

III. BASIN OVERVIEW

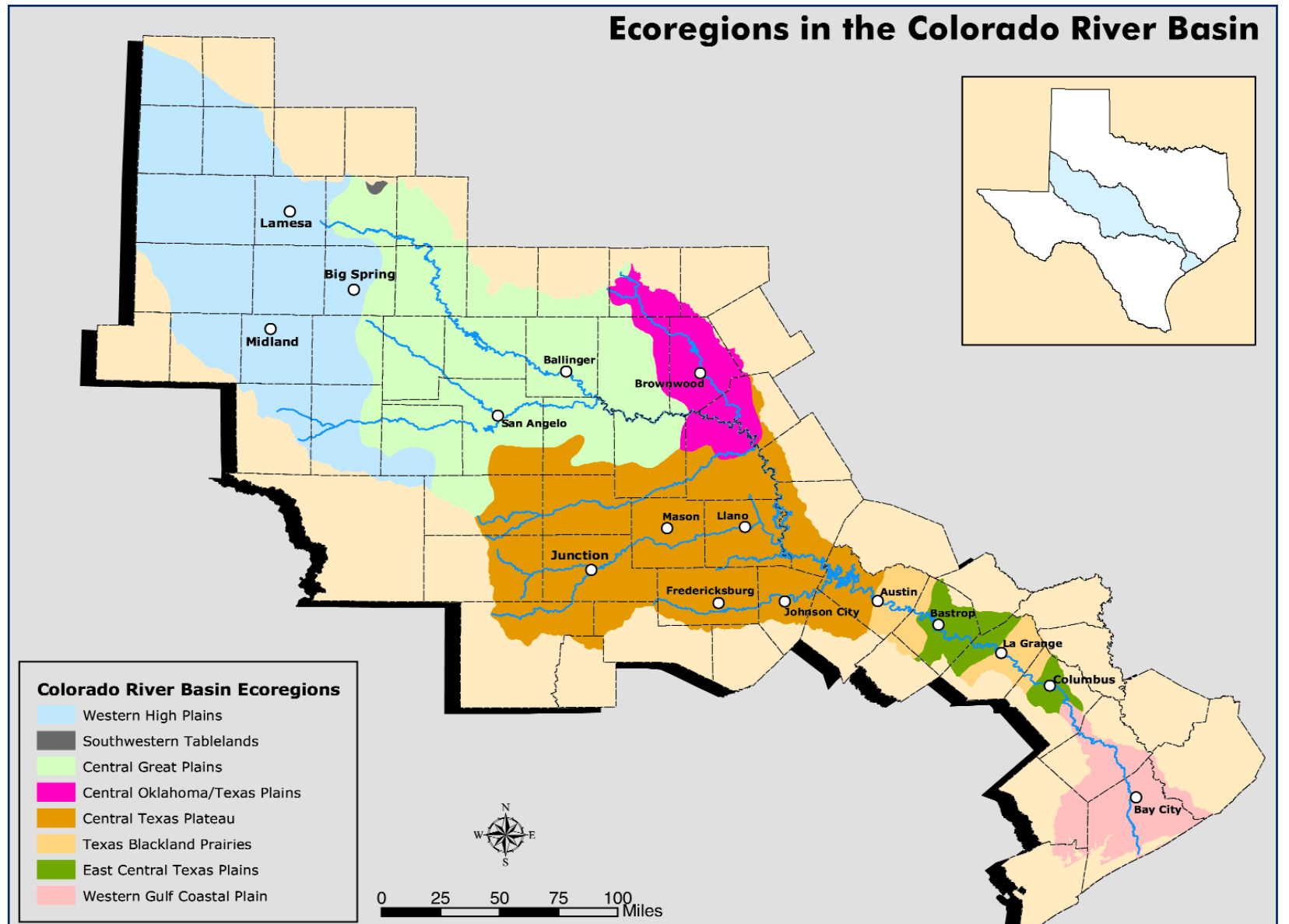
Ecoregions in the Colorado River Basin

An ecoregion is a delineation based on climate, vegetation, geology and many other factors that separate one geographic area from another. There are eight ecoregions in the Colorado River basin. In the upper basin, these ecoregions correspond markedly with the noncontributing zone, the upper Colorado River/Concho River basins, and the Pecan Bayou basin. In the middle portions of the basin, the Central Texas Plateau corresponds with the Pedernales, Llano and San Saba river basins. Downstream of Austin, the Colorado River flows through the East Central Plains and