

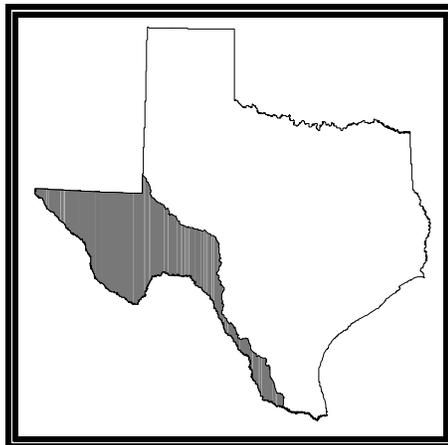
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Basin 23

Rio Grande



Rio Grande Basin Narrative Summary

The Rio Grande/Río Bravo, originates in the San Juan Mountains of southern Colorado, and flows to the south across New Mexico before entering Texas about 20 miles northwest of El Paso. After entering Texas the remaining two-thirds of the river, 1,248 miles, forms the international boundary between the United States and Mexico from El Paso to the Gulf of Mexico. The total length of the Rio Grande/Río Bravo from the San Juan Mountains to the Gulf of Mexico is 1,896 miles long. The river and its tributaries drain 335,500 square miles in three US and five Mexican states (Colorado, New Mexico, and Texas; Chihuahua, Coahuila, Durango, Nuevo Leon, and Tamaulipas). However, only 182,215 square miles (88,968 square miles in the US and 48,259 square miles in Texas), actually drain into surface waters that eventually flow to the Gulf of Mexico.

The basin has been divided into 14 segments. Three of the segments are major reservoirs (Amistad and Falcon International Reservoirs and Red Bluff Reservoir), which have a combined surface area of 163,776 surface acres, and 1551 stream miles.

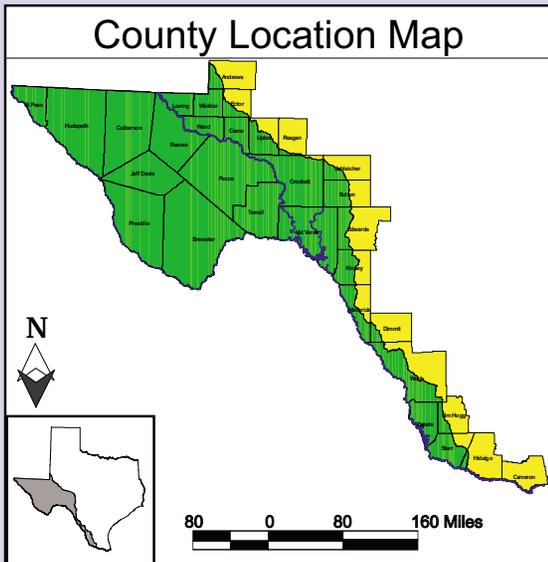
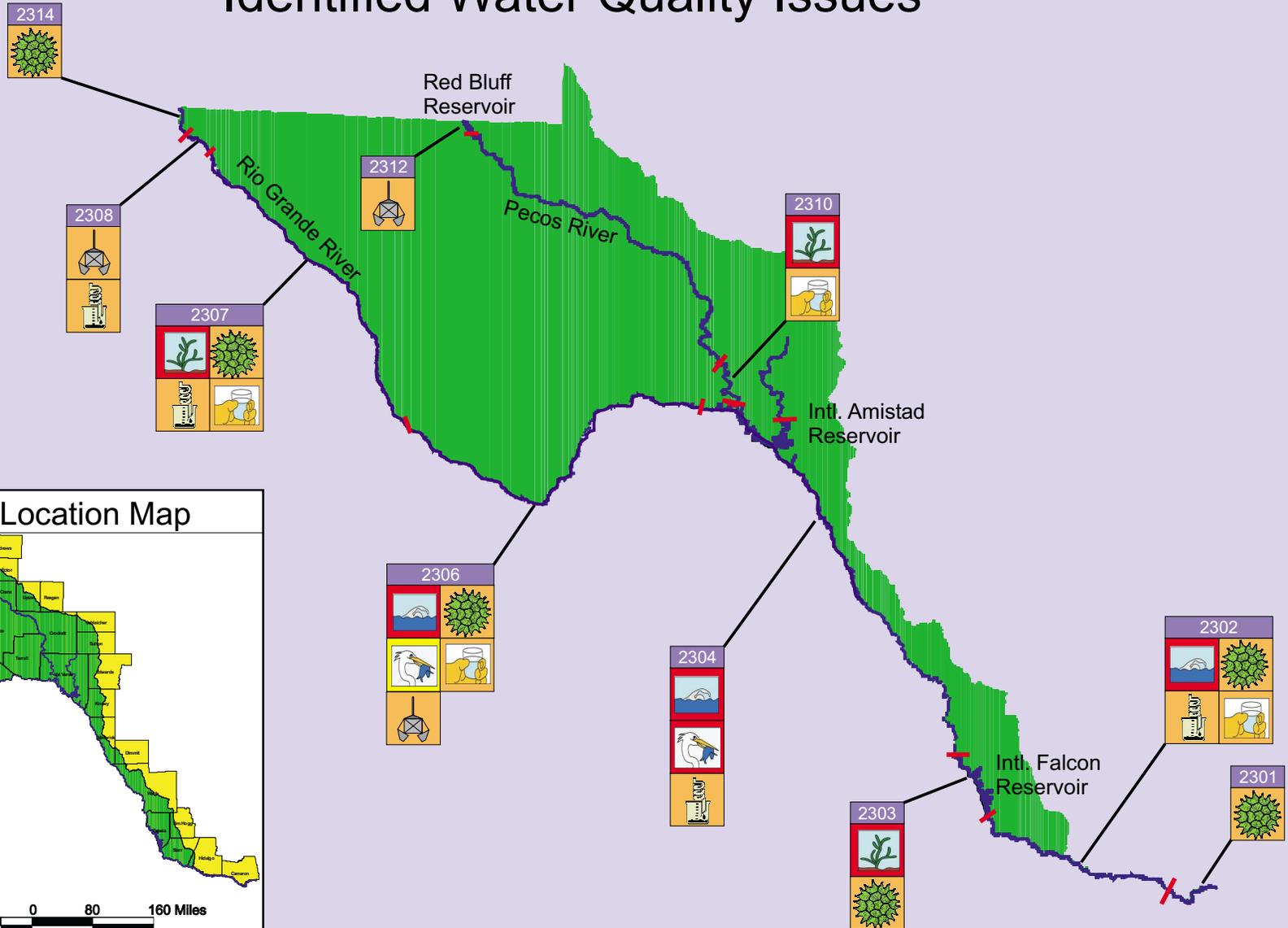
The population of the Rio Grande/Río Bravo Basin is estimated at approximately 10 million. Of the 10 million roughly one million live in the Colorado/New Mexico portion of the basin, one million in the Texas portion and eight million in Mexico. The economy of the area is based on wholesale and retail trade, oil and gas production, agriculture, manufacturing, international trade, tourism, and recreation.

