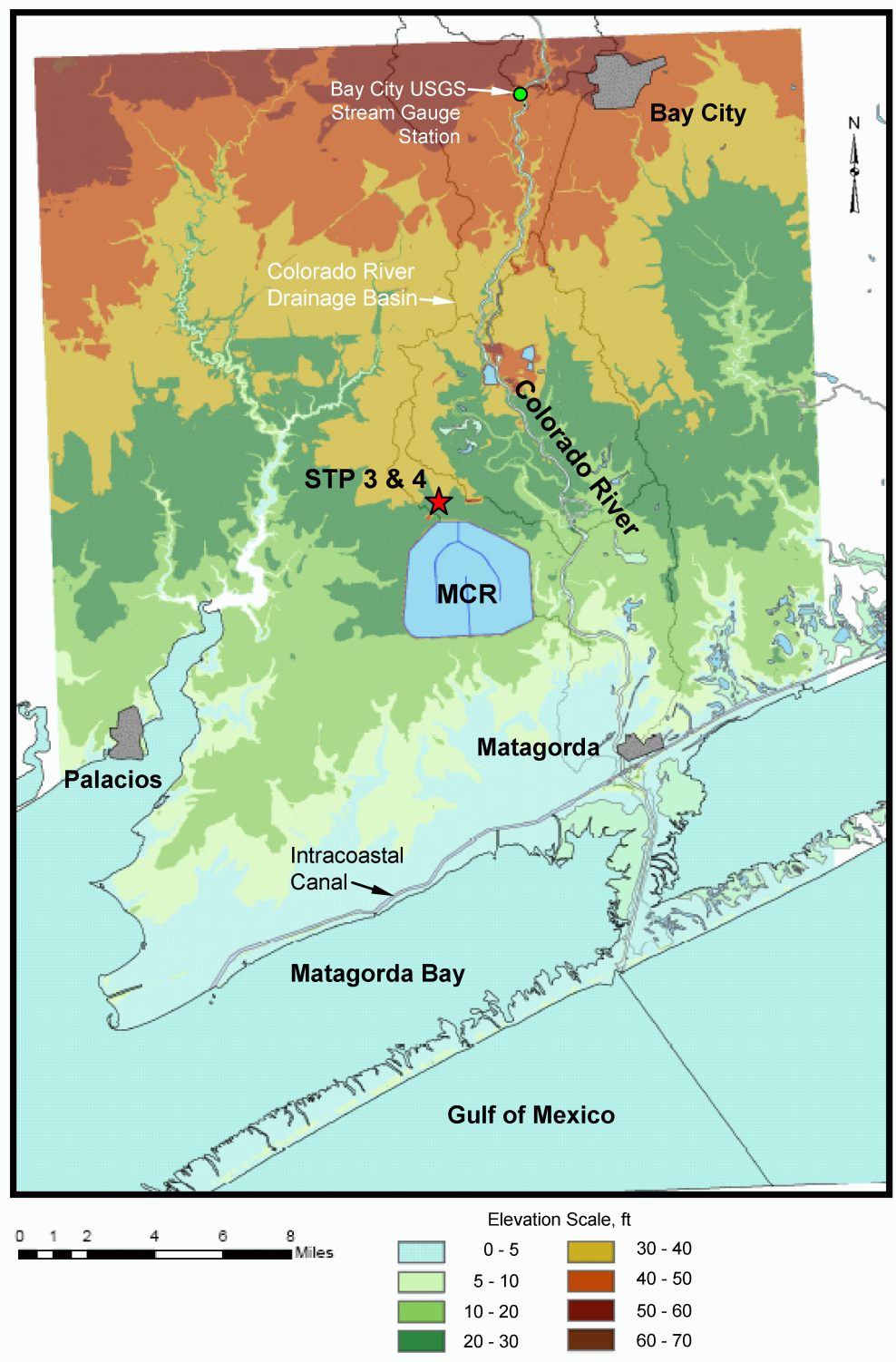


Figure 2.3.1-1 Site Map of STP 3 & 4

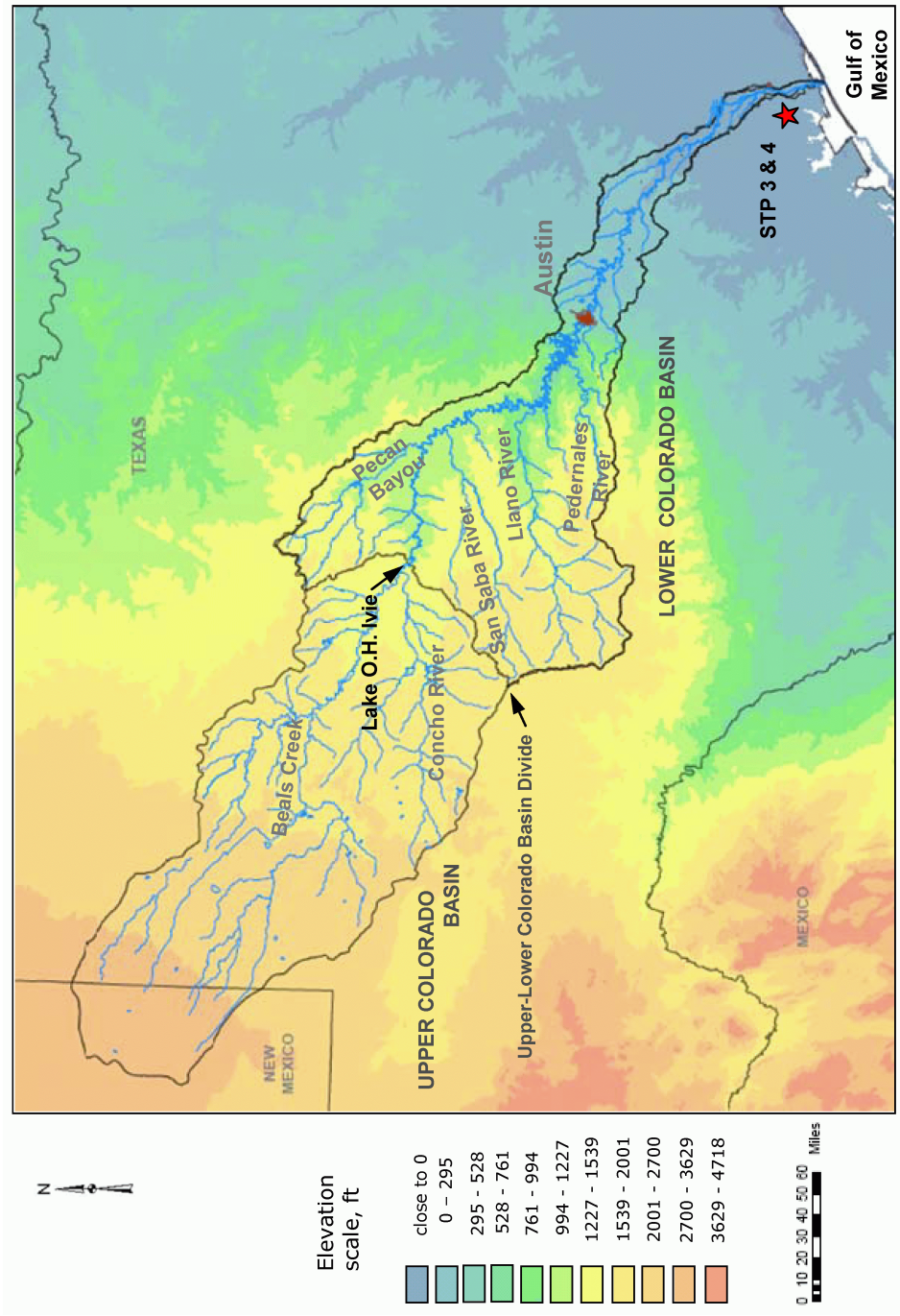


Figure 2.3.1-2 The Colorado River Basin (Reference 2.3.1-2)

