2026 BASIN HIGHLIGHTS REPORT- RIO GRANDE RIVER

International Boundary and Water Commission – U.S. Section

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INTRODUCTION

The Texas Clean Rivers Program (CRP) was founded in 1991 in response to growing concern about the quality of the surface water in the state. Through legislation, the Texas Clean Rivers program came to fruition and has been used to monitor the state's surface water quality since then with the Texas Commission on Environmental Quality (TCEQ) spearheading the program. The United States International Boundary and Water Commission (USIBWC) partnered with TCEQ in 1998 to administer the Texas Clean Rivers Program for the Rio Grande Basin.

The USIBWC is one of 13 partner agencies collaborating with TCEQ to administer the Texas Clean River Program in the 23 river and coastal basins of Texas. The main goals of the CRP include:

- Maintaining a basin-wide routine water quality monitoring program and a water quality database
- Provide quality-assured data to TCEQ for use in water quality decision-making
- Identify and evaluate water quality issues, and summarize reports
- Promote cooperative watershed planning
- Inform and engage stakeholders
- Maintain efficient use of public funds
- Adapt the program to emerging water quality issues

This report will summarize the 2025 USIBWC CRP water quality monitoring activities as well as water quality data for the Rio Grande Basin in Texas.

The Rio Grande Basin Overview

The Rio Grande Basin covers a total area of about 335,000 square miles and traverses three U.S States and four Mexican ones (Figure 1). In total the Rio Grande flows over 1,896 miles from its source to its termination, with 50,000 square miles in Texas alone.

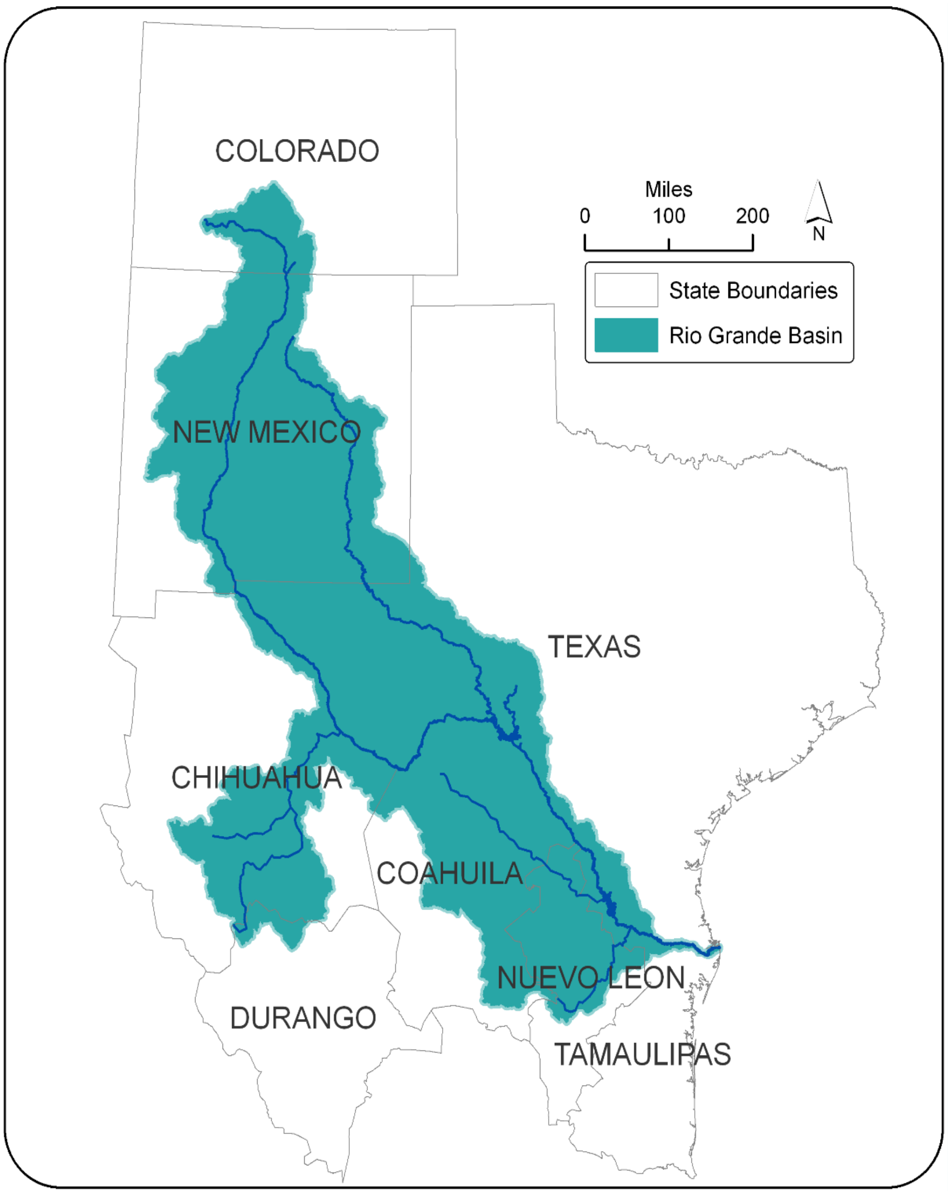

Figure 1: Rio Grand Basin

In Texas, the Rio Grande River extends 1,255 miles from El Paso down to the Texas valley, before reaching the Gulf of Mexico. The twelve hundred-plus miles also demarcate the boundary between the United States and Mexico, making the Rio Grande a bi-national water source. This water source is utilized by populations on both sides of the border for agriculture, drinking water, and hydroelectric power. This basin spans roughly 182,200 square miles encompassing three U.S. states and five states in Mexico.

The USIBWC CRP study area for this report is the Rio Grande Basin in Texas. for coordination and planning purposes, the USIBWC CRP study area has been divided into four subbasins (Figure 2):

- the Upper Sub-Basin extending from the New Mexico/ Texas state line downstream to the International Amistad Reservoir.
- the Pecos River Sub-Basin from the New Mexico/ Texas state line to its confluence with the Rio Grande upstream of Amistad Reservoir.
- the Middle Sub-Basin from International Amistad Reservoir downstream to International Falcon Reservoir and including the Devil's River; and
- the Lower Sub-Basin from International Falcon Reservoir downstream to the Gulf of Mexico.

Due to the basin's sheer size, the USIBWC CRP depends on sampling partners to collect the necessary water quality data for the State of Texas. CRP partners throughout the basin have been an asset in water quality monitoring. In 2025 IBWC partnered with 11 entities, who collectively monitored 44 stations (Figure 3) through the basin. These entities also provided guidance and suggestions on how to improve the program and the basin, as well as assisting in special studies, and communicating and educating the public.

