

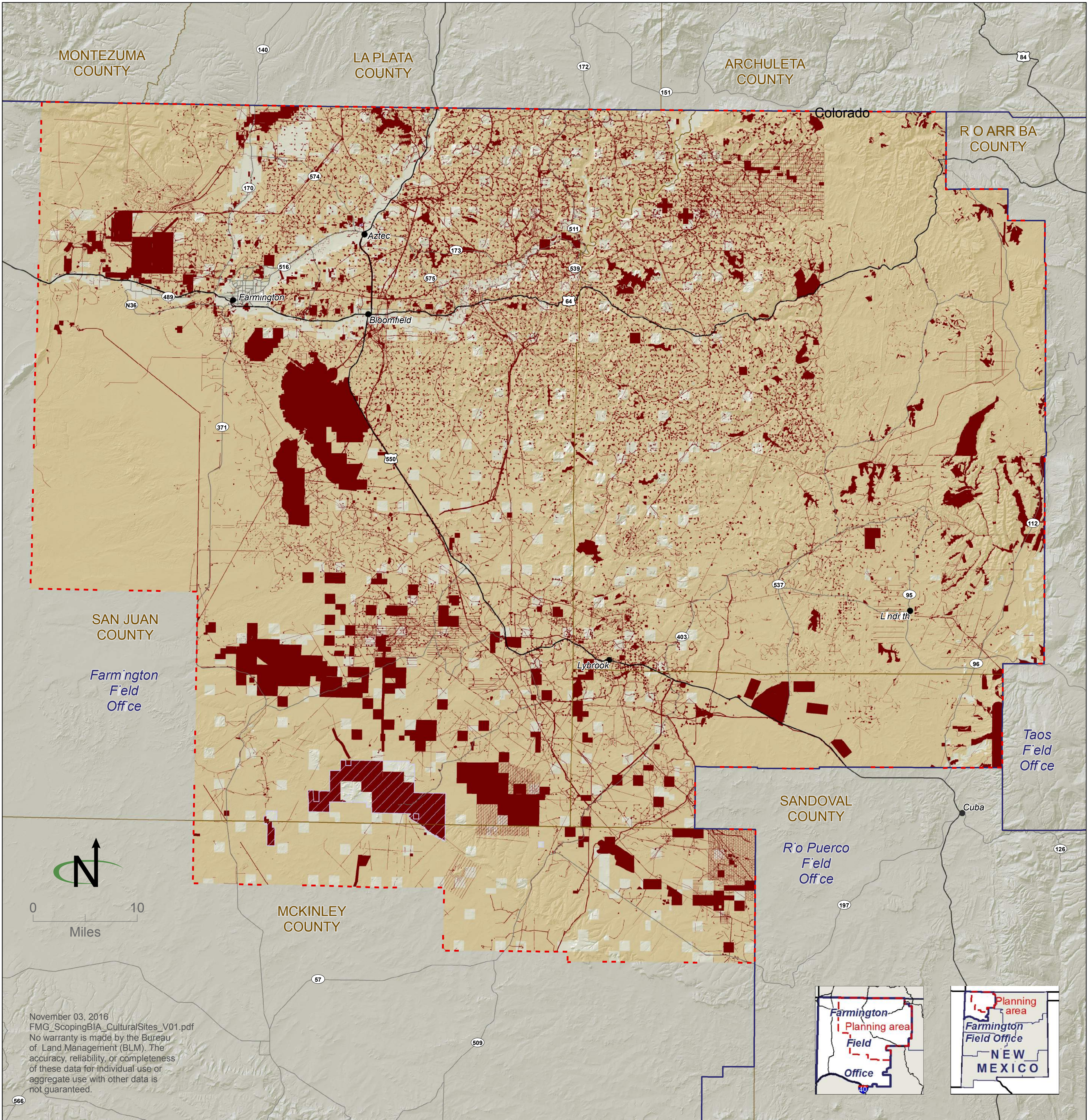


Cultural Resources



Cultural resources is a broad term referring to the physical remains left behind by prehistoric and historic peoples. NEPA requires that agencies consider the impacts of their actions on aspects of the “human environment,” and the National Historic Preservation Act require agencies to consider the impacts of an undertaking on historic properties (36 CFR, Part 800). Researchers have inventoried thousands of important cultural

resources and historic properties in the planning area. These include many prehistoric archaeological sites associated with the Anasazi or Ancestral Puebloan peoples who developed nearby Chaco Canyon. Other sites important to the Jicarilla Apache, the Navajo Nation, and other tribes and pueblos are habitations, hunting blinds, camps, homesteads, sweat lodges, hogans, and areas of intensive settlement and resource acquisition.