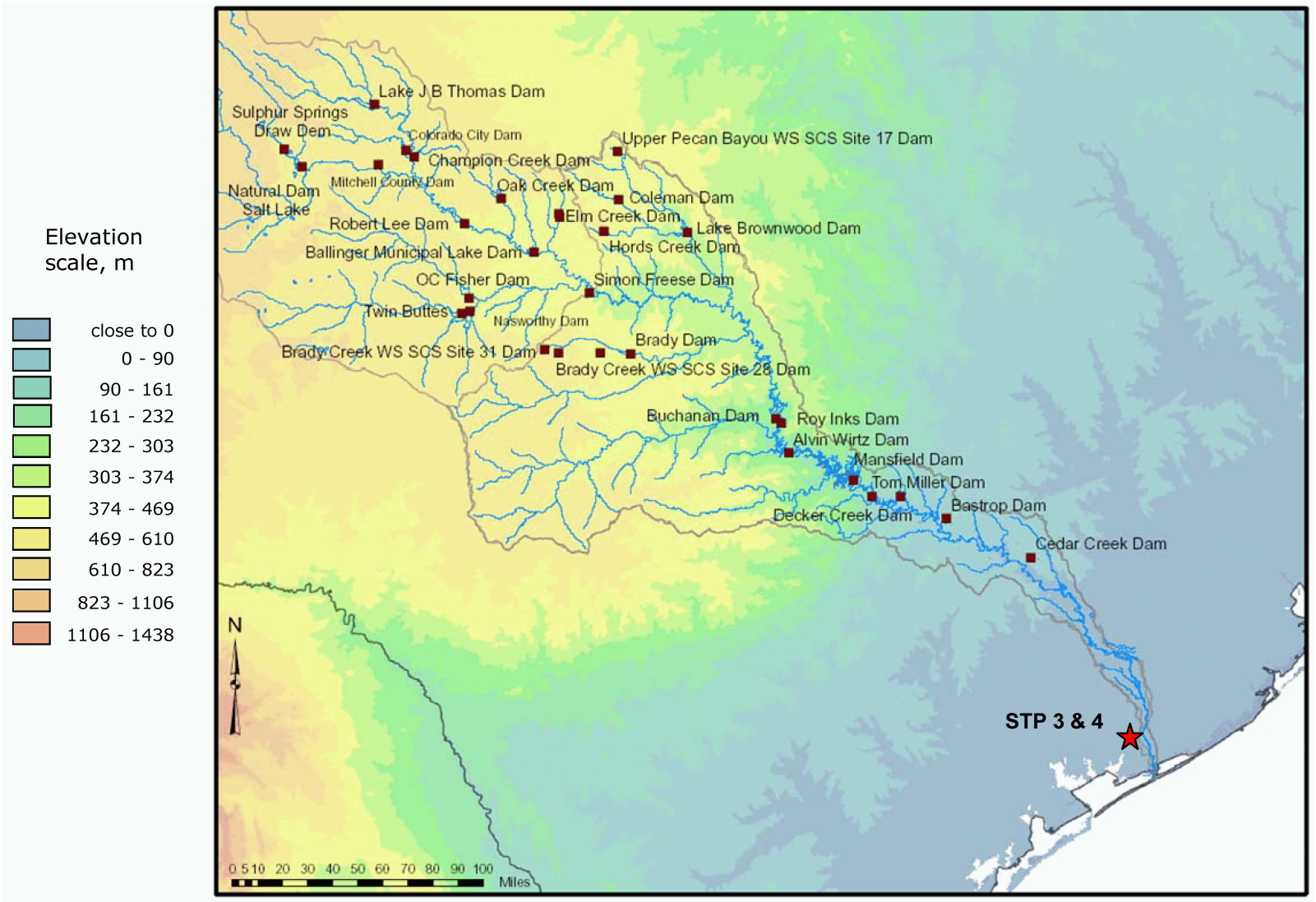


Figure 2.3.1-3 Major Dams in the Colorado River Basin (Location of Dams from Reference 2.3.1-4)

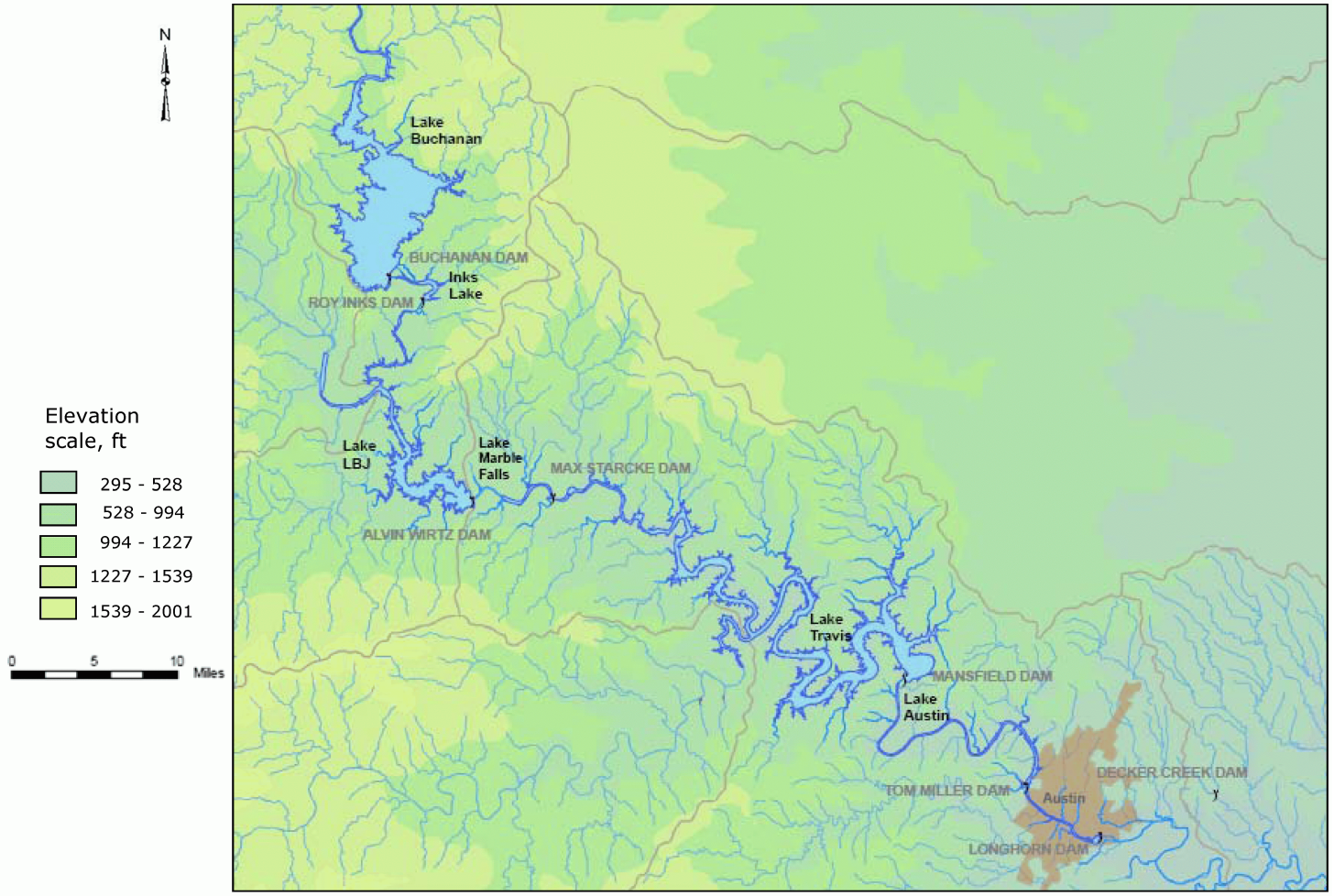


Figure 2.3.1-4 The Highland Lakes and Dams in the Lower Colorado River Basin (Reference 2.3.1-5)

