

Lower Rio Grande Basin Study

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Reclamation and the Rio Grande Regional Water Authority (RGRWA) and its 53 member entities, in collaboration with the Texas Region M Planning Group, Texas Water Development Board, Texas Commission on Environmental Quality (TCEQ), and International Boundary and Water Commission, are conducting a basin study to evaluate the impacts of climate change on water supply and demand imbalances within an eight county region along the U.S./Mexico border in south Texas (Cameron, Willacy, Hidalgo, Starr, Zapata, Jim Hogg, Webb and Maverick Counties; Figure 1).

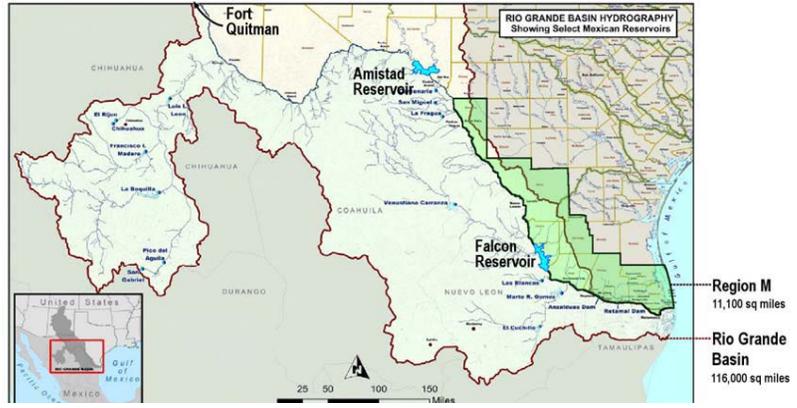


Figure 1: Lower Rio Grande Basin (adapted from IBWC)

The study area currently experiences severe and frequent water supply and demand imbalances that may be exacerbated by a changing climate and population growth. The population in the study area is expected to grow from 1.7 million in 2010 to 4 million in 2060. The water supply and demand imbalance is expected to reach 592,084 acre feet per year by 2060, which would result in 35 percent of water demands being unmet.

The water management issues facing the Lower Rio Grande River basin are extremely complex due to climate change, population growth, and treaty requirements. Because the study area is shared by both the U.S. and Mexico, numerous issues are presented both politically and technically. Flows within the Lower Rio Grande River are dependent upon reservoir operations and run-off emanating from both the U.S. and Mexico, which is complicated by issues relating to required reservoir releases pursuant to stipulations set forth in the 1944 U.S.-Mexico Water Treaty.

To address the issues facing the Lower Rio Grande Basin this study will:

- Perform hydrologic projections of water supply and demand in the changing climate.
- Evaluate how existing water and power infrastructure will perform in the future.
- Formulate a range of alternative regional water management strategies to meet water needs through 2060.
- Evaluate and screen alternatives based on several factors, including cost/benefits; public acceptance; and various political, institutional, regulatory, and environmental constraints.
- Recommend a preferred alternative plan to meet planning objectives.

The total study cost is estimated to be \$412,798 (52 percent RGWRA; 48 percent Federal cost share) and will take 24 months to complete.

