

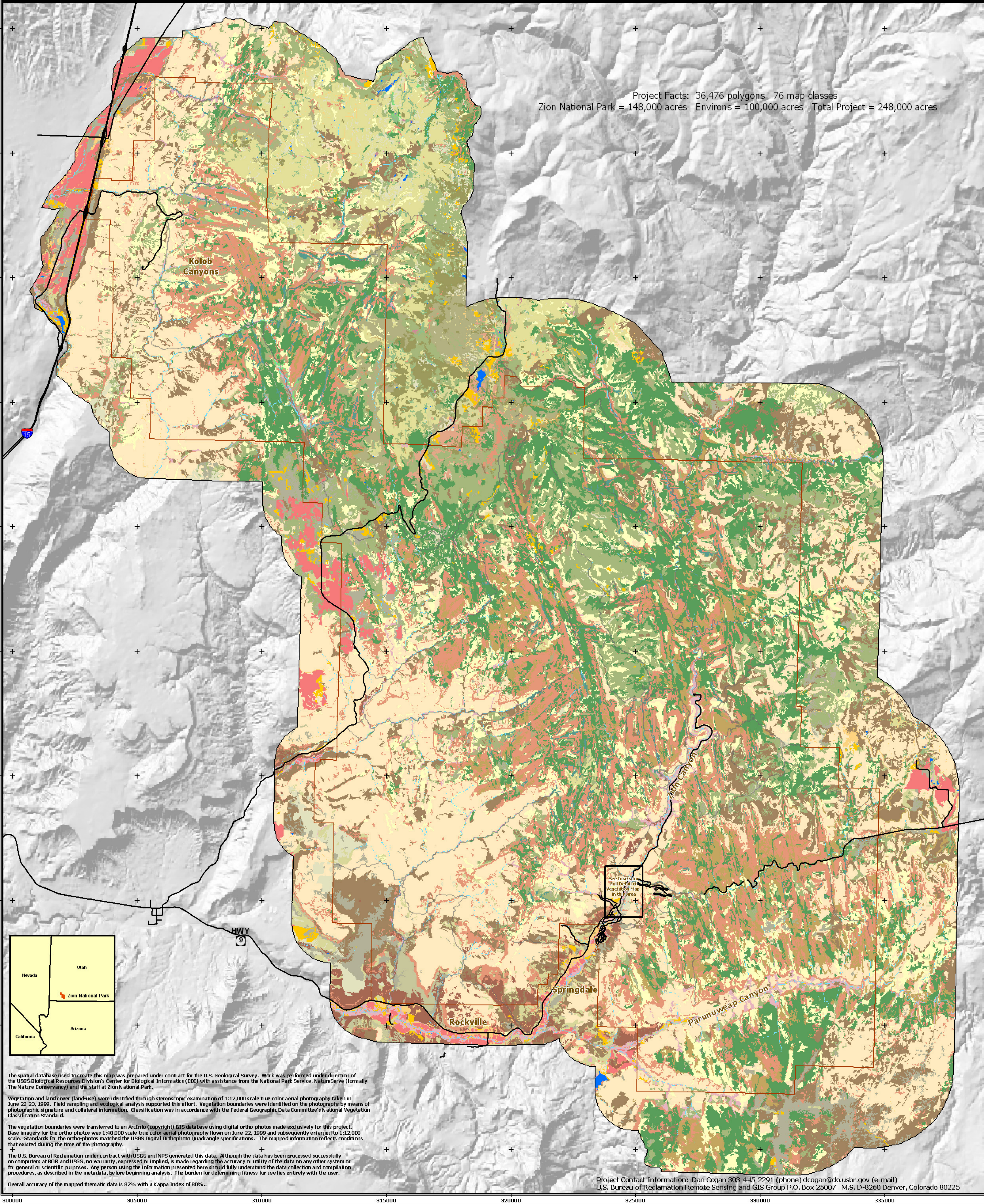
Zion National Park

Vegetation Mapping Project

U.S. Department of Interior
National Park Service
U.S. Geological Survey
U.S. Bureau of Reclamation
Assisted by: NatureServe

