

# FINAL REPORT

## Peace Fish and Wildlife Compensation Program Colloquium PEA-F17-F-1426

*Prepared for:*

**Fish and Wildlife Compensation Program**

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## Executive Summary

This project continues a long relationship between the Natural Resources and Environmental Studies Institute (NRESi) at UNBC and the Peace Region's Fish and Wildlife Compensation Program (FWCP) (previously B.C. Hydro) with the delivery of 3 research colloquium presentations. These presentations provided an education and outreach venue where we could discuss emerging research projects and the current state of knowledge on natural resource issues relating to the PFWCP mandate area. The presentations provided an opportunity to develop relationships between UNBC and local stakeholders and to assess current PFWCP information needs. The project addressed the FWCP's strategic objective in the Peace Basin Plan – Stewardship and Education and Community Engagement, to increase community engagement by building and maintaining relationships with stakeholders and aboriginal communities.

Dr. Kari Stuart-Smith (Canadian Forest Products Ltd) presented on "Forest management and the *Migratory Bird Convention Act* in Interior BC" and Ryan Bichon (Mackenzie Nature Observatory) presented on "20 years of bird banding at Mugaha Marsh" in Mackenzie, British Columbia, on November 30, 2016. George Desjarlais (West Moberly First Nations) presented "Missing Wildlife: A First Nations' Perspective" and Dr. Scott McNay (Wildlife Infometrics Inc.) presented "Caribou of the Williston Basin: What do we know of their status after 50 years of reservoir flooding and 30 years of study?" in Fort St John on March 8, 2017 and Dr. Steven Cooke (Carleton University) presented in Prince George on March 22, 2017 on his work, "Exposing the secret lives of fish". Each of the three presentations were well attended by a broad cross-section of the local community members representing various interest-areas (e.g., industry, academia, First Nations, government, general public) and generated many questions and interesting post-presentation discussions. The five topics presented also contributed to the achievement of Objective 1 in the Peace Basin, Species of Interest Action Plan, Riparian and Wetlands Action Plan, Upland Action Plan, and Lakes Action Plan, as well as Objective 2 of the Peace Basin, Reservoirs Action Plan. It is recommended that this project be continued in the future. Two of the topics presented were on projects funded by the Peace Region's Fish and Wildlife Compensation Program. Future presentation topics should continue to incorporate suggestions for presentation content from First Nation's as well as continuing to include previously funded Fish and Wildlife Compensation Program – Peace Region project results. Presentations should also include topics that educate stakeholders on emerging issues within the FWCP Peace Region landbase, including networking to UNBC faculty with research interests in the topic area, provide examples of fish and wildlife management from other jurisdictions that are directly

applicable to the FWCP Peace Region landbase, and incorporate regionally appropriate topics for presentations in each of Prince George, Mackenzie, and Fort St. John. Participation by Fish and Wildlife Compensation Program Peace Region Board and committee members should be encouraged.

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## Introduction

The Natural Resources and Environmental Studies Institute (NRESi) at UNBC has had a long relationship with the FWCP and previously B.C. Hydro to provide extension of knowledge concerning relevant topics in the Peace Williston area. Together, they have hosted 13 lectures, providing the opportunity to share knowledge and creating networking opportunities. This project continues that relationship with the delivery of 3 presentations aimed at providing an education and outreach venue for building connections and developing relationships with those who have an interest in the area, as well as providing an opportunity to share knowledge and expertise that is being developed in or could be applied to the Peace region. It addresses the need identified in the Peace Basin Action Plan – Stewardship and Education and Community Engagement, to increase community engagement by building and maintaining relationships with stakeholders and aboriginal communities, recognizing the important of engaging aboriginal communities, local stakeholders, and other interest groups to contribute toward making good decisions and delivering effective projects. The project also addresses the identified need to improve science and knowledge by allowing researchers to share and discuss their latest research findings with others with similar interests and thus foster productive interactions among the FWCP, the public, research consultants, and the academic community.

