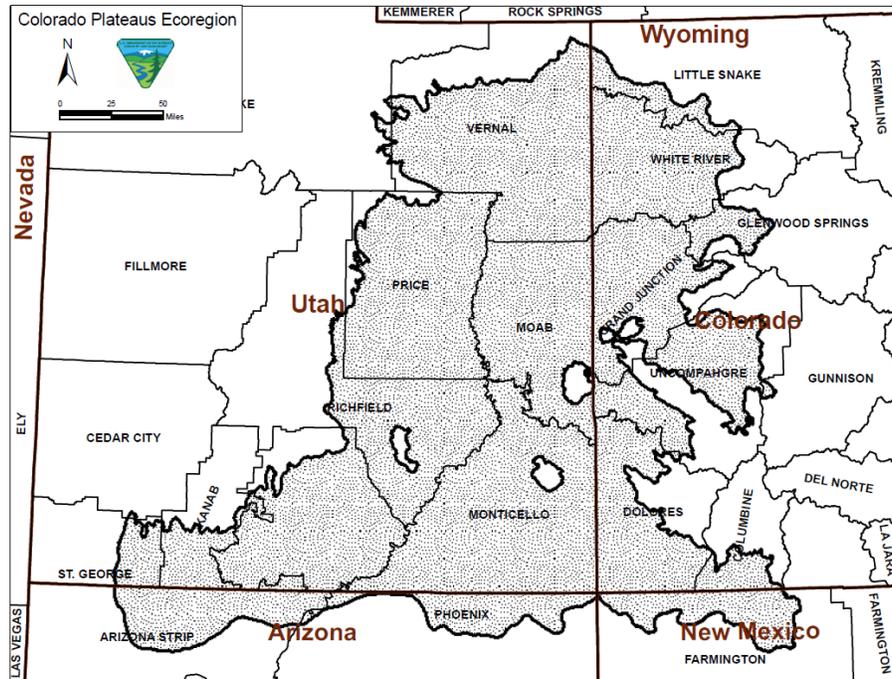


# Colorado Plateau Rapid Ecoregional Assessment (REA)

## REA Status

The Colorado Plateau REA was initiated in July 2010 and is scheduled for completion in early 2012. REA Task 1 (the refinement of management questions, conservation elements, and change agents) was completed in September 2010. The results of Task 1 are presented in the *Colorado Plateau Task 1 Final Memorandum*, and are summarized briefly below.

## Location Map



## Location and Setting

The Colorado Plateau ecoregion is located in Utah and Colorado with extensions in New Mexico and Arizona. It has an area of 32,387 square miles and includes all or portions of 16 BLM field offices.

The Colorado Plateau is an uplifted, eroded, and deeply dissected tableland. Its benches, mesas, buttes, salt valleys, cliffs, and canyons are formed in and underlain by thick layers of sedimentary rock. The ecoregion has a broad latitudinal range, from the Uinta Basin in the north to the arid canyonlands along the border of Arizona and New Mexico.

Climatic influences on the ecoregion vary both with latitude and elevation. Precipitation amounts range from a low of 5-8 inches per year in the shale deserts and arid canyonlands, to almost 20 inches per year in the higher pinyon-juniper woodlands, northern Uinta Basin slopes, and escarpment areas such as the Book Cliffs. The southern part of the ecoregion differs from the north in having a summer monsoonal precipitation pattern.

In general, juniper-pinyon woodland communities dominate higher elevations and are far more extensive than in the Wyoming Basin, which is adjacent to the north. Saltbush-greasewood and blackbrush communities are common at lower elevations. Summer moisture from thunderstorms supports warm season grasses not found in the Central Basin and Range, which is adjacent to the west. Many endemic plants occur and species diversity is greater than in the Central Basin and Range.

### **Management Questions**

The management questions for the Colorado Plateau REA were finalized in September 2010 in the *Colorado Plateau Task 1 Final Memorandum*. Approximately 60 questions, organized in 6 categories, were formulated to guide the REA. They seek information related to:

- Terrestrial ecological features, functions, and services as conservation elements
- Species as conservation elements
- Terrestrial sites of regional importance as conservation elements
- Aquatic ecological features, functions and services as conservation elements
- Aquatic sites of regional importance as conservation elements
- Change agents

### **Conservation Elements**

Conservation elements are resources of conservation concern within an ecoregion. This REA will assess the current status and forecast the future condition of these conservation elements:

- “Coarse-filter” ecological systems, which represent characteristic vegetation assemblages occurring within the ecoregion;
- “Fine-filter” plant species conservation elements, which represent a dominant plant species characteristic of each of the four largest geographical ecological system coarse-filters in the Colorado Plateau Ecoregion;
- Landscape-species conservation elements, in which selected species represent a range of important attributes characterizing the environment in which they occur.

A full list and description of conservation elements can be found in the Phase 1 Task 1 Memo.

In brief, the coarse-filter vegetation assemblages for the Colorado Plateau REA are Upland Forests and Woodlands, Riparian Communities, Semi-Arid Sage and Grasslands, and Arid Basin Shrublands. An additional category, Sparsely-Vegetated and Barren, was developed to represent areas with little or no vegetation. Biological (cryptogamic) soil crusts will also be addressed separately to highlight their important ecological role.

Examples of fine-filter plant species include Pinyon pine, Mountain sagebrush, and Blackbrush. For landscape-species conservation elements, the mountain lion, desert bighorn sheep, and burrowing owl are examples.

The REA will also address species that were not selected for inclusion in the suite of landscape species, known as “desired species,” such as the pronghorn and mule deer. Wild horses and burros will also be assessed as desired species.

The assessment will also look at a suite of conservation elements representing sites and a suite of ecological functions and services of conservation concern as conservation elements. Sites include, as examples, NatureServe/Natural Heritage sites and national and state parks. Surface and subsurface water availability — including for example, streams and groundwater protection zones — serve as ecological functions and services of conservation concern for the REA.

**Change Agents**

Change agents are disturbances on the landscape that can influence ecosystem health. They can have natural causes, such as wildfire; human causes, such as energy development; or result from the interaction of both, such as climate change. A key purpose of this REA is to understand the influences of significant, widespread change agents on the natural resources (represented by the conservation elements discussed above) of the Colorado Plateau.

This REA will examine the potential effects of the following change agents. A more complete discussion of change agents is presented in the Task 1 Final Memorandum.

<b>Change Agents to be Addressed in the Colorado Plateau REA</b>
Wildland Fire
Invasive Species
Land and Resource Uses: Urban and Roads Development Oil, Gas, and Mining Development Renewable Energy Development Agriculture Livestock grazing Wild horse and burro grazing Wildlife grazing Groundwater and Surface Water Extraction, Development, and Transportation Recreational Uses Pollution (Air Quality)
Climate Change