Blackland Prairies until just below Columbus, where the Western Gulf Coastal Plains define the flat topography and coastal marshes. Fig. 10 shows the ecoregions in the Colorado River Basin.

The Central Texas plateau typically produces clear, spring-fed streams.



Fig. 10 - Ecoregions in the Colorado River Basin



Hydrology and Groundwater

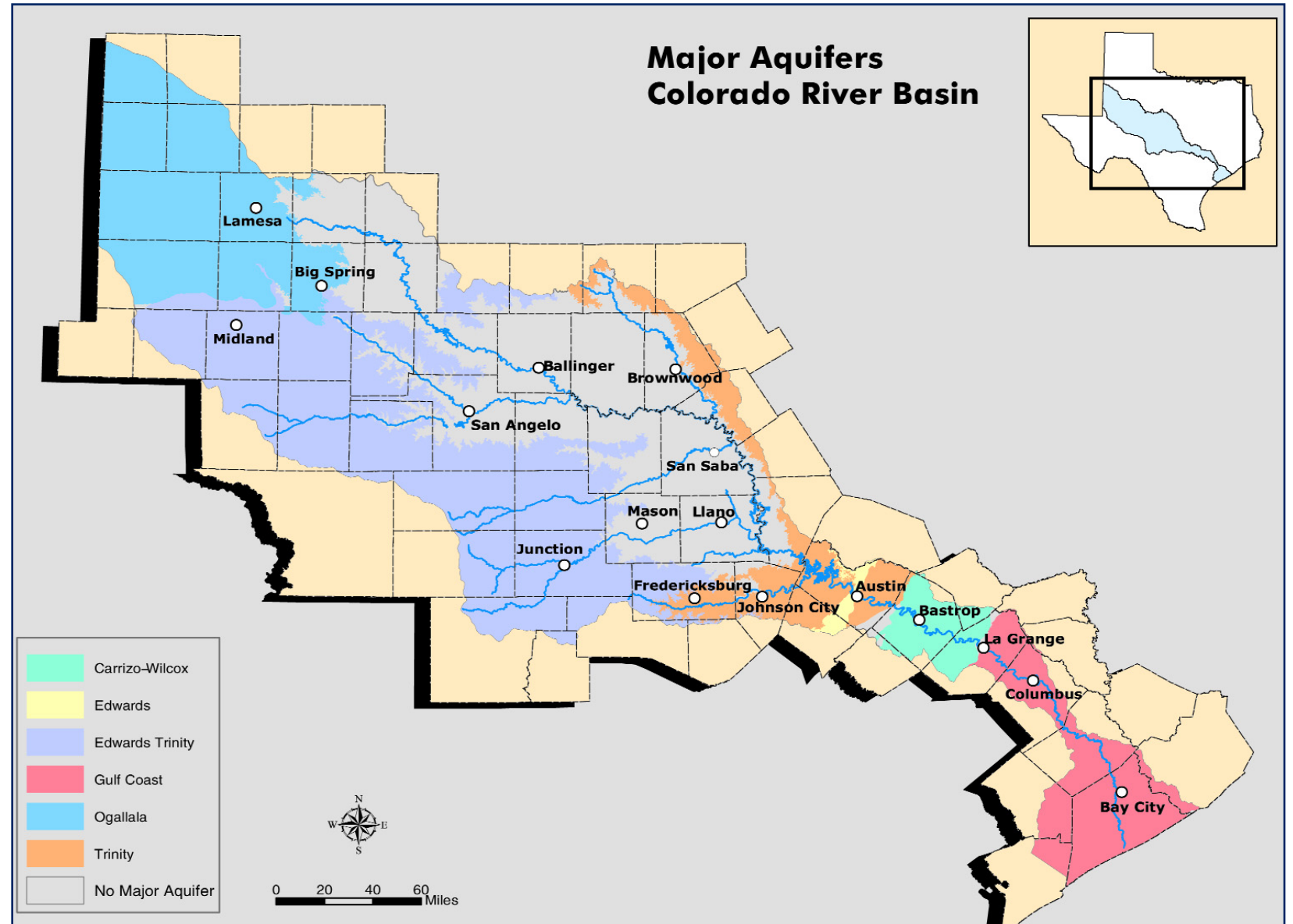
Rainfall patterns vary substantially across the basin. The headwaters usually receive less than 14 inches of rain per year, while the lower basin averages 44 inches annually. The upper portion of the basin is characterized by long periods of drought separated by rare, but large flood events.