## Goals and Objectives

The goal of this project is to share knowledge and information and to provide a venue for networking and open discussion of fish and wildlife research results and management implications which will help to improve the management of fish and/or wildlife in both the short- and long term.

The objectives of the project were to;

- 1) Provide an important extension vehicle for the Peace Region's Fish and Wildlife Compensation Program,
- 2) Increase community engagement by fostering productive interactions and dialogue among the FWCP partners, the public, First Nations, industry, the consulting community, and academia, and
- 3) Inform local communities and agencies on the best practices from other jurisdictions and communities regarding the strategic priorities of the Peace Region's Fish and Wildlife Compensation Program.
- 4) Address the FWCP Peace Region's strategic objective of community engagement by supporting stewardship and education projects (Section 4.3 – Peace Basin Plan)

## Study Area

As this project consisted of a series of three presentations, there is no study area for this project per se. However, sponsored presentations were held in three northern British Columbia communities, Mackenzie, Fort St John, and Prince George. In addition, all three presentations were available for viewing live over the Internet using UNBC's Blue Jeans system (Mackenzie and Fort St John), and Live Stream system (Prince George), thus making it available to interested people not able to attend the presentation in person. All presentations were also recorded and posted on the UNBC Video archive for future viewing by those interested.

## Methods

A series of 3 evening talks were organized, one in each of the following locations in British Columbia: Mackenzie, Fort St. John, and Prince George. Presentation topics were chosen in consultation with the FWCP Peace Region Board and First Nations Working Group, choosing themes that supported FWCP strategic research directions, while illustrating new and emerging themes within the scientific community as they apply to the FWCP Peace Region. Speakers were identified to address those themes and were contacted to determine their interest and availability. Once presentation dates were determined, venues were contacted and booked, and arrangements made for catering. For the events in Mackenzie and Fort St John, catering consisted of basic refreshments (e.g., coffee, tea, cookies, muffins, etc), while for the Prince George event, a pre-event buffet dinner was held for invited guests and dignitaries. For the Mackenzie and Fort St John events, arrangement for using the UNBC's Blue Jeans system for livestreaming and recording the presentations were made, and for the Prince George event, held at the University of Northern British Columbia, arrangements for Live Streaming and recording of the presentation were made with the Educational Media Services department.

Events were advertised via local media in Mackenzie, Fort St John and Prince George, in the Natural Resource and Environmental Studies Institute's bi-weekly newsletter, and through posters (see section 10 for samples) hung at various public locations in Mackenzie, Fort St John and on the UNBC Prince George campus. In addition, email announcements were distributed to First Nations, Industry, Government and general public contacts in Mackenzie, Fort St John and Prince George. Email announcements were also sent to the Fish and Wildlife Compensation Program Peace Region Board and

First Nations Working Group. The Mackenzie, Fort St John, and Prince George local radio stations were also contacted with information on the presentations.