Due to the basin's size and wide range of geologic and climatic conditions, the water quality of the Rio Grande/Río Bravo varies greatly. Most of the flow of the Rio Grande/Río Bravo is diverted for irrigation and municipal uses at the American Canal in Texas and the Acequia-Madre Canal in Mexico before it reaches El Paso. Downstream of El Paso, most of the flow consists of treated municipal wastewater from El Paso and irrigation return flow. Flow can be intermittent to Presidio/Ojinaga where inflow from Mexico's Río Conchos enters the Rio Grande/Río Bravo. The presence of metals and pesticides has been identified sporadically throughout the Rio Grande/Río Bravo Basin. Elevated fecal coliform densities occur in the river downstream of major US-Mexico border cities due to municipal waste treatment facilities in Texas and untreated wastewater in Mexico. Chloride, sulfate, and total dissolved solids concentrations are increasing in the Rio Grande due to repeated use of water for irrigation. Elevated nutrient levels are common in the Rio Grande/Río Bravo.

Major tributaries to the Rio Grande/Río Bravo are the Devils River, Pecos River and San Felipe Creek in Texas, and the Río Conchos, Río Salado, Río San Juan, Río Alamo, and Río San Rodrigo in Mexico. The Devils

River and San Felipe Creek have no known water quality problems. The Pecos River drains a substantial part of New Mexico and far West Texas. The saline waters entering Texas are stored in Red Bluff Reservoir. Downstream of the reservoir, the salinity in the Pecos River continues to increase.