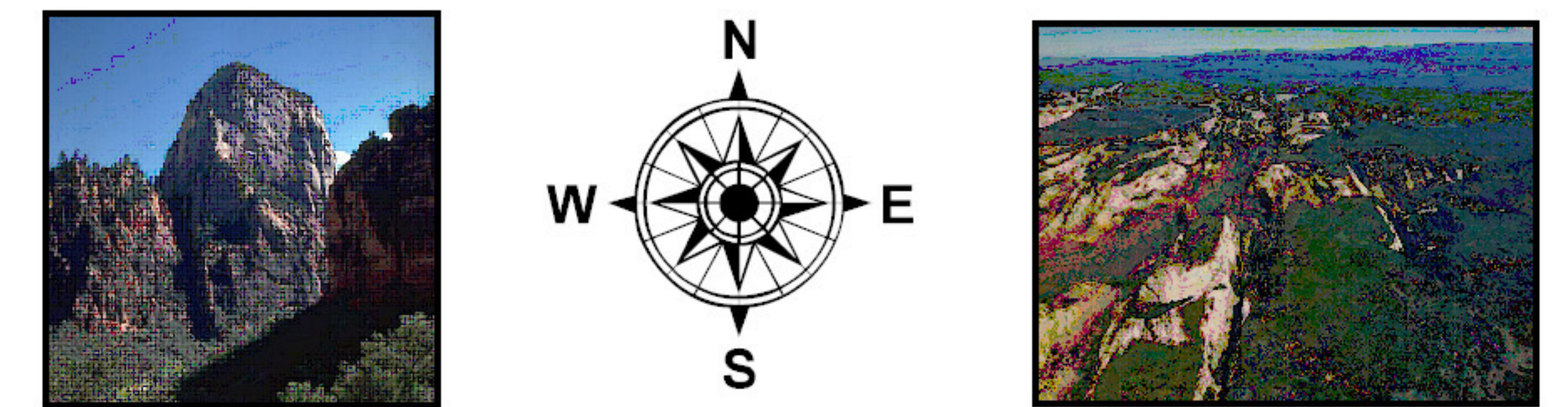


Project Facts: 36,476 polygons 76 map classes
Zion National Park = 148,000 acres Environs = 100,000 acres Total Project = 248,000 acres



