

Great Sand Dunes National Park and Preserve



Water, Water Everywhere - List of Issues to Research

Issue	Description
<i>Pollution</i>	
Abandoned mines	Although most of the mining done in Great Sand Dunes National Park and Preserve's watershed was on a small scale, a few of mines should be studied in detail to be certain that there are not remnant pollution sources at those sites.
New mining operations	Since private landholders are near the park, the potential exists for impact to the public resources at Great Sand Dunes if mining operations occur near the park boundary.
Recreational contaminations	Contaminations to water supplies could occur through the improper disposal of human waste. Vehicles traveling on roads could also cause contamination.
Abandoned in-park dumps	Although the park no longer uses park lands to dump trash, in past years the park used three small locations inside the park boundary as dumps. These sites should be studied to see if water supply contaminants exist.
<i>Water Rights</i>	
The Rio Grande Compact	In 1938, the Rio Grande Compact was signed by Colorado, New Mexico, and Texas. The Rio Grande Compact attempts to maintain equitable distribution of the Rio Grande's water among each state through which the river flows. Its terms are somewhat flexible, but it requires Colorado to deliver a certain level of flow to New Mexico.
Senior water rights	Water rights in Colorado are based on the "first in them, first in right" maxim. Great Sand Dunes National Park and Preserve does not have the senior water rights for all of the waters that flow on the surface through the park. How might that affect the flow of water through the park in the future?
Closed Basin Division	In the San Luis Valley, the Closed Basin Division project delivers water, pumped from the aquifer, through a 42-mile canal to areas downstream of the Rio Grande to help meet Colorado's obligations under the Rio Grande Compact.
Water export and development	In the dry parts of the American West, water is a valuable resource, especially in areas where the demand is high and the supply is low. Projects have been proposed by private companies to export water from San Luis Valley's aquifer to locations outside the Valley.
<i>Human Use</i>	
Water use in the park	There are currently four wells in use by the park for the campground, picnic area, residential area, and park operational facilities. If more development were to occur in the park, additional wells may be needed which could cause a seasonal lowering of the local groundwater, thereby affecting the natural hydrology of the area.
Agriculture and ranching outside the park	Most agricultural and ranching operations in the area rely on wells for water. How would additional ranching and agricultural operations affect the aquifer?
New development	Even though the San Luis Valley is not a populous area, how would new development around the park affect the water resources inside the park boundary? (Thirty-seven percent population growth is predicted by 2030 for the San Luis Valley.)

Recreation	One of the major reasons why people visit the Great Sand Dunes is Medano Creek. Visitors enjoy wading, building sand castles, and other beach-like recreation during the months when the creek's flow is high. How would recreational opportunities be affected if Medano Creek's natural flow was altered significantly?
Sacred lands	The people from Tewa/Tiwa-speaking pueblos and other Native American groups along the Rio Grande consider a lake located near the dunes to be of great spiritual importance.
<i>Ecosystem Needs</i>	
Wildlife and plant-life	Like all life, plant and animal communities are dependent on water. How does human water use or seasonal water diversion affect plant and animal life at Great Sand Dunes?
Migratory wildlife	Seasonally wet areas, interdunal ponds, lakes, and creeks are of significance to migratory wildlife. These stopover locations are extremely important to birds and even larger animals, such as herds of elk that seasonally migrate up and down from the mountains.
Interdunal ponds	In 1936, there were 36 interdunal ponds. In 1966, there were zero. Today there are a few scattered to the west and southwest of the dunefield. What factors have influenced the formation and disappearance of these ponds?
Native fisheries	The stocking of nonnative fish in the creeks and highcountry lakes in past years has interfered with the native fisheries. The park has begun an effort to reintroduce in to Medano Creek fish (the Rio Grande cutthroat trout, the Rio Grande sucker and the Rio Grande chub) that are considered native. Should the park take similar action in Sand Creek?
<i>Physical Landscape Alterations</i>	
Aquifer recharge	Much of Great Sand Dunes National Park is considered an aquifer recharge zone. How does protecting a recharge zone play a role in the protection of water resources inside and outside the park boundary?
<i>Other</i>	
Climate change	How is global climate change affecting the ecology and hydrology of Great Sand Dunes National Park and Preserve?
Outstanding Waters Designation	Medano Creek has gained the classification of Outstanding Waters Designation—the highest level of water-quality protection available under the Clean Water Act and Colorado regulations. How will this new classification affect future water use?
Wild and Scenic Rivers	Should Great Sand Dunes' creeks be designated as Wild and Scenic under the Wild and Scenic Rivers Act? Managers at Great Sand Dunes National Park and Preserve are currently exploring the possibilities.
Unknowns	How do unknowns play a role in water-quality management? Should the unknowns be factored into the decision-making and planning process?