Rio Grande Basin Identified Water Quality Issues

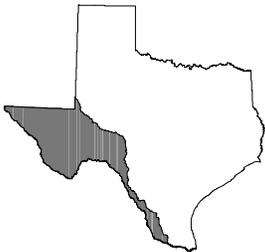


Rio Grande Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 2301 Rio Grande Tidal	Segment 2302 Rio Grande Below Falcon Reservoir	Segment 2303 International Falcon Reservoir	Segment 2304 Rio Grande Below Amistad Reservoir	Segment 2305 International Amistad Reservoir	Segment 2306 Rio Grande Above Amistad Reservoir	Segment 2307 Rio Grande Below Riverside Diversion Dam	Segment 2308 Rio Grande Below International Dam	Segment 2309 Devils River	Segment 2310 Lower Pecos River
DESIGNATED USE SUPPORT										
Contact Recreation	S	N	NA	N	S	N	S	X	S	S
Noncontact Recreation	X	X	X	X	X	X	X	S	X	X
Public Water Supply	X	S	S	S	S	S	S	S	S	S
Fish Consumption										
Human Health	NA	S	NA	S	NA	NA	NA	S	NA	NA
Advisories/Closures	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aquatic Life										
Dissolved Oxygen (Grab)	S	S	NA	S	S	S	S	S	S	S
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals in Water	NA	S	NA	S	NA	S	NA	S	NA	S
Organics in Water	NA	S	NA	S	NA	S	NA	S	NA	NA
Water Toxicity Tests	NA	S	NA	N	NA	P	NA	NA	NA	NA
Sediment Toxicity Tests	NA	S	NA	S	NA	S	NA	NA	NA	NA
Macrobenthos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL USE SUPPORT										
Water Temperature	S	S	NA	S	S	S	S	S	S	S
pH	S	S	NA	S	S	S	S	S	S	S
Chloride	X	S	N	S	S	S	N	S	S	N
Sulfate	X	S	S	S	S	S	N	S	S	N
Total Dissolved Solids	X	S	N	S	S	S	N	S	S	N

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern;
 NA = Not Assessed; X = Not Applicable

Rio Grande Basin Graphical Summary (Continued)

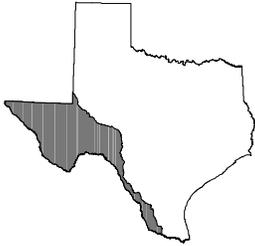
Basin Map	Water Bodies									
	Segment 2301 Rio Grande Tidal	Segment 2302 Rio Grande Below Falcon Reservoir	Segment 2303 International Falcon Reservoir	Segment 2304 Rio Grande Below Amistad Reservoir	Segment 2305 International Amistad Reservoir	Segment 2306 Rio Grande Above Amistad Reservoir	Segment 2307 Rio Grande Below Riverside Diversion Dam	Segment 2308 Rio Grande Below International Dam	Segment 2309 Devils River	Segment 2310 Lower Pecos River
										
WATER QUALITY CONCERNS										
Contact Recreation	X	X	NA	X	X	X	X	X	X	X
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Fish Tissue	NA	NA	NA	NC	NA	NA	NA	NA	NA	NA
Sediment	NA	NC	NA	NC	NA	C	NC	C	NA	NA
Narrative	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nutrient Enrichment										
Ammonia Nitrogen	NC	C	NC	C	NC	NC	C	C	NC	NC
Nitrite + Nitrate Nitrogen	NC	NC	NA	NC	NC	NC	NC	NC	NC	NC
Orthophosphorus	NC	NC	NA	NC	NC	NC	NC	NC	NC	NC
Total Phosphorus	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Chlorophyll <i>a</i>	C	C	C	NC	NC	C	C	NC	NC	NC
Public Water Supply										
Finished Water Chloride	X	C	NC	NC	NC	C	NC	NC	NC	NC
Finished Water Sulfate	X	C	NC	NC	NC	C	NC	NC	NC	NC
Finished Water TDS	X	C	NC	NC	NC	C	NC	NC	NC	NC
Surface Water Chloride	X	NC	NC	NC	NC	NC	C	NC	NC	C
Surface Water Sulfate	X	NC	NC	NC	NC	NC	C	NC	NC	C
Surface Water TDS	X	NC	NC	NC	NC	NC	C	NC	NC	C
Aquatic Life										
Dissolved Oxygen	X	X	NA	X	X	X	X	X	X	X
Metals in Water	NA	X	NA	X	NA	X	NA	X	NA	X
Organics in Water	NA	X	NA	X	NA	X	NA	X	NA	NA
Water Toxicity Tests	NA	X	NA	X	NA	X	NA	NA	NA	NA
Sediment Toxicity Tests	NA	X	NA	X	NA	X	NA	NA	NA	NA