Index to Zion National Park

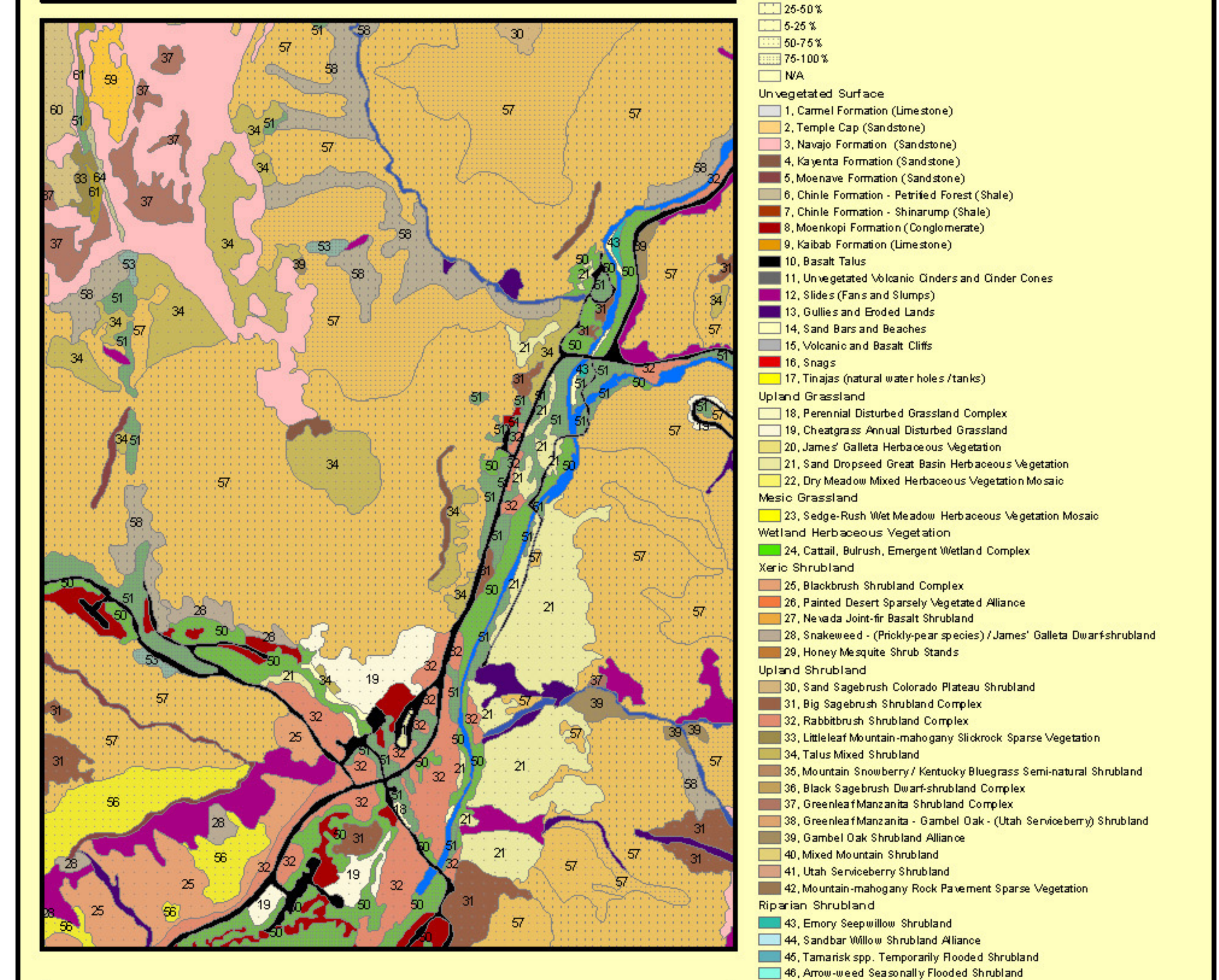
1999-2003 Vegetation Map



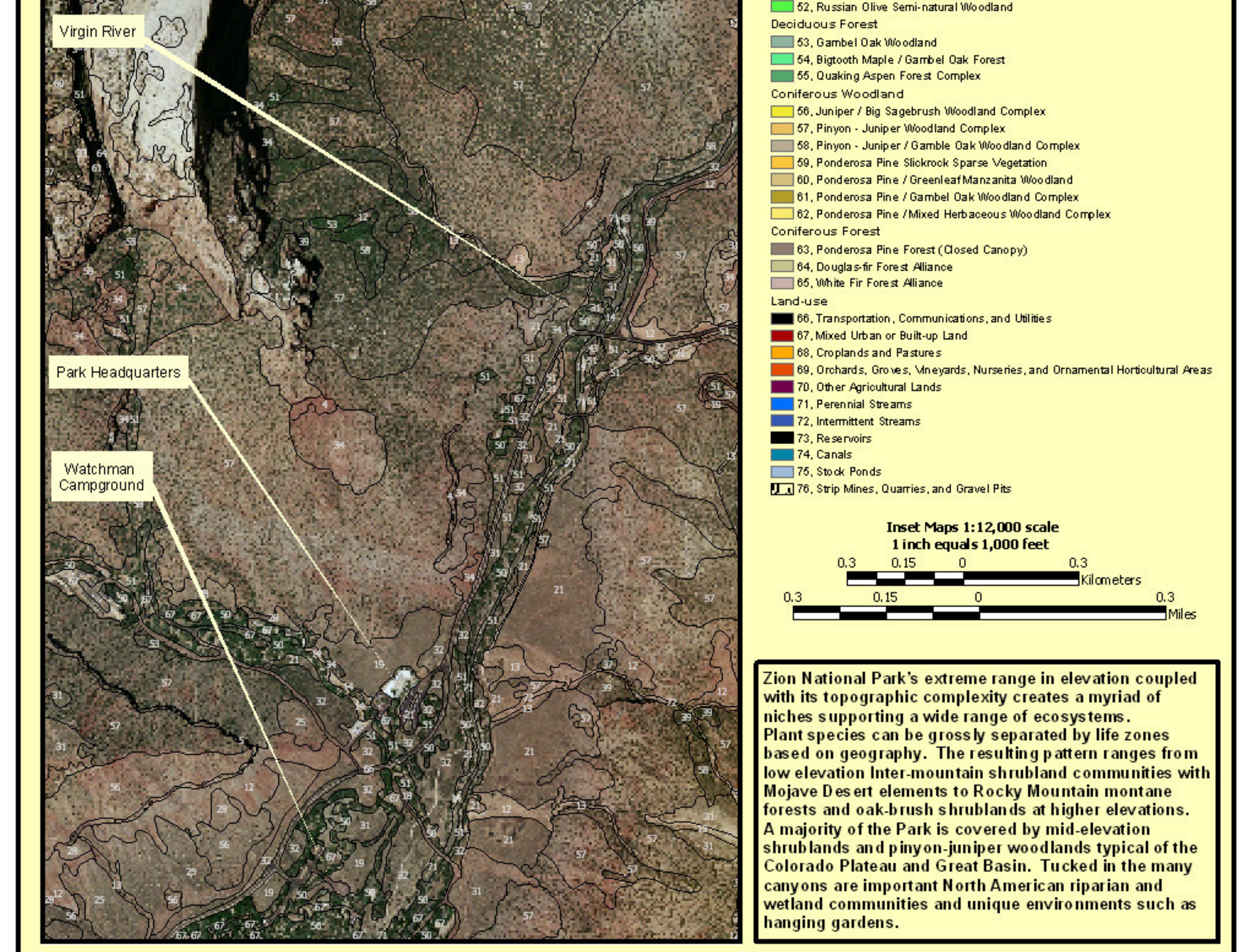
Overview Legend (Ecological Systems)

