



Vegetation Mapping at Dinosaur National Monument

Wondering where in the park to look for a certain bird? Trying to plan a prescribed fire? Need help identifying potential habitat for a threatened species? You need a vegetation map!

Vegetation maps visually display the distribution of vegetation communities across a landscape. Knowing what's growing where, and what kinds of habitat occur in a park, helps park managers to successfully conduct a variety of activities, including park planning, resource monitoring, interpretive programs, prescribed fire, and climate change response. Vegetation maps also provide a baseline for ecological studies.

In cooperation with the U.S. Geological Survey and many other partners, the National Park Service (NPS) is engaged in an effort to classify, describe, and map vegetation communities in more than 270 NPS units across the U.S. Each map represents hundreds to thousands of hours of effort by dozens of contributors: ecologists, field technicians, GIS technicians, data managers, writers, editors, and park staff. Each finished project comprises not just a map and report, but also an entire library of vegetation data and descriptive information.

The Dinosaur NM mapping project was led by the Northern Colorado Plateau Network, with assistance from several partners, including engineering-environmental Management, Inc., NatureServe, the Colorado Natural Heritage Program, U.S. Department of Agriculture, and U.S. Bureau of Reclamation. The team gathered aerial photography, established and collected data from vegetation plots, used those data to classify vegetation types and write descriptions, wrote a vegetation-type key,

performed photo interpretation, assessed the accuracy of the results, created a geodatabase, and wrote a final report.

To create a map, vegetation is first classified into *associations* and/or *alliances*, which are repeating assemblages of plants in similar habitats. Those assemblages are then organized into *map classes*, which identify meaningful units to represent existing vegetation and land uses. *Ecological systems* are used to organize the map classes (see map, next page). They represent groups of communities that occur in similar environments and are shaped by similar ecological processes.

For the Dinosaur NM project, the NCPN crew developed 37 natural or semi-natural vegetation map classes, represented by 28,915 map polygons. The mapped vegetation was classified into 174 community types. The most frequent vegetation mapping unit was Sagebrush - Rabbitbrush Shrubland, covering 19.7% of the project area. Among the mapped community types, pinyon-juniper woodlands and sagebrush shrublands were dominant.

The mapping results revealed that forest, woodland, and sparse woodland vegetation types are common and widely distributed in the monument, occupying nearly every available habitat. Shrublands, of which there are a wide variety, are as widespread as woodlands. Herbaceous associations are common but patchy, tending to occur where soils were thin and wind-swept or where fire had removed competing woody vegetation. Riparian woodlands are restricted to floodplains, tributary canyons, and plunge pools below pour-offs. Mesic, wetland shrub, riparian, and wetland herbaceous communities are all very limited in size and distribution.

Map on other side!



Dinosaur National Monument Vegetation Map

U.S. Department of the Interior
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