Rio Grande Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 2310A Independence Creek	Segment 2311 Upper Pecos River	Segment 2312 Red Bluff Reservoir	Segment 2313 San Felipe Creek	Segment 2314 Rio Grande Above International Dam					
DESIGNATED USE SUPPORT										
Contact Recreation	S	S	S	S	S					
Noncontact Recreation	X	X	X	X	X					
Public Water Supply	X	X	X	S	S					
Fish Consumption										
Human Health	NA	NA	NA	NA	S					
Advisories/Closures	NA	NA	NA	NA	NA					
Aquatic Life										
Dissolved Oxygen (Grab)	S	S	S	S	S					
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA					
Metals in Water	NA	NA	S	NA	S					
Organics in Water	NA	NA	NA	NA	S					
Water Toxicity Tests	NA	NA	NA	NA	NA					
Sediment Toxicity Tests	NA	NA	NA	NA	NA					
Macrobenthos	NA	NA	NA	NA	NA					
Fish	NA	NA	NA	NA	NA					
GENERAL USE SUPPORT										
Water Temperature	X	S	S	S	S					
pH	X	S	S	S	S					
Chloride	X	S	S	S	S					
Sulfate	X	S	S	S	S					
Total Dissolved Solids	X	S	S	S	S					

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern;
 NA = Not Assessed; X = Not Applicable

Rio Grande Basin Graphical Summary (Continued)

Basin Map	Water Bodies									
	Segment 2310A Independence Creek	Segment 2311 Upper Pecos River	Segment 2312 Red Bluff Reservoir	Segment 2313 San Felipe Creek	Segment 2314 Rio Grande Above International Dam					
										
WATER QUALITY CONCERNS										
Contact Recreation	NC	X	X	X	X					
Noncontact Recreation	X	X	X	X	X					
Fish Tissue	NA	NA	NA	NA	NA					
Sediment	NA	NA	C	NA	NC					
Narrative	NC	NC	NC	NC	NC					
Nutrient Enrichment										
Ammonia Nitrogen	NC	NC	NC	NC	NC					
Nitrite + Nitrate Nitrogen	NC	NC	NC	NC	NC					
Orthophosphorus	NC	NC	NC	NC	NC					
Total Phosphorus	NC	NC	NC	NC	NC					
Chlorophyll <i>a</i>	NC	NC	NC	NC	C					
Public Water Supply										
Finished Water Chloride	NC	X	X	NC	NC					
Finished Water Sulfate	NC	X	X	NC	NC					
Finished Water TDS	NC	X	X	NC	NC					
Surface Water Chloride	NC	X	X	NC	NC					
Surface Water Sulfate	NC	X	X	NC	NC					
Surface Water TDS	NC	X	X	NC	NC					
Aquatic Life										
Dissolved Oxygen	X	X	X	X	X					
Metals in Water	NA	NA	X	NA	X					
Organics in Water	NA	NA	NA	NA	X					
Water Toxicity Tests	NA	NA	NA	NA	NA					
Sediment Toxicity Tests	NA	NA	NA	NA	NA					

Rio Grande Basin

Segment 2301 - Rio Grande Tidal

Water body description: From the confluence with the Gulf of Mexico in Cameron County to a point 10.8 km (6.7 miles) downstream of the International Bridge in Cameron County

Water body classification: Classified

Water body type: Tidal Stream

Water body length / area: 49.00 Miles

Use support summary: Available data indicate that the aquatic life, contact recreation and general uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Chlorophyll *a* is a concern.

Monitoring sites used in the assessment

Station	Station Description
13176	Rio Grande Tidal at SH 4 near Boca Chica

Published studies

Publication	Date	Author
AS 69 Lower Rio Grande	Feb. 1994	Davis/KleinSasser/Cantu

Wastewater dischargers

Permit type	Number of outfalls
Domestic	1

Historical fish kills

Start date	Location	Fish killed	Suspected cause
09/11/1997	off FM 803 near locks at Los Fresnos	500	Low Dissolved Oxygen
07/10/1998	Brownsville resaca near 1077 Quail Hollow Drive	21	Low Dissolved Oxygen

Rio Grande Basin

Segment 2302 - Rio Grande Below Falcon Reservoir

Water body description: From a point 10.8 km (6.7 miles) downstream of the International Bridge in Cameron County to Falcon Dam in Starr County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 231.00 Miles

Use support summary: The contact recreation use is not supported in the lower 25 miles due to elevated fecal coliform densities. Other uses are supported.

