

“Our Ancestors are in our Water, Land, and Air”: A Two-Eyed Seeing Approach to Researching Environmental Health Concerns with Pictou Landing First Nation

4th Annual Pictou Landing Native Women’s Research Retreat



The 4th Annual Retreat took place in Wékopekwik (Truro), Nova Scotia at the Best Western Plus Glengarry

DECEMBER 12TH-13TH, 2015

Introduction

The women arrived from Pictou Landing First Nation in the morning on Saturday, December 12th, 2015. The day began with the opportunity for Retreat attendees to get settled into the hotel and to review two Draft Reports prepared for the event: the Final Project Report that provides detailed information about the entirety of the Boat Harbour project and the Environmental Health Survey Community Report. The meeting began with a prayer led by Jackie Alex and a song and drumming by Catherine Martin, a

Mi’kmaq filmmaker from Millbrook First Nation who has been working with the Pictou Landing Native Women’s Group (PLNWG) and Dalhousie team to develop the documentary film that will depict the women’s story of mobilization around Boat Harbour and their research partnership. With two full days ahead of everyone it was important for the day to start in such a way that all those who were present would come to the discussions with open hearts and open minds. Mary Irene Nicholas welcomed the group to the Retreat, noting that we should not be

thinking of it as a ‘final’ retreat, but as the start of moving forward with what this project has achieved. Then, Sheila Francis and Heather Castleden reviewed the busy 2-day Retreat agenda. Throughout the Retreat a poster about the project was put up, created, in part for the occasion, which will remain with Pictou Landing First Nation. A second copy of it is with Heather at Queen’s University. Additionally, over the two days attendees could write current feedback and future questions on chart paper posted around the room, each page

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dedicated to a project segment.

Environmental Health Survey

Diana Lewis presented on the Environmental Health Survey. The survey results report 279 questions about 470 on-reserve residents – reflecting a 60% response rate. In light of the excellent survey response rate, Diana updated the group on a peer-review article about the process of the survey authored by Diana, Heather, Sheila, Kim, and Colleen on behalf of the PLNWG. The article, titled, “Increasing response rates on face-to-face surveys with Indigenous communities in Canada: Lessons from Pictou Landing,” has been accepted for publication in the journal *Progress in Community Health Partnerships*. Also at the retreat, the women discussed the pros and cons to accessing and using additional microdata from the Atlantic Research Data Centre or the Regional Health Survey for comparative purposes in the report. Diana continued her presentation by highlighting some of the survey results and responding to questions and points from the women present. For example, Diana highlighted survey respondents’ beliefs about water quality and health experiences and clarified meanings of some responses. The complete survey results are reported in Diana’s Environmental Health Survey Community Report, which will be printed and distributed to Pictou Landing First Nation households upon completion. Chief and Council will also keep a copy of the report on file.



Oral Histories

Diana Lewis and Heather Castleden discussed the Oral Histories component of the project. They noted that a copy of Master’s student Ella Bennett’s thesis is now available in Pictou Landing First Nation (Sheila Francis has a copy) as well as publicly online. As well, a peer-reviewed article about this work has been accepted for publication by the journal, *Progress in Community Health Partnerships*. In the Fall of 2015, Dee carried out three more oral histories; the audio, video, and transcripts of all oral histories will also be made available. Lastly, we screened the film that Ella Bennett produced, a collage of the oral history interviews she had done, which was an emotional reminder of the importance of this work and the reasons that it was done – not just the oral history work, but this project as a whole. The short film will be available for viewing online at Heather Castleden’s website (www.heclab.com) and Pictou Landing First Nation’s website (www.plfn.ca).

Science Panel

The Retreat’s Science Panel comprised the team’s affectionately named “Science Guys” – Daniel Rainham, Rob Jamieson, Mark Gibson, and Ron Russell. Daniel began the panel by demonstrating what the Community Map is capable of illustrating and discussing its characteristics. For example, the map includes air, water, and soil sampling sites. The map also visually documents information from the oral histories. The map helps to situate the viewer within the landscape and suggests how land use has changed over time in terms of favourite places to connect, swim, gather medicine, harvest plants, and more using different layers of information that can be turned ‘on’ or ‘off.’ We reconfirmed the decision to make the map a legacy of the project at the Retreat, so it will be locked (i.e. not editable unless by request to Daniel) and will be linked to Daniel’s, Pictou Landing’s, and Heather’s websites. Additions to the map before locking it were noted, including soil sampling sites.

Update: Boat Harbour Documentary Film

Catherine Martin, noted above, was present to discuss the potential upcoming documentary film and to record Retreat activities. The desire to move forward and apply for funding to make the film was reconfirmed. The women discussed whether or not to include clips from this project's digital stories, which will depend on the length of the film. Lorraine emphasized that telling the story of Boat Harbour is important and it is important to do so *now* in order to hear and document what Elders living in the community can say about A'se'k. A grant application has been subsequently submitted to the Canadian Institutes of Health Research (CIHR) to carry out the documentary film project and we will be notified about the decision by July 15th, 2016.

Future Collaborations/Projects

Heather introduced CIHR's Environment and Health Signature Initiative as a potential opportunity to continue working together. Visions for what future work around and beyond Boat Harbour could look like included: a knowledge sharing opportunity involving Elders and other members of the community (especially youth); the formation of a community-based Boat Harbour group, which would include men and youth, as well as women; and/or, use of existing data to explore new questions and develop next steps. In the final roundtables of both days it was clear our team was proud of what they had accomplished and are looking ahead at future possibilities.



