

Manitoba Envirothon 2006

Oral Presentation Question

“Water Stewardship in a Changing Climate”

Researchers anticipate that global warming will have significant effects in northern regions. In particular, warmer temperatures will cause snow, ice and permafrost to melt. Changes in the quality and quantity of water may have significant impacts on the soil, wildlife, forests/plants, and people who live in northern regions. To date, little research has been done on these impacts.

The Manitoba Northern Research Foundation (MNRF) was founded in 1986. Since it was established and through the efforts of a coalition of citizen organizations, government and industry the MNRF has been carrying out research projects of interest to the people of the north. As a not-for-profit organization, the mandate of the foundation is to protect the diversity of nature and ensure a continuing quality of life in northern Manitoba. Over 20,000 donors fund the foundation to carry out studies on issues of unique concern to the north, so informed policy decisions can be made by government, industry and local communities. MNRF has considered issues as diverse as the effect tundra buggies have on polar bears, to the problems of establishing roads in the north. The geographic area of prime concern to the MNRF is north of the 53rd latitude, which roughly coincides with the permafrost line through Manitoba.

As members of the Research Advisory Board of the MNRF you are responsible for establishing study priorities for the foundation. Donors to the foundation have recommended that the research for the next few years focus on ***global warming***, and in particular, how will the anticipated changes to the hydrology and aquatic systems affect other components of the northern ecosystem (soil, wildlife, plants/forests, and people)? The Board has accepted this recommendation and directed the Research Advisory Board to make recommendations on an appropriate study program given the mandate and finances of the foundation.

As members of the Advisory Board your tasks are to:

1. Identify potential issues dealing with the impact climate change may have on water resources in northern Manitoba.
2. Select three priority issues for study by the MNRF.
3. Justify your selection of these three issues. Indicate why they are the most important of all the issues identified on your original list (question # 1).
4. Identify the water stewardship practices (if any) that could address these issues and/or help northern communities adapt to the changes brought about by climate change.

Note: 70% of the score is based on knowledge shown and 30% is based on the presentation quality. Attention should be focused on questions 1 and 3 as they have the greatest weight.