NRESI RESEARCH COLLOQUIUM SERIES

FRIDAY

Jan. 18, 2008

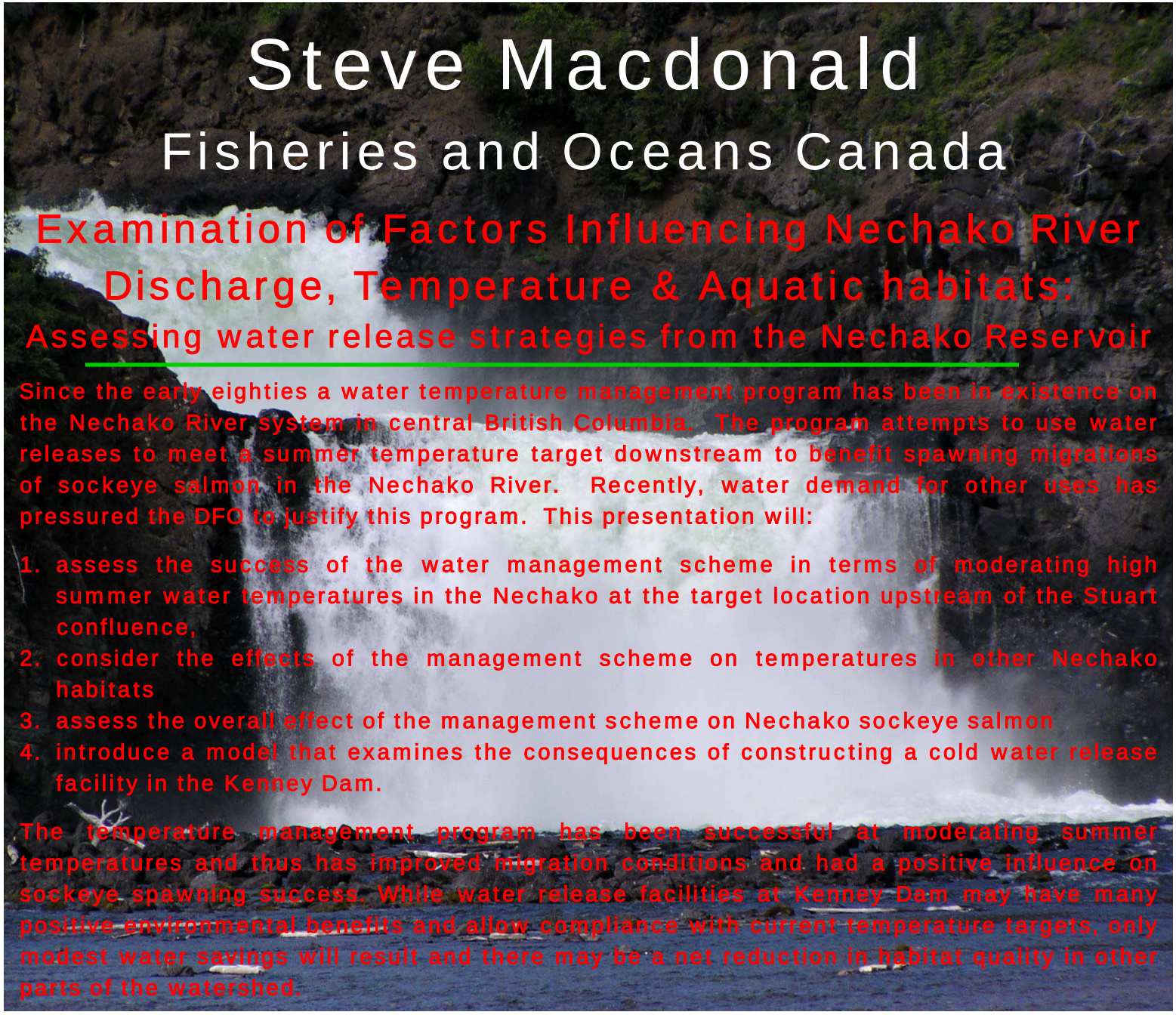
3:30 - 4:30 pm

LECTURE THEATRE

7-150

LIGHT REFRESHMENTS SERVED AT 3:20 PM

UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA



Steve Macdonald

Fisheries and Oceans Canada

Examination of Factors Influencing Nechako River Discharge, Temperature & Aquatic habitats:

Assessing water release strategies from the Nechako Reservoir

Since the early eighties a water temperature management program has been in existence on the Nechako River system in central British Columbia. The program attempts to use water releases to meet a summer temperature target downstream to benefit spawning migrations of sockeye salmon in the Nechako River. Recently, water demand for other uses has pressured the DFO to justify this program. This presentation will:

1. assess the success of the water management scheme in terms of moderating high summer water temperatures in the Nechako at the target location upstream of the Stuart confluence,
2. consider the effects of the management scheme on temperatures in other Nechako habitats
3. assess the overall effect of the management scheme on Nechako sockeye salmon
4. introduce a model that examines the consequences of constructing a cold water release facility in the Kenney Dam.

The temperature management program has been successful at moderating summer temperatures and thus has improved migration conditions and had a positive influence on sockeye spawning success. While water release facilities at Kenney Dam may have many positive environmental benefits and allow compliance with current temperature targets, only modest water savings will result and there may be a net reduction in habitat quality in other parts of the watershed.