Source: BLM GIS 2016

- Cultural inventory
- Decision area
- Planning area
- National Park Service
- Field office boundary

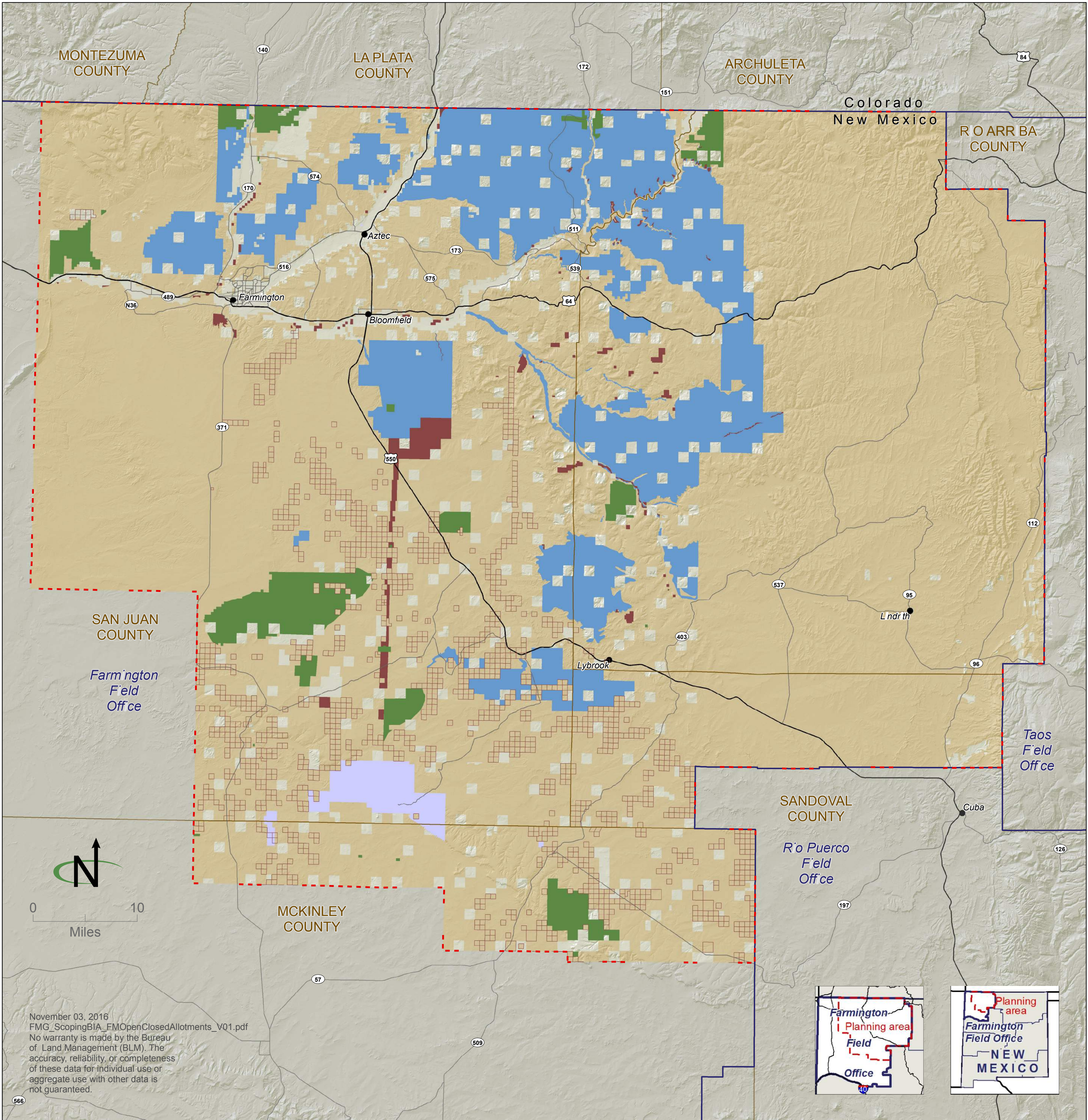


Areas Open/Closed to Fluid Mineral Leasing and Navajo Nation Allotted Lands



Closed areas do not allow fluid mineral development. No surface occupancy (NSO) areas are open to fluid mineral leasing, but surface occupancy or surface-disturbing activities associated with fluid mineral leasing are prohibited. Controlled surface use (CSU) areas are open to fluid mineral leasing, but the stipulation requires special operational constraints. Remaining lands are open subject to standard lease terms and conditions. A portion of

the planning area is referred to as the checkerboard lands, an area located primarily at the eastern boundary of the Navajo reservation. In this area, tribal lands are intermingled with fee lands (owned by both Native American and nonnative American people) and federal and state lands under various jurisdictions.



Source: BLM GIS 2016

- | | |
|------------------------------|-----------------------|
| Closed | Decision area |
| NSO | Planning area |
| CSU | National Park Service |
| Navajo Nation Allotted Lands | Field office boundary |

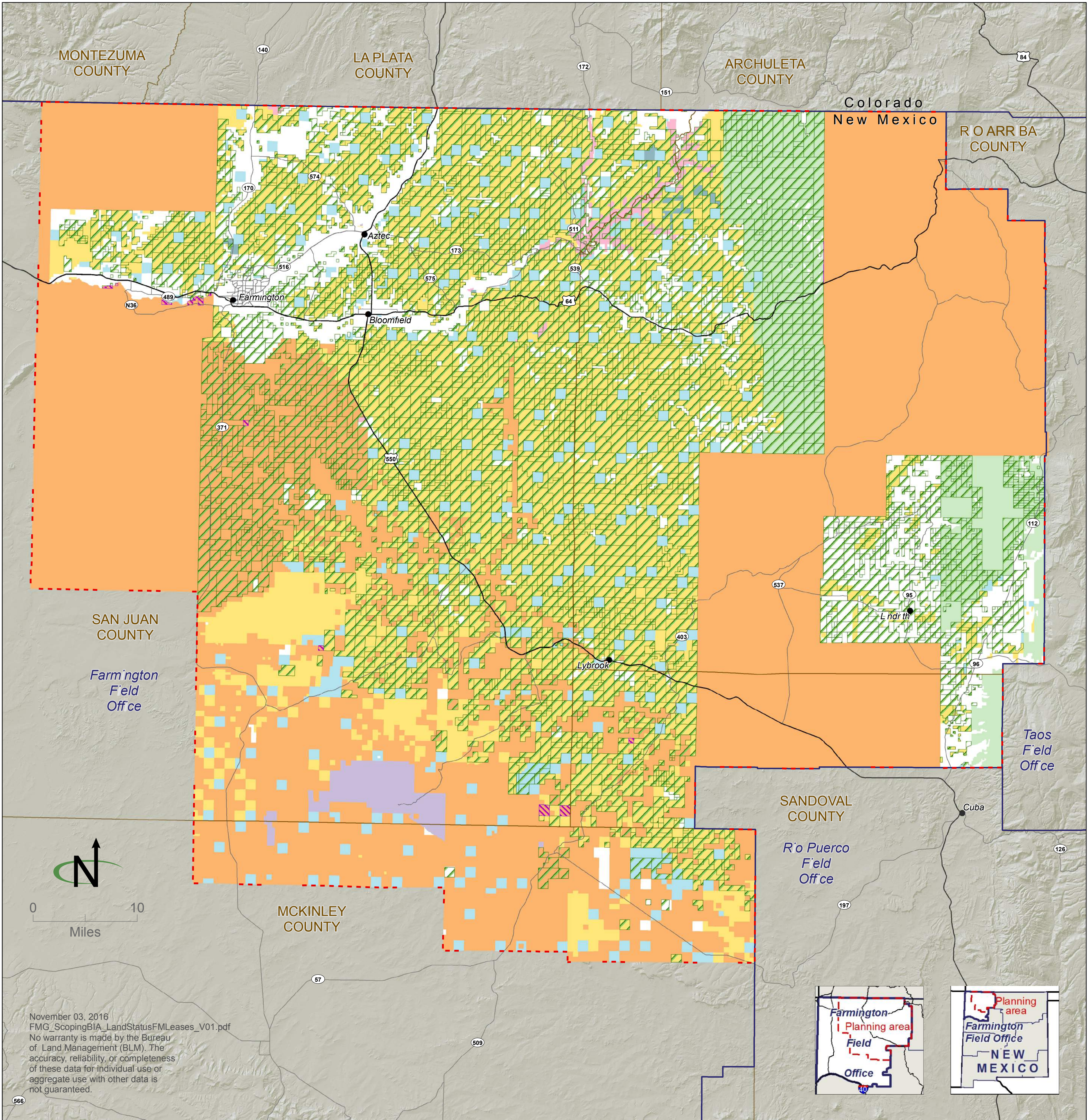


Surface Administration and Active Fluid Mineral Leases



The 4.2 million acre planning area is comprised of federal, state, and private lands as well as Indian reservations overlying the Mancos/Gallup formations within portions of San Juan, Rio Arriba, McKinley, and Sandoval Counties in New Mexico. The decision area for the RMP Amendment/EIS includes only the surface land and subsurface mineral estate within the planning area for which the BLM and BIA have authority to make land use and

management decisions. Oil and gas production in the planning area is primarily from natural gas, coal bed methane, and a small amount of oil/condensate. Oil and gas development leases are primarily administered by the BLM and BIA. Due to advances in horizontal drilling and stimulation, interest and exploration in the Mancos Shale/Gallup Formations has increased.