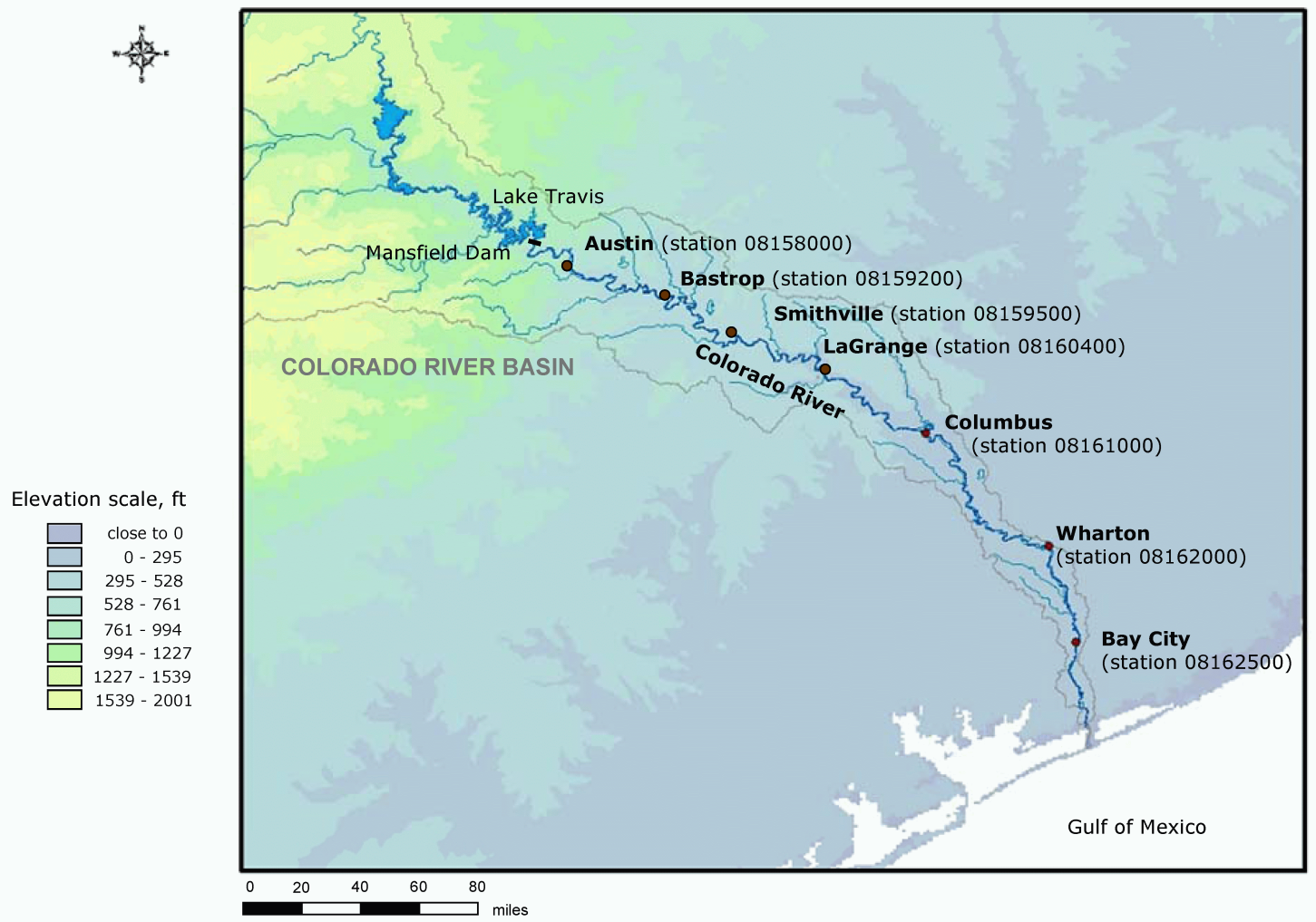


Figure 2.3.1-5 Colorado River Streamflow Gauging Stations Downstream of Mansfield Dam (Reference 2.3.1-6)

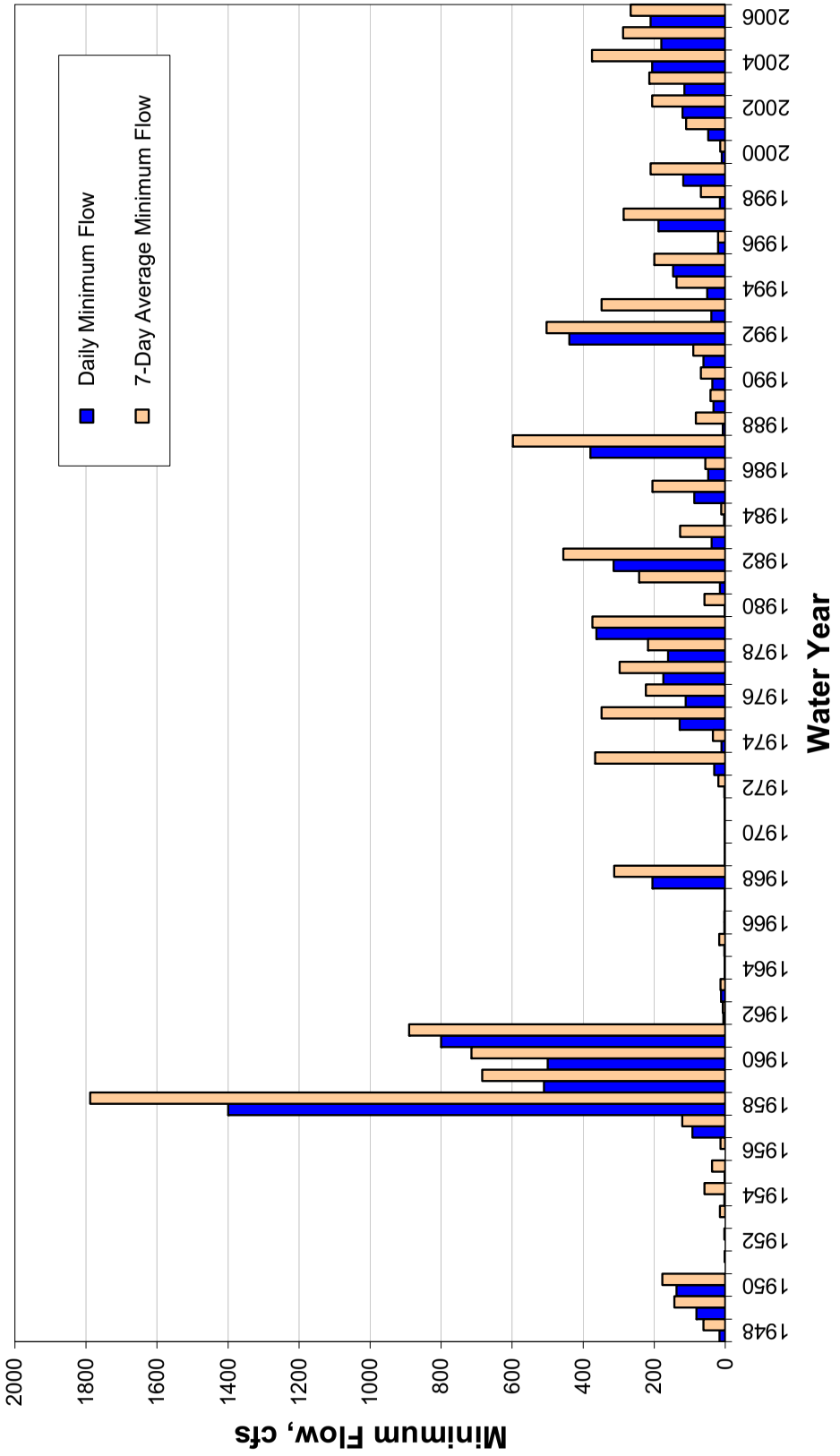


Figure 2.3.1-6 Minimum Daily and 7-Day Flow at Bay City for the Period 1948-2006 (Reference 2.3.1-10)

