

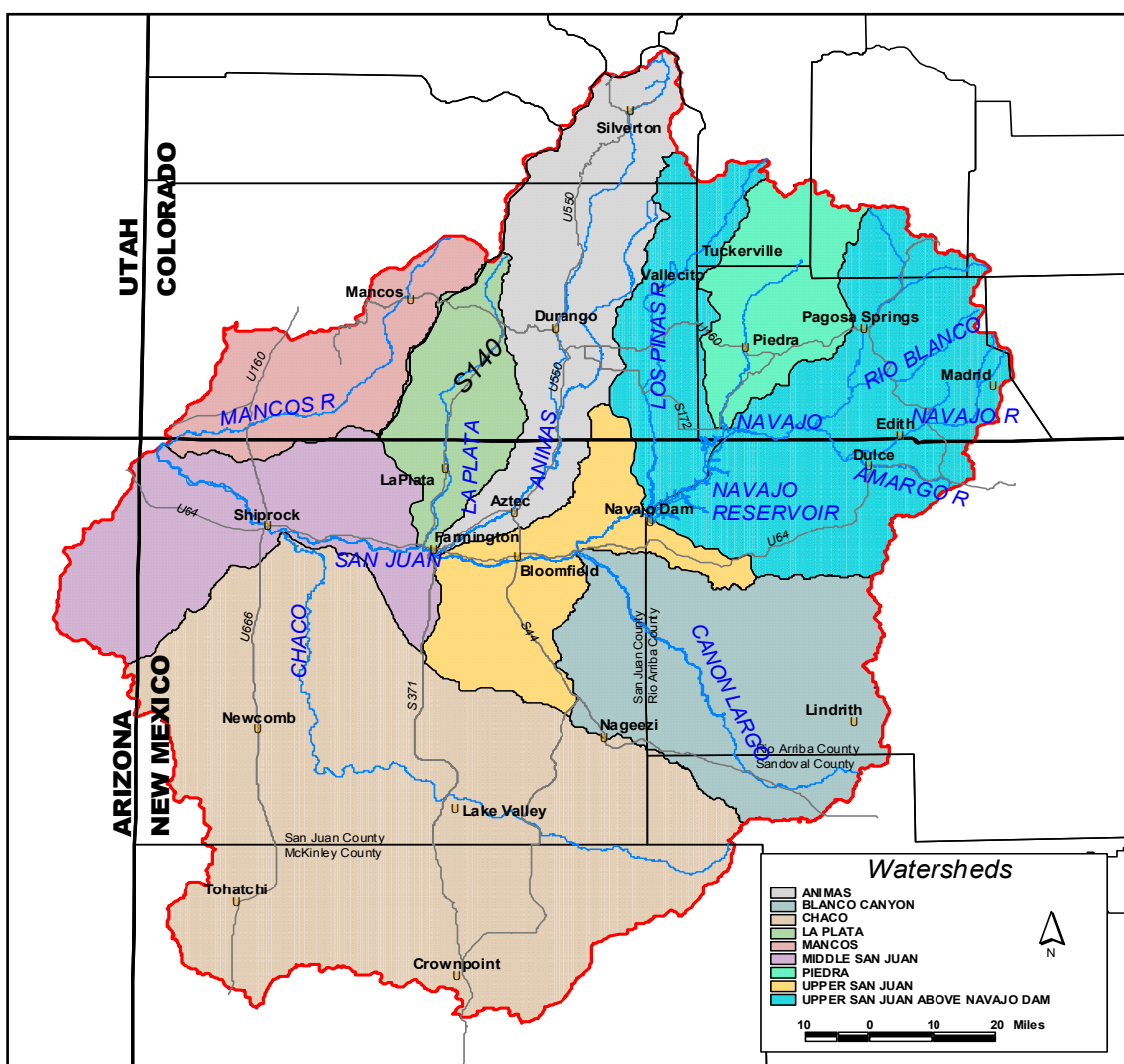
5.0 Background Information

5.1. Description of Region

5.1.1. Location of Boundaries

The San Juan Hydrologic Unit is located in the northwest corner of New Mexico and extends into Colorado, Utah, and Arizona. For the purposes of this study, the San Juan Hydrologic Unit was divided into nine watersheds (see Figure 0-1). This report evaluates the water supply available to New Mexico in seven of the nine watersheds. The two watersheds that are not included in this study are the Piedra Watershed and the Mancos Watershed. They are not included because the water demands from these basins are either completely within another state or reservation.