Water quality concerns summary: Ammonia nitrogen is a concern in a 25-mile reach downstream of the confluence of the El Anhelito Drain near Hidalgo/Reynosa. Chlorophyll *a* is a concern in the lower 50 miles. Average chloride, sulfate, and total dissolved solids in finished drinking water are concerns.

Additional summary: *Rio Grande Toxic Substance Study Phase 2 Report-* Anhelito Drain carries raw/partially treated sewage from Reynosa, Tamaulipas, Mexico.

A project is scheduled for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at www.tnrcc.state.tx.us/water/quality/tmdl/.

Monitoring sites used in the assessment

Station	Station Description
13177	Rio Grande El Jardin Pump Station, at low water dam 300 ft. below intake
13179	Rio Grande near River bend boat ramp approximately 5 mi. west of Brownsville on US 281
13180	Rio Grande below El Anhelito Drain south of Las Milpas

Monitoring sites, continued

Station	Station Description
13181	Rio Grande International Bridge at US 281 at Hidalgo
13184	Rio Grande at SH 886 near Los Ebanos
13185	Rio Grande at Fort Ringgold 1 mi. downstream from Rio Grande City
13186	Rio Grande below Rio Alamo near Fronton
13187	Rio Grande 2.5 mi. below Falcon Dam at diversion structure
13188	Rio Grande U.S. Tailrace at Falcon Dam and end of FM 2098
13664	Rio Grande 0.5 mi. below Anzalduas Dam, 12.2 mi. from Hidalgo
15808	Rio Grande 200m upstream of Pharr International Bridge (US 281)

Wastewater dischargers

Permit type	Number of outfalls
Agriculture	7
Domestic	21
Industrial	3

Historical fish kills

Start date	Location	Fish killed	Suspected cause
06/09/1994	Canal 4 miles S of Hwy 77 on FM 2520	100,470	Inorganic compound
01/02/1995	Resaca off Pt. Isabel Road in Brownsville	750	Temperature
02/12/1996	FM 107, in a canal 1.5 miles out of Santa Rosa	15	Temperature
10/09/1996	Brownsville, the Town Resaca, upper end near Corera Street	9	Low Dissolved Oxygen

Rio Grande Basin

Segment 2303 - International Falcon Reservoir

Water body description: From Falcon Dam in Starr County to the confluence of the Arroyo Salado (Mexico) in Zapata County, up to normal pool elevation of 301.1 feet (impounds Rio Grande)

Water body classification: Classified

Water body type: Reservoir

Water body length / area: 87,210 Acres

Use support summary: General uses are not supported due to elevated average concentrations of chloride and total dissolved solids. The public water supply use is supported. The contact recreation, aquatic life, and fish consumption uses were not assessed due to insufficient data.

Water quality concerns summary: Chlorophyll *a* is a concern in 5,120 acres of the reservoir near Boundary Monument XIV.

Additional summary: A project is scheduled for chloride and total dissolved solids to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at www.tnrcc.state.tx.us/water/quality/tmdl/.

Monitoring sites used in the assessment

Station	Station Description
13189	Falcon Lake at International Boundary Monument I
13192	Falcon Lake at International Boundary Monument XIV

Published studies

Publication	Date	Author
IMS 11 Falcon Reservoir	Feb. 1974	Bohmfolk, C.
IS 91-02 Falcon Reservoir	Mar. 1991	Webster, C. (Region 15)

Wastewater dischargers

Permit type	Number of outfalls
Domestic	4

Rio Grande Basin

Segment 2304 - Rio Grande Below Amistad Reservoir

Water body description: From the confluence of the Arroyo Salado (Mexico) in Zapata County to Amistad Dam in Val Verde County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 226.00 Miles

Use support summary: The aquatic life use is partially supported downstream of Eagle Pass due to significant effects in ambient water toxicity tests. Downstream of Del Rio, ambient water toxicity causes nonsupport of the aquatic life use. The contact recreation use is not supported due to elevated fecal coliform densities downstream of Laredo and Del Rio and in a small section of the river near Eagle Pass. The fish consumption, public water supply, and general uses are supported throughout the segment.

Water quality concerns summary: Ammonia nitrogen is a concern downstream of Laredo.

Additional summary: A wasteload evaluation (WLE) for dissolved oxygen was approved in 1998 and has been incorporated into the state Water Quality Management Plan. Advanced waste treatment is required for one or more dischargers.

