



### INTRODUCTION

- Undisturbed forests provide high quality of water since surface runoff and erosion is negligible.
- Natural wildfires remove the vegetative cover on soils, dramatically increasing surface runoff and erosion potential.
- Understanding factors which can help predict the likelihood of wildfire occurrence is important for forest fire prevention..

### **OBJECTIVES**

- Assess the ability of the WEPP model to simulated snowmelt and streamflow.
- Quantify the fire risk under future climate for the Fernan lake watershed.

# STUDY SITE



**Figure 1.** Proximity of weather and streamflow gauging stations to the Hayden lake and Fernan lake watersheds.

# **METHODOLOGY (Models Available)**



### **Interfaces of the WEPP model:**

- Undisturbed and Treatment (clearcuts, thinning, prescribed) burn); Burn Area Emergency Response (wildfires); Roads

# Fire Risk Assessment Under Future Climate for the Fernan Lake Watershed A. Srivastava, E. S. Brooks

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FlamMap model representing burn severities for the analysis area.



yield.

of this project.





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