Rio Grande Basin Sub-Basins

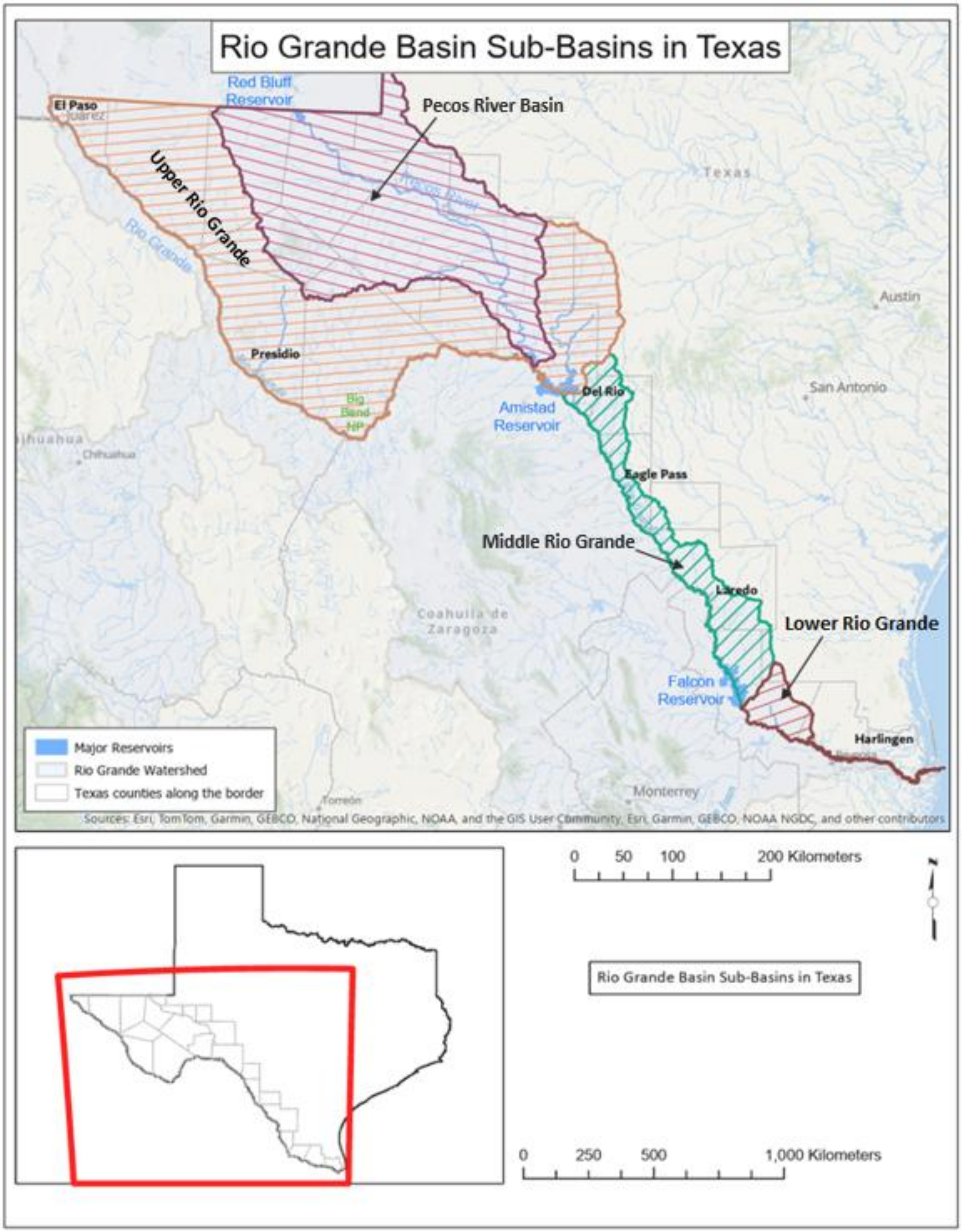

Figure 2: Map of the Sub-Basins that comprises the Rio Grande Basin

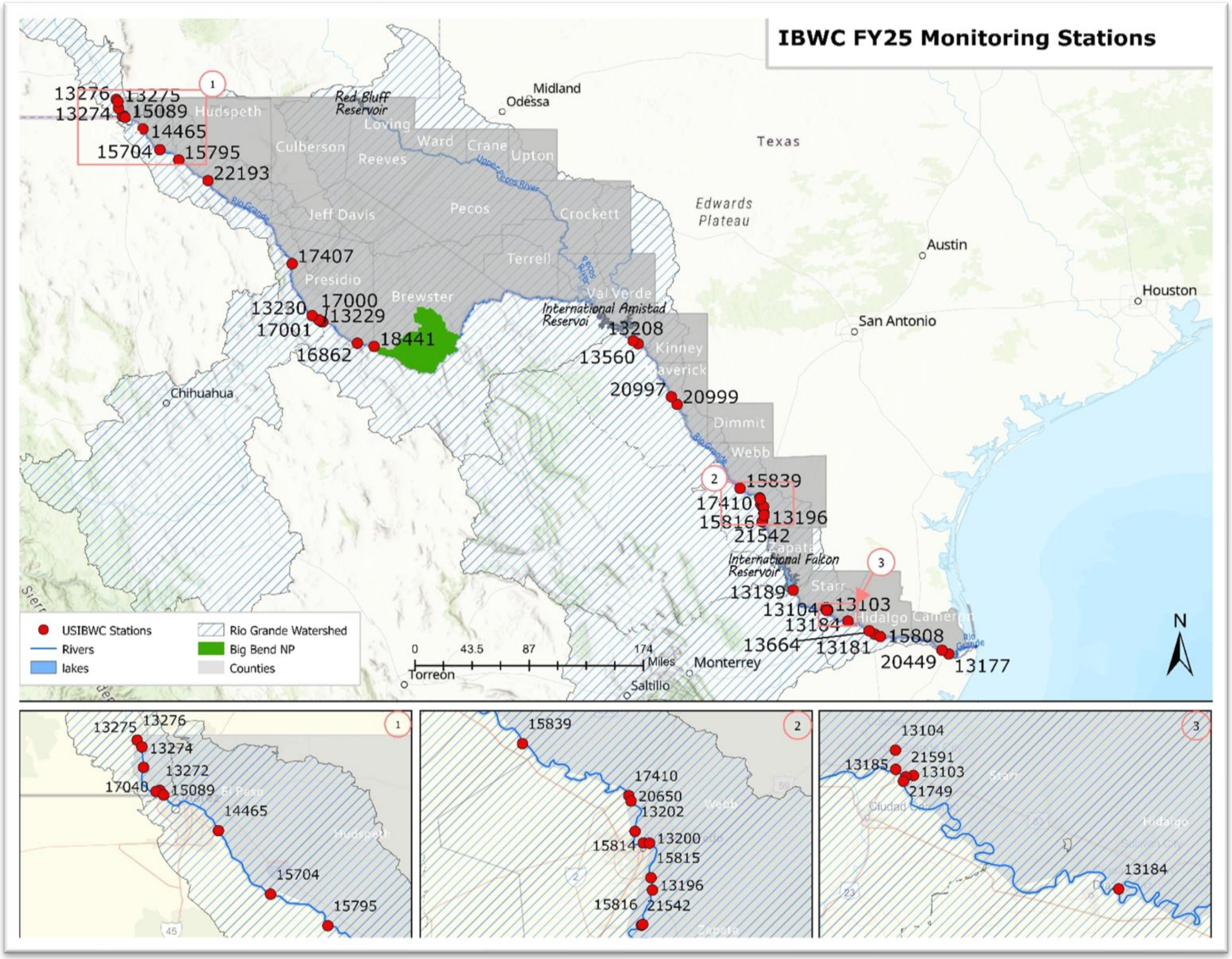

Figure 3: Rio Grande Monitoring Stations

Water Quality Monitoring Overview

Water quality monitoring is an essential process to assess the physical, chemical, and biological characteristics of water bodies. These characteristics help TCEQ determine at what capacity the water can be used for, and the overall health of the river. To continue to provide valuable water quality data the USIBWC CRP has maintained its large network of water quality stations for 35 years. By performing routine monitoring of these stations at regular intervals throughout the year, the health of the water system can be determined. Water quality standards for the Rio Grande set forth by TCEQ are shown in Table 1.

Routine monitoring in the Rio Grande Basin helps us understand its unique characteristics, which can in turn help us to:

- Assess Environmental Health.
- Protect human health.
- Manage resources.

Partners collect water quality samples at approximately 44 routine monitoring stations throughout the basin. Sediment samples are also collected for metals analysis at some stations. In addition to collecting samples for laboratory analysis, personnel also make field observations to record conditions at the time the sample were taken. Field observations include things such as weather conditions, recent rain events in the area, watercolor, and other general notes pertinent to water quality and stream uses. Quantitative field measurements are made using specialized equipment. The parameters taken include water and air temperature, water depth, water clarity, stream flow, and how that flow compares to the normal flow for that water body.

The routine collection of field parameters, together with laboratory parameters, allows us to determine the health of the river ecosystem and can aid in the identification of potential issues. These parameters and their effects on the water bodies can be seen in Table 1 below. Data is compared against the Texas Surface Water Quality Standards (TSWQS) criteria and screening levels, which are outlined in Table 2. Indicators that are directly tied to support of designated uses and criteria adopted in the TSWQS include:

- Water temperature (general use)
- pH (general use)
- Dissolved Oxygen (DO) (aquatic life)
- Chloride (general use)
- Sulfate (general use)
- Total Dissolved Solids (TDS) (general use)
- *E. coli* (contact recreation)

Table 1: Water Quality Parameters and the effects on water bodies.

Field Parameters		
Parameter	**Description**	**Effects on water body**
Temperature (degrees centigrade)	Water temperature plays a crucial role in determining water quality, as it influences a variety of physical, and biological processes.	Physically affecting dissolved oxygen levels, density, and mixing rates. Chemical effects on reaction rates and solubility. Biological effects on algae growth, and metabolism of aquatic organisms.
pH	Measure of how acidic or basic the water is. The values range from 0 to 14, with 7 being neutral. pH values less than 7 indicate acidity, whereas a pH greater than 7 indicates a base.	Values greater than 9.0 and less than 5.0 can have detrimental effects on the health of aquatic life, wildlife, and humans.
Specific Conductance	Indicator of how well the water conducts electricity. Pure water does not conduct electricity; impurities like salts and metals allow electricity to pass through the water. Since total and dissolved metal values should be very low, conductivity primarily measures how much salt is in the water. Most naturally occurring waters have some level of conductivity.	High conductivity can cause physiological effects in animals and plants. It also could be a result of high TDS. The indirect effects of excess dissolved solids are primarily the elimination of desirable food plants and habitat-forming plant species. Agricultural uses of water for livestock watering are limited by excessive dissolved solids and high dissolved solids can be a problem in water used for irrigation.
Dissolved Oxygen (DO)	The measure of how much oxygen is freely available in water.	Low DO values can lead to reduced abundance and diversity in aquatic communities. Very low levels (<2 mg/L) can be indicative of higher levels of oxygen-demanding plants that use up DO during the decay process.
Secchi Depth	A measure of the transparency of water - the maximum depth at which a black and white disk is visible.	Higher transparency leads to a more robust aquatic plant life (particles in water block sunlight for photosynthesis). High transparency coupled with high nutrients can lead to negative impacts on DO and aquatic life.
Stream Flow	The volume of water moving over a location over a period. Low flow conditions common in the warm summer months create critical conditions for aquatic organisms.	At low flows, the stream has a lower assimilative capacity for waste inputs from point and nonpoint sources.
Solids	Total and dissolved materials of any kind (calcium, magnesium, potassium, sodium, bicarbonates, chlorides, and sulfates).	High total dissolved solids indicate higher amounts of dissolved salts which can reduce the diversity of aquatic life and can render the water unusable for human consumption, industry, and agriculture.
Nutrients	Nutrients include nitrogen compounds, ammonia, and phosphorus.	High levels can cause excessive plant growth, which can lead to reduced dissolved oxygen and fish kills, reduced stream flow, and reduced navigability of the waters. Elevated ammonia can also be toxic to aquatic life.
Chlorophyll-a	Chlorophyll-a is used as an indicator of algal growth in water.	High levels for long periods may indicate low water quality and are indicative of excess nutrient levels.
Bacteria	Bacteria found in the intestinal tracts of warm-blooded animals. They are introduced into a system via excrement.	These organisms are used as indicators of bacterial pollution and the possible presence of waterborne pathogens. Sources of high bacteria include untreated, concentrations of animals, and application of manure-based fertilizers.
Metals	Aluminum, arsenic, barium, chromium, copper, lead, mercury, nickel, silver, and zinc. Metals can be tested as total or dissolved metals in water or metals in sediment to determine long-term accumulation.	High concentrations can result in adverse long- and short-term effects on aquatic life and human health.
Organics	Chemicals containing carbon and hydrogen. Organic compounds analyzed are herbicides, pesticides, and industrial compounds both in water and in sediment.	Organics can result in adverse long- and short-term effects on aquatic life and human health.
Nekton	Fish captured in the river during biological surveys using both electrofishing and seining methods	Using the Index of Biotic Integrity (IBI) can indicate biodiversity and overall health of the river.
Benthic	Freshwater macroinvertebrates collected during a five-minute kicknet or sweep hand net methods.	Using IBI, this biological aquatic assemblage analysis indicates biodiversity and overall health of the river. Healthy macroinvertebrate communities can be excellent indicators of high-water quality.