- Roads
 - Trails and Routes
 - Project Boundary
 - Zion National Park Boundary
- #### Mogollon Vegetation
- Mogollon Chaparral
 - Talus Mixed Shrubland
 - Oliveleaf Marzantia - Gambel Oak Shrubland
 - Oliveleaf Marzantia Shrubland Complex
 - Mixed Mountain Shrubland
- #### North American Vegetation
- North American Warm Desert Lower Montane Riparian Woodland and Shrubland
 - Emergy Soapflow Shrubland
 - Tamarisk spp. Temporarily Flooded Shrubland
 - Arrowweed Seasonally Flooded Shrubland
 - Freemont Cottonwood Woodland Complex
 - Freemont Cottonwood - Velvet Ash Woodland
 - Russian Olive Semi-natural Woodland
 - North American Warm Desert Riparian Mesquite Bosque
 - Honey Mesquite Shrub Stands
 - North American Arid West Emergent Marsh
 - Cattail, Bulrush, Emergent Wetland Complex
- #### Colorado Plateau Vegetation
- Colorado Plateau Mixed Bedrock Canyon and Tableland
 - Littleleaf Mountain-mahogany Slickrock Sparse Vegetation
 - Mountain-mahogany Rock Pavement Sparse Vegetation
 - Ponderosa Pine Slickrock Sparse Vegetation
 - Colorado Plateau Blackbrush-Mormon-tea Shrubland
 - Blackbrush Shrubland Complex
 - Narrowleaf Joint-fir Shrubland
 - Sand Sagebrush Colorado Plateau Shrubland
 - Colorado Plateau Mixed Low Sagebrush Shrubland
 - Black Sagebrush Dwarf-shrubland Complex
 - Colorado Plateau Piñon-Juniper Woodland
 - Piñon / Big Sagebrush Complex
 - Piñon - Juniper / Gambel Oak Complex
- #### Mixed Vegetation
- Colorado Plateau Piñon - Juniper Woodland (or)
 - Great Basin Piñon - Juniper Woodland
 - Piñon - Juniper Woodland Complex
- #### Semi-natural Vegetation
- Semi-natural Vegetation
 - Perennial Disturbed Grassland Complex
 - Chadgrass Annual Disturbed Grassland
- #### Inter-Mountain Vegetation
- Inter Mountain Basins Shale Balland
 - Painted Desert Sparsely Vegetated Alliance
 - Inter Mountain Basins Semi-Desert Grassland
 - Dry Meadow Mixed Herbaceous Vegetation Mosaic
 - James' Galata Herbaceous Vegetation
 - Sand Dripped Great Basin Herbaceous Vegetation
 - Inter Mountain Basins Semi-Desert Shrub-Steppe
 - Rabbitbrush Shrubland Complex
 - Strakoski - (Pinyon-juniper species) / James' Galata Dwarf-shrubland
 - Inter Mountain Basins Big Sagebrush Shrubland
 - Big Sagebrush Shrubland Complex
 - Inter-mountain Basins Aspen-Mixed Conifer Forest and Woodland
 - White Fir Forest Alliance
- #### Rocky Mountain Vegetation
- Rocky Mountain Alpine-Montane Wet Meadow
 - Sedge - Rush Wet Meadow Herbaceous Vegetation Mosaic
 - Rocky Mountain Gambel Oak-Mixed Montane Shrubland
 - Gambel Oak Shrubland Alliance
 - Gambel Oak Woodland Alliance
 - Mountain Serrano - Kentucky Bluegrass Semi-natural Shrubland
 - Utah Serviceberry Shrubland
 - Rocky Mountain Lower Montane Riparian Woodland and Shrubland
 - Sandbar Willow Shrubland Alliance
 - Straggled Willow / Beaked Sedge Shrubland
 - Single-leaf Ash Woodland
 - Bowlder Woodland Alliance
 - Rocky Mountain Bigtooth Maple Ravine Woodland
 - Bigtooth Maple / Gambel Oak Forest
 - Rocky Mountain Montane Dry-Mesic Mixed Conifer Forest and Woodland
 - Douglas-fir Forest Alliance
 - Rocky Mountain Aspen Forest and Woodland
 - Quaking Aspen Forest Complex
 - Rocky Mountain Ponderosa Pine Woodland
 - Ponderosa Pine / Gambel Oak Woodland
 - Ponderosa Pine / Gambel Oak Woodland Complex
 - Ponderosa Pine / Mixed Herbaceous Woodland Complex
 - Ponderosa Pine Forest (Closed Canopy)
- #### Land Use and Barren Lands
- Barren
 - Land-Use
 - Agricultural
 - Streams
 - Impoundments

