Project Summary Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Toward a Meteorological Early Warning System for Reducing the Transport and Deposition of Nitrogen in Rocky Mountain National Park

Discipline:NaturalType of Project:ResearchFunding Agency:National Park ServiceOther Partners/Cooperators:Colorado State UniversityEffective Dates:9/1/2013 - 12/31/2014Funding Amount:\$50,000

Investigators and Agency Representative: NPS Contact: Tamara Blett, Ecologist, NPS Air Resources Division, PO Box 25287, Denver, CO 80225, phone (303)969-2011, tamara_blett@nps.gov

Investigator: Russ Schumacher, Professor, Dept. of Atmospheric Science, Campus 1371, Colorado State University, Fort Collins, CO 80523, phone (970)491-8084, fax (970) 491-8449, email: russ.schumacher@colostate.edunet

Project Abstract: The research will provide improved quantification and understanding of the weather systems that lead to large nitrogen transport and deposition events into Rocky Mountain National Park, which can then be applied into weather prediction models to identify potential periods of time when transport and deposition are likely. These forecasts can then be communicated to agricultural producers, who can implement practices to reduce ammonia emissions within these time frames, and ultimately reduce nitrogen deposition.

Outcomes with Completion Dates: The products of this effort will include the processed and analyzed weather dataset for past nitrogen deposition events, a website with these data and a summary of the findings, and a final report. Final Report – December 31, 2014

Keywords: nitrogen, transport and deposition, meteorological conditions, warning systems, Rocky Mountain National Park, Colorado State University