

# Update on Rio Grande Water Quality and the Clean Rivers Program

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USIBWC- Clean Rivers Program

# Outline

Texas Clean Rivers Program (CRP) History



About the program



Monitoring in the Rio Grande



Integrated Report and Water Quality Standards



Summary of issues in the Rio Grande

# Texas Clean River Program History

**1991**

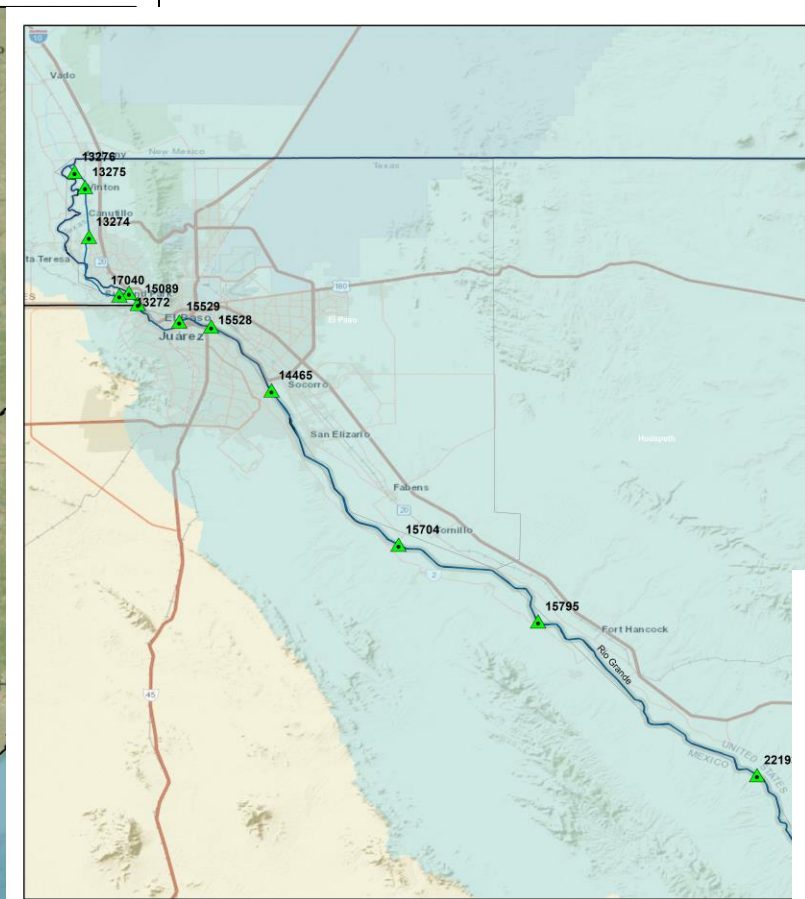
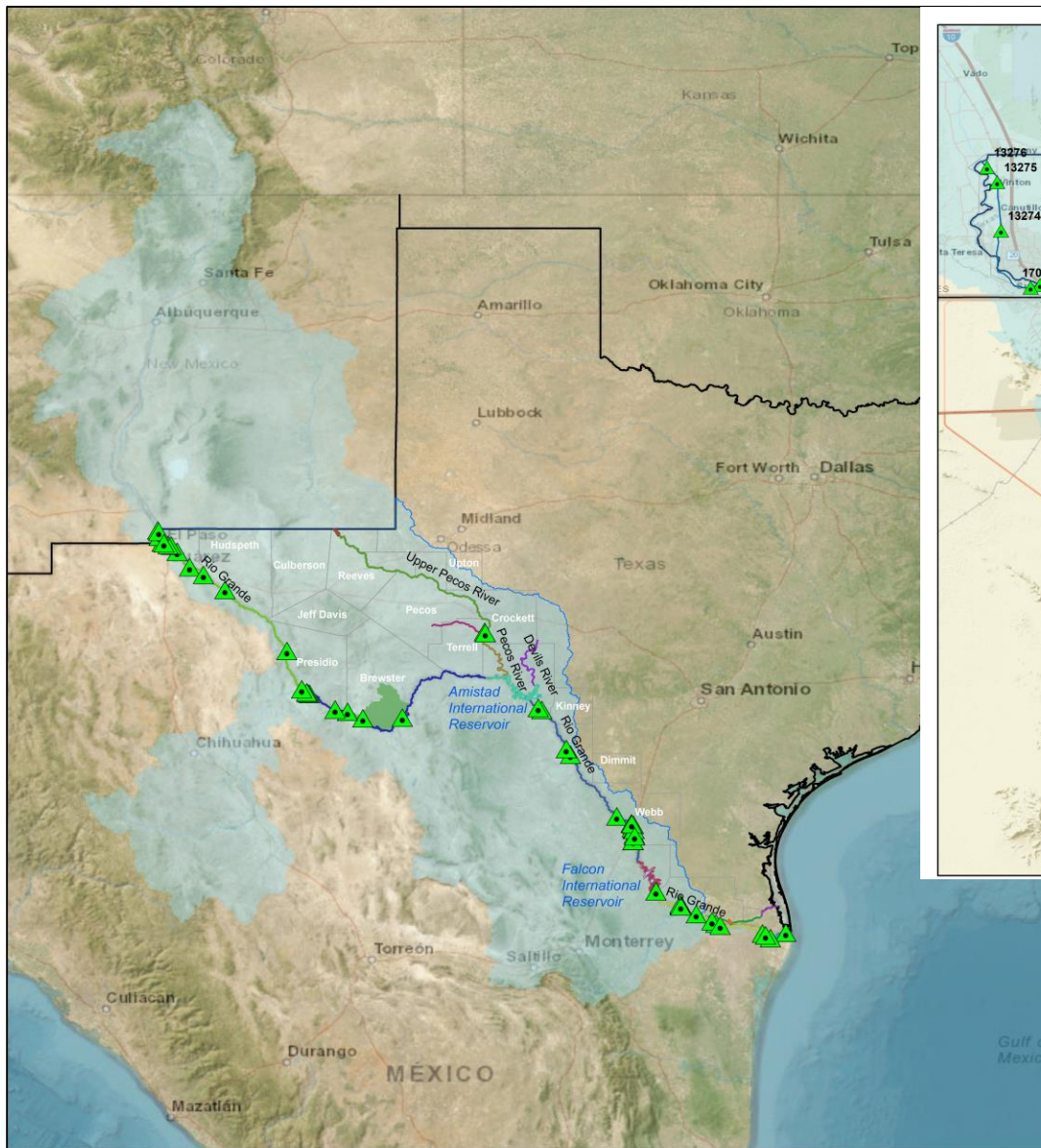
Enacted in 1991 in response to growing concerns on water resources, through Senate Bill 818

