

## **Project Summary**

**Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Interpreter Notebook on  
**Discipline:** Natural  
**Type of Project:** Education  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** University of Montana  
**Effective Dates:** 6/1/2007- 12/31/2008  
**Funding Amount:** \$7200  
**Investigators and Agency Representative:**

NPS Contact: Sallie Hejl, Glacier National Park, West Glacier MT 59936; phone: 406-888-7863, [sallie\\_hejl@nps.gov](mailto:sallie_hejl@nps.gov)

Investigator: Dan Pletscher, College of Forestry and Conservation, University Hall, Room 309, University of Montana, Missoula, MT 59812; 406-243-6364, [dan.pletscher@umontana.edu](mailto:dan.pletscher@umontana.edu)

### **Project Abstract:**

The University of Montana will work with Glacier NP to find a student to work in the park during summer and fall 2007 on a notebook and CD for interpreters on the topic of climate change. The primary objective for this project is to create a notebook on climate change for park interpreters. A secondary objective includes creating other products for interpreters, such as resource bulletins and content for web pages on climate change and other resource topics.

The climate change notebook will include sections on temperature, glaciers, precipitation and the water cycle, vegetation, wildlife, disturbance, and the science of climate change. More specifically, there will be chapters describing (1) general information on climate forcing for Northern Rocky Mountains--including natural climate variability and human-induced change; (2) measured trends and predicted changes in precipitation patterns and other hydrologic changes (snowpack, streamflow); (3) melting of mountain glaciers and impacts to aquatic communities; (4) elevational shifts in treeline and other vegetation; (5) wildlife range shifts - especially alpine and subalpine; (6) current and potential impacts on disturbance regimes, including fire, avalanches, pests (such as mountain pine beetle and spruce budworm), pathogens (e.g. blister rust), and exotic invasives; and (7) how climate change will affect recreation and visitor experience. We will highlight what scientists know, what scientists think they know, and what scientists think is likely about each topic. We will have a section that discusses impacts to park resources and visitor experiences. Dan Pletscher will supervise the RM-CESU student who will create the notebook and other products. Sallie Hejl, resource education specialist at the Research Learning Center, will work closely with the student throughout the process. The student will be advised about content by park resource specialists, climate change researchers, and park interpreters. Once a section is written, the appropriate expert will review that chapter. The student will gather all of the materials (publications, maps, and photos), create summaries of salient points, and assemble them into a notebook.

The notebook will be available in hardcopy and on CD. The hardcopies will be located in key locations in the park where interpreters work on program development and at visitor contact stations. The CD will be mailed to each interpretive ranger in the spring once they have committed to coming to Glacier for the summer season.

### **Outcomes with Completion Dates:**

The NPS the cooperator will create a notebook on climate change for Glacier's interpreters. This notebook will contribute to the knowledge needed by interpreters in the Division of Interpretation and Education at Glacier National Park. Other products for interpreters will be created as requested.

**Keywords:** Climate change, interpreters notebook, education, Glacier National Park, University of Montana

**For Administrative Use Only:**

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: