Riparian-Wetland Area

Riparian-wetland areas occupy a unique position in the landscape and life of the western United States. They are a great deal more important than we might expect, given their relatively small acreage (less than 2 percent of the land in New Mexico).

Riparian-wetland ecosystems are areas near rivers, lakes or springs and are important islands of environmental diversity. Lying within much larger, drier and higher ("upland") ecosystems, these small areas attract greater numbers and more use by wildlife and livestock than their size would suggest. In terms of the total volume of plants they support, they are generally more productive than the nearby uplands. They also add to the supply of groundwater, reduce the effects of flooding, and remove pollutants.

Wetlands have a water table at, near or above the land surface. They are waterlogged for a long enough period to support "hydric" soils (with a higher level of the element hydrogen and less oxygen) and "hydrophytic" vegetation (those plants that grow well in very wet soil). Plants in wetlands are especially good at producing oxygen.

Wetlands are so productive because they can catch large amounts of the sun's energy and store it as chemical energy, and they recycle much of the energy they produce on their own. These areas and their plants are nutrient traps that in the future will probably help us with some of our air and water pollution problems.

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Contact us at:
Bureau of Land Management
Rio Puerco Field Office
435 Montaño N.E.
Albuquerque, New Mexico 87107
505/761-8700
or
www.blm.gov/nm

In case of emergency:
BLM Rio Puerco Law Enforcement – 505/761-8700
Immediate Emergency – 911
BLM 24-hour Santa Fe Law Enforcement – 505/827-9377

Leave No Trace: Plan ahead and prepare - Travel and camp on durable surfaces - Dispose of waste properly - Leave what you find - Minimize campfire impacts - Respect wildlife - Be considerate of other visitors.

BLM

Perea Nature Trail

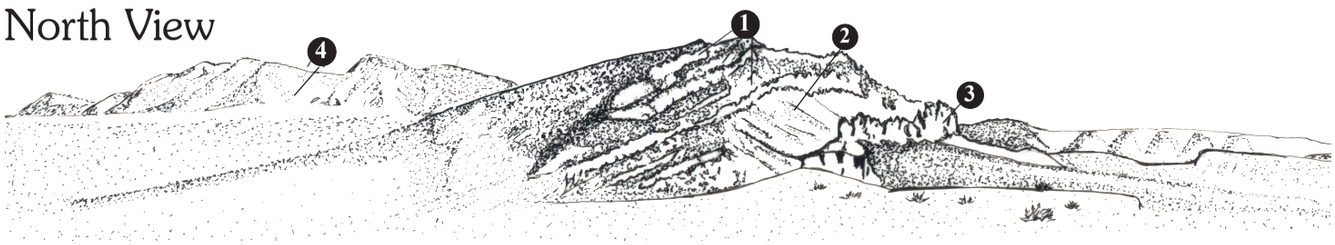
Geology & Wetlands

New Mexico • Rio Puerco Field Office

"Joy in looking and comprehending is nature's most beautiful gift."

Albert Einstein

North View



Trail Location:
Located in San Ysidro, New Mexico, just off US 550, at the Rio Salado Bridge.

Geology:
The view to the North, from the Perea Nature Trail, is dominated by a mountain peak, meagerly covered with native juniper and grasses. The mountain highlights the Jemez Mountain range, which is the southern start of the Rocky Mountains that extend northward to Alaska.

1. The western reaches of the mountain peak, and its crest, are composed of a white-to-tan sand-stone that forms sharp ridges. It is of the Triassic Age and called the Agua Sarca formation.

2. Lower, on the east side of the peak, an overlay of grey Permian-Age sandstone appears. The sand stone is called the Glorieta formation and is a cliff-forming rock.

3. The slope breaks abruptly, and forms a brilliant red, vertical face at the San Ysidro Fault. Here, the mountain is striped with shades of red. This was developed during the Permian Age and these stripes are out-crops of the Abo and Yeso formations. The Abo formed in river channels and on floodplains, while the Yeso formed in a shallow marine environment with local wind-blown sands.

4. The high rock formations with purple hues seen in the distance are part of the Nacimiento Mountain chain. These are principally granite, gneiss, and schist that formed during the Precambrian Age. The gneiss and schist form the core of the Nacimientos, and are the oldest rocks in the area.

South View

Visitors to the Perea Nature Trail may look to the southwest, over the Rio Salado river bed, to view an outstanding geologic setting.

1. The Todilto layer forms the edge of a large flat mesa known as 'Blanco Mesa', for its unusual white surface. The mesa has been used as a creative background for motion picture scenes and photographic productions, and for the mining of gypsum. Gypsum is mined and shipped to Albuquerque and Bernalillo for manufacture of wall-board to be used nationwide in home construction.

2. At the upper reaches of the existing cliffs, layers of near-white rock can be seen. These layers are known as the Todilto Formation, also of the Jurassic Age. The Todilto Formation is composed of brown limestone at the base and is overlain by white gypsum up to 100 feet thick.

3. This layer is composed of light tan-to-yellowish sandstone cliffs, and is part of the Jurassic Age it is called the Entrada formation. The sandstone was formed from ancient sand dunes.

4. Rising from the sparsely vegetated grazing lands are small hills and mounds of landslide deposits, fallen from centuries of decay of the rocky cliffs above. These show an inter-mix of colors from red-to-orange in the lower layer, and grey-to-white material deposited from above. The lower layer was formed during the Triassic Age and is part of a group of rocks called the Chinle formation.

Geologic Time Scale

Subdivisions Based on Strata/Time Systems/Age	Radiometric Dates (millions of years ago)
Quaternary	0-2?
Tertiary	2?-63
Cretaceous	63-145
Jurassic	145-210
Triassic	210-255
Permian	255-280
Pennsylvanian	280-320
Mississippian	320-360
Devonian	360-415
Silurian	415-465
Ordovician	465-520
Cambrian	520-580
Precambrian	580-3,000