

# **Final Environmental Impact Statement**

## **Elk and Vegetation Management Plan**

### **Rocky Mountain National Park • Colorado**

#### **Summary**

This Final Elk and Vegetation Management Plan/Environmental Impact Statement (plan/EIS) analyzes five alternatives to manage elk and vegetation within Rocky Mountain National Park in Colorado. The purpose of this plan/EIS is to guide management actions in Rocky Mountain National Park to reduce the impacts of elk on vegetation and restore, to the extent possible, the natural range of variability in the elk population and affected plant and animal communities.

**Alternative 1** would continue to manage elk and the vegetative resources associated with elk as they are currently managed. No specific management actions would be taken to address the large population size and high densities of elk or the resultant adverse vegetative conditions and trends in aspen and willow communities on the winter elk range.

All action alternatives (Alternatives 2 through 5) would incorporate adaptive management and monitoring to determine the level and intensity of management actions including elk population reductions, fencing, herding, and aversive conditioning. Population numbers would be estimated annually and the number of animals to be removed would be determined based on the most current population estimates. If the elk population is within the defined portion of the range of natural variation and vegetation management objectives are being met, no lethal reduction activities would take place.

**Alternative 2** would use NPS staff and authorized agents of the National Park Service in the park to remove elk using lethal means to reach a population target range at the lower end of the natural range of variation, between 1,200 and 1,700 elk (200 to 400 park subpopulation; 1,000 to 1,300 town subpopulation). Reduction targets would be aggressive removing 200 to 700 elk in the first four years to quickly reduce the size of the population, followed by less intensive yearly reductions of 25 to 150 elk each year for 16 years. Use of redistribution techniques and limited aspen fencing would also be required to meet vegetation objectives. Given appropriate interagency cooperation, redistribution techniques could include adaptive use of wolves as a management tool.

**Alternative 3** would rely on gradual lethal reduction of elk over time by NPS staff and authorized agents of the National Park Service to achieve a high target elk population at the high end of the natural range of variation, between 1,600 and 2,100 animals (600 to 800 park subpopulation; 1,000 to 1,300 town subpopulation). Inside the park, up to 200 elk would be removed annually over 20 years. Fertility control agents could be implemented as an adaptive management tool to control the population size if an effective, logistically feasible agent becomes available. The higher elk population target under this alternative would require additional measures, including aspen and montane riparian willow fences on both the primary summer and winter ranges and redistribution techniques, to meet vegetation objectives. Given appropriate interagency cooperation, redistribution techniques could include adaptive use of wolves as a management tool.

**Alternative 4** would use fertility control agents on elk inside the park to achieve a target elk population at the higher end of the natural range of variation (1,600 to 2,100: 600 to 800 park subpopulation; 1,000 to 1,300 town subpopulation). Lethal reduction of 80 to 150 elk each year by NPS staff and authorized agents of the National Park Service would supplement fertility control. The higher elk population target under this alternative would require additional measures, including aspen fences on the primary winter and summer ranges and montane riparian willow fences on the primary winter range and redistribution techniques, to meet vegetation objectives.

**Alternative 5** would release a limited number of gray wolves in Rocky Mountain National Park to be intensively managed and allowed to increase to a maximum of 14 in a phased approach. Lethal reduction activities by NPS staff and authorized agents of the National Park Service would reduce the elk population to the higher end of the natural range of variation, 1,600 to 2,100 animals, in the first four years. Up to 100 elk would be lethally removed annually over the next 16 years to meet population targets. Later in the plan, the target elk population would be allowed to fluctuate within the natural range of variation between 1,200 to 2,100 elk, depending on wolves' effectiveness in redistributing elk. Wolf activity would be the primary redistribution tool. Wolves would be intensively monitored and their movements and activities restricted to the park. A limited amount of aspen fencing may also be required to meet vegetation objectives.