## Results and Outcomes

### ***Mackenzie***

The Mackenzie presentation took place on Thursday, November 30, 2016 in the conference room at the Mackenzie Recreation Centre. The theme of this presentation was birds and featured two speakers to address this topic. The first speaker was Dr. Kari Stuart-Smith, Senior Forest Scientist with Canadian Forest Products Ltd. She presented her work on “Forest Management and the *Migratory Bird Convention Act* in Interior BC”. Dr. Stuart-Smith described the federal Migratory Bird Convention Act and the BC Wildlife Act which prohibit the harming of migratory birds, their nests, and eggs and thus impacts forest management activities such as harvesting and brushing. Her talk presented the strategy that a group of forest companies in the interior of BC have developed in order to mitigate the risk associated with the acts. Due to travel logistics and other commitments Kari was unable to deliver her presentation in person. Instead we used the university’s Blue-Jean’s conference system. This system allows for two-way communication and thus attendees were able to ask questions of the presenter. A recording of her talk is available on-line at [https://www.youtube.com/watch?v=4LQ\\_XlgIEDM&t=309s](https://www.youtube.com/watch?v=4LQ_XlgIEDM&t=309s). The second speaker was Mr. Ryan Bichon, President, Mackenzie Nature Observatory. Mr. Bichon spoke about “20 years of bird banding at Mugaha Marsh”. The Mugaha Marsh bird banding project has received several years of funding from the Fish and Wildlife Compensation Program. Ryan described the operations of the Mackenzie Nature Observatory which has operated a bird banding station at Mugaha Marsh annually for more than 20 years. His presentation described how bird banding at Mugaha Marsh fits in with the larger network of banding stations across North America. He discussed the operation of the banding station and data collection protocols used and showcased some of the species of birds banded at the station. He concluded with a summary of what has been learned about songbirds, population trends and migration routes. A recording of Ryan’s talk is available on-line at [https://www.youtube.com/watch?v=z0tPHs8\\_wF8&t=7s](https://www.youtube.com/watch?v=z0tPHs8_wF8&t=7s).

The engaging presentations generated much discussion and interest among the 30 people in attendance. Attendees included representatives from the forest industry (Canadian Forest Products Ltd., Conifex, and BC Timber Sales), the Mackenzie Community Forest, the Provincial government, academia,

the consulting community, the BC Trappers Association, the Mackenzie Nature Observatory, and the general public.

Prior to the presentations, Al Wiensczyk, made a presentation on Natural Resources and Environmental Studies Institute and the Fish and Wildlife Compensation Program on behalf of Chelsea Coady, the Peace Region Manager, who was unable to attend the presentation.

## ***Fort St John***

The Fort St John presentation was held on Wednesday, March 8, 2017 at the LIDO theatre in Fort St. John, British Columbia. Similar to the Mackenzie presentation this event featured two presenters. The theme for the evening was ungulate management. The first speaker of the evening was Mr. George Desjarlais from West Moberly First Nations. Mr. Desjarlais, who is a member of the FWCP- Peace Region First Nations Working Group spoke about “Missing Wildlife: A First Nations’ perspective”. First Nations Elders from West Moberly First Nations have noted a marked decrease in the number of mountain ungulates (caribou, sheep and goats) in their traditional territory. George shared his thoughts and those of the Elders on the potential reasons for the decline, the fundamental information needs required to effectively manage both the mountain ungulates and the Foothills ungulates (moose, deer and elk) that may be affected by further development, and the impacts population declines of these species would have on the traditional way of life of his people. Mr. Desjarlais’s presentation was recorded and is available online in the NRESi/UNBC video archive – *(please note that there were no slides shown with this presentation)* [https://video.unbc.ca/media/Missing+WildlifeA+A+First+Nations+Perspective+-+George+Desjarlais%2C+West+Moberly+First+Nation+-+March+8+2017/0\\_dhywm8di/19801](https://video.unbc.ca/media/Missing+WildlifeA+A+First+Nations+Perspective+-+George+Desjarlais%2C+West+Moberly+First+Nation+-+March+8+2017/0_dhywm8di/19801)

Dr. Scott McNay, senior wildlife and forest ecologist with Wildlife Infometrics Inc. was the second presenter of the evening. He presented on “Caribou of the Williston Basin: What do we know of their status after 50 years of reservoir flooding and 30 years of study?” Several of the projects presented by Dr. McNay were funded by the Fish and Wildlife Compensation Program. Mr. McNay noted that there are six caribou herds whose ranges are wholly (or mostly) enclosed by the boundaries of the Williston Basin, and five other herds that have a minor part of their range within the basin. He reported that we now know that at least three of the herds were impacted by construction of the reservoir, one of them significantly enough that full recovery of their historic range is unlikely. He discussed the biological status of the herds, the herd-specific impacts that the reservoir has had, results from 30 years of studies



on the Williston caribou, and the current population management actions being supported by the Fish and Wildlife Compensation Program. A recording of Dr. McNay's presentation is available at [https://video.unbc.ca/media/Caribou+of+the+Williston+Basin+-+Scott+McNay%2C+Wildlife+Infometrics+Inc+-+March+8+2017/0\\_jpz4tjg/19801](https://video.unbc.ca/media/Caribou+of+the+Williston+Basin+-+Scott+McNay%2C+Wildlife+Infometrics+Inc+-+March+8+2017/0_jpz4tjg/19801)

