RM-CESU PROJECT FINAL REPORT, June 2007

Project Title: Statistical Support for analysis and design of vital signs monitoring within for the Greater Yellowstone I&M Network

Park/Unit: Greater Yellowstone I&M Network

Funding Sources: Greater Yellowstone Network, Inventory and Monitoring Program

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Project Description: Natural resource monitoring provides information needed to understand and identify change in complex, variable, and imperfectly understood natural systems and to determine whether observed changes are within natural levels of variability or may be indicators of unwanted human influences. Thus, monitoring provides a basis for understanding and identifying meaningful change in natural systems characterized by complexity, variability, and surprises.

This project provided specialized statistical assistance through sub teams formed between the GRYN staff or designated cooperators and the Department of Mathematical Sciences

for a particular statistical problem. The Department of Mathematical Sciences provided support through the review of study designs, consulting on preliminary sampling and sample size determination, consulting at all phases of project planning, work, analysis, and write ups including the review of manuscripts for statistical methods used and interpretation of data.

Project Results:

This project provided preliminary analyses and guidance from which the Greater Yellowstone Whitebark Pine Monitoring Program was developed. This cooperation guided our development of a monitoring protocol including sampling design, field methods and analyses.

Follow-up of this project:

Whitebark Pine Protocol and reports will be updated as warranted.

Publications, other reports expected/with dates:

Available from:

http://www.greateryellowstonescience.org/topic/whitebarkpine/whitebarkpineproject1.html

Greater Yellowstone Whitebark Pine Monitoring Working Group. 2007. Interagency Whitebark Pine Monitoring Protocol For The Greater Yellowstone Ecosystem, Version 1.00. Greater Yellowstone Coordinating Committee, Bozeman, MT.

Greater Yellowstone Whitebark Pine Monitoring Working Group. 2007. Monitoring Whitebark Pine in the Greater Yellowstone Ecosystem: 2006 Annual Report. Pages XX-XX in C.C. Schwartz, M.A. Haroldson, and K. West, editors. Yellowstone grizzly bear investigations: annual report of the Interagency Grizzly Bear Study Team, 2006. U.S. Geological Survey, Bozeman, Montana, USA. (available July 2007).

Greater Yellowstone Whitebark Pine Monitoring Working Group. 2006. Monitoring Whitebark Pine in the Greater Yellowstone Ecosystem: 2005 Annual Report. Pages 73-80 in C.C. Schwartz, M.A. Haroldson, and K. West, editors. Yellowstone grizzly bear investigations: annual report of the Interagency Grizzly Bear Study Team, 2005. U.S. Geological Survey, Bozeman, Montana, USA.

Greater Yellowstone Whitebark Pine Monitoring Working Group. 2005. Interagency Whitebark Pine Health Monitoring Program for the Greater Yellowstone Ecosystem, 2004 Annual Report. Pages 92-125 in C.C. Schwartz, M.A. Haroldson, and K. West, editors. Yellowstone grizzly bear investigations: annual report of the Interagency Grizzly Bear Study Team, 2004. U.S. Geological Survey, Bozeman, Montana, USA.

Huang, M. 2006. A Statistical Analysis of Observer Variability in the Identification of Blister Rust Infection Occurring in White-Bark Pine Monitoring. Unpublished Report prepared for the Whitebark Pine Monitoring Working Group. Department of Mathematical Sciences, Montana State University, Bozeman.

Contact for data and publications:

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