Table 2. Primary Surface Water Quality Standards for the Rio Grande Basin

2025 Texas Surface Water Quality Standards for the Rio Grande Basin												
Segments		**Uses**				**Criteria**						
Segment No.	**Segment Description**	**Recreation**	**Aquatic Life**	**Domestic Water Supply**	**Other**	**Cl-1 (mg/L)**	**SO4-2 (mg/L)**	**TDS (mg/L)**	**Dissolved Oxygen (mg/L)**	**pH Range (SU)**	**Indicator Bacteria* (#/100ml)**	**Temp (°F)**
2301	Rio Grande Tidal	PCR1	E						5.0	6.5-9.0	35	95
2302	Rio Grande below Falcon Reservoir	PCR1	H	PS		270	350	880	5.0	6.5-9.0	126	90
2303	International Falcon Reservoir	PCR1	H	PS		200	300	1,000	5.0	6.5-9.0	126	93
2304	Rio Grande Below Amistad Reservoir	PCR1	H	PS		200	300	1,000	5.0	6.5-9.0	126	95
2305	International Amistad Reservoir	PCR1	H	PS		150	270	800	5.0	6.5-9.0	126	88
2306	Rio Grande above Amistad Reservoir	PCR1	H	PS		200	450	1,400	5.0	6.5-9.0	126	93
2307	Rio Grande below Riverside Diversion Dam	PCR1	H	PS		300	550	1,500	5.0	6.5-9.0	126	93
2308	Rio Grande below International Dam	NCR	L			250	450	1,400	3.0	6.5-9.0	605	95
2309	Devils River	PCR1	E	PS		50	50	300	6.0	6.5-9.0	126	90
2310	Lower Pecos River	PCR1	H	PS		1,700	1,000	4,000	5.0	6.5-9.0	126	92
2311	Upper Pecos River	PCR1	L			7,000	3,500	15,000	5.0	6.5-9.0	33	92

2312	Red Bluff Reservoir	PCR1	H			3,200	2,200	9,400	5.0	6.5-9.0	33	90
2313	San Felipe Creek	PCR1	H	PS		50	50	400	5.0	6.5-9.0	126	90
2314	Rio Grande above International Dam	PCR1	H	PS		340	600	1,800	5.0	6.5-9.0	126	92
2315	Rio Grande Below Rio Conchos	PCR1	H			450	750	2,100	5.0	6.5-9.0	126	93

PCR - Primary Contact Recreation NCR - Noncontact Recreation PS - Public Water Supply
E - Exceptional Aquatic Life L - Limited Aquatic Life H - High Aquatic Life TDS - Total Dissolved Solids
Cl- - chloride SO42- - sulfate DO - Dissolved Oxygen
*Indicator Bacteria is *E. coli* for freshwater and enterococci for saltwater (2301, 2311, 2312)
The critical low flow for Segments 2309 and 2313 is calculated according to §307.8(a)(2)(A) of the TSWQS.

Table: 3 Texas Commission on Environmental Quality (TCEQ) designated uses for water bodies

2026 Texas Surface Water Quality Standards for the Rio Grande Basin			
Designated Use	**Description**	**Primary Parameter**	**Criteria**
Contact Recreation (CR)	3 levels depending on the use of the water: Fishing, swimming, wading, boating, etc. Note: Secondary contact recreation criteria is not applied in any of the segments in the Rio Grande Basin	Bacteria E. Coli Tidal and saline – Enterococcus (Entero)	• Primary Contact Recreation (significant possibility of water ingestion, i.e. swimming). Geometric mean: 126 colony forming units (CFU) for E. coli, 35 CFU Entero. • Secondary Contact Recreation (limited body contact that poses a less significant risk of ingestion of water, i.e. fishing, boating). Geometric mean: 630 CFU for E. coli, 175 CFU Entero. • Non-Contact Recreation: Unsuitable for contact recreation.
Public Water Supply (PS)	Drinking water source	See full list of human health criteria in table 2 of the TSWQS The Texas Commission on Environmental Quality (TCEQ, agency, or commission) proposes amendments to §§307.2 - 307.4, 307.6, 307.7, and 307.10.	

Aquatic Life Use (ALU)	4 levels depending on the ability of water body to support aquatic life	DO – Average values	• (E) - Exceptional 6.0 mg/L • (H) - High 5.0 mg/L • (I) - Intermediate 4.0 mg/L • (L) – Limited 3.0 mg/L
	Toxins in water	See full list of Aquatic life criteria in Table 1 of the TSWQS The Texas Commission on Environmental Quality (TCEQ, agency, or commission) proposes amendments to §§307.2 - 307.4, 307.6, 307.7, and 307.10.	
Fish consumption (FC)	Prevent contamination to protect human health	See full list of human health criteria in Table 2 of the TSWQS The Texas Commission on Environmental Quality (TCEQ, agency, or commission) proposes amendments to §§307.2 - 307.4, 307.6, 307.7, and 307.10.	

Designated Uses continued:

The State of Texas assigns designated uses to specific water bodies. Table 3 describes the designated uses for the Rio Grande Basin, and Table 1 on page 9 lists the uses and standards for each segment. Designated uses and water quality standards are defined in the TSWQS. For more info, see TSWQS website.

Contact Recreation (CR) – Fishing, swimming, wading by children, boating, and direct water contact. E. Coli and Enterococci bacteria are used as indicators. The proposed 2014 revisions to TSWQS created subcategories of Primary **(PCR)** and Secondary Contact Recreation **(SCR).** PCR refers to activities such as swimming, and SCR refers to non-immersing recreation activities such as canoeing and fishing.

Public Water Supply (PS) – As a drinking water source, the primary concern is total dissolved solids **(TDS)**. The TSWQS includes a list of parameters that are screened to ensure safe domestic water supply use.

Aquatic Life Use (ALU) – This designated use is designed to protect aquatic species including fish and benthic macroinvertebrates (aquatic insects). This designated use has four levels depending on the ability of a water body to support aquatic life (exceptional, high, intermediate, and limited). The primary parameter used to determine the **ALU** of a waterbody is Dissolved Oxygen.

Fish Consumption (FC) – This applies to all water bodies where citizens may collect and consume fish. The TSWQS includes a list of parameters that are screened to ensure the fish consumption use is met.

General Use – To safeguard general water quality rather than for protection of one specific use.

Rio Grande Basin River Segments

To help TCEQ and the CRP meet one of their primary objectives; provide credible and up-to-date information on the state of Texas' water bodies. Designed to help stakeholders make informed decisions and take actions to preserver and improve water quality. TCEQ has divided the basin into segment and even finer assessment units to help describe the Rio Grand River' water quality. See tables (4,5,6) below for details. If you would like to obtain more information (water data) on any of these stations, you can access this at https://waterdata.ibwc.gov/AQWebportal/Data or feel free to reach out to the staff at USIBWC CRP if you have any questions. The contact information can be found at the end of the report.

Table 4: Upper Rio Grande Sub-Basin River Segments, Assessment units, and a list of monitoring stations.

Upper Rio Grande Sub-Basin River Segments, Assessment units, and a list of monitoring stations				
River Segment	**Segment Description**	**Assessment Units (AU)**	**Station ID**	**Station Description**
2306	**Rio Grande Above Amistad Reservoir**	**2306_06**	**13228**	**Rio Grande at Santa Elena Canyon**
2306		**2306_07**	**13229**	**Rio Grande Below Conchos**
2306			**16826**	**Rio Grande at Colorado Canyon**
2306			**18441**	**Rio Grande at Lajitas boat ramp**
2306		**2306_08**	**17000**	**Rio Grande at Presidio Railroad Bridge**
2306			**17001**	**Rio Grande at Presidio/Ojinaga**
2307		**2307_01**	**13230**	**Rio Grande at above Conchos**
2307		**2307_02**	**17407**	**Rio Grande at Candelaria**
2307		**2307_03**	**22193**	**Rio Grande at Fort Quitman**
2307		**2307_04**	**15704**	**Rio Grande at Guadalupe International Bridge**
2307			**15795**	**Rio Grande at Alamos Control structure**
2307		**2307_05**	**14465**	**Rio Grande at Riverside Canal**
2314			**13272**	**Rio Grande at Courchesne Bridge**

2314		2314_01	13274	Rio Grande at Borderland Road
2314			13275	Rio Grande at Vinton Bridge
2314			13276	Rio Grande upstream of Anthony Drain
2314			15089	Rio Grande at American Dam
2314			17040	Rio Grande at Anapra Bridge

Table 5: Middle Rio Grande Sub-Basin River Segments, Assessment units, and a list of monitoring stations.

Middle **Rio Grande Sub-Basin River Segments, Assessment units, and a list monitoring stations**				
River Segment	Segment Description	Assessment Units (AU)	Station ID	Station Description
2303	International Falcon Reservoir	2303_03	13189	Falcon Lake at IBWC monument
2304	Rio Grande Below Amistad Dam	2304_01	13196	Rio Grand at Pipeline Crossing
2304			15816	Rio Grande at El Cenizo
2304			21542	Rio Grande at Cenizo Park
2304		2304_02	13200	Rio Grande at Zacata Creek
2304			15815	Rio Grande at Masterson
2304		2304_03	15814	Rio Grande at Juarez-Lincoln Bridge
2304		2304_04	13202	Laredo water treatment pump intake
2304			20650	Rio Grande at Father McNaboe Park
2304			17410	Rio Grande at World Trade Bridge
2304		2304_06	15839	Rio Grande at Colombia Bridge
2304		2304_07	20999	Rio Grande at Kickapoo Boat Ramp
2304		2304_08	20997	Rio Grande at Main Street Boat Ramp
2304		2304_09	13560	Rio Grande at Moody Ranch
2304		2304_10	13208	Rio Grande downstream of Amistad Dam upstream IBWC gage 08-4509
2304B	Manadas Creek	2304B_01	13116	Manadas Creek

Table 6: Lower Rio Grande Sub-Basin River Segments, Assessment units, and a list of monitoring stations.