**1998**

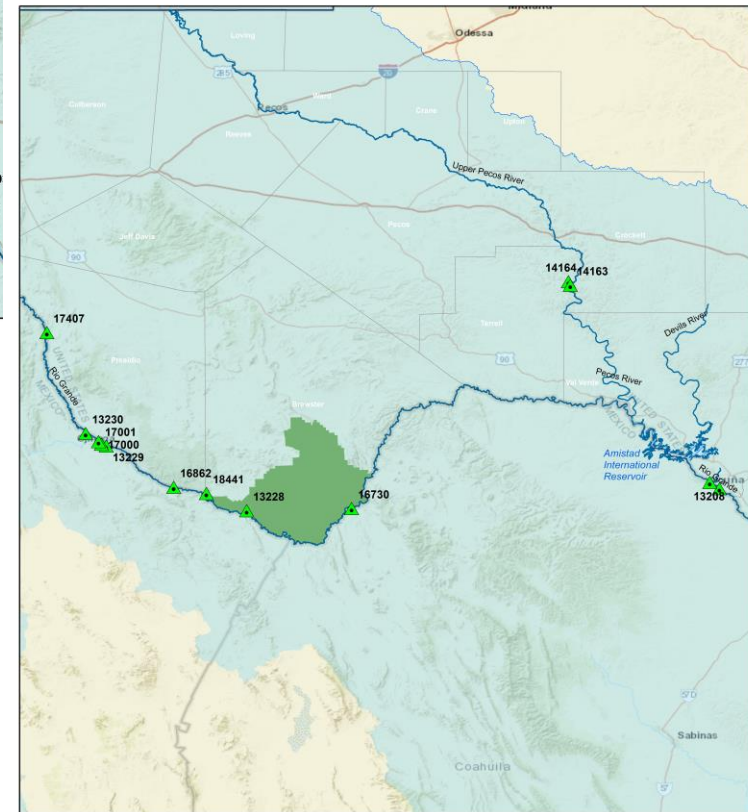
In 1998 USIBWC partnered with TCEQ to run CRP on the Rio Grande

