



## Vegetation Mapping at Colorado National Monument

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*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!*

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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 Colorado NM mapping project was led by the Northern Colorado Plateau Network, with assistance from park staff and several partners, including engineering-environmental Management, Inc., NatureServe, the 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 (see map, next page). *Ecological systems* are used to organize the map classes. They represent groups of communities that occur in similar environments and are shaped by similar ecological processes.

For the Colorado NM project, the NCPN crew developed 25 natural or semi-natural vegetation map classes. The mapped vegetation was classified into 67 plant community types, including 4 forest, 19 woodland, 31 shrubland, and 13 herbaceous communities. Most of the plant associations were characterized by indigenous native plants; four associations were semi-natural types dominated by non-native species and/or characterized by anthropogenic disturbance. However, all four of those associations were found at locations outside the park or at the park boundary.

The mapping results revealed that woodland and shrubland types are the most diverse physiognomic groups in the monument; both occupy all habitats. Forest and graminoid associations are uncommon, with most graminoid associations occurring as small patches on alluvial fans and in drainage bottoms in the east side of the monument. Forb associations and non-vascular plant communities are rare.

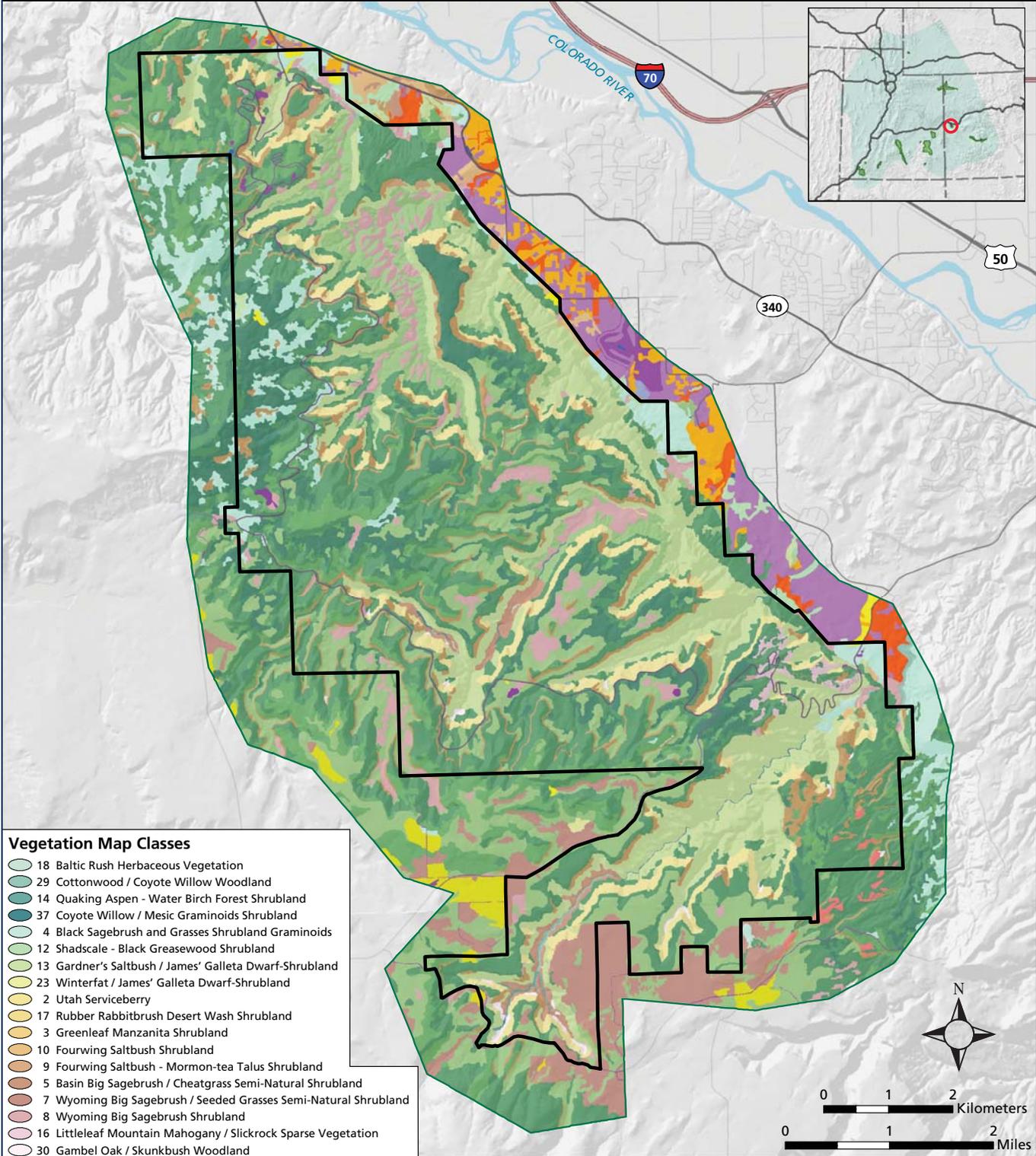
*Map on other side!*



# Colorado National Monument

## Vegetation Map

U.S. Department of the Interior  
National Park Service



### Vegetation Map Classes

- 18 Baltic Rush Herbaceous Vegetation
- 29 Cottonwood / Coyote Willow Woodland
- 14 Quaking Aspen - Water Birch Forest Shrubland
- 37 Coyote Willow / Mesic Graminoids Shrubland
- 4 Black Sagebrush and Grasses Shrubland Graminoids
- 12 Shadscale - Black Greasewood Shrubland
- 13 Gardner's Saltbush / James' Galleta Dwarf-Shrubland
- 23 Winterfat / James' Galleta Dwarf-Shrubland
- 2 Utah Serviceberry
- 17 Rubber Rabbitbrush Desert Wash Shrubland
- 3 Greenleaf Manzanita Shrubland
- 10 Fourwing Saltbush Shrubland
- 9 Fourwing Saltbush - Mormon-tea Talus Shrubland
- 5 Basin Big Sagebrush / Cheatgrass Semi-Natural Shrubland
- 7 Wyoming Big Sagebrush / Seeded Grasses Semi-Natural Shrubland
- 8 Wyoming Big Sagebrush Shrubland
- 16 Littleleaf Mountain Mahogany / Slickrock Sparse Vegetation
- 30 Gambel Oak / Skunkbush Woodland
- 22 Utah Juniper / Talus Mixed Shrub Woodland
- 19 Two-Needle Pinyon Pine - Utah Juniper / Wyoming Big Sagebrush Woodland
- 28 Two-Needle Pinyon Pine - Utah Juniper / Sparse Understory Woodland
- 20 Two-Needle Pinyon Pine - Utah Juniper / Multiple Shrub Woodland
- 25 Two-Needle Pinyon Pine - Utah Juniper / Black Sagebrush Woodland
- 15 Cheatgrass Semi-Natural Herbaceous Vegetation
- 31 Crested Wheatgrass Semi-Natural Herbaceous
- 34 Nonvascular Cover - Board Beds Unit, Entrada Sandstone
- 44 Serpent's Trail

### Land Use Classes

- Bare Rock / Sand
- Herbaceous
- Transitional
- Open Water
- Residential
- Woody
- Non-Residential Developed
- Quarries / Strip Mines / Gravel Pits
- Colorado National Monument Boundary