Lower **Rio Grande Sub-Basin River Segments, Assessment units, and a list of Active monitoring stations**				
River Segment	**Segment Description**	**Assessment Units (AU)**	**Station ID**	**Station Description**
2301	**Rio Grande Tidal**	**2301_01**	**13176**	**Rio Grande Tidal**
2302	**Rio Grande below Falcon Reservoir**	**2302_01**	**13177**	**Ro Grande at El Jardin pump station**
2302			**13179**	**Rio Grande at River Bend**
2302			**20449**	**Brownsville Pub intake**
2302		**2301_03**	**15808**	**Rio Grande at Pharr International Bridge**
2302		**2301_04**	**13181**	**Rio Grande at Hidalgo**
2302			**13664**	**Rio Grande at Anzalduas Dam**
2302		**2301_06**	**13184**	**Rio Grande at Los Ebanos**
2302			**21749**	**Rio Grande at Los Olmos Creek**
2302		**2301_07**	**13185**	**Rio Grande at Fort Ringgold**
2302A	**Arroyo Los Olmos**	**2302A_01**	**13103**	**Los Olmos Creek at Rio Grande City**
2302A			**13104**	**Arroyo Los Olmos NW of Rio Grande City**
2302A			**21591**	**Arroyo Los Olmos at Rio Grande**

What Happens to the Data

Once samples are collected, an accredited laboratory analyzes the lab parameters, and then CRP checks both field and laboratory data for accuracy, quality, and adherence to approved methods. CRP submits the reviewed and quality-assured data to TCEQ, which also runs quality assurance checks on the data before including the data in TCEQ's Surface Water Quality Monitoring Information System (SWQMIS) database. This public interface can be accessed at (https://www80.tceq.texas.gov/SwqmisPublic/index.htm). Data from the past seven years that contain at least 10 data points are then compared to the TSWQS that have been assigned to each stream segment. This comparison is used to create a summary of water quality, the Integrated Report which is done by the TCEQ every two years as required by the Clean Water Act. Any section of a water body that does not meet the primary standards is then placed on the 303(d) list, which contains impaired water bodies throughout the state. (See table 3 below)

RIO GRANDE BASIN WATERSHED CHARACTERIZATION

Hydrology of the Rio Grande

The Rio Grande is one of the most variable-flow rivers in the United States. Its annual water levels largely rely on snowmelt from the San Juan, Sangre de Cristo, and southern Rocky Mountains. Additionally, summer monsoon rains from New Mexico, West Texas, and Northern Mexico directly affect the river's flow. A warming climate and ongoing drought have further decreased its overall discharge. The Natural flow has decreased substantially over the last several decades due to declining snowpack and rising temperatures. This is consistent with the drought-driven conditions where the snowpack last year was less than 10% of a normal year. This will lead to reduced river flow and will be insufficient to sustain downstream reservoir storage.

The Rio Grande's water management system is highly dependent on a chain of key reservoirs operated by the Bureau of Reclamation (upper basin) and IBWC (lower basin). These reservoirs are crucial for the redistribution of seasonal snowmelts, water deliveries for agricultural needs, and to provide supplemental flows to protect endangered species (historically used to mitigate drought impacts).

The Rio Grande, which is shared by the United States and Mexico, is undergoing a critical water crisis marked by declining reservoir storage, aquifer levels, and streamflow. Only about 48% of the water consumed for human use is sustainably replenished, while the remaining 52% represents unsustainable extraction that is depleting key water sources. Irrigated agriculture—responsible for 87% of all direct water consumption—is the primary driver of overuse. Worsening shortages have contributed to substantial farmland losses in Colorado, New Mexico, and Texas. Although irrigation and municipal use have declined in the U.S. portion of the basin, irrigation demand has risen significantly in Mexico, keeping overall basin-wide consumption high despite shrinking water supplies.

The Upper Rio Grande

Figure 4: Rio Grande at American Dam in El Paso, TX

The Upper Rio Grande Sub-Basin stretches from the Texas–New Mexico state line to the International Amistad Dam, covering approximately 650 miles (1,045 km). Along this path, the river flows through eight U.S. counties and is divided into seven segments: 2314, 2309, 2309A, 2308, 2307, 2306, and 2305 and the unclassified segments.

In Segment 2314, the Rio Grande weaves in and out of Texas and New Mexico, forming the boundary between the two states in several areas. Below this segment, the river becomes the international boundary between the United States and Mexico. During irrigation season, water from the river is heavily used for agriculture in New Mexico, Texas, and Mexico. The City of El Paso also relies on the Rio Grande River for roughly half of its municipal drinking water supply.

El Paso, Texas, and Ciudad Juarez, Chihuahua—twin cities with a combined population of more than two million—are surrounded largely by agricultural land. These intensive agricultural and urban uses significantly reduce both the quantity and quality of water in the river. To visualize land cover in the upper Rio Grande Sub-basin, see *Figure 5*. Downstream of the cities, the Rio Grande is composed mainly of agricultural return flows, treated and untreated wastewater, and other effluents, resulting in high concentrations of salts and bacteria.

Conditions improve as the Rio Grande flows past Presidio, Texas, and Ojinaga, Chihuahua, where the Rio Conchos enters the system. This major tributary provides substantial increases in both water quantity and quality. The improved flow then continues into Segment 2306, an area that includes Big Bend Ranch State Park, Big Bend National Park, and the Rio Grande Wild and Scenic River—regions where water quality and availability are vital for tourism, wildlife, and ecological health.

Farther downstream, the Pecos River—the largest U.S. tributary of the Rio Grande—joins the system near the upstream end of Amistad International Reservoir. The International Amistad Dam, located near Del Rio, Texas, is operated by the International Boundary and Water Commission (IBWC). The dam provides several key benefits, including flood control, improved water quality, reliable downstream flows, water supply storage, and recreation. Additionally, two hydroelectric plants at the dam generate electricity for communities on both sides of the border.

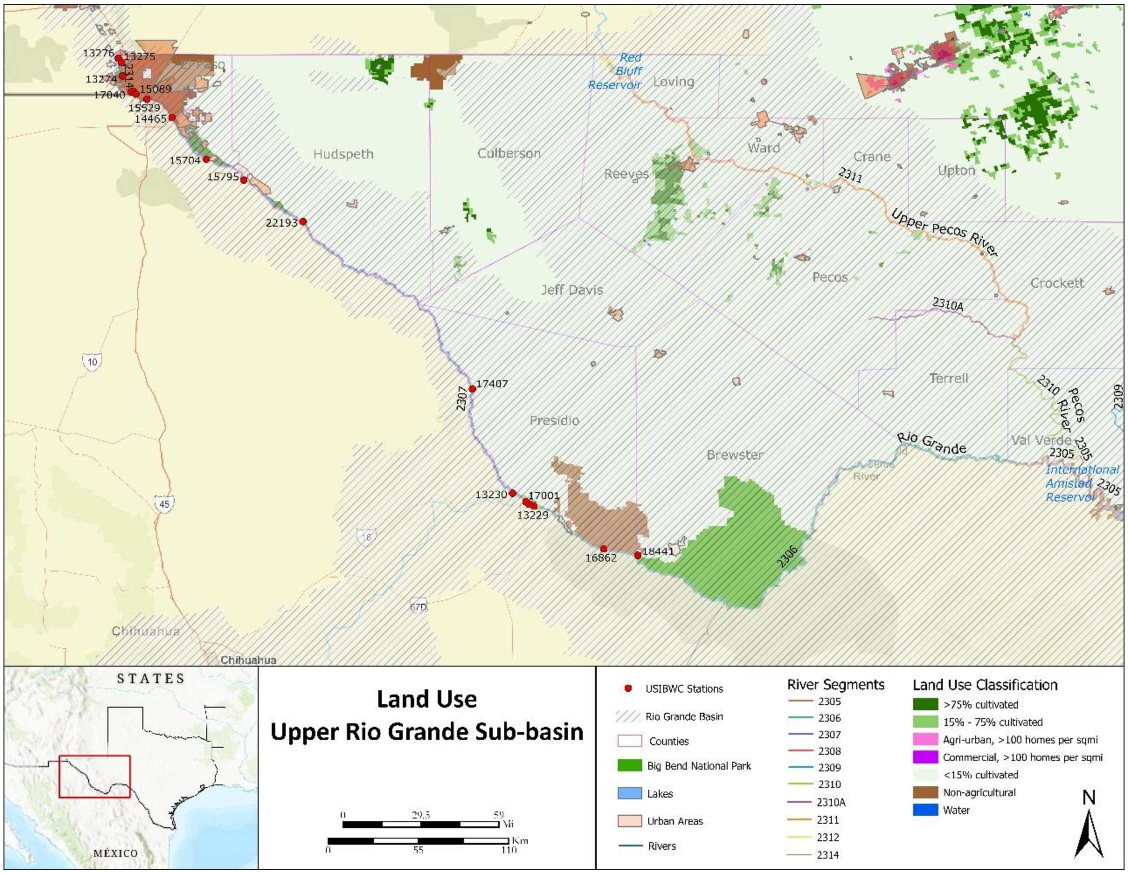

Figure 5: Land Use in the Upper Rio Grande Sub-Basin

The Middle Rio Grande

Figure 6: Aerial View of Rio Grande River in Laredo TX

The Middle Rio Grande Sub-basin includes the portion of the Rio Grande extending from just below International Amistad Reservoir to just above International Falcon Reservoir, approximately 303 miles (487 km). This section of the river is divided into three segments 2303, 2304, 2304A, 2304B and 2313. This reach spans five Texas counties and borders the Mexican states of Coahuila, Nuevo León, and Tamaulipas. Major population centers along this section of the river include Del Rio, Eagle Pass, and Laredo, Texas, and their sister cities Ciudad Acuña, Coahuila, and Nuevo Laredo, Tamaulipas. Laredo is one of the fastest-growing cities in Texas, with increases in trade, manufacturing, and tourism contributing significantly to regional population growth.