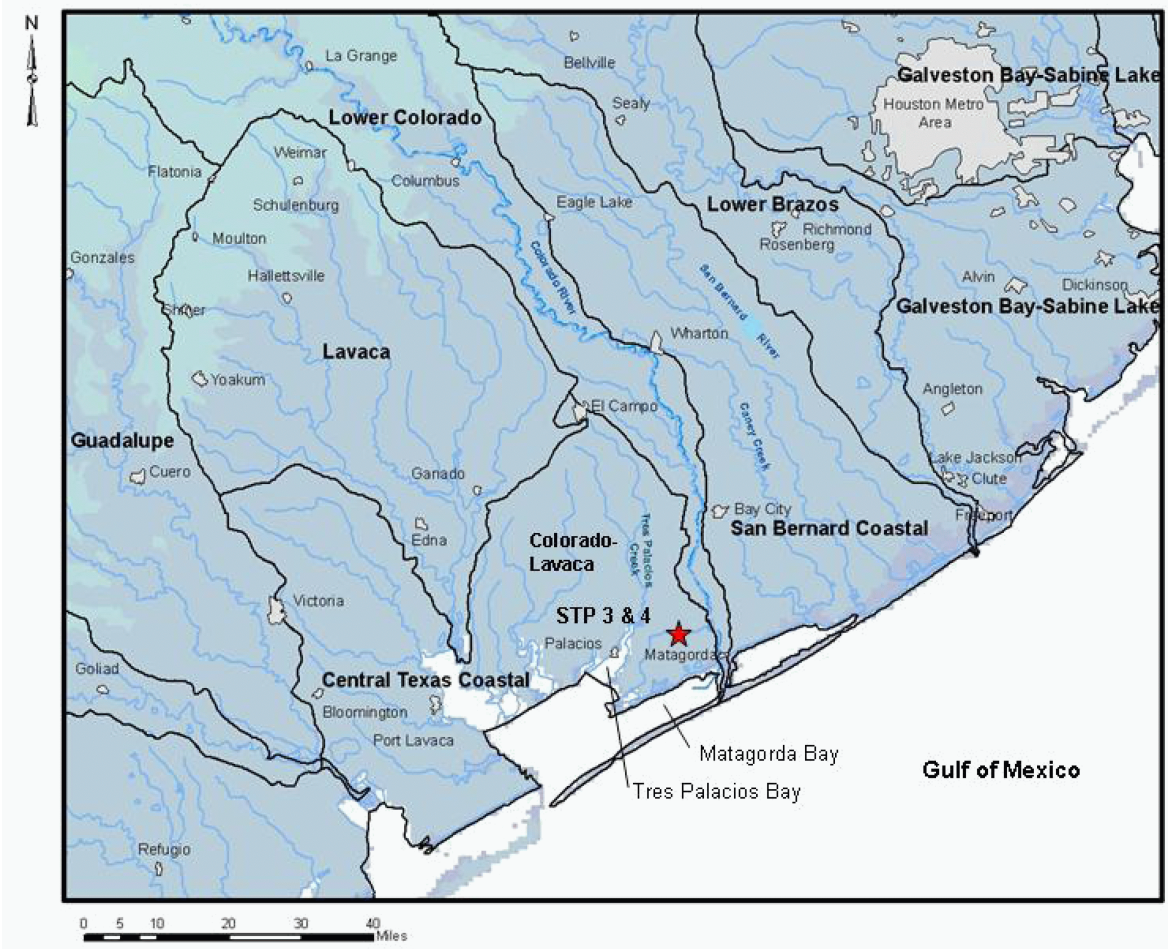


Figure 2.3.1-7 River Basin Map of Texas (Reference 2.3.1-41)

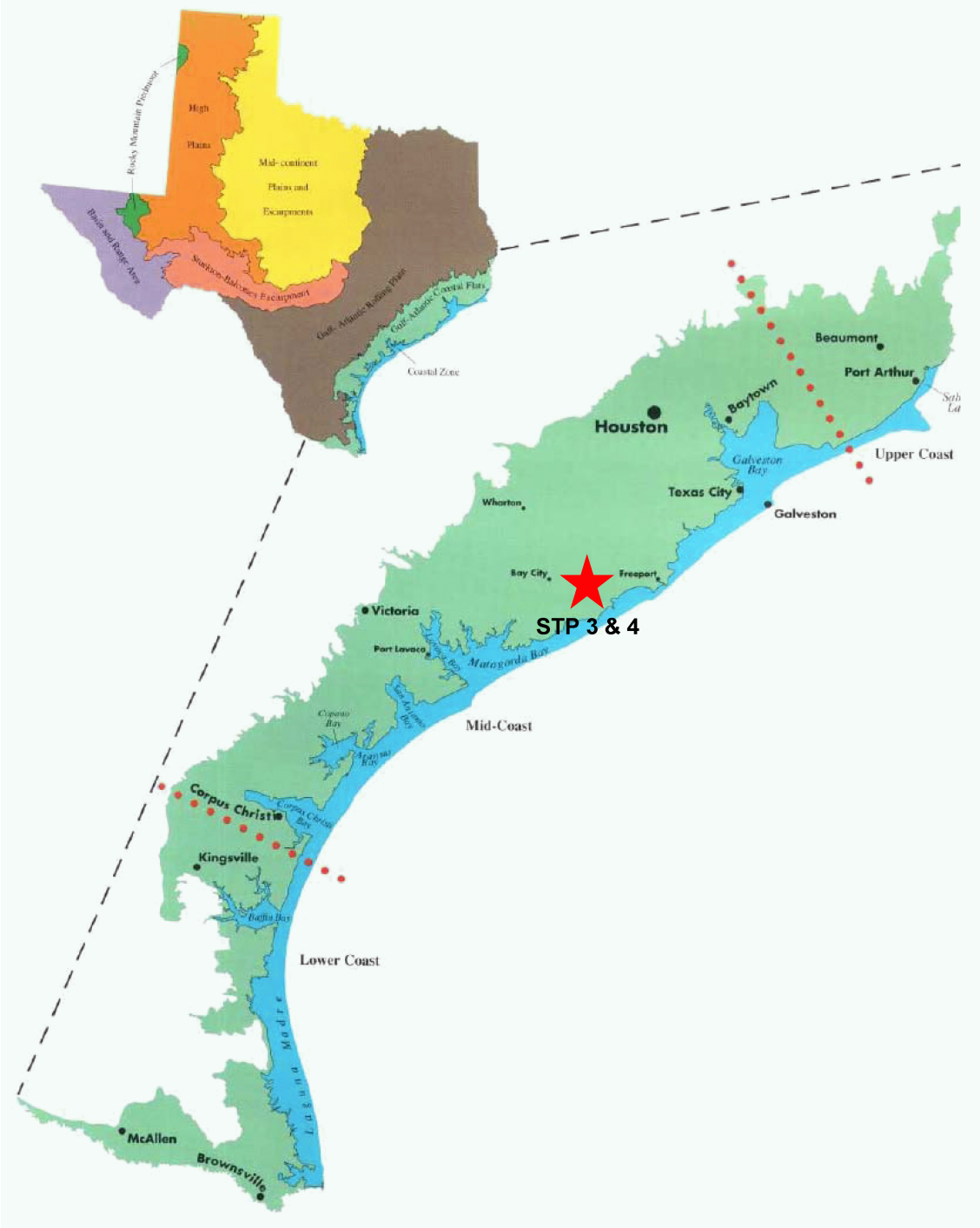


Figure 2.3.1-8 Texas Costal Wetland Study Area (Reference 2.3.1-13)

