

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Assessing the Threat of Climate Change to Headwater Amphibians in Glacier National Park

**Type of Project:** Research

**Project Discipline:** Natural

**Funding Agency:** USGS

**Other Partners/Cooperators:** University of Montana

**Effective Dates:** 6/8/2010 - 8/1/2015

**Funding Amount:** \$25,556 [FY12: \$6,520; FY11: \$12,515; FY10: \$6,521]

#### **Investigators and Agency Representative:**

**Investigator:** Winsor H. Lowe, The University of Montana, 32 Campus Drive, #4824 Missoula, MT 59812-4824; Phone: 406-243-4375; Fax: 406-243-4184; winsor.lowe@umontana.edu

**Agency:** Steve Corn, USGS, Northern Rocky Mountain Science Center, 790E Beckwith Avenue, Missoula, MT 59801; Phone: 406-542-4191; steve\_corn@usgs.gov

#### **Project Abstract:**

Using a combination of field studies, laboratory experiments, and genetic techniques, this research will provide information critical for assessing the threat of climate change to *A. montanus* populations in Glacier National Park and elsewhere in the northern Rocky Mountains. The two main objectives are:

1. Determine how increased stream temperatures may affect growth, body condition, and survival of Rocky Mountain tailed frog (*Ascaphus montanus*) larvae and also determine if there is evidence of local adaptation to different thermal regimes within and among populations; and
2. Determine levels of genetic variation and connectivity within and between streams and to estimate effective population size.

**Outcomes with completion dates:** July 1, 2015

**Keywords:** Amphibians (*Ascaphus montanus*), threats, climate change, Glacier National Park, University of Montana