The northernmost and easternmost portions of the Middle Rio Grande Sub-basin lie within the Edwards Plateau, while the remainder of the basin falls within the South Texas Brush Country. Downstream of International Amistad Reservoir, the river flows through rolling, irregular plains that eventually transition into coastal plains as the river approaches the Lower Rio Grande Sub-basin. Reduced flow velocities in the pool of Amistad Reservoir allow suspended solids transported from the Upper Rio Grande to settle out within this reach. Most communities along this portion of the river rely on surface water for domestic, agricultural, and industrial uses. To visualize land cover in the middle Rio Grande Sub-basin, see *Figure 7*. Del Rio is the only major municipality in the sub-basin dependent on groundwater, supplied primarily by the Edwards-Trinity (Plateau) Aquifer. San Felipe Creek, a major spring-fed tributary that flows through Del Rio, enters the Rio Grande in Val Verde County downstream of the dam. The region's primary economic sectors include tourism, hunting, ranching, and government, including Laughlin Air Force Base in Del Rio.

Two major USIBWC dams are located within this section of the river: Amistad International Reservoir and Falcon International Reservoir. Amistad was constructed to provide flood control and protect downstream communities, as well as to store water for conservation purposes benefiting both the United States and Mexico during periods of drought. Falcon Reservoir serves primarily for water conservation, releasing water to both nations during scheduled deliveries and to protect from severe weather events such as hurricanes and tropical storms preventing downstream flooding.

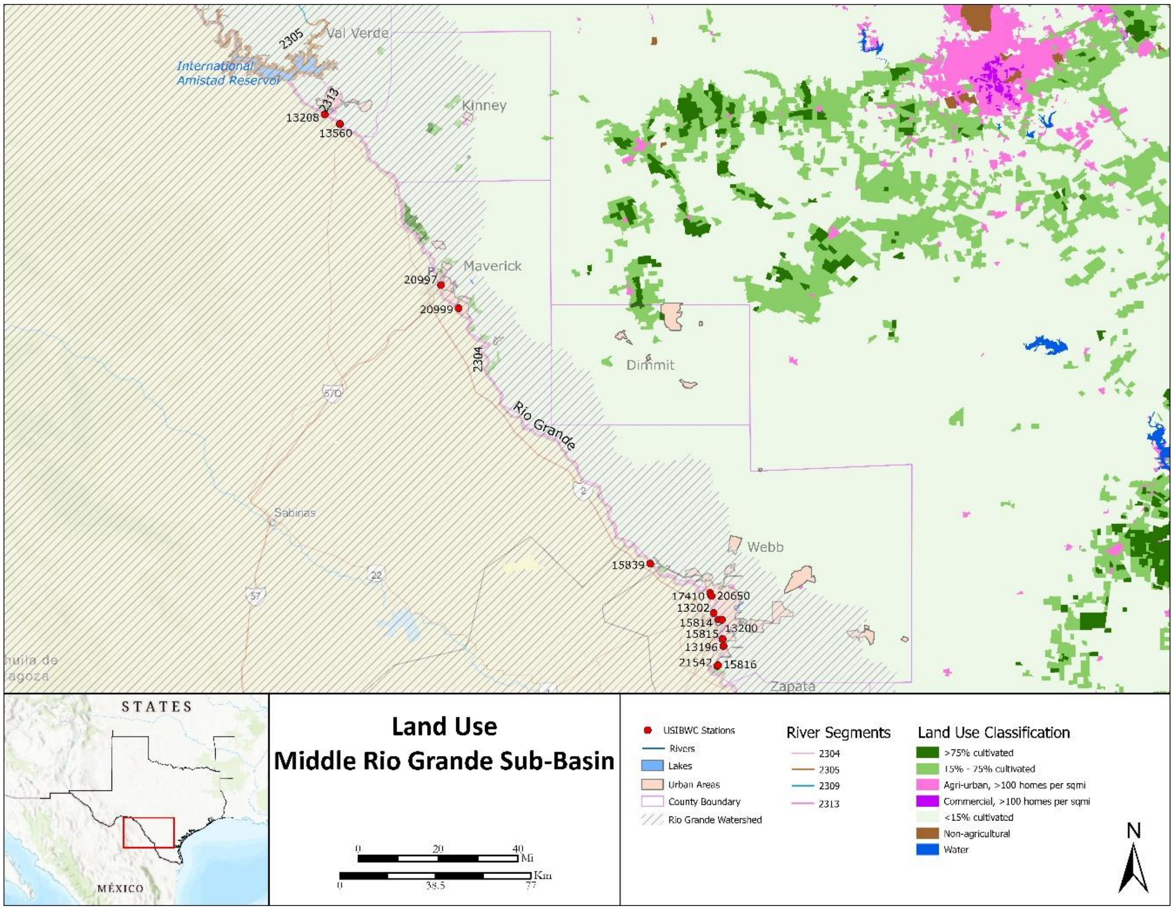

Figure7: Land Use in the Middle Rio Grande Sub-Basin

The Lower Rio Grande

Figure 8: Aerial View of Rio Grande enters the Gulf

The Lower Rio Grande Sub-basin extends from just downstream of International Falcon Dam to the Gulf of Mexico, approximately 280 miles (451 km). It is comprised of two segments 2301, 2302 and 2302A. Along this reach, the river forms the international boundary between Starr, Hidalgo, and Cameron counties in Texas and the Mexican state of Tamaulipas. Population centers throughout the Lower Rio Grande region have grown rapidly in the past decade, and the area's economy relies heavily on agriculture, trade, manufacturing, services, and hydrocarbon production. Major cities include McAllen, Harlingen, and Brownsville in Texas, and Reynosa and Matamoros in Tamaulipas. All municipal and industrial water demands in the Lower Rio Grande Sub-basin depend entirely on the Rio Grande. Anticipated increases in water use from continued population growth will further strain this limited resource, which has already been impacted by drought and high agricultural demand.

The Lower Rio Grande Sub-basin lies within the southeastern portion of the South Texas Brush Country and is underlain by the Carrizo-Wilcox and Gulf Coast Aquifers. Groundwater in this area is primarily brackish, prompting the construction of desalination facilities and studies on both additional groundwater desalination and the potential use of ocean water desalination to supplement drinking water supplies. Most agricultural and urban discharges in this region are diverted into canal systems that empty directly into the Gulf of Mexico; however, during periods of high flow, canal capacities can be exceeded, causing discharges to enter the Rio Grande. To visualize land cover in the lower Rio Grande Sub-basin, see *Figure 9.*

Several dams operated by the USIBWC are located along this portion of the river, including Falcon Dam, Anzalduas Dam, and Retamal Dam. Falcon Dam and Reservoir serve primarily for water conservation and release stored water to both the United States and Mexico during scheduled deliveries or in response to severe weather events, such as hurricanes and tropical storms, to prevent downstream flooding. Anzalduas and Retamal are diversion dams used for binational water accounting, though both can also provide flood control support during emergency conditions. The region also includes an emergency floodway system designed to divert excess floodwaters from the Rio Grande to the Gulf of Mexico.

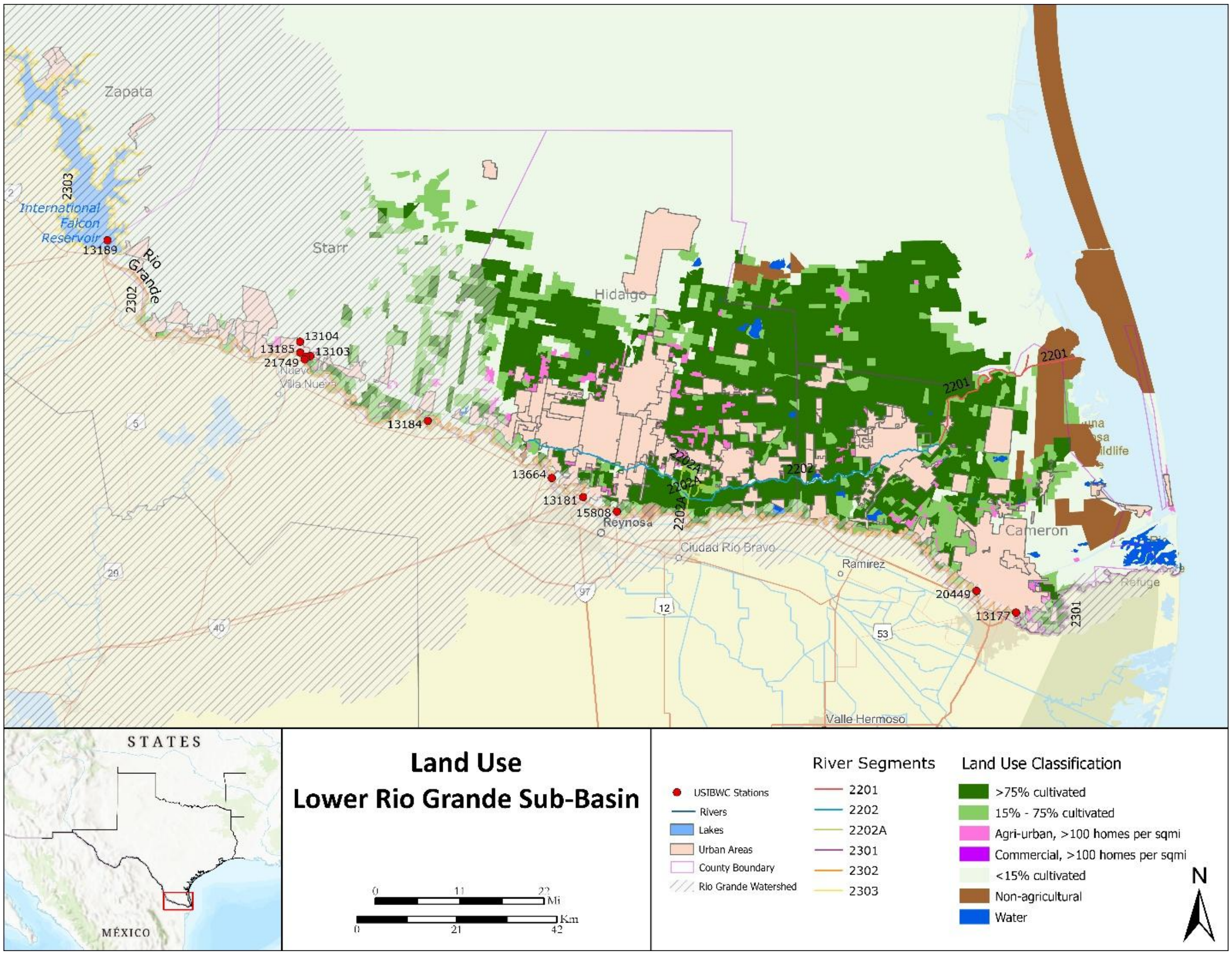

Figure 9: Land Use in the Lower Rio Grande Sub-Basin

The Pecos River

Figure 10: Pecos River

The Pecos River begins in the mountains of north-central New Mexico and flows south along the eastern portion of the state. Just after crossing into Texas, the river is impounded by Red Bluff Dam, forming Red Bluff Reservoir. Water releases from the reservoir are managed under the Pecos River Compact and distributed to irrigation districts throughout the basin. From there, the river continues southeast until it meets the Rio Grande upstream of the International Amistad Dam.

