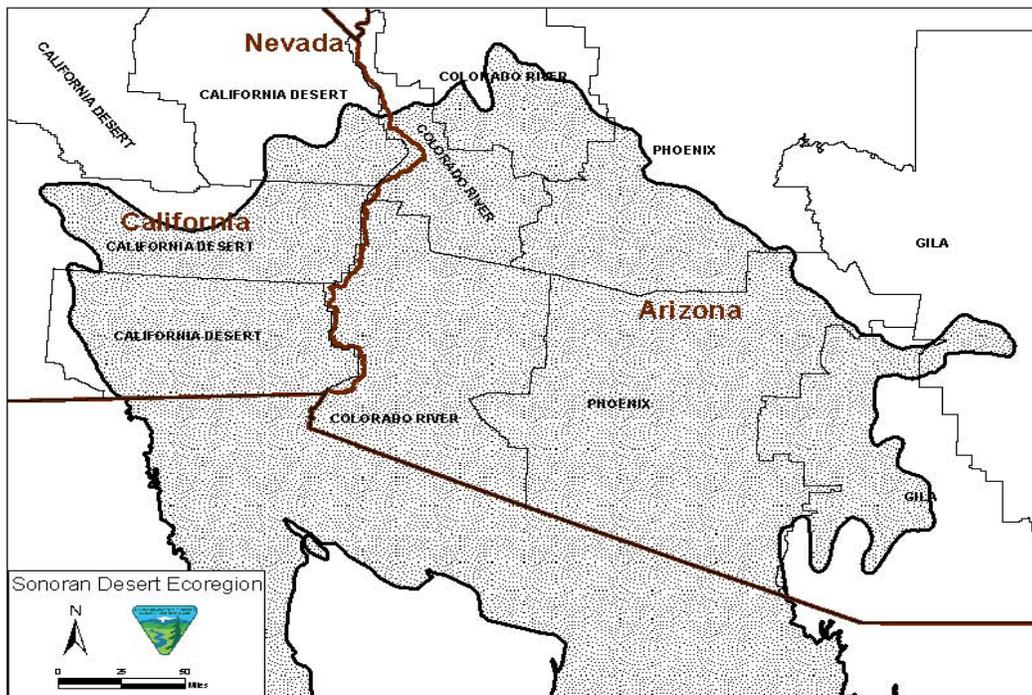


Sonoran Desert Rapid Ecoregional Assessment (REA)

REA Status

The Sonoran Desert 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 *Sonoran Desert Task 1 Final Memorandum*, and are summarized briefly below.



Location and Setting

The Sonoran Desert ecoregion is situated in parts of Arizona, California, and a northern portion of Mexico, which is not included in the assessment. The ecoregion, which has desert basins and uplands punctuated by scattered low mountain ranges, has an area of approximately 20,552 square miles and includes all or portions of land administered by 14 BLM field offices.

The ecoregion is divided into a lower, drier western section, that includes the Salton Sea basin and the lower Colorado Desert, and a somewhat higher eastern section that is also relatively more moist (by desert standards), as it experiences the summer monsoonal rains. In the winter, rainfall has the opposite pattern, decreasing from west to east. Annually across the region, precipitation ranges from 3 to 10 inches; in the desert a difference of one or two inches of precipitation can make a large difference in the vegetative cover.

The vegetation of the lower elevation western Sonoran is dominated by creosote bush and white bursage, but in the eastern upland, somewhat higher precipitation amounts support a more diverse vegetation community with palo verde, acacia, ocotillo, and a variety of cacti, such as saguaro.

The ecoregion has much of the same topography as the Mojave Basin and Range to the north. Both ecoregions have low mountains and large tracts of federally administered land, much of which is used for military training.

Management Questions

The management questions for the Sonoran Desert were finalized in September 2010 in the *Sonoran Desert Task 1 Final Memorandum*. Approximately 45 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 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 six largest geographical ecological system coarse-filters in the Sonoran Desert;
- 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 Sonoran Desert REA are Forest and Woodland; Shrub/Scrub; Grassland/Herbaceous; Woody Wetland/Riparian; Emergent Herbaceous Wetland; Sparsely Vegetated/Wetland; and Open Water.

Examples of fine-filter plant species include saguaro and creosote bush. For landscape-species conservation elements, the mountain lion, Lucy’s warbler, and the Gila topminnow 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 desert tortoise.

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 Central Great 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 Sonoran Desert REA
Wildland Fire
Invasive Species
Land and Resource Uses: Urban and Roads Development Oil, Gas, and Mining Development Renewable Energy Development (i.e., solar, wind, geothermal, including transmission corridors) Agriculture Livestock grazing (proposed by Dynamac) Groundwater Extraction and Transportation Recreational Uses Pollution (Air Quality)
Climate Change