A severe drought occurred in Central Texas in 2000 dropping Lake Travis levels to 50 feet below the historical average conservation pool. The lake was brought back to normal levels when it rose more than 50 feet in 20 hours due to floods in the Pedernales River basin.

The upper basin has been plagued with drought during much of this reporting period. Lake J.B. Thomas and E.V. Spence Reservoir currently contain less than ten percent of their capacity. H.H. Ivie Reservoir has remained at less than 50 percent of its capacity since 1997.

Fig. 11 identifies the six major aquifers in the Colorado River Basin. The upper basin has been plagued with drought during much of this reporting period. Lake J.B. Thomas and E.V. Spence Reservoir currently contain less than ten percent of their capacity. H.H. Ivie Reservoir has remained at less than 50 percent of its capacity since 1997.

Fig. 11 - Major and Minor Aquifers in the Colorado River Basin



Vegetation and Soils

There are 10 major vegetation regions in Texas and seven of them occur in the lower Colorado River watershed (Fig. 12).

- ◆ The Gulf Prairies and Marshes region contains tallgrass-midgrass prairies and marsh plant communities on heavy clay soils associated with poor drainage. The region receives 26 to 56 inches of rainfall annually and elevation ranges from 0 to 250 feet above sea level with nearly level topography.
- ◆ The Post Oak Savannah region contains oak-hickory forest communities on acid, loamy soils underlain by clay pan. The region receives 30 to 45 inches of rainfall annually and elevation ranges from 300 to 800 feet above sea level with nearly level to gently rolling topography.
- ◆ The Blackland Prairie region contains tallgrass prairie, post oak savanna and bottomland hardwood plant communities on deep clayey soils. The region receives 30 to 45 inches of rainfall annually and elevation ranges from 250 to 750 feet above sea level with nearly level to rolling topography.
- ◆ The Cross Timbers and Prairies region contains post and blackjack oak along with tallgrass-midgrass prairies on loamy or sandy soils with acid to neutral surface layers. The region receives 25 to 35 inches of rainfall annually and elevation ranges from 500 to 1,500 feet above sea level with gently rolling topography.
- ◆ The Edwards Plateau region contains oak savannahs and woodlands, juniper breaks and short prairie grasses on alkaline soils in limestone areas and neutral soils in granite areas. The region receives 12 to 32 inches of rainfall annually and elevation ranges from 1,200 to 3,000 feet above sea level with deeply dissected, hilly and stony plains.
- ◆ The Rolling Plains region contains juniper woodlands and prairie midgrasses on sands and clays. The region receives 18 to 28 inches of rainfall annually and elevation ranges from 1,000 to 3,000 feet above sea level with nearly level to rolling topography.
- ◆ The High Plains region contains mostly grasses on alluvial sediment deposits from the Rocky Mountains. The region receives 12 to 20 inches of rainfall annually and elevation ranges from 3,000 to 4,500 feet above sea level with nearly level topography.

Fig. 12 - Vegetation Regions in the Colorado River Basin

