

RM-CESU PROJECT COMPLETION REPORT

Cooperative Agreement H1200090004
Task Agreement FBMS# P11AC90763
Project number MSU-236

Project Title: Support implementation of five needle pine climate change response project

Park/Unit: Rocky Mountain I&M Network

Funding Sources: Climate Change Response, Inventory and Monitoring Program, total = \$38,722

Dates: 9/1/2011- 6/30/2014

NPS ATR:

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Project Description:

This project is to expand current five-needle pine monitoring of limber pine (*Pinus flexilis*) at Glacier, Rocky Mountain and Great Sand Dunes national parks using and or adapting methods from the Greater Yellowstone Ecosystem and the Upper Columbia Basin Network (UCBN) whitebark and limber pine protocols. This project collects baseline data related to the five- needle pine and climate change response protocols.

Project Results and Citations:

To meet these needs, Montana State University (MSU) student and temporary employees assigned to the project accomplishing the following:

A sampling design for establishing long term monitoring of five needle pine
2012-2013 Field reconnaissance and plot establishment at GLAC, ROMN and
GRSA
Data base development and data management
Draft maps and reports

This project is continuing through RM_CESU agreement #P12AC10404.