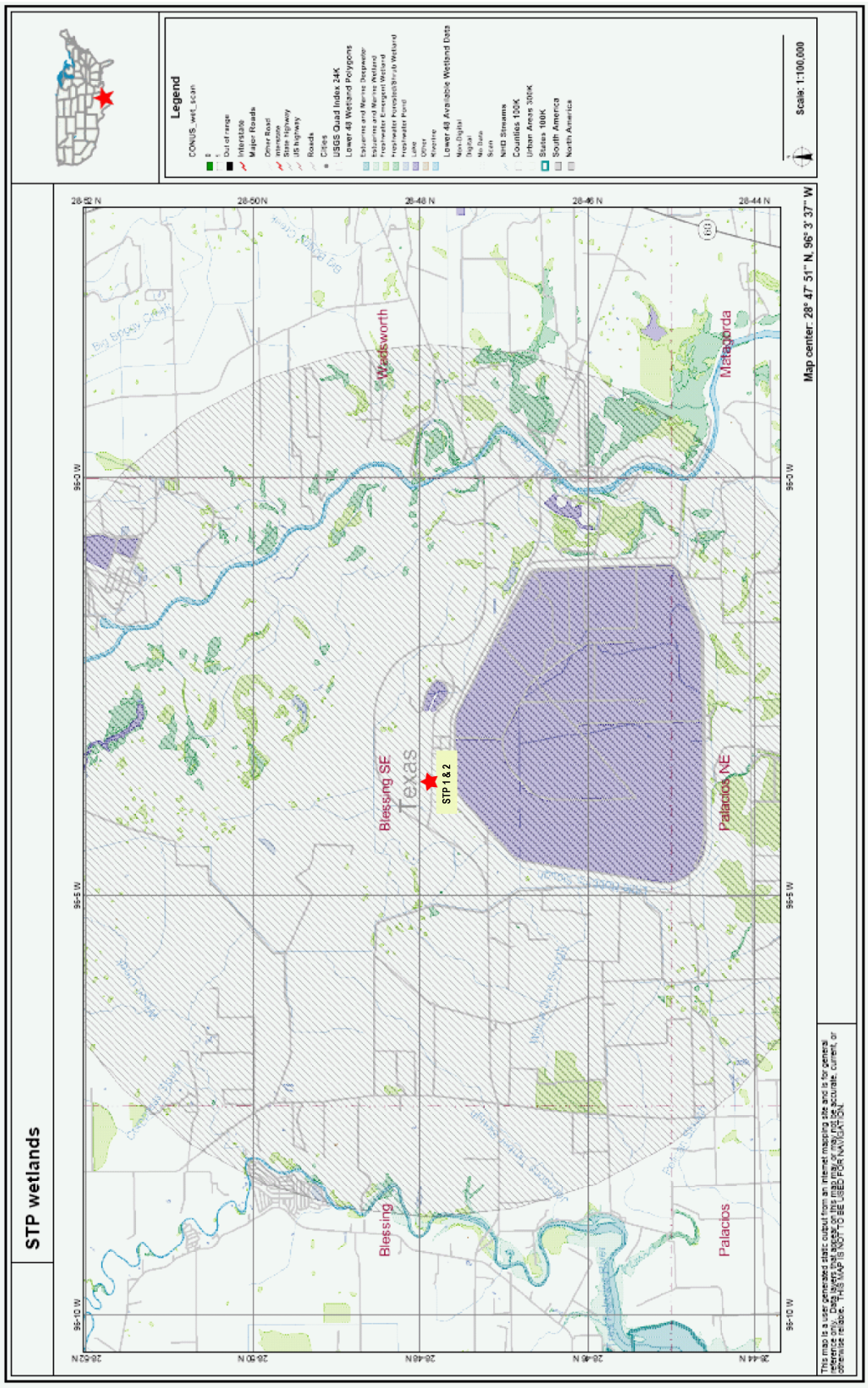


Figure 2.3.1-9 Wetland Distribution within 6 Mile Radius of STP 3 & 4 (Reference 2.3.1-15)