# Clean Rivers Program

- There is a program at every major river basin.
- Composed of partnerships between federal, state and local organizations.
- Non-regulatory, state fee-funded program.
- USIBWC CRP collects water quality data from the Rio Grande and Pecos River
- 2023 Sampling sites
  - CRP – 52 sites
  - TCEQ – 35 sites



Northern section – segments 2314, 2308, and 2307



Southern section – segment 2306

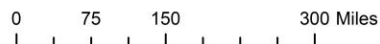
▲ 2023 IBWC Stations

*Rio Grande Basin and USIBWC Monitoring Stations*

**Rio Grande River Segments**

- 2201    2303    2308    2312
- 2202    2304    2309    2313
- 2202A    2305    2310    2314
- 2301    2306    2310A
- 2302    2307    2311

- Texas Rio Grande Watershed
- Big Bend National Park
- Texas Counties
- Rio Grande Watershed



# CRP Activities

- Water Quality Monitoring
  - Routine monitoring
  - Special studies
- Water Quality Assessments
- Publications
  - Annual Basin Highlights Report
  - 6-yr Basin Summary Report
- Outreach
- Basin Advisory Committee Participation

# Standards and Parameters

- USIBWC collects water quality data within the international reach of the Rio Grande
  - Samples are collected monthly or quarterly by IBWC, TCEQ Regional Offices, and volunteer groups
  - Sampling and analysis was standardized to ensure data quality.
- Surface Water Quality Monitoring Procedures from TCEQ are followed



RG-415  
Revised August 2012

## **Surface Water Quality Monitoring Procedures, Volume 1:**

Physical and Chemical Monitoring  
Methods



RG-416  
Revised May 2014

## **Surface Water Quality Monitoring Procedures, Volume 2:**

Methods for Collecting and  
Analyzing Biological Assemblage  
and Habitat Data

print  
recycle

printed on  
recycled paper

Water Quality Planning Division  
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

# Partnerships

- Upper Rio Grande partners
  - IBWC Presidio and El Paso Field Offices
  - El Paso Water
  - Big Bend National Park Service
  - Texas Parks and Wildlife Dept.
- TCEQ Region 6
- Continuous Water Quality Network





# Quality Assurance Project Plan (QAPP)

- Outlines the clean rivers program
  - History
  - Lab procedures
  - Specification tables
  - Monitoring schedules
- Revised every 2 years
  - Amendments as needed
  - Appendix B
- Signed by all participants

## Quality Assurance Project Plan Rio Grande Basin Monitoring Program USIBWC Clean Rivers Program

**4191 N. Mesa St.  
El Paso, Texas 79902**

**Clean Rivers Program  
Water Quality Planning Division  
Texas Commission on Environment  
P.O. Box 13087, MC 234  
Austin, Texas 78711-3087  
Effective Period: FY 2022 to FY 20**

Questions concerning this QAPP should be directed to:  
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USIBWC FY22-23 QAPP  
Last revised on September 7, 2021

