Water Management

YELLOWKNIVES DENE FIRST NATION

PUBLIC HEARING FOR THE ENVIRONMENTAL ASSESSMENT OF THE JAY PROJECT (EA1314-01)
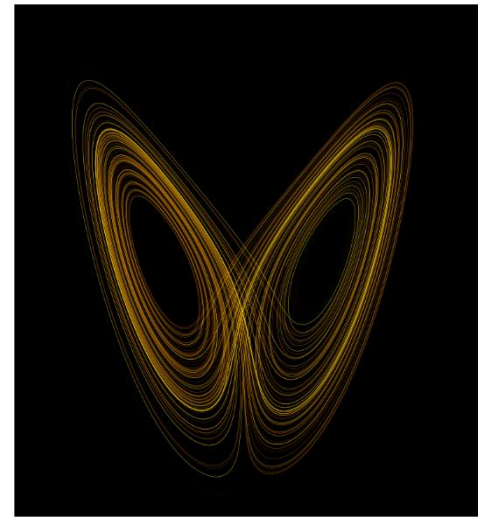
Waste Water & Meromixis

- Lac de Gras and Lac du Sauvage are traditional fishing and hunting grounds for the YKDFN

- YKDFN is very concerned about the long-term viability of the fisheries and that the water remain suitable for drinking.

Waste Water & Meromixis

- YKDFN does not have confidence in the long-term stability of any proposed meromictic state in the Jay pit.

- The behaviour of induced meromictic states are difficult to predict and are susceptible to disruption by changing pit conditions such as freeze thaw cycles and changes in permafrost conditions

- There appears to be no response plan for dealing with a failure of the meromictic state

Predictive Power of Computational Modelling

- "With four parameters I can fit an elephant, and with five I can make him wiggle his trunk." John Von Neumann on Computation Modelling

- To paraphrase: If you have lots of parameters, the models will do what you want.

- Conclusions based on computational modeling need to be considered with caution.

Predictive Power of Computational Modelling …

- Any conclusion based on computational modeling needs to be considered for what it is, guessing with numbers.

Recommendations

1. Further steps be taken to ensure more extensive and robust monitoring of the meromixis in the Jay pit. This would include monitoring of the integrity of permafrost surrounding the Jay pit.

2. DDEC develop a more detailed adaptive management plan detailing timelines and specific measures to be taken in the event of a failure to establish or maintain meromixis.