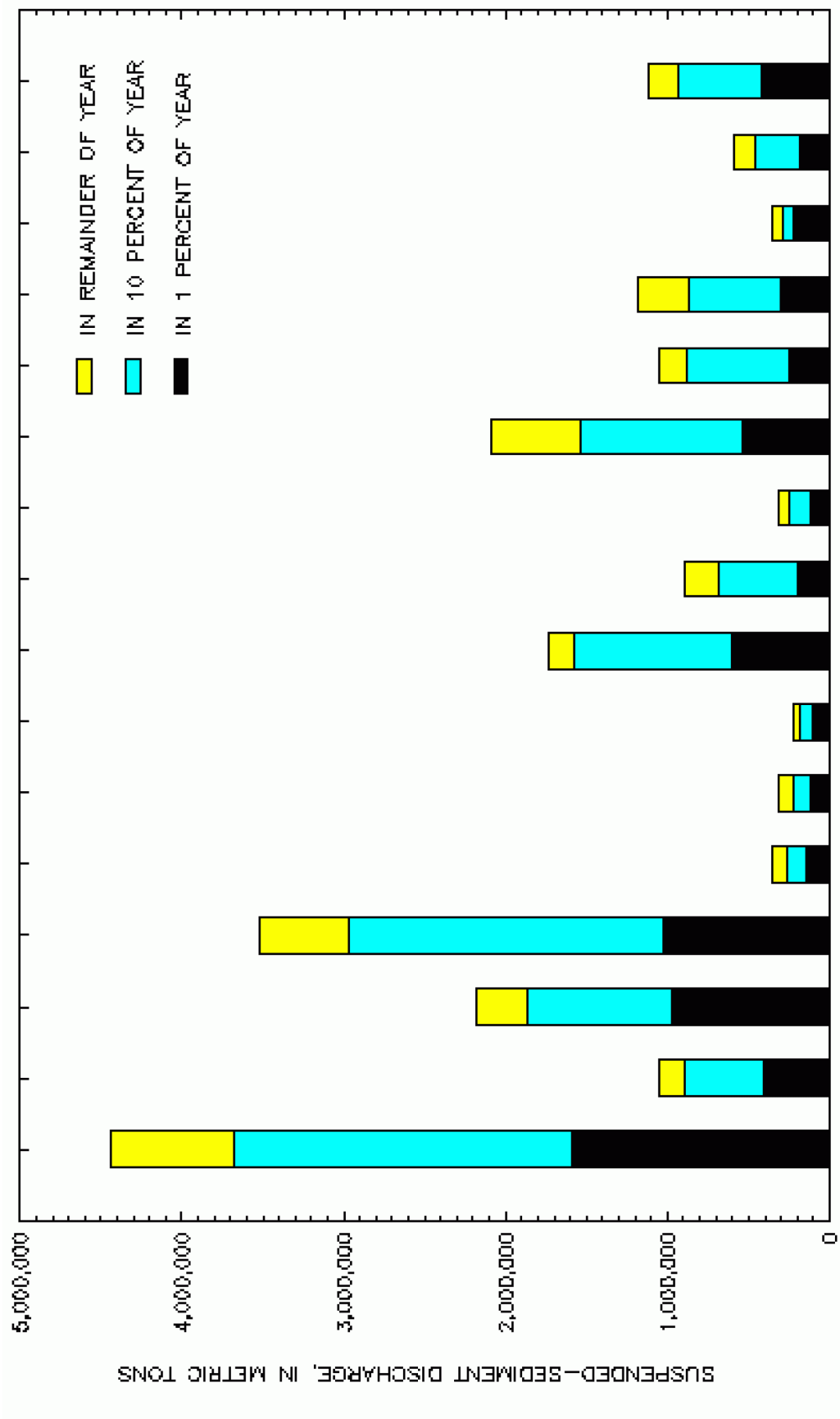


Figure 2.3.1-10 Histogram of Suspended Sediment Load Data on the Colorado River at Columbus Station (Reference 2.3.1-16)

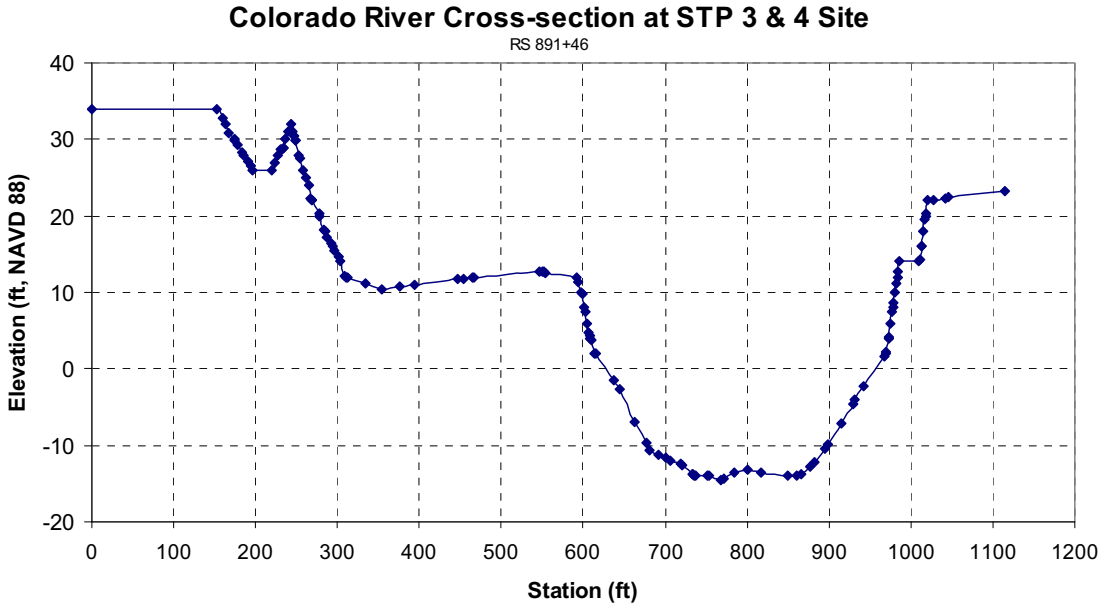


Figure 2.3.1-11 Cross Section of the Colorado River Channel near the Intake Structure

