

Presented By: UNBC's Natural Resources & Environmental Studies Institute



"Our environment is our future"

# PUBLIC PRESENTATION



## A tale of three fish: A migrant, an invader and a resident

**Guest Presenter: Dr. Mark Shrimpton**

Professor, University of Northern British Columbia

*All are welcome to attend. No registration required.*

The Natural Resources & Environmental Studies Institute at the University of Northern British Columbia, together with its partners, invite those with interest in learning more about fish habitat in the Williston Reservoir in northeast British Columbia and the challenges they face to attend an upcoming presentation and discussion.

### Presentation Summary:

The Williston Reservoir was created in 1968 following the construction of the WAC Bennett Dam and impounding the Peace River. The suitability of Williston Reservoir for fish habitat is unclear – but the response of three different species of fish provides us with some insight into the role of the reservoir as potential habitat. Arctic grayling (*Thymallus arcticus*) are a highly migratory fluvial species that use different habitat throughout their life history. We used elemental signatures in otoliths to track movements of grayling and our work revealed that grayling are restricted to rivers flowing into the reservoir. Modeling locations where grayling are found indicated that large rivers are needed for juvenile Arctic grayling – habitat similar to that lost when the reservoir was flooded. In an attempt to increase productivity of the reservoir, over 3,000,000 Kokanee (*Oncorhynchus nerka*) were stocked in the 1990s. The present distribution and abundance of Kokanee in tributaries to the Williston Reservoir poorly reflects the stocking patterns, but the large numbers of Kokanee have the potential to dramatically affect the flow of nutrients in rivers where they spawn due to their semelparous life history. The slimy sculpin (*Cottus cognatus*) is a putative resident species, however, otolith signatures for this species also reveal considerable movement within river systems. Our work has demonstrated that fish exhibit habitat shifts during development and also migrate seasonally among habitats. Understanding habitat requirements for fish in natural systems is important for effective management, particularly in areas affected by anthropogenic disturbance.

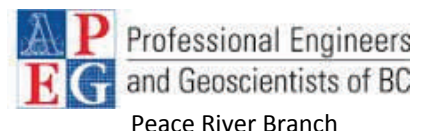
**Friday  
March 4,  
2016**

**7:30pm**

**Lido Theatre**

**10156 100 Ave  
Fort St John, BC**

Presented in Partnership with:



Peace River Branch