The Pecos River is 926 miles long and drains a watershed of approximately 38,300 square miles. Within Texas, the river spans 409 miles (658 km) and is divided into three designated stream segments: 2312, 2311, 2310 and 2310A.

Segment 2312 encompasses Red Bluff Reservoir, extending from Red Bluff Dam in Loving/Reeves County upstream to the New Mexico state line at the reservoir's normal pool elevation of 2,842 feet. Segment 2311, the Upper Pecos River, stretches from immediately upstream of the confluence with Independence Creek in Crockett/Terrell County upstream to Red Bluff Dam. Segment 2310, the Lower Pecos River, runs from a point 0.7 kilometers (0.4 miles) downstream of the confluence with Painted Canyon in Val Verde County upstream to the point just above the confluence with Independence Creek.

The Upper Pecos River faces persistent challenges, including naturally high salinity, invasive salt cedar, and prolonged drought conditions. Salinity is a major concern because, although the Pecos is the largest U.S. tributary to the Rio Grande, it contributes about 29.5% of the salt load entering Amistad Lake while providing only 11% of total streamflow. Conditions improve in the Lower Pecos River, where freshwater inflows from tributaries such as Independence Creek reduce salinity levels and support greater biological diversity. To visualize land cover in the Pecos Sub-basin, see *Figure 11.*

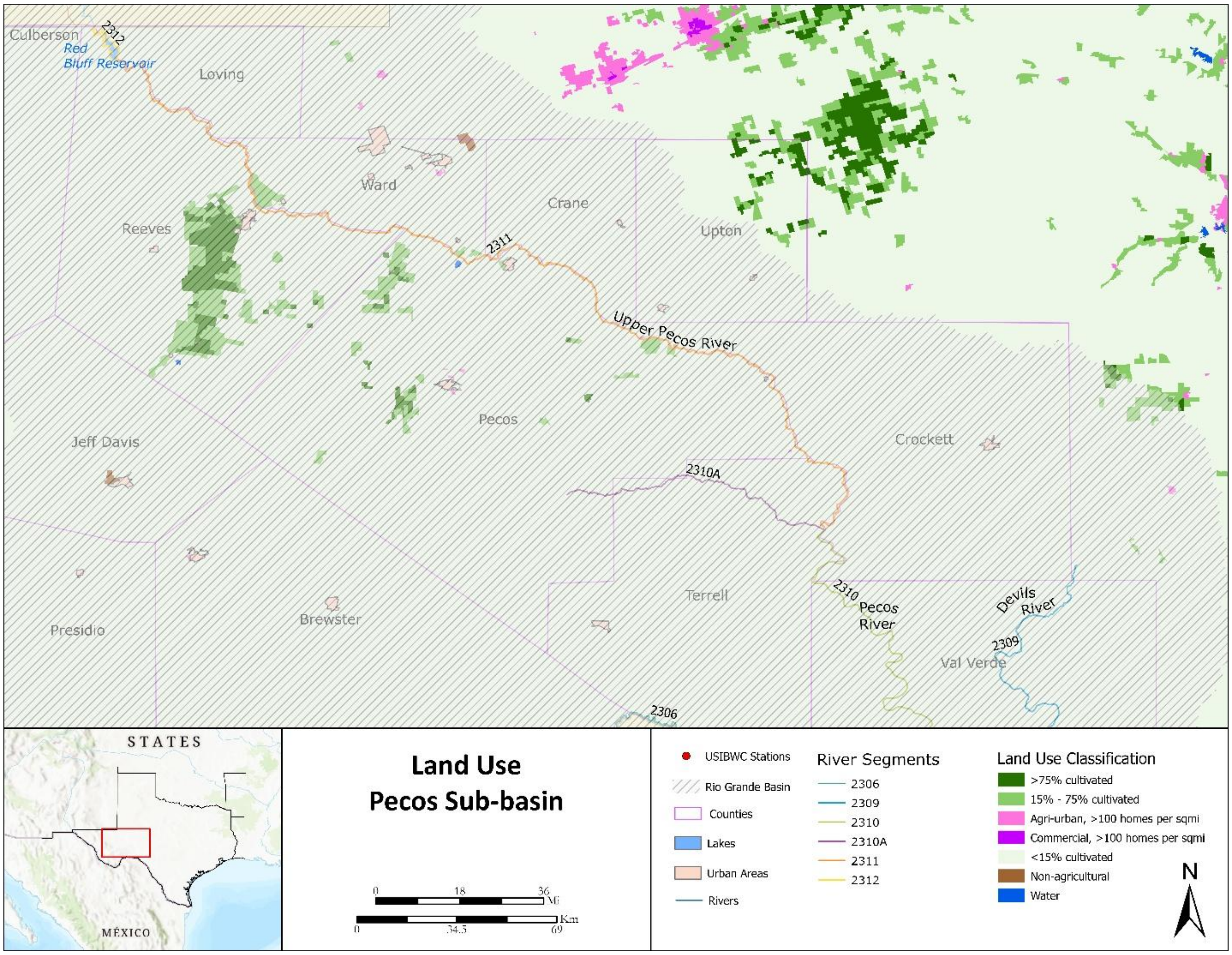

Figure 11: Land Use in the Pecos Sub-Basin

IMPAIRED SURFACE WATER IN THE RIO GRANDE BASIN 2026

Given the extensive size and hydrologic complexity of the Rio Grande Basin, this characterization report focuses primarily on impaired and impacted surface waters. Using the EPA's 303(d) list, developed as a requirement of the Clean Water Act, we can summarize the primary concerns affecting the basin. These include risks to public health, impacts on aquatic species and wildlife, and the identification of specific pollutants along with their potential sources. Additions to this year's report include section 2312 Red bluff Reservoir. While segment 2310 Lower Pecos River was delisted from the 303(d) report.

Table 3: Texas's 2026 Draft Integrated report of surface water quality for the Clean Water Act 303(d) list

Segment ID	Segment Name	AU ID	Impairment Description	Year First Listed	Impairment Category
2302	Rio Grande Below Falcon Reservoir	2302_03	Bacteria in water (Recreation Use)	1996	5c
2302A	Arroyo Los Olmos	2302A_01	Bacteria in water (Recreation Use)	2004	5b
			Depressed dissolved oxygen in water	2022	5c
2304	Rio Grande Below Amistad Reservoir	2304_01	Bacteria in water (Recreation Use)	1996	5c
		2304_02	Bacteria in water (Recreation Use)	1996	5c
		2304_03	Bacteria in water (Recreation Use)	1996	5c
		2304_07	Bacteria in water (Recreation Use)	1996	5c
		2304_09	Bacteria in water (Recreation Use)	1996	5c
2306	Rio Grande Above Amistad Reservoir	2306_01	Sulfate in water	2010	5b
		2306_02	Sulfate in water	2010	5b
		2306_03	Sulfate in water	2010	5b
		2306_04	Sulfate in water	2010	5b
		2306_05	Sulfate in water	2010	5b
		2306_06	Sulfate in water	2010	5b
		2306_07	Sulfate in water	2010	5b
		2306_08	Sulfate in water	2010	5b
2307	Rio Grande Below Riverside Diversion Dam	2307_01	Bacteria in water (Recreation Use)	2002	5c
			Chloride in water	1996	5c
			Sulfate in water	2024	5c
			Total dissolved solids in water	1996	5c
		2307_02	Chloride in water	1996	5c
			Sulfate in water	2024	5c
			Total dissolved solids in water	1996	5c
		2307_03	Bacteria in water (Recreation Use)	2002	5c
			Chloride in water	1996	5c
			Sulfate in water	2024	5c
			Total dissolved solids in water	1996	5c
2307	Rio Grande Below Riverside Diversion Dam	2307_04	Bacteria in water (Recreation Use)	2002	5c
			Chloride in water	1996	5c
			Sulfate in water	2024	5c
			Total dissolved solids in water	1996	5c
		2307_05	Bacteria in water (Recreation Use)	2002	5c
			Chloride in water	1996	5c
			Depressed dissolved oxygen in water	2024	5c
			Sulfate in water	2024	5c
			Total dissolved solids in water	1996	5c
2308	Rio Grande Below International Dam	2308_01	Bacteria in water (Recreation Use)	2014	5c
			Depressed dissolved oxygen in water	2024	5c
			Total dissolved solids in water	2024	5c
2311	Upper Pecos River	2311_03	Depressed dissolved oxygen in water	2006	5b
2312	Red Bluff Reservoir	2312_01	Sulfate in water	2016	5c
		2312_02	Sulfate in water	2016	5c
2313	San Felipe Creek	2313_01	Bacteria in water (Recreation Use)	2014	5c
2314	Rio Grande Above International Dam	2314_01	Bacteria in water (Recreation Use)	2002	5c

AU ID: Identifies the assessment unit (AU_ID, six or seven digits, e.g., 0101A_01) and describes the location of the specific area within a classified or unclassified water body for which one or more water quality standards are not met.
Category 5b: A review of the standards for the water body will be conducted before a management strategy is selected.
Category 5c: Additional data and information will be collected or evaluated before a management strategy is selected.