Figure 0-1: San Juan Hydrologic Unit



5.1.2. **Geography**

See *Water Supply Assessment Report*, Section 2.0 Water resources assessment for the planning region.

5.1.3. **Climate**

See *Water Supply Assessment Report*, Section 2.0 Water resources assessment for the planning region.

5.1.4. **Natural Resources**

The following natural resources are located in the San Juan Basin; oil, natural gas, coal, helium, and construction sand and gravel. See *Water Supply Summary Report*, “Topography Overview” for each sub-basin.

5.1.5. **Major Surface and Ground Water Sources**

See *Water Supply Assessment Report*, Section 1.1 General San Juan Hydrologic Unit Characteristics and 1.2 Groundwater.

5.1.6. **Demographics**

The year 2000 demographics of the San Juan Basin are, 53% White, 37% Native American, and 10% other. If current growth trends continue, Native Americans will account for over 50% of the population by the year 2040. The age distributions are, <5 8%, 5-19 28%, 20-44 35%, 45-59 16%, and >60 13% with a median age of 31. For more information see *Water Demand Assessment Report*, 1.1 Population Projections and Explanation of Methodology

5.1.7. **Economic Picture**

The per capita personal income for 2000 was \$18,153 and the average annual salary was \$27,473. The top commodities were corn, wheat, and potatoes. The top three employers were government, retail trade, and mining. The economy in the San Juan Basin is predicted to grow at an average rate of 3% a year with no sharp increases or declines.

5.1.8. **Land Ownership and Land Use**

5.1.8.1. **Land Ownership**

Land ownership is important for a regional water master plan because it identifies the owner of the land. GIS data was obtained from RGIS and BLM. The source scale of the data varied from 1:100,000 to 1:500,000. Figure 5-2 identifies the landowners within the project area. The figure classifies the landowners into the following general categories:

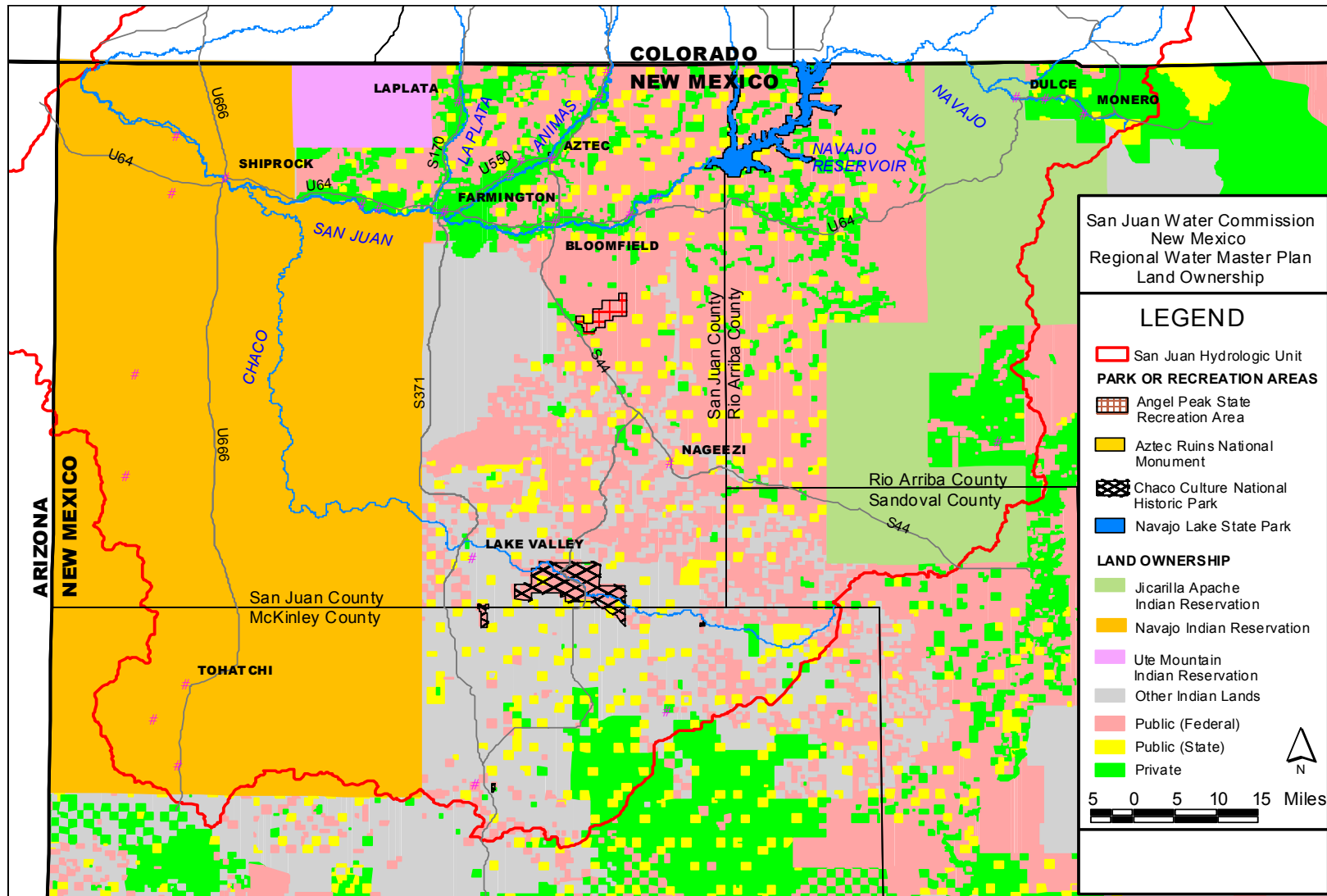
1. Navajo Indian Reservation
2. Jicarilla Apache Indian Reservation
3. Ute Mountain Indian Reservation
4. Other Indian Lands
5. Federal Lands
6. Public Lands
7. Private Lands

