Within the subarea, both sides of the international border have protected areas. The Maderas del Carmen and Cañon de Santa Elena in Mexico contain nearly 1.2 million acres. Although much of this land is privately held, the Mexican government has given these areas special environmental status. Although much of the land in Texas is privately owned, the National Park Service (NPS) and Texas Parks and Wildlife Department (TPWD) protect significant areas along the border including: Big Bend National Park (NPS), the Rio Grande Wild and Scenic River (NPS), Amistad National Recreation Area (NPS), Black Gap Wildlife Management Area (TPWD), and Big Bend Ranch State Park (TPWD).

Sandbar near Santa Elena. Big Bend National Park. (Photo courtesy of NPS).

SIGNIFICANT WATER-RESOURCE ISSUES

The availability of both surface and ground water is the major water-resources issue in this subarea; concern for its quality is a second important issue. In the United States, ground water is the principal source of water for domestic, livestock, and public-supply uses. In Mexico, the Rio Conchos has historically supplied water for agricultural use. Adequate streamflow, in terms of both annual volume and seasonal distribution of flows and peak discharges, is needed to support aquatic and riparian habitats, satisfy recreational and livestock water uses, and satisfy downstream demands by the U.S. and Mexico for water that is temporarily stored in Amistad Reservoir and allocated for future use to satisfy international agreements.

EXTERNAL FACTORS

Most of the factors affecting water availability and quality within the subarea originate outside the subarea. The regulation of the Rio Grande is a consequence of laws and treaties governing the allocation of water among the States and between the U.S. and Mexico, which form the fundamental basis for the existing surface-water flow regime in the subarea.

EXPLANATION

The following icons (symbols) are used in the text and in figure 2 to describe a variety of water issues; a brief explanation of each symbol is provided below.

- Water quantity issues
- Ground water-surface water interactions
- Maintenance of river flows
- Riparian/wildlife habitat issues
- Undertreated sewage
- Agricultural chemical/nutrient runoff
- Fish/amphibian impacts
- Mining/tailings dam issues
- Water-quality degradation
- Salinity
- Recreation

Rafting in "Rock Slide" of Santa Elena Canyon. Big Bend National Park.(Photo courtesy D. Prichard).

Figure 2. Water issues in the Rio Grande--Rio Conchos to Amistad Reservoir subarea.