**Introduction**

The rocky mountain national park is a park located in northern colorado. The park encompasses 265,461 acres of federal land, with an additional 253,059 acres of U.S. Forest Service wilderness adjoining the park boundaries. The park is elevated as high as 14,000 feet above sea level. You can find wetlands located at the lower elevations. Forests and lakes can be found on higher elevations. More than 200 species can be found in the park, the most common being elk and moose.

**Claim**

Keeping the Rocky Mountain National Park grey wolf population at approximately 22 (grey wolf carrying capacity for the area)is the best solution for Rocky Mountain National Park.

**Reasoning**

Keeping the grey wolf population at approximately 22 ( grey wolf carrying capacity) is the best solution for Rocky Mountain National Park. When there were no grey wolves in the park the elk, moose and mule deer populations increased. The park temporarily ran under a "Wildlife Management Plan" and it didn’t end up helping the park’s ecosystem. In the graph, you can see that the park has gained visitors since they put the elk management plan in action. Reintroducing the wolves will have the same effect as the management plan but with less expense, and provide a more natural solution.

**History of Wolf Conservation**

Wolves were removed from Rocky Mountain National Park in 1915 when the park was established. Today grey wolves are protected under the "Endangered Species Act." This ensures that they will be protected, and all efforts will be made to assist in their recovery. In 2009, the park implemented it's “Elk and Vegetation Management Plan,” after discussing the possibility of reintroducing wolves. They decided not to reintroduce wolves into Rocky Mountain National Park and instead think of other options to control the elk population. The park is still deciding what to do to decrease the elk population. We think reintroducing wolves is the best option.

**Wolf Distribution**

We plan to reintroduce wolves into Rocky Mountain National Park, to do this we need to decrease the amount of in-pack fighting, and wolf overpopulation. According to our calculations, the carrying capacity of grey wolves in Rocky Mountain National Park is approximately 22 wolves ( two packs). When reintroducing the wolves we will put about 10 wolves in the park after they adjust to the area and food. We will release the first group of wolves near the middle of the park, and they will hopefully increase to the size of 22, and separate when the pack becomes too crowded. After the two packs break apart we will monitor them and make sure they don’t move to close to each other. After the first year, we will see if it will be necessary to add or remove wolves from the park.

**Game Animal Status**

There is not much hunting in the area surrounding Rocky Mountain National Park. The park is big enough that all the elk and mule deer usually stay in the park. They live in the higher elevated parts of the park in the summer, and most elk migrate farther down during winter. The few elk that don’t stay in the national park move into the area south of the park. Hunting is permitted in Roosevelt and Arapaho National Forests which are near the borders of the national park. Since most of the elk stay in the national park we believe that the wolves will mostly stay in the national park area because they will be closer to their food source. The areas near the park are not popular places for hunting because of the rocky terrain and hard accessibility. If the park's wolf population increases drastically and there are no other parks that require wolves. We would designate hunting areas and provide hunting licenses to kill some of the wolves.

**Wolf Livestock Conflicts**

Cattle owners may be concerned that the grey wolf reintroduction will negatively affect their businesses. There will be about 22 wolves ( estimated carrying capacity ) therefore they won’t eat too much, and won’t kill as much livestock. Since the elk is overpopulated the wolves won’t lack food and go looking for live-stock. There aren’t a lot of farms near Rocky Mountain National Park because the terrain is very rocky, and lacks big empty plots of land for grazing. For the farms near the park, we plan to have the national government pay off every animal killed by the wolves at market value, using the increased business tax. We will not allow livestock owners to shoot wolves on their property, because there are a limited number of wolves, we don’t want to affect their population too much.

**Wolf-Ungulate Interactions**

Grey wolf reintroduction into the park is the best way to deal with the overpopulated elk. Since the wolves were first killed the park, elk, moose, and mule deer populations have increased. The park had previously considered reintroducing wolves but decided to try a different elk management plan. When this plan was put into action the park's ecosystem has started to repair itself, and the park got more revenue. But this plan was produced by humans and eventually caused harm to the environment because It was unorganized and mistakes were made. Reintroducing grey wolves would be a more natural way to fix the park’s ecosystem. Our plan also requires fewer government resources, therefore providing a cheaper more effective solution.

**Wolf-Predator Interactions**

Rocky mountain national park has many different species of predators such as black bears, coyote, mountain lion, and bobcat. If wolves are introduced into the park we'll have to figure out how they will interact with other existing predators. The least concerning problem would be food availability because the park has an overpopulated elk and mule deer population. There are as many as 3,200 elk in the park during the summer and 600-800 in the winter. The elk population is considered overpopulated in Rocky Mountain National Park according to the fact that plant species are decreasing. The elk, mule deer and moose are overgrazing which is causing the park's ecosystem to become unbalanced. The main predator that currently resides in the park is mountain lions. But recently the mountain lion populations have been decreasing, therefore killing fewer elk, and allowing elk to overpopulate. Black bears will also show little concern because they barely eat elk and other ungulates. Their diet mostly contains roots, grasses, berries, and fish. The bobcat population has also almost vanished from the park.

**Wolf-Human Interactions**

Wolves will help the economy of Rocky Mountain National Park because they will provide more natural resources such as trees, fruit, and other plants. This will provide the park with more resources so they can spend less money managing elk. With the park cleaner, more tourists will decide to visit and the park will increase revenue. The increase in tourists will also help businesses receive more customers and make money. We plan to raise taxes for business owners because they will be making more money from the increase in visitors. We will use this money to pay off cattle killed by the wolves. This will also provide more jobs for residents because new businesses will open, due to the increase in visitors. Wolves could also be a selling point to the park and make it appear more interesting and unique.

**Conclusion**

Keeping the Rocky Mountain National Park grey wolf population at approximately 22 (grey wolf carrying capacity for the area)is the best solution for Rocky Mountain National Park’s ecosystem. And will overall help the parks ecosystem, economy, and community.