Segment 2302: Rio Grande Below Falcon Reservoir

2302 segment is described from a point 10.8 km (6.7 miles) downstream of the International Bridge in Cameron County to Falcon Dam in Starr County. It is the segment located just below International Falcon Reservoir, stretching to the tidal segment of the Rio Grande and is approximately 231.5 miles long. The segment has seven assessment units, or AUs, and one unclassified water body with fourteen monitoring stations historically. This segments impairment is for *Enterococcus* or elevated levels of *E. coli* bacteria since 1996. It also has high levels of chlorophyll-a and Nitrate. These concerns are from Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown point sources.

Segment 2302A: Arroyo los Olmos

2302A_01 segment stretches approximately 25.7 km (16 miles) from Rio Grande confluence at Rio Grande City to El Sauz in Starr County. There is one assessment unit, which is monitored by three stations historically. This segment has been impaired for *E. coli* bacteria since 2004 and depressed dissolved oxygen since 2022. It also has concerning levels chlorophyll-a. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown point sources.

Segment 2304: Rio Grande Below Amistad Reservoir

2304 segment stretches approximately 363 km (226 miles) from a point 0.66 km (0.41 mi) upstream of the confluence of the Arroyo El Lobo (Mexico) in Webb County to Amistad Dam in Val Verde County to the Amistad Reservoir. There are ten assessment units, which are monitored by eighteen stations historically. This segment has been impaired for *E. coli* bacteria since 1996. It also has concerning levels chlorophyll-a, ammonia, and depressed dissolved oxygen. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown point sources.

Segment 2306: Rio Grande Above Amistad Reservoir

2306 segment stretches 503 km (313 miles) from a point 1.8 km (1.1 mi) downstream of the confluence of Ramsey Canyon in Val Verde County to the confluence of the Rio Conchos (Mexico) in Presidio County. There are eight assessment units, which are monitored by nine stations historically. This segment has been impaired for elevated sulfate levels since 2010. It also has concerning levels chlorophyll-a. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown sources.

Segment 2307: Rio Grande Below Riverside Diversion Dam

Segment 2307 stretches 357.3 km (222 miles) from the confluence of the Rio Conchos (Mexico) in Presidio County to Riverside Diversion Dam in El Paso County. There are five assessment units, monitored by five station stations historically. This segment has been impaired for elevated bacteria levels since 2002, chloride since 1996, total dissolved solids since 1996, and sulfate since 2024. It also has concerning levels of chlorophyll-a, ammonia, phosphorus and nitrate. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown point sources.

Segment 2308: Rio Grande Below International Dam

Segment 2308 stretches 24.1 km (15 miles) from the riverside diversion dam in El Paso County to International Dam in El paso County. There is one assessment unit, monitored by two station stations historically. This segment has been impaired for elevated bacteria levels since 2014, total dissolved solids since 2024, and depressed dissolved oxygen since 2024. It also has concerning levels of chlorophyll-a, ammonia, and phosphorus. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown sources.

Segment 2311: Upper Pecos River

Segment 2311 runs 497.3 km (309 miles) from a point immediately upstream of the confluence of Independence Creek in Crockett and Terrell County to Red Bluff Dam in Loving and Reeves County. There are eight assessment units in this segment with four monitoring stations historically. This segment has been impaired for depressed dissolved oxygen since 2006. It also has concerning levels chlorophyll-a. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown sources.

Segment 2312: Red Bluff Reservoir

Segment 2312 runs from Red Bluff Dam in the Loving/Reeves County line to the New Mexico state line in Loving/Reeves County, up to the normal pool elevation of 2842 feet (866 m) (impounds the Pecos River), which runs for 11 miles (18 km). This reservoir is used to impound the waters of the Pecos River entering Texas from New Mexico and is approximately 11700 acres in area. Water is then released at the request of irrigation districts or municipalities. There are two assessment units in this segment, with one monitoring station each. Assessment unit 2312_01 runs from Red Bluff Dam to mid-lake and has monitoring station 13267 (Red Bluff Reservoir). Assessment unit 2312_02 runs from mid-lake to the Texas/New Mexico state line and is monitored by station 13269 (Red Bluff Reservoir at TX/NM state line). This segment has been impaired for elevated sulfate levels oxygen since 2016. It also has concerning levels of depressed dissolved oxygen. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown point sources.

Segment 2313: San Felipe Creek

Segment 2313 is a tributary that runs into the Rio Grande River traveling around 14.5 km (9 miles) in length. There is one assessment unit in this segment, with three monitoring stations. This segment has been impaired for elevated bacteria (*E. coli*) since 2014. These sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown point sources.

Segment 2314: Rio Grande Above International Dam

Segment 2314 stretches 33.8 km (21 miles) from International Dam in El Paso County to the New Mexico State Line in El Paso County. There are two assessment units (2314_01 and 2314_02) in this segment. All the stations that monitor this reach, however, are only within AU 2314_01. There are two assessment units in this segment, with six monitoring stations. This segment has been impaired for elevated bacteria (*E. coli*) since 2002. It also has concerning levels of ammonia, chlorophyll-a, phosphorus, and PCBs. The sources of these impairments have been classified as Non-Point Sources (NPS) originating from outside state jurisdiction or borders, urban runoff, storm sewers, and other unknown sources.

Possible negative impacts on water quality

Nonpoint sources- The Rio Grande is heavily impacted not only by small and large urban developments on both sides of the border, but also by the lower-income communities that have limited or no access to sewer systems. These areas are more likely to have inadequate sewer hookups, leaky septic tanks or no infrastructure at all, which can contribute to the bacteria problems in the area. Waterfowl and livestock from nearby ranchlands may further contribute to bacteria in the water, but the extent of any impact on the water quality from wildlife is currently unknown.

Agriculture: The Rio Grande is significantly influenced by the agricultural sector, with a considerable portion of the surrounding land devoted to crop production. There are some private ranchlands in the surrounding areas that have livestock. Agricultural return flows may contribute to high salinity in the water being returned to the river and may also have a negative impact on the bacteria counts. It is important to note that return flows are received from both the U.S. and Mexico, and both may be contributing to the problem. Agricultural return flows are also high in nutrients, which can contribute to algal blooms. Livestock that are allowed to graze near the river can also contribute to high levels of bacteria in the surface water.

Wildlife- activity along the Rio Grande in Texas can influence local water quality conditions, particularly in areas where access to the river is easy due to low banks and limited riparian vegetation. Mammals commonly use the river as a primary water source in this arid region, and their presence can contribute to natural bacterial loading. The river also serves as an important migratory corridor and resting point for numerous bird species. Large congregations of migratory waterfowl and shorebirds can increase fecal bacteria inputs, especially during peak migration seasons. In addition, livestock grazing on adjacent private ranchlands introduces another potential source of bacteria and nutrients when animals enter or graze near the riparian zone. Smaller wildlife species—including rodents, reptiles, and meso-mammals—are also present throughout the river corridor and may contribute to background bacteria levels, though typically to a lesser extent. While wildlife-associated impacts are natural components of the ecosystem, their effects can become more pronounced where riparian vegetation is sparse, human access is high, or water flows are reduced, limiting the river's ability to dilute and assimilate these inputs.

Urban Runoff- is a growing contributor to water quality degradation in the Rio Grande River, particularly in and downstream of rapidly expanding metropolitan areas such as El Paso and Laredo. During storm events, rainfall washes pollutants from streets, parking lots, industrial areas, and residential neighborhoods directly into storm drains that discharge to the river with little or no treatment. This runoff often carries elevated levels of bacteria, nutrients, heavy metals, oil and grease, trash, and suspended sediments. These pollutants can increase pathogen levels, reduce oxygen concentrations, and impair aquatic habitat, especially during low-flow periods when the river's dilution capacity is limited.

Urbanization also alters the natural hydrology of the watershed by replacing permeable soils with concrete and asphalt. This increases the volume and speed of stormwater entering the river, contributing to bank erosion, channel instability, and the mobilization of sediment-bound contaminants. In addition, failing or aging wastewater infrastructure—such as sanitary sewer overflows, leaking septic systems, and cross-connections—can further elevate bacteria loads during rainfall events. The combined effect of pollutant transport, altered flow regimes, and infrastructure stress makes urban runoff a significant nonpoint source contributor to water quality impairments along the Rio Grande

Drought effects- Drought brings with it many water quality implications. It increases water scarcity lowering river flow which in turn increases salinization making the water unusable for irrigation and leading to municipal water shortages. This also has a broad range of negative effects on flora and fauna, leading to overall lowered biodiversity. The lower water levels directly correlate with reduced dissolved oxygen levels, which can lead to fish kills and macroinvertebrate loss. Drought also leads to a reduced dilution of contaminants. High average temperatures and higher levels of available nutrients (particularly phosphate and nitrogen) can cause algae blooms, exacerbating fish kills and promoting toxic cyanobacterial blooms, which are a potential health risk to communities that rely on the river for drinking water (Mosley, 2015). As 7.7 million Texans are currently impacted by drought, we should continue water monitoring efforts to reduce and manage adverse impacts. To learn more about the current drought in Texas, you can utilize the National Integrated Drought Information System (NIDIS) to see real-time data on drought monitoring, forecasting, and planning at the state and local levels.

