

Limnology

with Dr Jennifer Korosi

Talking points

Knowledge & Comprehension

1. What is the definition of sporadic discontinuous permafrost peatland?
2. How is climate change impacting permafrost peatland environments?
3. How does Jennifer collect sediment cores?
4. How do sediment cores allow Jennifer to uncover the history of a lake?
5. How and why do wildfires impact permafrost peatland lakes?

Application

6. How do you think Dehcho community members could use Jennifer's research findings to manage the impacts of permafrost thaw on Dehcho waters?

Analysis

7. Why do you think it is important that research into permafrost thaw is conducted through a Two-Eyed Seeing approach in collaboration with local community members?
8. What role do you think limnologists play in conserving freshwater supplies and protecting aquatic ecosystems?

Evaluation

9. What do you think you would most enjoy about working at the Scotty Creek Research Station, and what do you think you would find most challenging? Why?

Activities

"Scientists have been doing research at the Scotty Creek Research Station since the 1990s, so we have records that allow us to understand how the landscape has been changing as the climate has been getting warmer," says Jennifer.

Plan a research project at the Scotty Creek Research Station

Visit the Scotty Creek Research Station website (scottycreek.com) to learn more about the station's facilities and the types of research that scientists are conducting there. Then choose your own research question that could be answered by combining a field season at the station with previously collected data. Your question could be about any aspect of peatland environments, permafrost thaw, limnology, etc.

What data will you need to collect to answer your question? What methods will you use to collect your data? What historical data will you analyse? What knowledge might community members have that could enrich your research findings? How will you collaborate with community members to ensure your results can help them manage the impacts of climate change?

Write three diary entries about your field trip

Entry 1 (written the day before you travel to the Scotty Creek Research Station): How are you going to travel to the station? What research will you conduct when you arrive? What do you expect to discover? What are your hopes and fears for the expedition ahead?

Entry 2 (written halfway through your field trip): What is your daily routine at the station? What do your field research tasks involve? For example, if you are collecting sediment cores from lakes, how do you do this? What are you learning from other scientists and community members working at the station?

Entry 3 (written the day before you leave): What have you discovered from your fieldwork? What further research will you need to conduct when you return home? What were the highlights of your trip, and why?

More resources

- In this video, Jennifer explains how paleolimnology allows scientists to uncover the history of lakes:
[youtube.com/watch?v=2Mn8sPZX-bo](https://www.youtube.com/watch?v=2Mn8sPZX-bo)
- Canada Water Portal provides a wealth of water-related teaching resources:
waterportal.ca/teaching-resources