

STATE OF ALASKA

ANILCA IMPLEMENTATION PROGRAM

FRANK H MURKOWSKI
GOVERNOR

550 W. 7TH AVENUE, SUITE 1660
ANCHORAGE, ALASKA 99501
PH: (907) 269-7470 / FAX: (907) 269-3981
Sally_Gibert@dnr.state.ak.us

May 26, 2004

Bruce Noble
Superintendent
Klondike Gold Rush National Historical Park
P.O. Box 517
Skagway, Alaska 99840

Dear Mr. Noble:

State of Alaska resource agencies reviewed the April 2004 draft preliminary assessment of glacial outburst flood hazards that could potentially threaten public safety within the Klondike Gold Rush National Historical Park. The comments herein come from the Division of Geological & Geophysical Surveys within the Department of Natural Resources. While the data presented in the summary report is very preliminary in nature, we agree there is a significant potential for future outburst hazards in the Taiya Watershed. Further study seems warranted, particularly in the face of possible loss of life and property in the Park and the community of Dyea.

We expect that knowledgeable geologists with experience in glacial environments and engineering geology would be able to assess the likelihood of a similar liquefaction collapse to the second perched lateral moraine of West Creek Glacier, as well as evaluate the stability of the Nourse Lake moraine dam. Proper evaluation will likely require drilling to assess the geologic materials comprising these landforms, and study and monitoring of hydrologic characteristics in Nourse Lake to determine the nature of the hydrologic regime through the moraine.

A quick review of the images included with and in the report suggests that additional tasks should include evaluation of landslide potential since glacially over-steepened slopes are often prone to failure. In addition to the immediate hazards posed by such an event, a large landslide into one of the glacial lakes could precipitate an outburst flood similar to the 2002 West Creek Flood.

Additionally, as noted in the cover letter, flood modeling at a more complex level than described in the summary report will be essential to develop a meaningful evaluation of flood hazard potential.

The datasets obtained by the Park (aerial photographs and LIDAR elevations) will be very useful in assessing the geohazards of the Taiya watershed; but a substantial amount of field work will be required to collect baseline data and establish ground truth.

If you have any questions or wish to discuss this matter further, please contact De Anne Stevens, Geologist, Alaska Division of Geological & Geophysical Surveys, at 907-451-5014 or deanne_stevens@dnr.state.ak.us. Thank you for the opportunity to provide these comments.

Sincerely,

/ss/

Sally Gibert
State ANILCA Coordinator

cc: Meg Hahr, Natural Resources Program Manager, KLGO