

animal movement. The subarea receives considerably more rainfall than most other subareas of the border, with an average annual rainfall of about 26 inches at the mouth of the river and about 16 inches at Falcon Dam. In Texas, the primary population centers are McAllen, Harlingen, and Brownsville; Reynosa and Matamoros are the major cities in Tamaulipas (fig. 6). The total 2000 population of these cities is estimated to be in excess of 1,500,000. As in other border subareas, the water resources and associated plant, fish, and wildlife communities of the Lower Rio Grande Valley are increasingly subject to the pressures of human activities.

SIGNIFICANT WATER-RESOURCE ISSUES

Limited water quantity and impaired water quality represent the greatest water-resources issues in the subarea. Anthropogenic activities such as agriculture, urbanization, and industry compete for and affect both the quantity and quality of the water resources. Water withdrawal and use has reduced water quantity and quality, resulting in significant threats to the biological, cultural, and physical resources of the Lower Rio Grande Valley subarea. In the remainder of this Fact Sheet, these threats are discussed under the general headings of water quantity and water quality. Though in many situations, water quantity and quality are directly related.

Water Quantity

Surface-water flow entering the Lower Rio Grande Valley subarea via the Rio Grande mainstem is greatly influenced by water-management practices and upstream control structures. Mexico's Rio Conchos and Rio San Juan have been the primary sources of water for this section of the Lower Rio Grande for several decades. Flow in these rivers is being rapidly diminished by increasing demands in their upper watersheds. The Rio Conchos supplies many cities in northwestern Mexico, while

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
-  Municipal or domestic water supply
-  Ground water - surface water interaction
-  Maintenance of river flows
-  Riparian / wildlife habitat issues
-  Fish impacts
-  Legal issues / water rights
-  Agricultural chemical / nutrient runoff
-  Salinity
-  Human population pressure
-  Chemical/industrial effluent
-  Undertreated sewage
-  Endangered species (sea turtles)



Figure 2. Water issues in the Lo