Over 25 people attended the presentation which included representatives from the forest industry (Canadian Forest Products Ltd, and BC Timber Sales), West Moberly First Nations, the Provincial government, the natural resource consulting community, and the general public. A reporter from a local television station (CJDC-TV) also attended the presentation and broadcast a news story on the presentations on Thursday, March 9, 2017 – a recording of the segment can be found at <https://www.youtube.com/watch?v=RmiAaD6zNhk>.

Prior to the presentations, Al Wiensczyk, made a presentation on Natural Resources and Environmental Studies Institute and the Fish and Wildlife Compensation Program on behalf of Chelsea Coady who was unable to attend the presentation.

## ***Prince George***

Dr. Steven Cooke (Carleton University) spoke on “Exposing the secret lives of fish” to over 40 people at the University of Northern British Columbia, Prince George campus, on Wednesday, March 22, 2017. His presentation discussed the challenges with studying wild fish in their environment and presented information on the technological techniques that are currently being used to monitor the movements of individual wild fish in their aquatic environment. Dr. Cooke discussed the potential impacts of those techniques on the fish species, how those techniques could potentially be used for nefarious purposes, and presented examples of studies illustrating these techniques in practice, including examples of a study on evaluating entrainment risk near hydro dams, evaluating fishway effectiveness and fish movements in the area of hydro dam intake pipes. He also presented on the challenges of incorporating new telemetry findings and other research results into actual fisheries management practices. He concluded with some advice for early career researchers on how to ensure that their research in solving conservation problems is relevant in terms of informing natural resource management policies and activities.

Attendees included faculty, graduate and undergraduate students, and representatives from the consulting community, the Provincial government, and the general public.

Prior to Dr. Cooke's presentation Dr. Darwyn Coxson gave a brief presentation on the Natural Resources and Environmental Studies Institute and Ms. Chelsea Coady made a brief presentation on the Fish and Wildlife Compensation Program. All three presentations were recorded and are available at:

[https://video.unbc.ca/media/Conserving+Freshwater+Fish+-+UNBC+Lecture+Series+-+March+22+2017/0\\_97g87urm/19801](https://video.unbc.ca/media/Conserving+Freshwater+Fish+-+UNBC+Lecture+Series+-+March+22+2017/0_97g87urm/19801)

## Discussion

This project was successfully delivered and achieved the project's objectives of providing an important extension vehicle for the Peace Region's Fish and Wildlife Compensation Program, increasing community engagement by fostering productive interactions and dialogue among the FWCP, the public, First Nations, industry, the consulting community, and academia, and informing local communities and agencies on the best practices from other jurisdictions and communities regarding the strategic priorities of the Peace Region's Fish and Wildlife Compensation Program.

Each of the three presentation events were very well attended by a broad cross-section of the local community members representing various interest-areas (e.g., industry, academia, First Nations, government, general public) and generated many questions and interesting post-presentation discussions, thereby contributing to the Fish and Wildlife Compensation Program's strategic objective to build and maintain relationships with stakeholders and aboriginal communities. However, lacking in attendance were members of the Peace Region's Fish and Wildlife Compensation Program board or its committees, even though two of the presentation events incorporated reporting out on FWCP-funded projects (Bichon – Mackenzie and McNay – Fort St. John).

