to go through a review process involving crown agencies, which encompasses consideration of the proposed project's environmental impacts, among other impacts and effects. Lheidli T'enneh is required to engage in these processes to ensure that their interests are communicated, subject to there being sufficient resources supplied for their participation. It is likely that additional projects of these and other natures will be proposed for Lheidli's Territory in the near future, and the demands for Lheidli's participation will become greater.

### North Shelley Riverbank Restoration

The erosion protection works along portions of the North Shelley riverbank are now complete, and the restoration phase of this work has been started in May and June. The riverbank armoring that was completed in March required an Authorization from Canada under the *Fisheries Act*. One of the requirements of that Authorization is that Lheidli restore an area of the river's banktop along the impacted area. This involves re-grading top soils adjacent to the river and replanting the area with a mix of tree and shrub species, and maintaining the area through the summer and into the fall to ensure the work is successful.

The Band will be organizing and hosting at least one community meeting on the North side to inform the community of this project and gather community input to guide aspects of the restoration phase of the project.



The 1st phase of erosion protection works in N. Shelley were completed in March, and restoration and re-planting (phase 2) of the work will be completed by July 2008.