

## **Gunnison Climate Change Adaptation Workshop Summary of Conservation Features**

At the Gunnison Basin Climate Change Adaptation Workshop, we will apply an adaptation planning framework to develop strategic actions for three different types of conservation features (species, ecosystem, and ecological process). Based on participant input, we selected the Gunnison sage-grouse, alpine ecosystem and Gunnison headwaters to be the focus of adaptation planning exercises conducted during breakout sessions.

Criteria for selecting features to focus on at the workshop include: species, ecosystems or processes of ecological significance within the watershed; rare, imperiled or Colorado Division of Wildlife Tier I species; species of concern; availability of information; particular vulnerability to climate change; and potential for development of adaptation strategies. A short description of each of these features is below.

### Gunnison sage-grouse:

The largest known population of the Gunnison sage-grouse, only known from southwestern Colorado and southeastern Utah, occurs in the Gunnison Basin. The grouse's priority habitats include montane sagebrush shrublands and riparian meadows. The Gunnison sage-grouse is ranked as critically imperiled by NatureServe/Colorado Natural Heritage Program, and is a Colorado Division of Wildlife Tier I species. Other imperiled species and/or species of concern inhabiting the sagebrush shrublands include Gunnison's prairie dog, Brewer's sparrow, Green-tailed towhee, Vesper's sparrow, Sage thrasher, Rollin's twinpod, skiff milkvetch and Gunnison milkvetch.

### Gunnison headwaters:

The Gunnison headwaters include the upper watershed of the Gunnison River above the junction with Beaver Creek. Primary tributaries include East River, Ohio Creek, Taylor River, Tomichi Creek, Los Pinos Creek, and South Beaver Creek. These rivers and streams support important woody riparian communities. Associated imperiled species and/or species of concern inhabiting the headwaters include Colorado River cutthroat trout, boreal toad, Black Swift, and the Gunnison sage-grouse. The group will consider these "nested" species and ecosystems of conservation concern and the characteristics of the headwaters hydrologic regime that are important for maintaining them.

### Alpine ecosystem:

The alpine ecosystem occurs above approximately 11,500 feet (timberline) and includes the highest peaks of the West Elk, Elk, Sawatch, and San Juan Mountains. Alpine habitats include dry alpine tundra, moist to wet alpine meadows, dwarf shrublands, fell-fields, talus slopes, snow and ice fields, and krummholz. These are cold wind-swept environments much of the year and receive intense ultraviolet radiation. For the purposes of this workshop, we will also include the transition zone between the alpine and subalpine zone (e.g., subalpine meadow/tree-line interface) because of potential shifts in plant and animal species. Associated imperiled species and/or species of concern include American pika, yellow-bellied marmot, Uncompahgre fritillary, Colorado tansy-aster, White-tailed Ptarmigan, Brown-capped Rosy Finch, and Rocky Mountain bighorn sheep. Wolverines were historically present.