The five topics presented in this year's colloquium series also addressed several of the objectives described in the Peace Basin Action Plans. Specifically, the presentation by Dr. Kari Stuart-Smith on management of migratory birds and by Ryan Bichon on bird banding activities at Mugaha Marsh contributed to the achievement of Objective 1 in the Peace Basin, Upland Action Plan to improve the understanding of the abundance, distribution, trend, and connectivity of ecologically important upland habitats (Fish and Wildlife Compensation Program 2014a) and Objective 1 in the Peace Basin, Riparian

and Wetlands Action Plan to improve the understanding of the abundance, distribution, trend, and connectivity of riparian and wetland ecosystems (Fish and Wildlife Compensation Program 2014b).

The presentations by George Desjarlais and Scott McNay on ungulates, including caribou in the area of the Williston Reservoir contributed to the achievement of Objective 1. Support conservation of species at risk of the Peace Basin Species of Interest Action Plan (Fish and Wildlife Compensation Program 2014c), and the presentation by Dr. Steven Cooke on the secret lives of fish contributed to the achievement of Objective 1. Improve understanding of status and trends in aquatic health in the Peace Basin Lakes Action Plan (Fish and Wildlife Compensation Program 2014d) and Objective 2. Improve understanding of the status and trends in aquatic health in the Peace Basin Reservoirs Action Plan (Fish and Wildlife Compensation Program 2014e).

## **Recommendations**

It is recommended that this project be continued in the future. Future presentation topics should continue to incorporate suggestions for presentation content from First Nation's as well as continuing to include previously funded Peace Region Fish and Wildlife Compensation Program project results. Presentations should also include topics that educate stakeholders on emerging issues within the FWCP Peace Region landbase, including networking to UNBC faculty with research interests in the topic area, provide examples of fish and wildlife management from other jurisdictions that are directly applicable to the FWCP Peace Region landbase, and incorporate regionally appropriate topics for presentations in each of Prince George, Mackenzie, and Fort St. John. Participation by Fish and Wildlife Compensation Program board and committee members should be encouraged.

## **Acknowledgements**

Thanks to the Peace Region's Fish and Wildlife Compensation Program for the financial support for this project. Thanks also to Sarah Curtis (Canfor – Mackenzie), Dawn Griffin (Canfor- Fort St John), Anna Regnier and Richard Kabzems (BC Ministry of Forests, Lands, and Natural Resource Operations – Peace Region) for their assistance with the presentations and advertising in Mackenzie and Fort St John.

## References

Fish and Wildlife Compensation Program. 2014a. Peace Basin. Upland Action Plan. BC Hydro. 20 pp. <http://fwcp.ca/app/uploads/2015/07/fwcp-peace-uplands-action-plan-march-31-2014.pdf>

Fish and Wildlife Compensation Program 2014b. Peace Basin. Riparian and Wetlands Action Plan. BC Hydro. 20 pp. <http://fwcp.ca/app/uploads/2015/07/fwcp-peace-riparian-and-wetlands-action-plan-march-31-2014.pdf>

Fish and Wildlife Compensation Program. 2014c. Peace Basin. Species of Interest Action Plan. BC Hydro. 24pp. <http://fwcp.ca/app/uploads/2015/07/fwcp-peace-species-of-interest-action-plan-march-31-2014.pdf>

Fish and Wildlife Compensation Program 2014d. Peace Basin. Lakes Action Plan. BC Hydro. 23 pp. <http://fwcp.ca/app/uploads/2015/07/fwcp-peace-lakes-action-plan-march-31-2014.pdf>

Fish and Wildlife Compensation Program. 2014e. Peach Basin. Reservoirs Action Plan. BC Hydro. 33 pp. <http://fwcp.ca/app/uploads/2015/07/fwcp-peace-reservoirs-action-plan-march-31-2014.pdf>