A project is underway for ambient toxicity in water to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

A project is scheduled for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

**Additional information,
continued:**

For more information on specific TMDL projects, visit the TNRCC Web site at www.tnrcc.state.tx.us/water/quality/tmdl/.

Monitoring sites used in the assessment

Station	Station Description
13194	Rio Grande at the San Isidro Pump Station
13196	Rio Grande at pipeline crossing 8.7 mi. below Laredo
13201	Rio Grande 30 meters upstream of US 81 Bridge (Convent Avenue) in Laredo
13202	Rio Grande Laredo Water Treatment Plant pump intake
13205	Rio Grande near irrigation canal lateral 50 US 277 Bridge in Eagle Pass
13206	Rio Grande US 277 at Eagle Pass
13208	Rio Grande 12.8 mi. below Amistad Dam, near gage, 340m upstream of US 277 Bridge in Del Rio
13209	Rio Grande below Amistad Dam NW of Del Rio
13560	Rio Grande, 4.5 mi. downstream of Del Rio at Moody Ranch
13698	Rio Grande 1.1 mi. downstream from highway bridge between Laredo and Nuevo Laredo
15340	Rio Grande 3.4 km downstream of Amistad Dam above Weir Dam (IBWC gage #08-4509.00)

Published studies

Publication	Date	Author
IS 90-03 Rio Grande	May 1990	Buzan, D.
IS 91-02 Rio Grande	March 1991	Webster, C. (Region 15)
SR 1 Rio Grande	June 1974	Blackwell, C. (Region 7)

Wastewater dischargers

Permit type	Number of outfalls
Agriculture	2
Domestic	44
Industrial	23

Rio Grande Basin

Segment 2305 - International Amistad Reservoir

Water body description: From Amistad Dam in Val Verde County to a point 1.8 km (1.1 miles) downstream of the confluence of Ramsey Canyon on the Rio Grande Arm in Val Verde County and to a point 0.7 km (0.4 miles) downstream of the confluence of Painted Canyon on the Pecos River Arm in Val Verde County and to a point 0.6 km (0.4 miles) downstream of the confluence of Little Satan Creek on the Devils River Arm in Val Verde County, up to the normal pool elevation of 1117 feet (impounds Rio Grande)

Water body classification: Classified

Water body type: Reservoir

Water body length / area: 64,900 Acres

Use support summary: Available data indicate that the aquatic life, contact recreation, public water supply, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Available data indicate that there are no water quality concerns.

Monitoring sites used in the assessment

Station	Station Description
13211	Amistad Reservoir at International Boundary Buoy I adjacent to dam
13212	Amistad Reservoir at National Park Buoy DRC, 5 mi. north of dam
13213	Amistad Reservoir at National Park Buoy DRN
13214	Amistad Reservoir at International Boundary Buoy V, 5 miles SW of dam
13215	Amistad Reservoir at International Boundary Buoy 20

Published studies

Publication	Date	Author
IMS 21 Amistad Reservoir	Feb. 1974	Kirkpatrick, J.

Rio Grande Basin

Segment 2306 - Rio Grande Above Amistad Reservoir

Water body description: From a point 1.8 km (1.1 miles) downstream of the confluence of Ramsey Canyon in Val Verde County to the confluence of the Rio Conchos (Mexico) in Presidio County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 313.00 Miles

Use support summary: The aquatic life use is partially supported due to significant effects in ambient water toxicity tests in the upper 25 miles. The contact recreation use is not supported due to elevated fecal coliform densities downstream of Presidio. The fish consumption, public water supply, and general uses are supported.

Water quality concerns summary:

Chlorophyll *a* is a concern in a 163-mile reach downstream of the Rio Conchos confluence near Presidio to the downstream eastern boundary of Big Bend National Park (FM 2627). Arsenic and barium in sediment are concerns in a 25-mile reach downstream of the Rio Conchos confluence near Presidio. Average chloride, sulfate, and total dissolved solids in finished drinking water are concerns in a 25-mile reach near Lajitas.

Additional summary:

A project is underway for ambient toxicity in water to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

A project is scheduled for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

**Additional information,
continued:**

For more information on specific TMDL projects, visit the TNRCC Web site at www.tnrcc.state.tx.us/water/quality/tmdl/.

