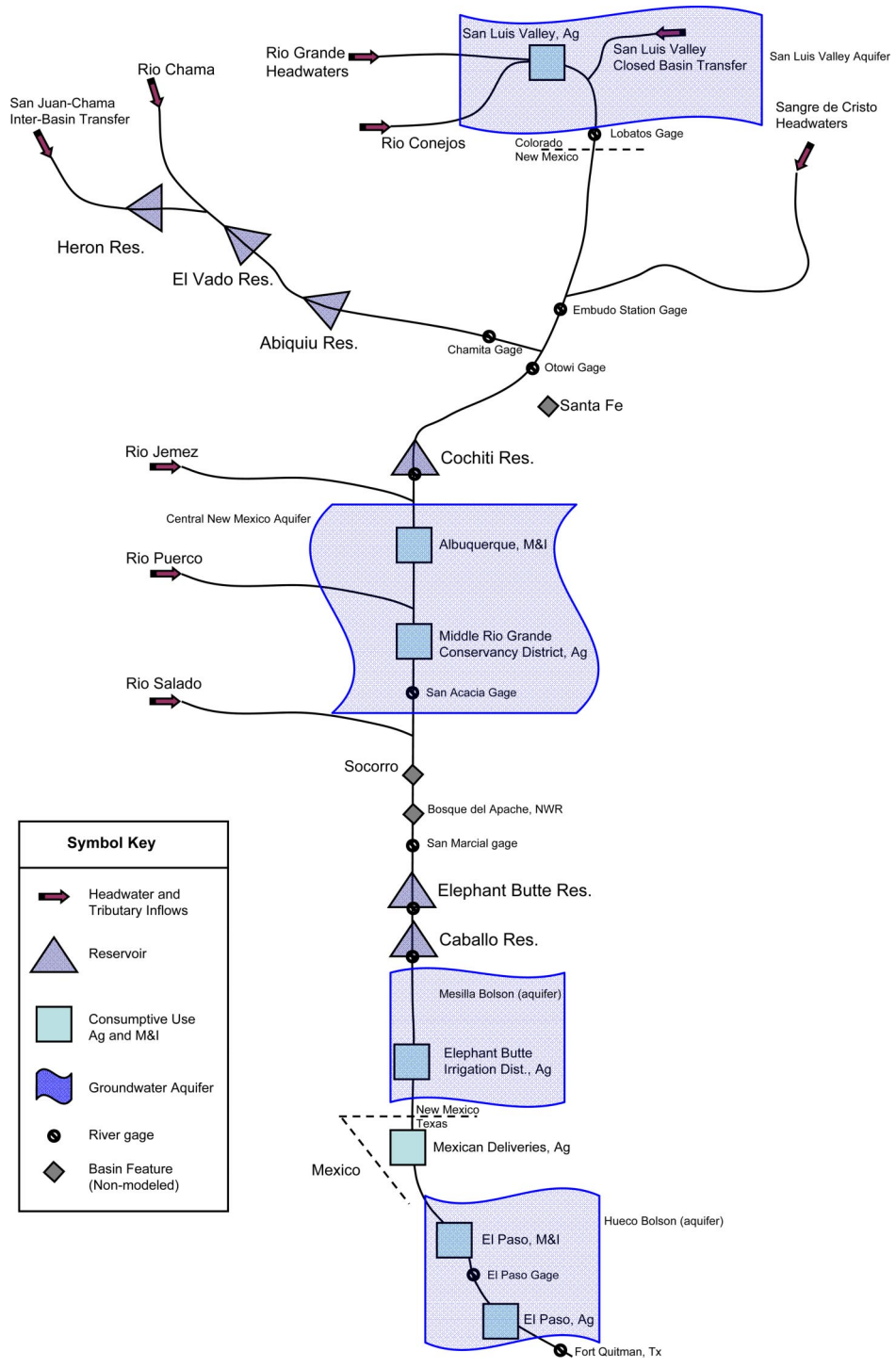
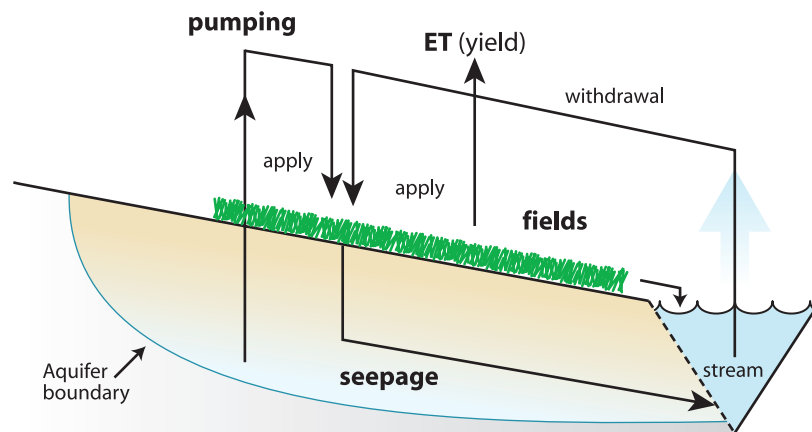


# Supporting Information

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**Fig. S1.** Rio Grande Basin schematic. The Upper Rio Grande Basin is the land area drained by the Rio Grande and its tributaries that flow from its headwaters to about 70 miles south of the border cities of El Paso, TX and Ciudad Juárez, Mexico. Surface water from the river and groundwater pumping meet the primary water needs of Albuquerque, NM, El Paso, and Juárez. In addition, it serves 1 million acres of irrigated land in the U.S. and Mexico. [Reproduced with permission from refs. 28 and 29 (Copyright 2008, Elsevier).]



**Fig. S2.** Water balance schematic. The schematic shows a hydrologic–agronomic balance at the field–stream level. Flows shown include water withdrawals, applications, pumping, seepage to the aquifer, evapotranspiration (ET), aquifer flows to or from the stream, and surface return flows to the stream.