Source: BLM GIS 2016

- BLM-administered lease

BIA-administered lease

Bureau of Land Mangement

Tribal Trust and Allotted Lands
- Other Surface Management

Bureau of Reclamation

US Forest Service

National Park Service

Private

State of New Mexico

New Mexico State Game and Fish

- Planning area
- Field office boundary

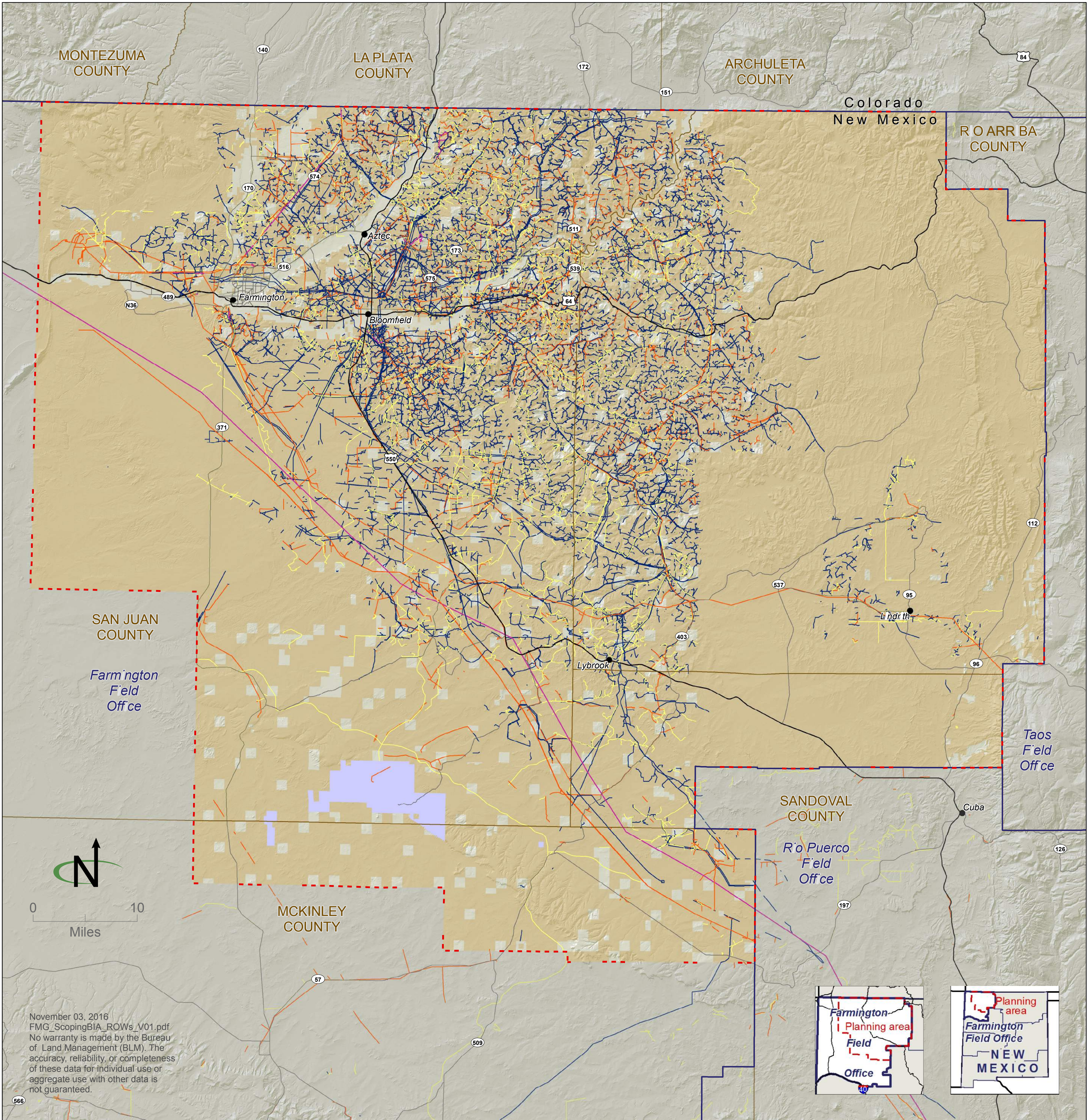


Authorized Right-of-Ways



Right-of-ways (ROW) are public lands authorized to be used or occupied for specific purposes pursuant to a right-of-way grant, which are in the public interest and which require ROWs over, on, under, or through such lands. All ROWs are subject to NEPA to analyze potential resource impacts. To the extent possible, linear ROWs are routed where impacts would least disturb environmental resources. Routing considerations include point of

origin and destination of the ROW, the resources that will be impacted, the impacts on these resources, and rerouting, grouping, and other mitigation that will reduce the impacts. The nearly 17,000 ROWs in the planning area are for various facilities and are held by private individuals, industry, government entities, and other qualified holders.



Source: BLM GIS 2016

- Authorized Right-of-Ways

 - Oil and gas facilities
 - Other energy facilities
 - Non-energy facilities
 - Fiber optic facilities
 - Other
- Decision area
 - Planning area
 - National Park Service
 - Field office boundary

