Lake Trout Strategic Project: Meeting 1 (April 24th 2014)

Attendees: AJ – Adam Jeziorski; AP: Andrew Paterson; CN - Clare Nelligan; JPS – John Smol; LB – Leon Boegman; LM – Lewis Molot

**Project Overview:**

Theme 1: Power of the Past (JPS)

A brief summary – as described on PowerPoint – was presented by AJ.

LM: Will the spectrally-inferred DOC/TP methods be able to handle DOC/TP decoupled? JPS: yes.

Spectrally-inferred DOC is the least validated of the paleolimnological proxies. It is currently more an exploratory approach but appears to track trends.

Spectrally-inferred chlorophyll a – mechanism not understood but empirical trend that repeatedly appears to be reliable and can be validated

LB: Error bars on the paleo data for comparison with models? JPS: Depends on the proxy.

LB: Interested in reconstructions of water temperature and the length of stratification

Theme 2: Modelling the Present (LM)

Regression model is a “steady state model” – not able to give values for a particular year.

Coefficients in the current model are out of date. TP and DOC were strongly correlated in the data used to build the model in 1992, so only TP was used (this is no longer the case).

Will use more recent data from the Dorset A, B and C lakes.

AP: Is there interest in adding the Red Chalk E to the lake list? LB: Not much, in terms of the dynamic models, but make an interesting side project for the paleo group.

Theme 3: Forecasting the Future (LB)

Improving the models to better account for methane emissions is one of Environment Canada’s long-term goals

S.O.D. model determine g O2/m@/day consumed by sediments

Role of DOC in protecting juvenile lake trout?

**Study Lakes:**

Double-check with MOE Eastern Region regarding lake choice and historical data, and find out whether any of the study lakes are going to be included in their spring sampling survey.

JPS: Both Loughborough and Charleston were probably cored ~20 years ago as part of Cathy Christie’s MSc thesis.

AP: Peninsula Lake another potential addition to the list, interesting DO history due to the nearby resort, well documented record, interest in determining current DO conditions.

Eagle Lake, oligotrophic but hypoxic, stocked with lake trout but natural reproduction not present. LB has a cottage on the lake (access to a boat when ready to collect sediment core)

Manitou Lake: Of interest as a major lake trout hatchery

Muskrat – most threatened lake trout lake in province (JPS cored lake ~1980 due to an interest in contaminants?)

LB: Only a subset of the lakes that are cored will be modelled, subset will be selected based on quality of data/knowledge of inflows.

**Timeline/Milestones:**

Student Recruitment: - completed

JPS: PhD1 – Clare Nelligan (starting an MSc). AJ is post doc already on project

LB: PhD2 Mohammed Mofidi

LM: MSc student Jiahua Li

Future meetings: Invite partners but likely use Skype etc to include more of the partner organizations. JPS stressed we have excellent partners and users critical to engage them at the maximum level they are willing. A variety of approaches can be used to enhance this interaction - see also discussion below.

**Communication Strategy:**

Passive Communications

Add a page/hub for the Lake Trout Strategic Project to the PEARL website – place to host presentations/documents (i.e. these minutes)

Regular update email to the full partner list – perhaps every 2 months

Active Communications and discussions

Potential for presentations at the Lake of the Woods Forum or the FOCA Annual Meeting, as well as other such avenues

AP has contributed articles to the FOCA quarterly letter before, another potential communication outlet.

**Budget Items**

LM: On past strategic projects it has been possible to get an extension on time if there is a reporting delay (i.e. finalizing manuscripts) but any request should be made months before the expiry date.

JPS notes extensions may be possible but not desirable.

**Summary**

Project is on schedule and main work begins in May – as promised in proposal.