# Confirmation of FWCP Recognition

<p>Presented By: UNBC's Natural Resources &amp; Environmental Studies Institute</p> 	<h2>PUBLIC PRESENTATIONS</h2>
<p><b>Wednesday November 30, 2016</b></p> <p><b>7:00pm</b></p> <p><b>Mackenzie Recreation Centre</b></p> <p><b>400 Skeena Ave Mackenzie, BC</b></p>	<p style="text-align: center;"><b>20 years of Bird Banding at Mugaha Marsh</b></p> <p style="text-align: center;"><b>Guest Presenter: Ryan Bichon</b> President, Mackenzie Nature Observatory</p>  <p>The Mackenzie Nature Observatory has operated a bird banding station at Mugaha Marsh annually for more than 20 years. This presentation will describe how bird banding at Mugaha Marsh fits in with the larger network of banding stations across North America. Operation of the banding station and data collection protocols will be discussed. Some of the species of birds banded at the station will be showcased. A summary of what we have learned about songbirds, population trends and migration routes will be provided.</p>
	<p style="text-align: center;"><b>Forest management and the Migratory Bird Convention Act in Interior BC*</b></p> <p style="text-align: center;"><b>Guest Presenter: Kari Stuart-Smith</b> Senior Forest Scientist—Canfor</p>  <p>The federal Migratory Bird Convention Act and the BC Wildlife Act prohibit the harming of migratory birds, their nests, and eggs. How then do we conduct forest management activities like harvesting and brushing? This talk will explore the strategy a group of forest companies in the interior of BC have developed in order to mitigate the risk associated with the acts.</p> <p><i>*Please note that this talk will be an online presentation</i></p>
	<p style="text-align: center;"><b>All are welcome to attend. No registration required.</b></p> <p>The Natural Resources &amp; Environmental Studies Institute at the University of Northern British Columbia, together with its partners, invite those with interest in learning more about birds in north-central British Columbia to attend these presentations and discussion. These presentations will also be viewable on the internet. Visit <a href="http://www.unbc.ca/nres-institute/colloquium-series">www.unbc.ca/nres-institute/colloquium-series</a> for information on how to connect.</p>
	<p>This project is funded by the <b>Fish and Wildlife Compensation Program</b> on behalf of its program partners <b>BC Hydro</b>, the <b>Province of BC</b>, <b>First Nations</b> and the <b>public</b>, who work together to conserve and enhance fish and wildlife impacted by existing BC Hydro dams.</p> 

Figure 1. Poster for Mackenzie Presentation

<p>Presented By: UNBC's Natural Resources &amp; Environmental Studies Institute</p> 	<h1>PUBLIC PRESENTATIONS</h1>
<p><b>Wednesday March 8, 2017</b></p> <p><b>7:00 pm</b></p> <p><b>LIDO Theatre</b></p> <p><b>10156 100 Ave Fort St John, BC</b></p>	<p style="text-align: center;"><b>Missing wildlife: A First Nations' Perspective</b></p> <p style="text-align: center;"><b>Guest Presenter: George Desjarlais</b> West Moberly First Nations</p>  <p>First Nations elders from the West Moberly First Nations have noted a marked decrease in the number of mountain ungulates (Caribou, sheep and goats) in their traditional territory. George will share his thoughts and those of the Elders on the potential reasons for the decline, the fundamental information needs required to effectively manage both the mountain ungulates and the Foothills ungulates (moose, deer and elk) that may be affected by further development, and the impacts population declines of these species would have on the traditional way of life of his people.</p>
	<p style="text-align: center;"><b>Caribou of the Williston Basin: What do we know of their status after 50 years of reservoir flooding and 30 years of study?</b></p> <p style="text-align: center;"><b>Guest Presenter: Scott McNay</b></p>  <p>Senior Wildlife and Forest Ecologist at Wildlife Infometrics Inc.</p> <p>There are six caribou herds whose ranges are wholly (or mostly) enclosed by the boundaries of the Williston Basin, and five other herds that have a minor part of their range within the basin. We now know that at least three of the herds were impacted by construction of the reservoir, one of them significantly enough that full recovery of their historic range is unlikely. I will discuss the biological status of the herds, the herd-specific impacts that the reservoir has had, results from 30 years of studies on the Williston caribou, and the current population management actions being supported by the Fish and Wildlife Compensation Fund.</p>
	<p style="text-align: center;"><b><i>All are welcome to attend. No registration required.</i></b></p> <p>The Natural Resources &amp; Environmental Studies Institute at the University of Northern British Columbia, together with its partners, invite those with interest in learning more about ungulates, including caribou, in the area around the Williston Reservoir in northeast British Columbia and the challenges they face to attend an upcoming presentation and discussion.</p>
	<p>This project is funded by the <b>Fish and Wildlife Compensation Program</b> on behalf of its program partners <b>BC Hydro</b>, the <b>Province of BC</b>, <b>First Nations</b> and the <b>public</b>, who work together to conserve and enhance fish and wildlife impacted by existing BC Hydro dams.</p> 