Following Daniel, Rob Jamieson reiterated findings from the water quality analysis that he previously presented at the March 2014 Retreat. Findings included that Boat Harbour is a hypereutrophic environment, meaning the water is high in nutrients and suspended solids and low in oxygen, which has led to limited aquatic diversity. The women discussed with Rob that the concern lies with the impacts from effluent emitted prior to regulation in 1992, particularly dioxins and furans, for which data from other regions of the province is difficult to obtain – for example, whether or not it has settled into the sediment at the bottom of Boat Harbour.

Rob also presented on the soil sampling findings. There were 13 locations sampled in 2013 with one reference location. Follow-up sampling occurred in 2015. In general, the soil quality was good – they analyzed for heavy metals and dioxins and furans. There were two exceedances of arsenic, which is not surprising because it is naturally occurring in Nova Scotia.



There was one other instance where copper exceeded environmental health regulation, which means it is not necessarily harmful to human health since a different level would be acceptable. Heavy metal concentrations were found to be similar between Pictou Landing First Nation and the Town of Pictou and the results were also comparable to other regions across Canada.

Mark Gibson was the third panelist to present. He discussed the air quality data sampled across thirteen sites during Summer 2013 and 2014 and Spring 2014. Volatile organic compounds, particulate matter, sulphur dioxide, nitrogen dioxide and dioxins and furans were measured. He noted that the control site is likely still being affected by pulp mill emissions and so future research should revise this location. Passive sampling, real-time sampling and AERMOD modeling were done, although there were some missing data due to various sampling equipment issues. Mark reported that all air pollutants were below guidelines.

Remise linked with findings about particulate matter, reports that show with the Reto a partial state of coming from fish, start of air, and fish suggests that further research could be used in our air quality to see how the sample to do at 000 issue that was identified in the study that the analysis included PCBs, dioxin-like PCBs, preservatives, which includes a study to know if the dip in the filters, and the impact of averages theoretical, with the exception of discussed that they, remain below the Canadian Council of Ministers of the Environment's guidelines – and importantly the mammal analysis will be reported in the Final Project Report. Post-presentation concerned about the air quality, a discussion touched on the question of lichen Ron and Lucie Francis had and well-being. This is notable in the context of sharing information: sensitive species of lichen were found surviving in the forests, but

not in open areas. And, the women

Budget Overview
 Heather reported on the spending of the morning of Day 2.

3. Annual Retreats & 2 Community Din-
 Team Meetings over 4 years: \$30,000

about the removal of sediments, a lot of learning, during clean up and the potential for water and air quality impacts



Project Legacy Plan

1. Upload short oral history film and embed the community map to the HEC Lab and Pictou Landing websites.
2. Upload youth digital stories to HEC Lab website once screened at the Community Dinner.
3. Ensure copies of raw data are in Pictou Landing.
4. The WetPro kit is currently being stored at Saint Mary's University for future use.



Youth Camp

of hearing happens at these retreats.” — Chief Andrea Paul
 The Youth Camp took place during the Summer 2015 and was co-led by
Sharing Circle Reflections

We held Sharing Circles at the end of both days to reflect and comment on the path of this research. A few thoughts are noted here. Heather compared the 50 years of the mill’s history versus the six years of working together – and how it began with a fear surrounding the many questions arising from Boat Harbour. Before this partnership, research had been done on and around the mill’s impacts, but this work was collaborative where the research team was the community. Sheila talked about the opportunity to use this research as an educational unit on culture, truth and reconciliation, environmental justice, and remediation and restoration. Haley, whose involvement began when she was a youth, now has a son of her own and incorporates learning about Boat Harbour in her own young classroom. Lexy noted the influence of seeing the work of her mom and the women in her life to answer her own questions. Pride in the work and gratefulness were emphasized throughout both days and appreciation shown for the positive legacies that have emerged from this work as well as the ways it can help inform moving forward (e.g. the vision for what Boat Harbour could look like after 2020 and how to meaningfully engage youth who have only ever known Boat Harbour to be polluted). As Mary Irene said, this is a place to start again.

started as a youth - now I have the same fears as my mom and the women in her life brought that to me as a youth and now as a mother. I do have hope, and I'm still young and thinking forward it being cleaned up.”
 — Haley Bernard

Canadian Alliance for Healthy Hearts and Minds (CAHHM)

CAHHM (formerly CVCD) is led by Dr. Sonia Anand and received a Band Council Resolution approving the participation of Pictou Landing in the large national cohort study. The goal of the research is to identify environmental and contextual early risk factors, the “causes of the causes,” of cancer, heart disease, stroke, and cognitive dysfunction. Ethics has been received from Queen’s University and Mi’kmaw Ethics Watch, but the Research Agreement is still being negotiated. Therefore, recruitment has not begun in Pictou Landing and we took the opportunity at the Retreat to reconfirm the decision to take part. The research involves surveys, blood draw, MRI scans, and physical measurements for participants and a Research Association from Pictou Landing will be hired to support these data collection processes. The benefits of the data that would be gleaned from participating were discussed at the meeting, but the women decided Chief and Council would take on the leadership for this project instead of the Pictou Landing Native Women’s Group.

initiative

Acknowledgements

Sincerest thanks to Kim Strickland who ensured everyone had a means of getting to Truro and who handmade the candy cane sleighs. Thank you to everyone who came to Truro to spend their weekend meeting and talking about the work we have undertaken together. Thanks to our presenters: Diana Lewis, Heather Castleden, Rob Jamieson, Daniel Rainham, Mark Gibson, Ron Russell, Kim Strickland, Cecilia Jennings, and Lexy Strickland. Enormous thanks also to Catherine Martin and Frank Clifford for attending and filming the event. We also appreciate Frank and Gino’s restaurant for hosting us for dinner in their private room on Saturday night and the Best Western Plus Glengarry for their meeting and event services.



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