Monitoring sites used in the assessment

Station	Station Description
13223	Rio Grande at Foster Ranch west of Langtry off Hwy 90 W
13225	Rio Grande at FM 2627 (Gerstacker Bridge) below Big Bend
13228	Rio Grande at the mouth of Santa Elena Canyon
13229	Rio Grande below Rio Conchos confluence near Presidio

Wastewater dischargers

Permit type	Number of outfalls
Agriculture	2
Domestic	18

Historical fish kills

Start date	Location	Fish killed	Suspected cause
01/20/1996	Rio Grande	2	Unknown

Rio Grande Basin

Segment 2307 - Rio Grande Below Riverside Diversion Dam

Water body description: From the confluence of the Rio Conchos (Mexico) in Presidio County to Riverside Diversion Dam in El Paso County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 222.00 Miles

Use support summary: General uses are not supported due to elevated average chloride, sulfate, and total dissolved solids concentrations. The aquatic life, contact recreation, and public water supply uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Ammonia nitrogen and chlorophyll *a* are concerns. Average chloride, sulfate, and total dissolved solids in surface water are public water supply concerns.

Additional summary: A project is scheduled for chloride, sulfate, and total dissolved solids to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at www.tnrcc.state.tx.us/water/quality/tmdl/.

Monitoring sites used in the assessment

Station	Station Description
13230	Rio Grande 2.4 mi. upstream from Rio Conchos confluence
13232	Rio Grande at Neely Canyon, south of Fort Quitman
13233	Rio Grande Bridge off US 80 - IH 10 at Fort Hancock Port of entry

Monitoring sites, continued

Station	Station Description
13721	Rio Grande 5.0 km upstream from Rio Conchos confluence near Presidio
15795	Rio Grande at Alamo control structure, 9.7km upstream of Ft. Hancock Port of entry

Wastewater dischargers

Permit type	Number of outfalls
Agriculture	26
Domestic	31
Industrial	9

Rio Grande Basin

Segment 2308 - Rio Grande Below International Dam

Water body description: From the Riverside Diversion Dam in El Paso County to International Dam in El Paso County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 15.00 Miles

Use support summary: Available data indicate that all uses are supported.

Water quality concerns summary: Ammonia nitrogen in water and cadmium, copper, and cresols in sediment are concerns.

Additional information: A wasteload evaluation (WLE) for dissolved oxygen was approved in 1998 and has been incorporated into the state Water Quality Management Plan. Advanced waste treatment is not required for dischargers.

Monitoring sites used in the assessment

Station	Station Description
13234	Rio Grande at Zaragosa International Bridge

Published studies

Publication	Date	Author
IMS 82 Rio Grande	Oct. 1977	Ottmers, D.

Wastewater dischargers

Permit type	Number of outfalls
Agriculture	2
Domestic	15
Industrial	8

Rio Grande Basin

Segment 2309 - Devils River

Water body description: From a point 0.6 km (0.4 miles) downstream of the confluence of Little Satan Creek in Val Verde County to the confluence of Dry Devils River in Sutton County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 67.00 Miles

Use support summary: Available data indicate that the aquatic life, contact recreation, public water supply, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Available data indicate that there are no water quality concerns.

Monitoring sites used in the assessment

Station	Station Description
13237	Devils River at Pafford Crossing near Comstock

Wastewater dischargers

Permit type	Number of outfalls
Domestic	11

Rio Grande Basin

Segment 2310 - Lower Pecos River

Water body description: From a point 0.7 km (0.4 miles) downstream of the confluence of Painted Canyon in Val Verde County to a point immediately upstream of the confluence of Independence Creek in Crockett/Terrell County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 89.00 Miles

Use support summary: General uses are not supported due to elevated average chloride, sulfate and total dissolved solids concentrations. The aquatic life, contact recreation, and public water supply uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Average chloride, sulfate, and total dissolved solids in surface water are public water supply concerns.

Additional summary: A project is scheduled for chloride, sulfate, and total dissolved solids to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at www.tnrcc.state.tx.us/water/quality/tmdl/.

Monitoring sites used in the assessment

Station	Station Description
13240	Pecos River at gaging station 7.4 mi. east of Langtry, 15.0 mi. upstream from confluence with Rio Grande
13246	Pecos River 7.52 km upstream from the Val Verde/Terrell/ Crockett county line convergence
14163	Pecos River approximately 0.5 mi. downstream from the confluence with Independence Creek

Historical fish kills

Start date	Location	Fish killed	Suspected cause
01/14/1995	Pecos River approximately 0.2 miles upstream of the Pandale crossing	50	Unknown
12/05/1995	Pecos River between River Road crossing and Copeland Ranch	7,733	Disease

Rio Grande Basin

Segment 2310A - Independence Creek (unclassified water body)

Water body description: From the confluence of the Pecos River northeast of Sanderson in Terrell County to the upstream perennial portion of the stream southeast of Fort Stockton in Pecos County

Water body classification: Unclassified

Water body type: Freshwater Stream

Water body length / area: 93.00 Miles

Use support summary: Available data indicate that the aquatic life and contact recreation uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Available data indicate that there are no water quality concerns.