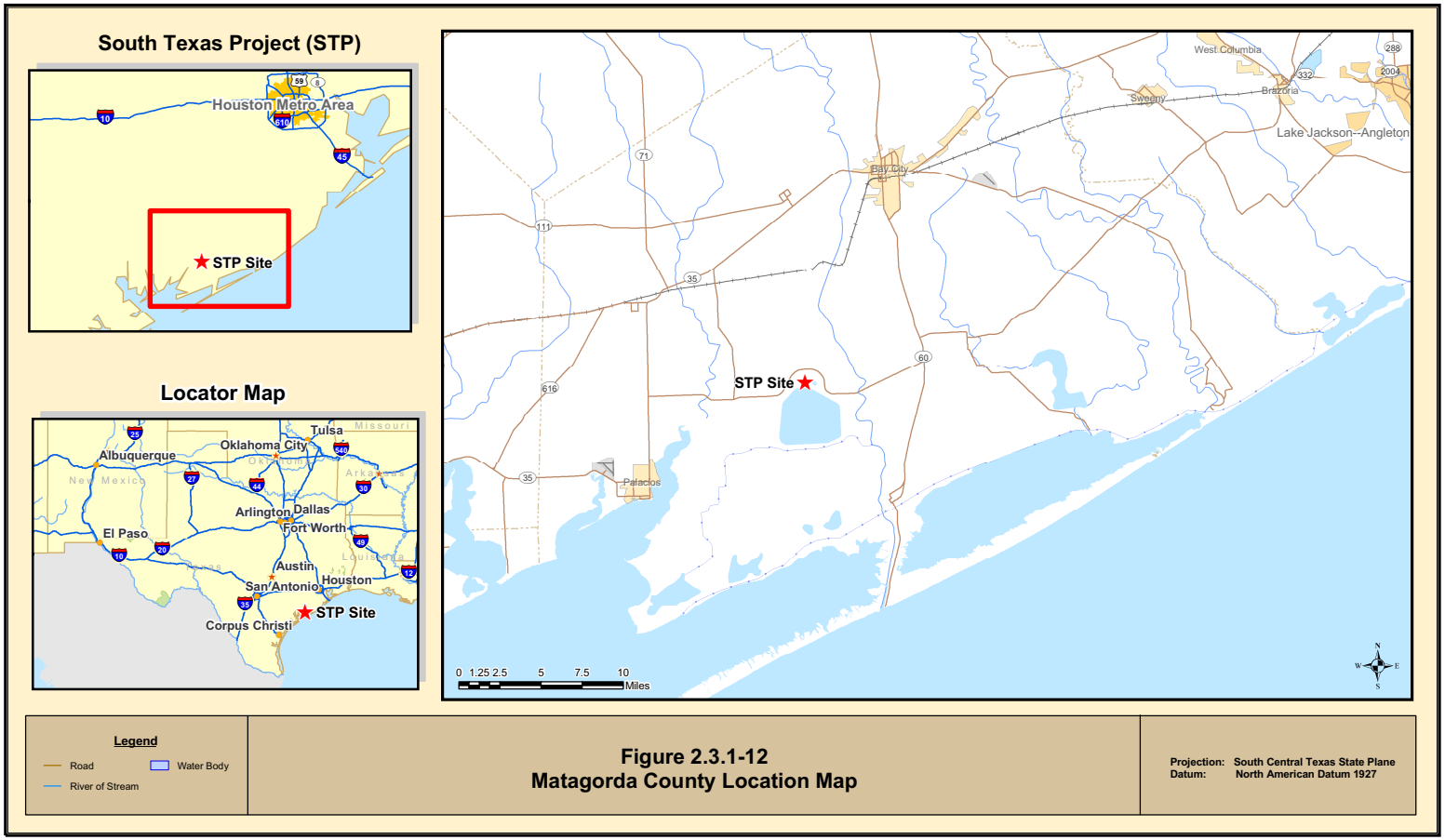


Figure 2.3.1-12 Matagorda County Location Map

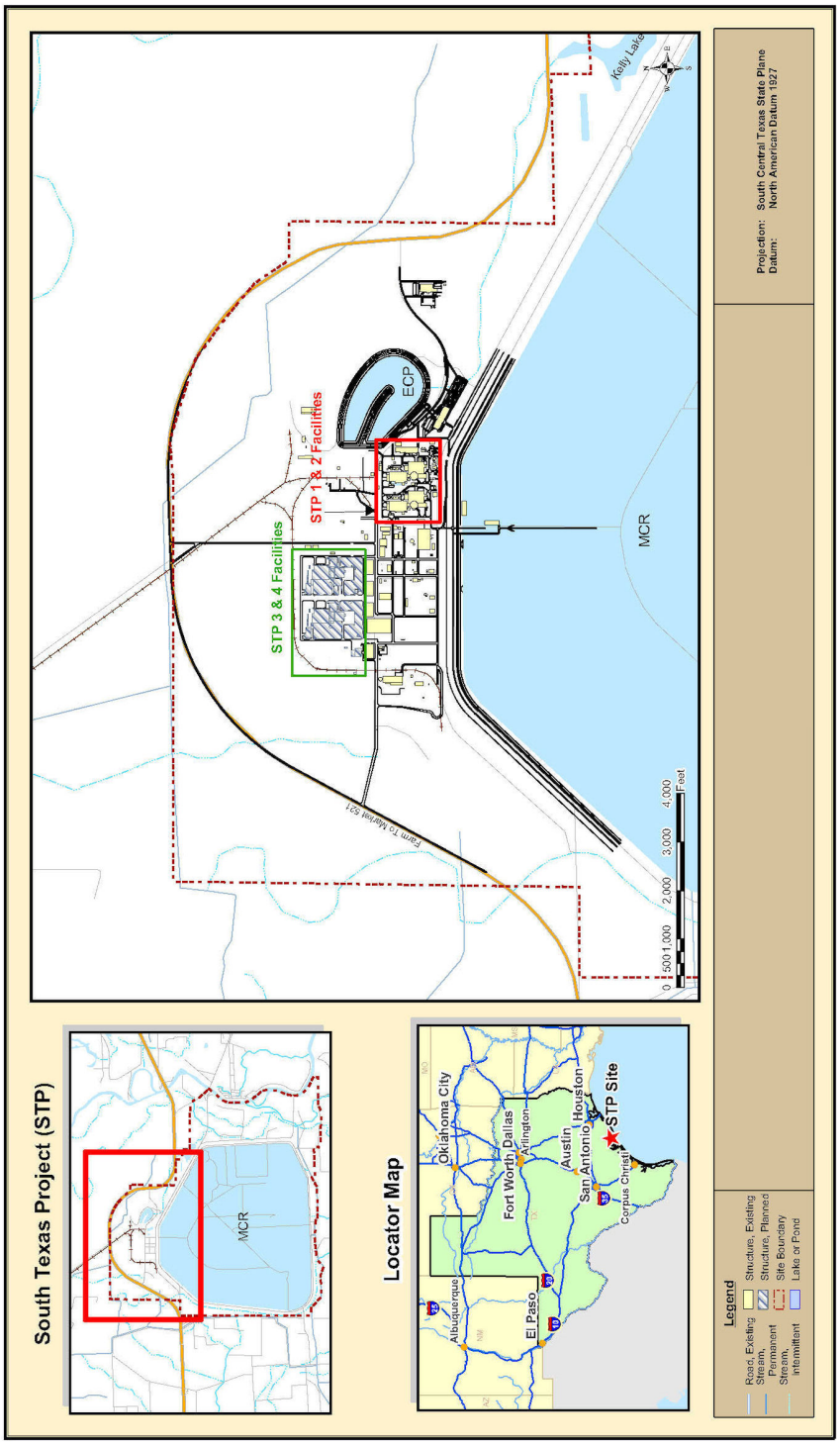
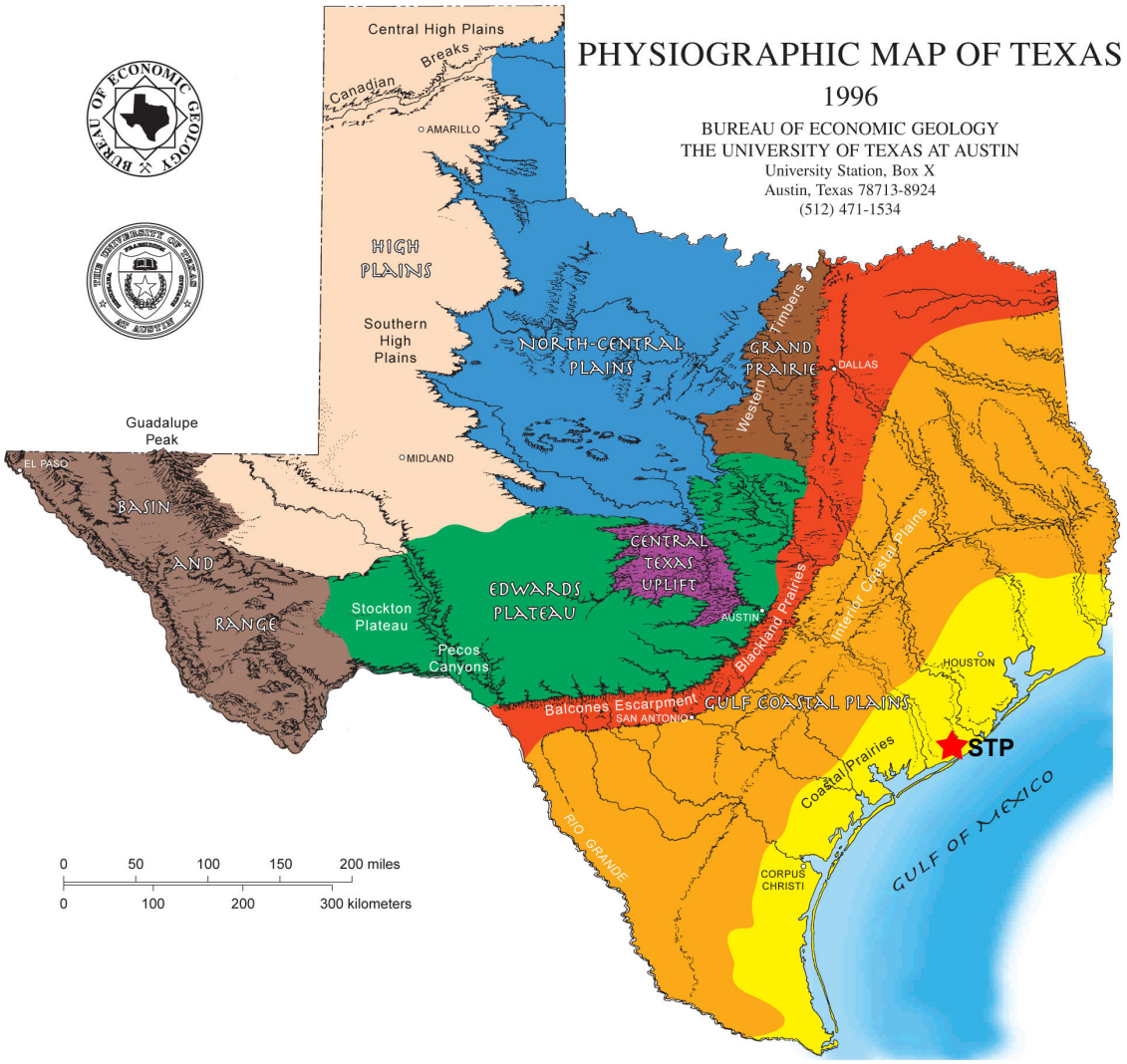