Figure 2. Poster for Fort St John Presentation

<p>Presented By: UNBC's Natural Resources &amp; Environmental Studies Institute</p> 	<h1 style="text-align: center;">PUBLIC PRESENTATION</h1> 
<p><b>Wednesday March 22, 2017</b></p> <p><b>7:30 pm</b></p> <p><b>Room 8-166 UNBC Prince George Campus</b></p> <p><b>Participants can also attend remotely by going to:</b></p> <p><b><a href="http://www.unbc.ca/nres-institute/colloquium-webcasts">www.unbc.ca/nres-institute/colloquium-webcasts</a></b></p>	<h2 style="text-align: center;">Working across boundaries - Integrating Behaviour, Physiology, and More to Facilitate the Conservation of Freshwater Fish</h2> <p style="text-align: center;"><b>Guest Presenter: Dr. Steven Cooke</b> Canada Research Chair in Fish Ecology and Conservation Physiology Carleton University, Ottawa, Ontario</p> <p style="text-align: center;"><b>Presentation Summary:</b></p> <p>Conservation problems are inherently complex with effective solutions dependent on the ability to integrate and apply diverse concepts, approaches, and tools. Here I describe how we have used behaviour, physiology, hydraulic engineering, and social science to inform our understanding of issues related to the conservation of freshwater fish. Case studies related to fisheries bycatch and fish-hydropower interactions are used to emphasize the benefits of integrating different perspectives to advance mission oriented research. I conclude with a broader discussion related to the benefits, risks, and challenges of working across and between traditional academic disciplines.</p> <p>Dr. Cooke is a Canada Research Chair and Professor of Environmental Science and Biology at Carleton University. His research is focused on the ecology and conservation of wild fish with research sites spanning freshwater and marine systems around the globe. He has 500+ peer reviewed publications and currently mentors 7 post docs and 20 graduate students. Cooke is the Editor-in-Chief of the journal "Conservation Physiology", Chair of the Sea Lamprey Research Board for the Great Lakes Fishery Commission, Chair of the Science Advisory Board of Ocean Tracking Network Canada, and President-Elect for the International Section of the American Fisheries Society. He currently holds an NSERC E.W.R. Steacie Fellowship and is a Member of the College of the Royal Society of Canada.</p> <p style="text-align: center;"><b><i>All are welcome to attend. No registration required.</i></b></p> <p>The Natural Resources &amp; Environmental Studies Institute at the University of Northern British Columbia, together with its partners, invite those with interest in learning more about the conservation of freshwater fish to attend this presentation and discussion.</p>
	<p>This project is funded by the <b>Fish and Wildlife Compensation Program</b> on behalf of its program partners <b>BC Hydro</b>, the <b>Province of BC</b>, <b>First Nations</b> and the <b>public</b>, who work together to conserve and enhance fish and wildlife impacted by existing BC Hydro dams.</p> 

Figure 3. Poster for Prince George Presentation