Monitoring sites used in the assessment

Station	Station Description
13109	Independence Creek 0.5 mi. downstream from John Chandler Ranch headquarters

Rio Grande Basin

Segment 2311 - Upper Pecos River

Water body description: From a point immediately upstream of the confluence of Independence Creek in Crockett/Terrell County to Red Bluff Dam in Loving/Reeves County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 309.00 Miles

Use support summary: Available data indicate that the aquatic life, contact recreation, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Available data indicate that there are no water quality concerns.

Monitoring sites used in the assessment

Station	Station Description
13249	Pecos River Bridge on US 290 SE of Sheffield
13257	Pecos River at US 67 NE of Girvin
13265	Pecos River at FM 652 Bridge NE of Orla
14164	Pecos River approximately 2 mi. upstream of the confluence with Independence Creek
15114	Pecos River 1.6 mi upstream of US 290 Bridge, SE of Sheffield

Published studies

Publication	Date	Author
AS 095/SR Upper Pecos River	July 1994	Larson, G. (Region 7)
AS 107/SR Upper Pecos River	July 1996	Larson, G. (Region 7)
AS 80 Balmorhea Lake	March 1992	Larson, G. (Region 7)

Wastewater dischargers

Permit type	Number of outfalls
Agriculture	15
Domestic	50
Industrial	8

Historical fish kills

Start date	Location	Fish killed	Suspected cause
08/11/1996	Pecos River	50	Unknown

Rio Grande Basin

Segment 2312 - Red Bluff Reservoir

Water body description: From Red Bluff Dam in Loving/Reeves County to New Mexico state line in Loving/Reeves County, up to normal pool elevation of 2842 feet (impounds Pecos River)

Water body classification: Classified

Water body type: Reservoir

Water body length / area: 11,700 Acres

Use support summary: Available data indicate that the aquatic life, contact recreation, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Nickel and selenium levels in sediment are concerns throughout the segment. Chromium in sediment is a concern in the upper half of the segment. Barium in sediment is a concern in the lower half of the segment.

Monitoring sites used in the assessment

Station	Station Description
13267	Red Bluff Reservoir above dam, north of Orla
13269	Red Bluff Reservoir ½ mile south of Texas - New Mexico border

Published studies

Publication	Date	Author
IMS 58 Red Bluff Reservoir	March 1976	Kirkpatrick, J.

Rio Grande Basin

Segment 2313 - San Felipe Creek

Water body description: From the confluence with the Rio Grande in Val Verde County to a point 4.0 km (2.5 miles) upstream of US 90 in Val Verde County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 9.00 Miles

Use support summary: Available data indicate that the aquatic life, contact recreation, public water supply, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

Water quality concerns summary: Available data indicate that there are no water quality concerns.

Monitoring sites used in the assessment

Station	Station Description
13270	San Felipe Creek at Guyler confluence with the Rio Grande
13271	San Felipe Creek at Bridge on US 277 at Del Rio
16377	San Felipe Creek at Academy St., 2.2km downstream of US 277 in Del Rio
16378	San Felipe Creek low water crossing on the Vic Bolner farm, 1.5km upstream of Rio Grande, South of Del Rio

Rio Grande Basin

Segment 2314 - Rio Grande Above International Dam

Water body description: From International Dam in El Paso County to the New Mexico state line in El Paso County

Water body classification: Classified

Water body type: Freshwater Stream

Water body length / area: 21.00 Miles

Use support summary: Available data indicate that all uses are supported.

Water quality concerns summary: Chlorophyll *a* is a concern.

Additional information: A wasteload evaluation (WLE) for dissolved oxygen was approved in 1998 and has been incorporated into the state Water Quality Management Plan. Advanced waste treatment is not required for dischargers.

Monitoring sites used in the assessment

Station	Station Description
13272	Rio Grande at Courchesne Bridge, 1.7 mi upstream from American Dam
13276	Rio Grande immediately upstream of the confluence with Anthony Drain east of La Tuna Prison near the state line

Wastewater dischargers

Permit type	Number of outfalls
Domestic	15
Industrial	6