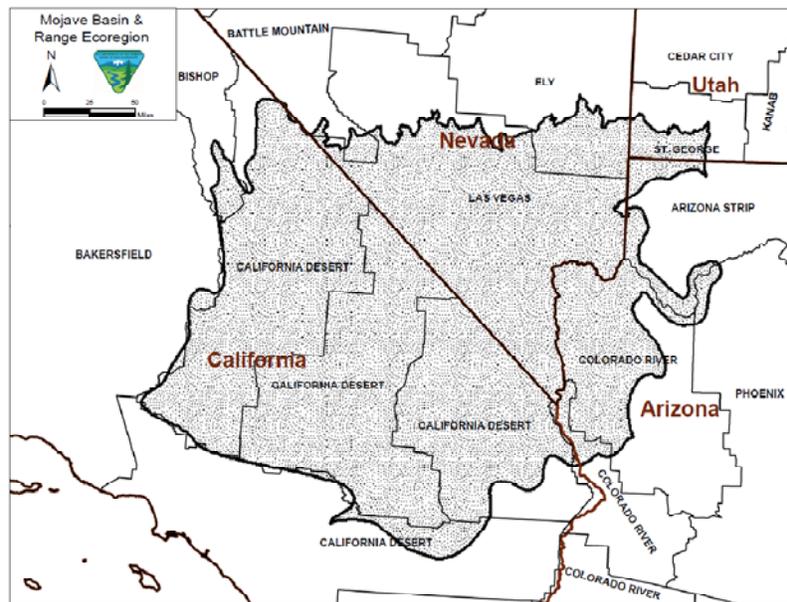


Mojave Basin and Range Rapid Ecoregional Assessment (REA)

REA Status

The Mojave Basin and Range 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 *Mojave Basin and Range Task 1 Final Memorandum*, and are summarized briefly below.



Location and Setting

The Mojave Basin and Range is located primarily in southeastern California and southwestern Nevada, with extensions in Arizona and Utah. The ecoregion is approximately 50,000 square miles and includes all or portions of 14 BLM field offices. Most of this region is federally owned.

The ecoregion lies to the immediate east of the Sierra Nevada and Southern and Baja California Pine Oak Mountains, to the north of the Sonoran Desert, to the west of the Arizona/New Mexico Plateau and a small portion of the Colorado Plateau ecoregions. Its broad basins and scattered mountains are generally lower, warmer, and drier, than those of the Central Basin and Range.

The ecological boundary of the Mojave Basin and Range is more readily distinguished by fairly sharp vegetation changes along its western and eastern edges, with abrupt transitions into high-plateau and montane environments. The transitions in plant communities are less abrupt along the southern borders of the Mojave Basin and Range, as warm desert transitions into an abundance of succulents across the Sonoran Desert. The northern transition into the Central Basin and Range also is more subtle, as salt desert scrub, blackbrush, and sagebrush vegetation dominates much of that transition.

Creosote bush dominates the shrub community, which distinguishes the Mojave Basin and Range from the saltbush-greasewood and sagebrush-grass associations that occur to the north in the Central Basin and Range and the Northern Basin and Range. Creosote bush also distinguishes the Mojave Basin and Range from the paloverde-cactus shrub and saguaro cactus that occur in the Sonoran Basin and Range to the south.

The region is mostly arid due to the rain shadow effect from the surrounding mountain ranges. The ecoregion receives an average of 2-8 inches of annual precipitation. Death Valley, located in southeastern California, is considered one of the driest locations in the Western Hemisphere, averaging 1.96 inches of rain annually.

Management Questions

The management questions for the Mojave Basin and Range REA were finalized and presented in August 2010 in the *Mojave Basin and Range Task 1 Final Memorandum*. The management questions address specific information needs that guide the REA and will ultimately inform management actions on the landscape. Approximately 87 questions were formulated and are organized in 21 categories. Examples of the categories and number of management questions in each category include:

- Species (9 questions)
- Native Plant Communities (4 questions)
- Terrestrial Sites of High Biodiversity (3 questions)
- Aquatic Sites of High Biodiversity (3 questions)
- Specially Designated Areas of Ecological Value (1 question)
- Grazing, Wild Horses and Burros (7 questions)
- Invasive Species (5 questions)

Conservation Elements

Conservation elements are resources of conservation concern within an ecoregion. These elements could include habitat or populations for plant and animal taxa, such as threatened and endangered species, or ecological systems and plant communities of regional importance. A list of conservation elements could also include other resource values, such as highly erodible soils, populations of wild horses and burros, scenic viewsheds, or designated sites of natural, historical or cultural significance. This REA will assess the current status and forecast the future condition of two basic types of conservation elements:

- “coarse-filter” conservation elements, which typically include all of the major ecosystem types within the assessment landscape, and represent all of the predominant natural ecosystem functions and services in the ecoregion; and
- “fine-filter” elements, which complement the first set of elements by including a limited subset of focal species assemblages and individual species.

A full list and explanation of the conservation elements can be found in the Phase 1 Task 1 Memo. In brief, the core conservation elements include 22 terrestrial and aquatic ecological system types and communities that express the predominant ecological pattern and dynamics of the ecoregion. Those elements are nested within 4 ecosystem categories: Basin Dryland, Basin Wet, Montane Dryland, and Montane Wet ecosystems. The Assessment Management Team is currently refining the species that will be evaluated as “fine-filter” conservation elements.

Change Agents

Change agents are those features or phenomena that have the potential to affect the size, condition and landscape context of conservation elements. Change agents include wildfire, invasive species, exotic ungulate grazing, climate change, and pollution as well as impacts from infrastructure and energy development. All these can influence ecosystem health. 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 Mojave Basin and Range Ecoregion.

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.

Change Agents to be Addressed in the Mojave Basin and Range REA
Wildfire
Development
Agriculture
Transportation and Energy Infrastructure
Extractive Energy Development
Renewable Energy Development
Military Constrained Areas
Air and Water Quality
Hydrologic Alteration
Recreation
Climate Change
Invasive Species
Terrestrial Invasive Species
Aquatic Invasive Species