Bacteria effects- High levels of bacteria (*E. coli*) in water indicate fecal contamination, meaning sewage or animal waste is entering the water and potentially carrying other harmful pathogens. This contamination poses significant health risks, as exposure or ingestion can cause gastrointestinal illnesses and, in severe cases, kidney complications in vulnerable individuals. Elevated *E. coli* levels also degrade water quality by increasing turbidity and reducing dissolved oxygen, which can harm aquatic life. Additionally, high bacterial counts often lead to recreational water closures and require management actions to protect public health and ecosystems.

Chlorophyll-a Effects- High concentrations of chlorophyll-a indicate excessive algal and cyanobacterial growth, often fueled by nutrient over-enrichment such as nitrogen and phosphorus runoff. This eutrophication process can lead to unsightly blooms, unpleasant odors, and reduced light penetration in water bodies. As algal biomass dies and decomposes, bacterial respiration consumes dissolved oxygen, potentially causing hypoxic conditions or "dead zones" that threaten aquatic life. Some blooms also produce toxins that endanger human and animal health and impair recreational, drinking, and ecosystem uses. Monitoring chlorophyll-a thus serves as a vital early warning sign of deteriorating water quality, alarming stakeholders to excessive nutrient pollution and the need for management responses.

High level of nutrients- High concentrations of ammonia, phosphorus, and nitrogen significantly impair water quality by accelerating eutrophication, harming aquatic life, and posing health risks. Elevated ammonia levels directly poison fish and other aquatic organisms, especially at higher pH and temperatures—and increase nitrogenous biochemical oxygen demand, which depletes oxygen in the water. Excess phosphorus, often in the form of phosphate, fuels algal growth, blocking sunlight and promoting blooms that deplete oxygen upon decomposition, leading to hypoxia and habitat degradation. Similarly, high levels of nitrogen—whether as nitrate, nitrite, or ammonium—stimulate algal blooms and downstream oxygen depletion; nitrate contamination in drinking water also presents serious risks to infants, including methemoglobinemia (“blue baby syndrome”). Combined, these nutrient pollutants disrupt ecosystem balance, reduce biodiversity, and threaten both environmental quality and public health.

RECOMMENDATIONS

Improving and protecting water quality throughout the Rio Grande Basin requires a coordinated, data-driven approach that emphasizes enhanced monitoring, binational collaboration, and targeted mitigation of known pollutant sources. Based on the 2025 monitoring results and the 2026 impairment findings, the following recommendations support effective basin management.

Strengthening monitoring and data collection remains a priority. This includes expanding targeted monitoring in reaches with chronic impairments—such as elevated bacteria, nutrients, TDS, and sulfate—to better identify pollutant sources. Increasing sampling frequency during low-flow periods, post-storm events, and times of greater irrigation return flows will improve the accuracy of water quality assessments. Continued support or expansion for Continuous Water Quality Monitoring (CWQM) stations is essential for detecting rapid changes during drought conditions, and consistent field observations from all partners will improve the reliability of the basin's long-term dataset.

Addressing bacterial contamination requires collaboration with local governments to evaluate and improve septic systems, especially in low-income or unincorporated communities lacking adequate wastewater infrastructure. Binational efforts will also be needed to reduce untreated or under-treated wastewater upstream of impaired reaches. In agricultural areas, livestock exclusion fencing and alternative watering sources can reduce direct contamination, while improved stormwater management in cities will help limit bacteria-laden runoff during rain events.

Reducing nutrient inputs—including chlorophyll-a, ammonia, nitrogen, and phosphorus—will require promoting agricultural best management practices such as nutrient management planning, vegetative buffer strips, and precision fertilizer application. Encouraging more efficient irrigation technologies can lessen nutrient-rich return flows. Upgrading wastewater treatment systems in growing border communities will improve excessive nutrient discharges into surface waters.

Managing salinity-related concerns, including TDS, chloride, and sulfate, involves working closely with irrigation districts to evaluate salinity contributions from return flows and explore opportunities for water reuse or blending. Collaboration with groundwater and surface-water managers will improve understanding of salinity behavior during drought. Supporting ongoing Pecos River salinity studies will help quantify long-term salt loads, and binational coordination is essential to address upstream contributions from municipal, industrial, and agricultural sources.

Public and binational engagement play a vital role in improving water quality. Expanding outreach on water stewardship, pollution prevention, and wastewater management will help inform basin communities. Continued collaboration with Mexican counterparts on sampling, data sharing, and watershed-level planning strengthens binational management. Regular Coordinated Monitoring Meetings and Basin Advisory Committee meetings ensure consistent communication with stakeholders, while partnerships with universities, NGOs, and local governments can enhance community-based monitoring and education initiatives.

Finally, improving interagency coordination and aligning resources across agencies remains essential. The Clean Rivers Program should continue integrating its activities with local, state, and federal water quality efforts. Close coordination with leadership at TCEQ and CRP will help keep monitoring aligned with emerging needs.

POTENTIAL STAKEHOLDERS

A wide range of stakeholders are involved in protecting water quality and availability throughout the Rio Grande river basin. Key stakeholders include federal agencies such as the U.S. Environmental Protection Agency and the International Boundary and Water Commission, which oversee water standards and binational agreements. State entities like the Texas Commission on Environmental Quality and Texas Parks and Wildlife manage water rights, environmental monitoring, and habitat protection. Local governments and water utilities rely on the river for municipal supply, while agricultural producers depend heavily on it for irrigation. Tribal communities, environmental organizations, scientists, and the public also have strong interests in maintaining a healthy, reliable river system. Together, these groups influence policy, resource management, and long-term sustainability of the Rio Grande.

Additional list of stakeholders:

Landowners TCEQ Watermaster Office
US Fish & Wildlife Service TCEQ Regional Offices
TX Parks and Wildlife TX A&M Kingsville
UTRGV- Edinburg Starr, Willacy, Hidalgo, Cameron Counties
Cities of Zapata, Roma, McAllen, La Feria, Pharr, Mercedes, Weslaco, Edinburg, Mission, Rio Grande City
Cameron County Water Improvement District No. 10 and 16
Cameron County irrigation District No. 2 and 6
Donna irrigation District- Hidalgo County No. 1
Hidalgo and Cameron County Irrigation District No. 9
Hidalgo County Irrigation District No. 1, 2, 6, 13, 16, 19
Hidalgo County Water Control and Improvement District No. 18
Hidalgo County Water Improvement District No. 3, 5

Hidalgo County Municipal Utility District No. 1
La Feria Irrigation District- Cameron County No. 3
Santa Maria Irrigation District- Cameron County No. 4
United Irrigation District of Hidalgo County
Valley Acres Water District
Valley Municipal Utility District No. 2

COMMUNITY OUTREACH AND ONGOING PROJECTS

Figure 12: CRP attending Water Week at UTEP 2025

Public involvement is essential to the success of the Clean Rivers Program (CRP) and is reflected in a variety of activities, including participation in stakeholder meetings, support for academic research, and collaboration with partner agencies. CRP staff regularly attend meetings organized by environmental and community groups to discuss water quality issues, communicate program goals, and coordinate efforts to prevent duplication of work within the basin. The program also supports research initiatives, including chemical and bacteriological studies near major metropolitan areas and assessments of potential impacts from domestic wastewater on wildlife. Additionally, CRP leverages grant funding to maximize resource use within the basin and has provided personnel, laboratory assistance, and binational coordination for projects conducted by other agencies. Outreach efforts—such as university presentations, school engagements, and community events—play a critical role in promoting water conservation, pollution prevention, and the stewardship of healthy river ecosystems. Collectively, these activities advance public awareness of the Texas CRP's mission and foster a sense of shared responsibility for protecting the state's rivers for future generations.

Coordinated Monitor Meetings

CRP holds several types of meetings, including an important series of annual meetings called Coordinated Monitoring Meetings. The purpose of the meetings is to plan and coordinate water quality monitoring efforts among different entities and partners. These meetings allow for more efficient use of agency resources and take into consideration concerns from the public gathered throughout the year. They provide an opportunity for CRP to hear about local water quality interests and problems and allow attendees to bring up any questions or concerns they may have about their area to CRP staff. Additionally, USIBWC CRP typically hosts training for sampling partners in conjunction with these meetings. Basin Advisory Committee meetings are held twice a year and usually revolve around presenting an annual water quality update to the public, as well as updates about important issues in the area.

Continuous Water Quality Monitoring


Figure 13: CWGM station

The TCEQ and USGS currently operate 25 Continuous Water Quality Monitoring (CWQM) stations across the Rio Grande Basin. Data collected from these stations are used to evaluate changes in salt concentrations through specific conductance measurements, assess surface-water flow conditions related to salt cedar removal, support investigations into the causes of toxic golden alga blooms, and contribute to the development of the Integrated Report.

Texas Legislature 2025

In 2025 Texas legislature passed Senate Bill 7 (SB7) and House Joint Resolution 7 (HJR7) which work together to strengthen Texas's water infrastructure in ways that ultimately protect and improve surface water quality. SB7 creates a coordinated statewide system for planning and building water-supply and conveyance projects, promotes use of modern construction standards, and expands funding eligibility for key efforts such as wastewater improvements, conservation, water-loss reduction, and surface-water conveyance upgrades—all of which reduce contamination risks and improve treatment before water reaches rivers and lakes. HJR7 complements this by establishing a long-term, constitutionally dedicated funding stream for the Texas Water Fund, ensuring stable, billion-dollar annual investments to repair aging infrastructure, upgrade treatment plants, and mitigate leaks. Together, they provide both the planning framework and the financial resources needed to protect Texas's surface waters and support healthier, more resilient water systems statewide.

USIBWC CONTACT INFORMATION AND RESOURCES

International Boundary and Water Commission, U.S. Section
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References and Additional Links

TCEQ 2024 Integrated Report: https://www.tceq.texas.gov/waterquality/assessment/2024-integrated-report

Texas surface Water Quality Standards (TSWQS): https://www.tceq.texas.gov/waterquality/standards/eq_swqs.html

Texas landcover classification data:

https://www.nass.usda.gov/Research_and_Science/stratafront2b.php

The Texas Clean Rivers Program: https://www.tceq.texas.gov/waterquality/clean-rivers/index.html

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