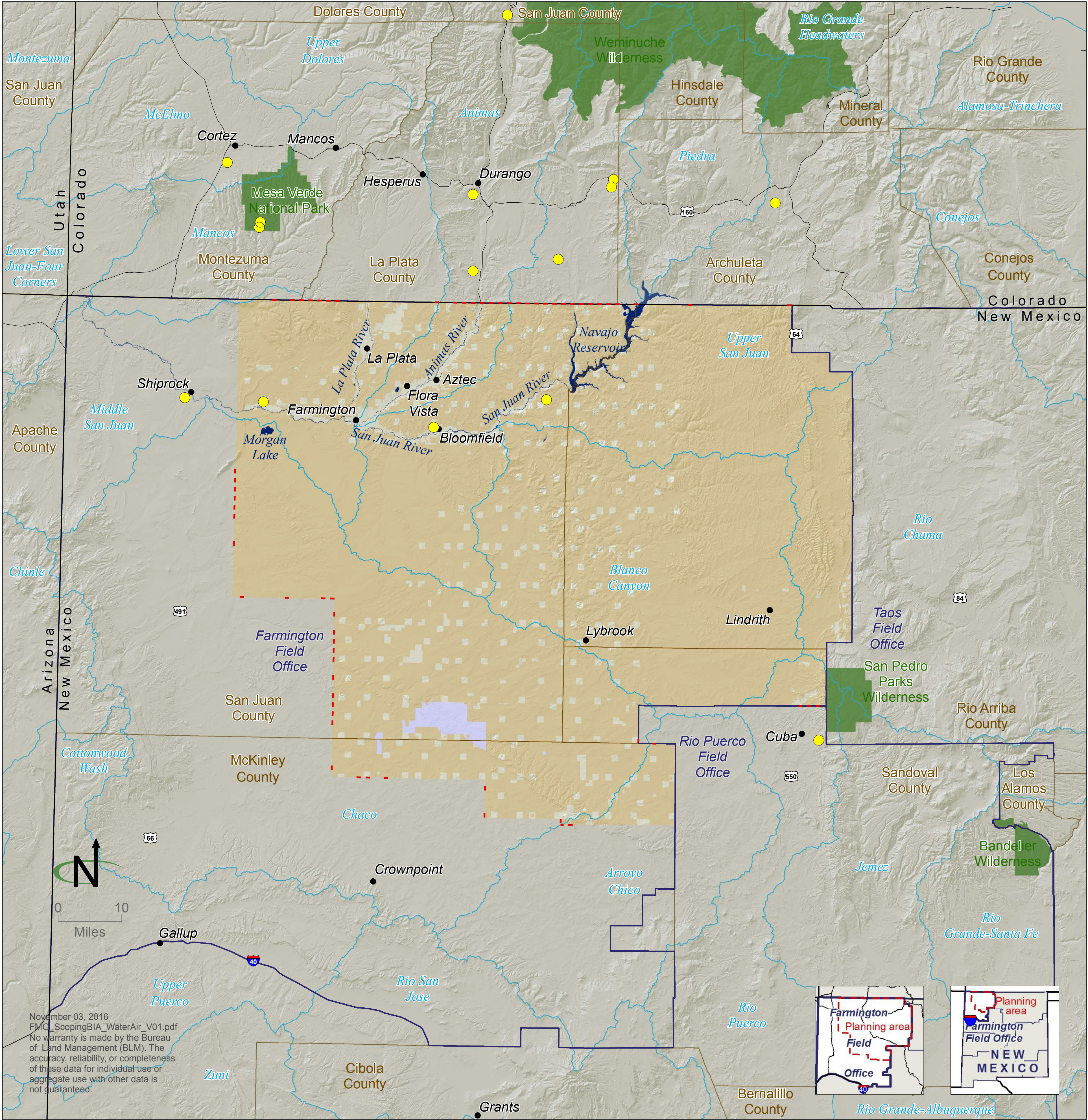


Water and Air Quality



Watersheds in the United States were delineated by the U.S. Geological Survey using a national standard hierarchical system based on surface hydrologic features. The boundary between watersheds is defined as the topographic dividing line from which water flows in two different directions. The EPA has set time-averaged National Ambient Air Quality Standards for six criteria air pollutants as key indicators of air quality: carbon monoxide,

nitrogen dioxide, ozone, sulfur dioxide, lead, and two categories of particulate matter (particulate matter less than 10 and 2.5 microns in diameter). Air monitoring stations are used to measure concentrations of these criteria pollutants. Additionally, under Section 162(a) of the Clean Air Act, certain federal lands defined as Class I areas were granted more restrictive air quality protections, particularly where visibility is concerned.



- | | | |
|------------------------|-------------------------|-----------------------|
| Class I area | Major lake or reservoir | Decision area |
| Air monitoring station | Major river or stream | Planning area |
| | Watershed (HUC 8) | National Park Service |
| | | Field office boundary |