Inset 1: Example of 1:12,000 Vegetation Polygons with Densities (Full Detail)



Inset 2: Example of 1:12,000 True-color 1999 Ortho-photo with Polygon Outlines (Full Detail)



The spatial database used to create this map was prepared under contract for the U.S. Geological Survey. Work was performed under direction of the USGS Biological Resources Division's Center for Biological Informatics (CBI) with assistance from the National Park Service, NatureServe (formerly The Nature Conservancy) and the staff of Zion National Park.

Vegetation and land cover (land-use) were identified through stereoscopic examination of 1:12,000 scale true color aerial photography taken in June 22-23, 1999. Field sampling and ecological analysis supported this effort. Vegetation boundaries were identified on the photographs by means of photographic signature and collateral information. Classification was in accordance with the Federal Geographic Data Committee's National Vegetation Classification Standard.

The vegetation boundaries were transferred to an ArcInfo (copyright) GIS database using digital ortho-photos made exclusively for this project. Base imagery for the ortho-photos was 1:40,000 scale true color aerial photography flown on June 22, 1999 and subsequently enlarged to 1:12,000 scale. Standards for the ortho-photos matched the USGS Digital Orthophoto Quadrangle specifications. The mapped information reflects conditions that existed during the time of the photography.

The U.S. Bureau of Reclamation under contract with USGS and NPS generated this data. Although the data has been processed successfully on computers at BGR and USGS, no warranty, expressed or implied, is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes. Any person using the information presented here should fully understand the data collection and compilation procedures, as described in the metadata, before beginning analysis. The burden for determining fitness for use lies entirely with the user.

Overall accuracy of the mapped thematic data is 82% with a Kappa Index of 80%.

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