Figure 2.3.1-13 STP Facility Location Map



PROVINCE	MAX. ELEV. (ft)	MIN. ELEV. (ft)	TOPOGRAPHY	GEOLOGIC STRUCTURE	BEDROCK TYPES
Gulf Coastal Plains					
Coastal Prairies	300	0	Nearly flat prairie, <1 ft/mi to Gulf	Nearly flat strata	Deltaic sands and muds
Interior Coastal Plains	800	300	Parallel ridges (questas) and valleys	Beds tilted toward Gulf	Unconsolidated sands and muds
Blackland Prairies	1000	450	Low rolling terrain	Beds tilted south and east	Chalks and marls
Grand Prairie	1250	450	Low stairstep hills west; plains east	Strata dip east	Calcareous east; sandy west
Edwards Plateau					
Principal	3000	450	Flat upper surface with box canyons	Beds dip south; normal faulted	Limestones and dolomites
Pecos Canyons	2000	1200	Steep-walled canyons		Limestones and dolomites
Stockton Plateau	4200	1700	Mesa-formed terrain; highs to west	Unfaulted, near-horizontal beds	Carbonates and alluvial sediments
Central Texas Uplift	2000	800	Knobby plain; surrounded by questas	Centripetal dips, strongly faulted	Granites; metamorphics; sediments
North-Central Plains	3000	900	Low north-south ridges (questas)	West dip; minor faults	Limestones; sandstones; shales
High Plains					
Central	4750	2900	Flat prairies slope east and south	Slight dips east and south	Eolian silts and fine sands
Canadian Breaks	3800	2350	Highly dissected; local solution valleys		
Southern	3800	2200	Flat; many playas; local dune fields		
Basin and Range	8750	1700	North-south mountains and basins	Some complex folding and faulting	Igneous; metamorphics; sediments

Figure 2.3.1-14 Physiographic Map of Texas (modified from Reference 2.3.1-20)

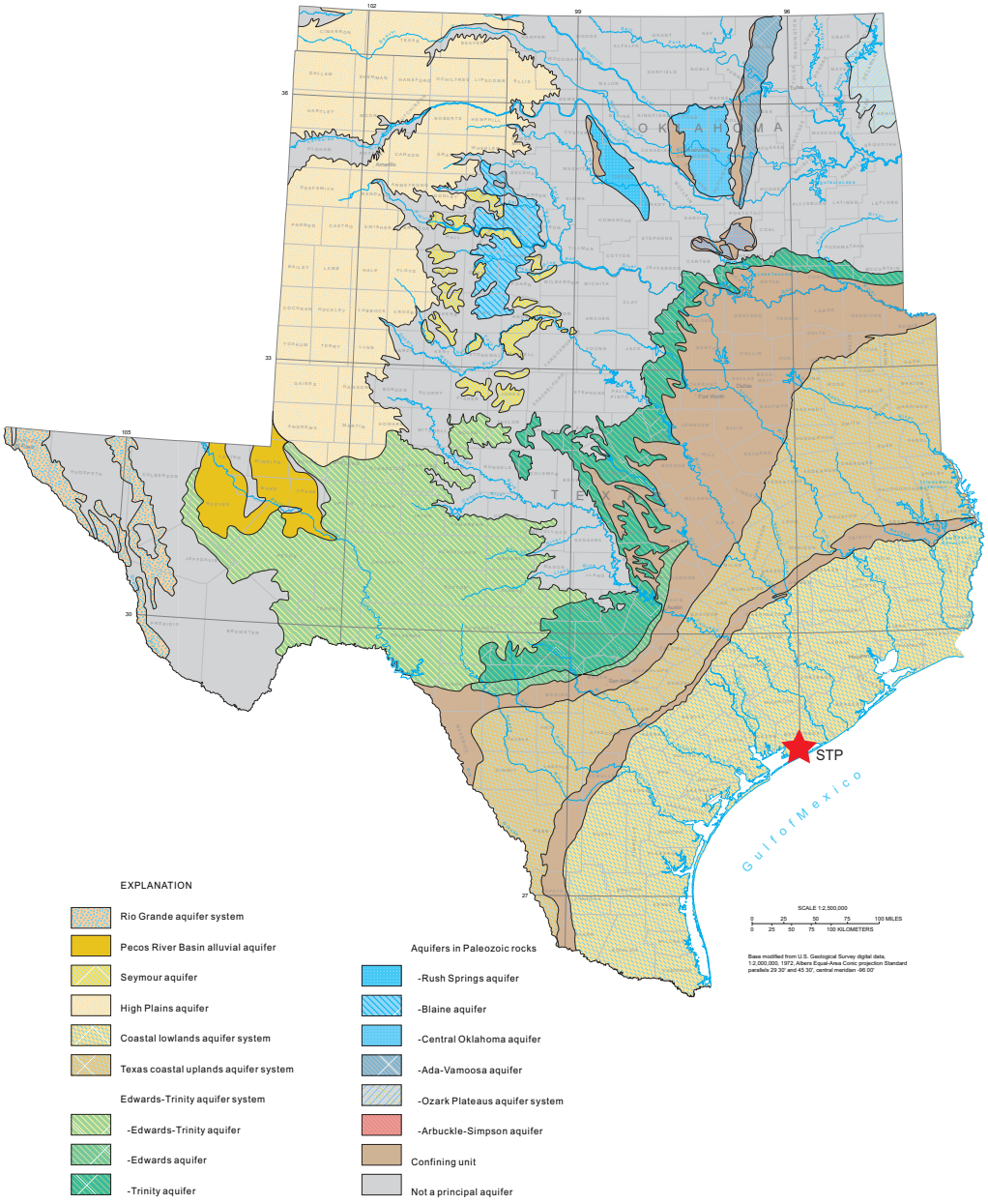


Figure 2.3.1-15 Aquifers of Texas (modified from Reference 2.3.1-21)

Era	System	Series	Stratigraphic unit (Modified from Baker, 1979)	Lithology	Hydrogeologic unit commonly used in Texas (Modified from Baker, 1979)	Hydrogeologic nomenclature used in this report (Modified from Weiss, 1992)
Cenozoic	Quaternary	Holocene	Alluvium	Sand, silt, and clay	Chicot aquifer	Permeable zone A
		Pleistocene	Beaumont Formation Montgomery Formation Bentley Formation Willis Sand	Sand, silt, and clay		Permeable zone B
	Tertiary	Pliocene	Goliad Sand	Sand, silt, and clay	Evangeline aquifer	Permeable zone C
		Miocene	Fleming Formation	Clay, silt and sand	Burkeville confining unit	Zone D confining unit [1]
			Oakville Sandstone	Sand, silt, and clay	Jasper aquifer	Permeable zone D
			Catahoula Sandstone or Tuff [2]		Catahoula confining unit (restricted)	
			Anahuac Formation [1]	Clay, silt and sand		Zone E confining unit [1]
		Oligocene	Frio Formation [1]	Sand, silt, and clay		Permeable zone E
			Frio Clay [3]	Clay and silt	Vicksburg-Jackson confining unit	Vicksburg-Jackson confining unit
			Vicksburg Formation [1]			
		Eocene	Jackson Group: Whitsett Formation, Manning Clay, Wellborn Sandstone, Caddell Formation			

Coastal lowlands aquifer system

[1] Present only in the subsurface
[2] Called Catahoula Tuff west of Lavaca County
[3] Not recognized at surface east of Live Oak County

Figure 2.3.1-16 Correlation of USGS and Texas Nomenclature (modified from Reference 2.3.1-2)