The GIS data can further define the Federal and Public Lands into the following categories:

1. Bureau of Land Management
2. BLM Wilderness Area
3. Bureau of Reclamation
4. National Forest Service
5. NFS Wilderness Area
6. US Fish & Wildlife Service
7. USFWS Wilderness Area
8. National Park Service
9. NPS Wilderness Area
10. State of New Mexico
11. State Park
12. State Game & Fish
13. Department of Defense (military reserves)

In addition to the above land ownership, National/State Parks and Recreation Areas are also identified.

Figure 5-2: Land Ownership Data



5.1.8.2. Land Use

Land use data can be very helpful for determining potential growth areas and estimating water demands. The land use data that has been acquired is from the USGS at a 1:250,000 scale and is in a GIS format. The categories for land use in the Project Area are:

- **Urban or Built-up Land**
 - Residential
 - Commercial and Services
 - Industrial
 - Transportation, Communications and Utilities
 - Mixed Urban or Built-up Land
 - Other Urban or Built-up Land
- **Agricultural Land**
 - Cropland or Pasture
 - Orchards, Groves, Vineyards, Nurseries, and Ornamental Horticultural Areas
 - Confined Feeding Operations
 - Other Agricultural Land
- **Rangeland**
 - Herbaceous Rangeland
 - Shrub and Brush Rangeland
 - Mixed Rangeland
- **Forest Land**
 - Deciduous Forest Land
 - Evergreen Forest Land
 - Mixed Forest Land
- **Water**
 - Lakes
 - Reservoirs
- **Wetland**
 - Forested Wetland
 - Non-forested Wetland
- **Barren Land**
 - Sandy Areas Other than Beaches
 - Bare Exposed Rock
 - Strip Mines, Quarries, and Gravel Pits
 - Transitional Areas

5.2. Historical Overview of Water Use in Region

Historically water in the San Juan Basin has been used primarily for agricultural irrigation. The 1948 Echo Decree defined the non-Native American water rights. Since then several significant water uses and water development projects have been completed. They are:

- Navajo Dam and Reservoir (U.S. Bureau of Reclamation)
- San Juan-Chama Project transbasin diversion (U.S. Bureau of Reclamation)
- The Hammond Irrigation Project (U.S. Bureau of Reclamation)
- Coal-fired power plants

In addition, the Navajo Indian Irrigation Project (NIIP) was started and the Animas-La Plata Project was authorized.

In 1998, the Jicarilla Apache Nation water rights settlement was completed. Negotiations for the Navajo Nation settlement are on-going.