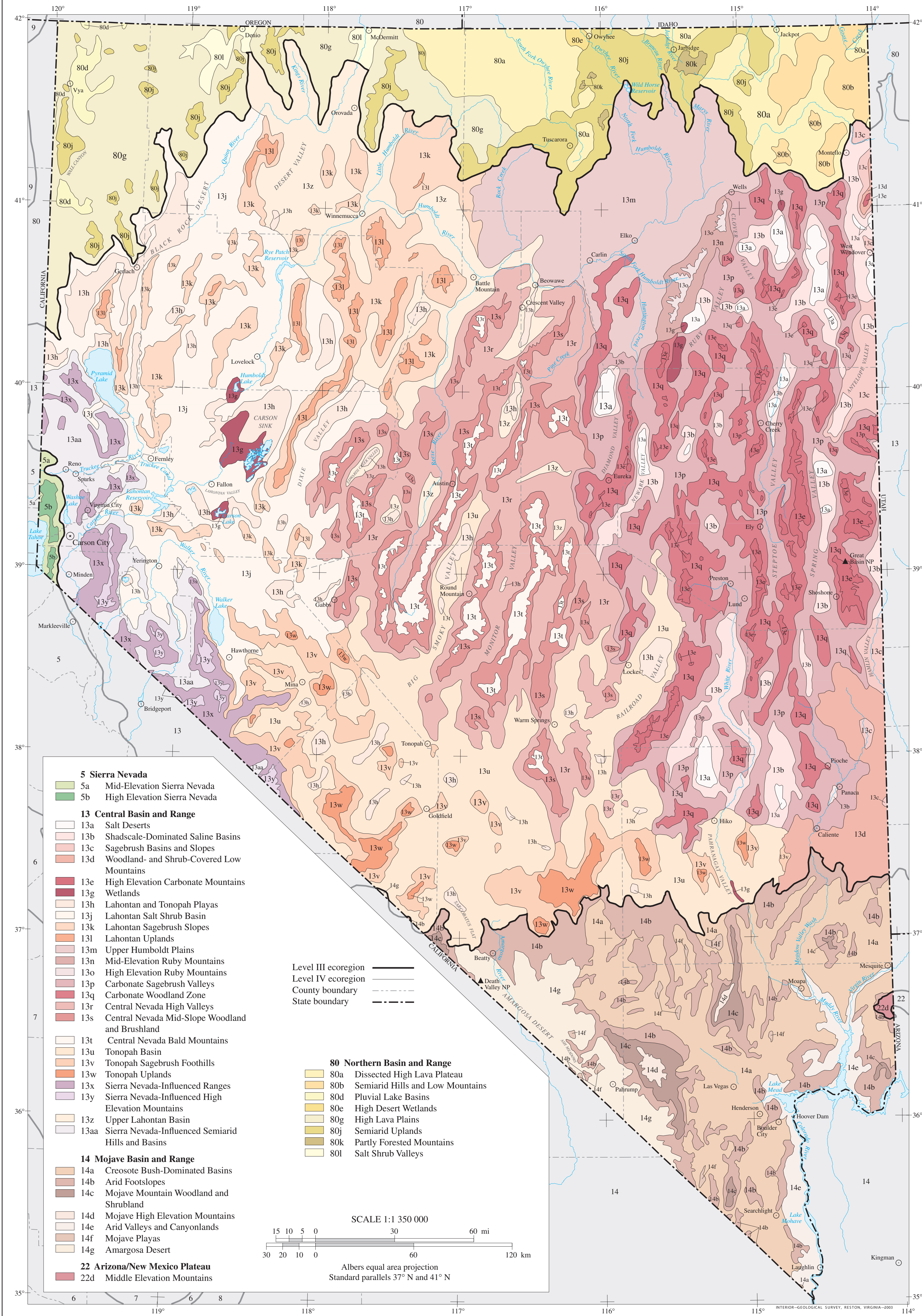


Ecoregions of Nevada



Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources. They are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. By recognizing the spatial differences in the capacities and potentials of ecosystems, ecoregions stratify the environment by its probable response to disturbance (Bryce and others, 1999). Ecoregions are general purpose regions that are critical for structuring and implementing ecosystem management strategies across federal agencies, state agencies, and nongovernmental organizations that are responsible for different types of resources in the same geographical areas (Omernik and others, 2000).

The approach used to compile this map is based on the premise that ecological regions can be identified through the analysis of the spatial patterns and the composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity (Wiken, 1986; Omernik, 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each phenomenon varies from one ecological region to another regardless of ecoregion hierarchical level. A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I is the coarsest level, dividing North America into 15 ecological regions. Level II divides the continent into 52 regions (Commission for Environmental Cooperation Working Group, 1997). At level III, the continental United States contains 104 ecoregions and the conterminous United States has 84 ecoregions (U.S. Environmental Protection Agency [USEPA], 2002). Level IV is a further subdivision of level III ecoregions. Explanations of the methods used to define the USEPA's ecoregions are given in Omernik (1995), Omernik and others (2000), Griffith and others (1994), and Gallant and others (1989).

Nevada's physiography is composed of a repeating pattern of fault block mountains and intervening valleys. Valleys are shrub-covered or shrub- and grass-covered. Mountains may be brush-, woodland-, or forest-covered. Land use is primarily rangeland but many mines and large military reservations occur. Some valleys are irrigated and farmed, and rapid urban and suburban growth is occurring in the Las Vegas, Reno, and Carson City areas. Most of the state is internally drained and lies within the Great Basin; rivers in the southeast are part of the Colorado River system and those in the northeast drain to the Snake River. There are 5 level III ecoregions and 43 level IV ecoregions in Nevada and many continue into ecologically similar parts of adjacent states (McGrath and others, 2002; Woods and others, 2001).

The level III and IV ecoregion map on this poster was compiled at a scale of 1:250,000 and depicts revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (USEPA, 2002; Omernik, 1987). This poster is part of a collaborative project primarily between USEPA Region 9, USEPA National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), Nevada Department of Conservation and Natural Resources-Division of Environmental Protection, Nevada Department of Conservation and Natural Resources-Nevada Natural Heritage Program, United States Department of Agriculture-Forest Service (USFS), United States Department of Agriculture-Natural Resources Conservation Service (NRCS), United States Department of the Interior-Bureau of Land Management (BLM), United States Department of the Interior-Fish and Wildlife Service, and United States Department of the Interior-Geological Survey (USGS)-Earth Resources Observation Systems (EROS) Data Center.

The Nevada ecoregion project is associated with an interagency effort to develop a common framework of ecological regions. Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies applied to develop the most common ecoregion-type frameworks, including those developed by the USFS (Bailey and others, 1994), the USEPA (Omernik, 1987, 1995), and the NRCS (U.S. Department of Agriculture-Soil Conservation Service, 1981). As each of these frameworks is further refined, their differences are becoming less discernible. Regional collaborative projects, such as this one in Nevada, where agreement has been reached among multiple resource management agencies, are a step toward attaining consensus and consistency in ecoregion frameworks for the entire nation.

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