**TABLE A-7.6 Measurement Performance Specifications for DHL Analytical, Inc.**

**Metals in Sediment**

| Parameter  | Units | Matrix   | Method             | Parameter Code | TCFQ AWRL | LOQ | LOQ Check Sample %Rec | Precision (RPD) | Bias %Rec. of LCS | Lab |
|--|-------|----------|--------------------|----------------|-----------|-----|-----------------------|-----------------|-------------------|-----|
| ARSENIC, BOTTOM DEPOSITS (MG/KG AS AS DRY WT)    | mg/kg | sediment | EPA 6020 EPA 200.8 | 01003          | 16.5      | 1   | 60-140                | 30              | 60-140            | DHL |
| BARIUM, BOTTOM DEPOSITS (MG/KG AS BA DRY WT)     | mg/kg | sediment | EPA 6020 EPA 200.8 | 01008          | NA        | 2   | 60-140                | 30              | 60-140            | DHL |
| CADMIUM, TOTAL, BOTTOM DEPOSITS (MG/KG, DRY WT)  | mg/kg | sediment | EPA 6020 EPA 200.8 | 01028          | 2.49      | 3   | 60-140                | 30              | 60-140            | DHL |
| CHROMIUM, TOTAL, BOTTOM DEPOSITS (MG/KG, DRY WT) | mg/kg | sediment | EPA 6020 EPA 200.8 | 01029          | 55.5      | 2   | 60-140                | 30              | 60-140            | DHL |
| COPPER, BOTTOM DEPOSITS (MG/KG AS CU DRY WT)     | mg/kg | sediment | EPA 6020 EPA 200.8 | 01043          | 74.5      | 2   | 60-140                | 30              | 60-140            | DHL |
| LEAD, BOTTOM DEPOSITS (MG/KG AS PB DRY WT)       | mg/kg | sediment | EPA 6020 EPA 200.8 | 01052          | 64        | 0.3 | 60-140                | 30              | 60-140            | DHL |
| MANGANESE, BOTTOM DEPOSITS (MG/KG AS MN DRY WG)  | mg/kg | sediment | EPA 6020 EPA 200.8 | 01053          | 550       | 2   | 60-140                | 30              | 60-140            | DHL |
| NICKEL, TOTAL, BOTTOM DEPOSITS (MG/KG, DRY WT)   | mg/kg | sediment | EPA 6020 EPA 200.8 | 01068          | 24.3      | 2   | 60-140                | 30              | 60-140            | DHL |
| SILVER, BOTTOM DEPOSITS (MG/KG AS AG DRY WT)     | mg/kg | sediment | EPA 6020 EPA 200.8 | 01078          | 1.1       | 0.2 | 60-140                | 30              | 60-140            | DHL |
| ZINC, BOTTOM DEPOSITS (MG/KG AS ZN DRY WT)       | mg/kg | sediment | EPA 6020 EPA 200.8 | 01093          | 205       | 2.5 | 60-140                | 30              | 60-140            | DHL |
| ANTIMONY, BOTTOM DEPOSITS (MG/KG AS SB DRY WT)   | mg/kg | sediment | EPA 6020 EPA 200.8 | 01098          | 12.5      | 1   | 60-140                | 30              | 60-140            | DHL |

| Segment No. | Rio Grande Basin Segment Names   | Recreation Use | Aquatic Life Use | Domestic Water Supply Use | Other Uses | ci <sup>-1</sup> (mg/L) | so <sub>4</sub> <sup>-2</sup> (mg/L) | TDS (mg/L) | Dissolved Oxygen (mg/L) | pH Range (SU) | Indicator Bacteria #/100 mL | Temperature (degrees F) |
|-------------|--|----------------|------------------|---------------------------|------------|-------------------------|--------------------------------------|------------|-------------------------|---------------|-----------------------------|-------------------------|
| 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 <sup>3</sup>        | 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 <sup>2</sup>  | 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                      |
| 1           | The indicator bacteria for freshwater is E. coli and for saltwater is Enterococci. The indicator bacteria for Segments 2311 and 2312 is Enterococci. |                |                  |                           |            |                         |                                      |            |                         |               |                             |                         |
| 2           | The critical low-flow is calculated in accordance with §307.8(a)(2)(A) of this title.  |                |                  |                           |            |                         |                                      |            |                         |               |                             |                         |
| 3           | The 24-hour minimum dissolved oxygen criterion is 1.0 mg/L.  |                |                  |                           |            |                         |                                      |            |                         |               |                             |                         |

- (51) Primary contact recreation 1--Activities that are presumed to involve a significant risk of ingestion of water (e.g., wading by children, swimming, water skiing, diving, tubing, surfing, hand fishing as defined by Texas Parks and Wildlife Code, §66.115, and the following whitewater activities: kayaking, canoeing, and rafting).
- (52) Primary contact recreation 2--Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, hand fishing as defined by Texas Parks and Wildlife Code, §66.115, and whitewater kayaking, canoeing, and rafting, that involve a significant risk of ingestion of water but that occur less frequently than for primary contact recreation 1 due to:
  - (A) physical characteristics of the water body; or
  - (B) limited public access.

NCR--noncontact recreation.

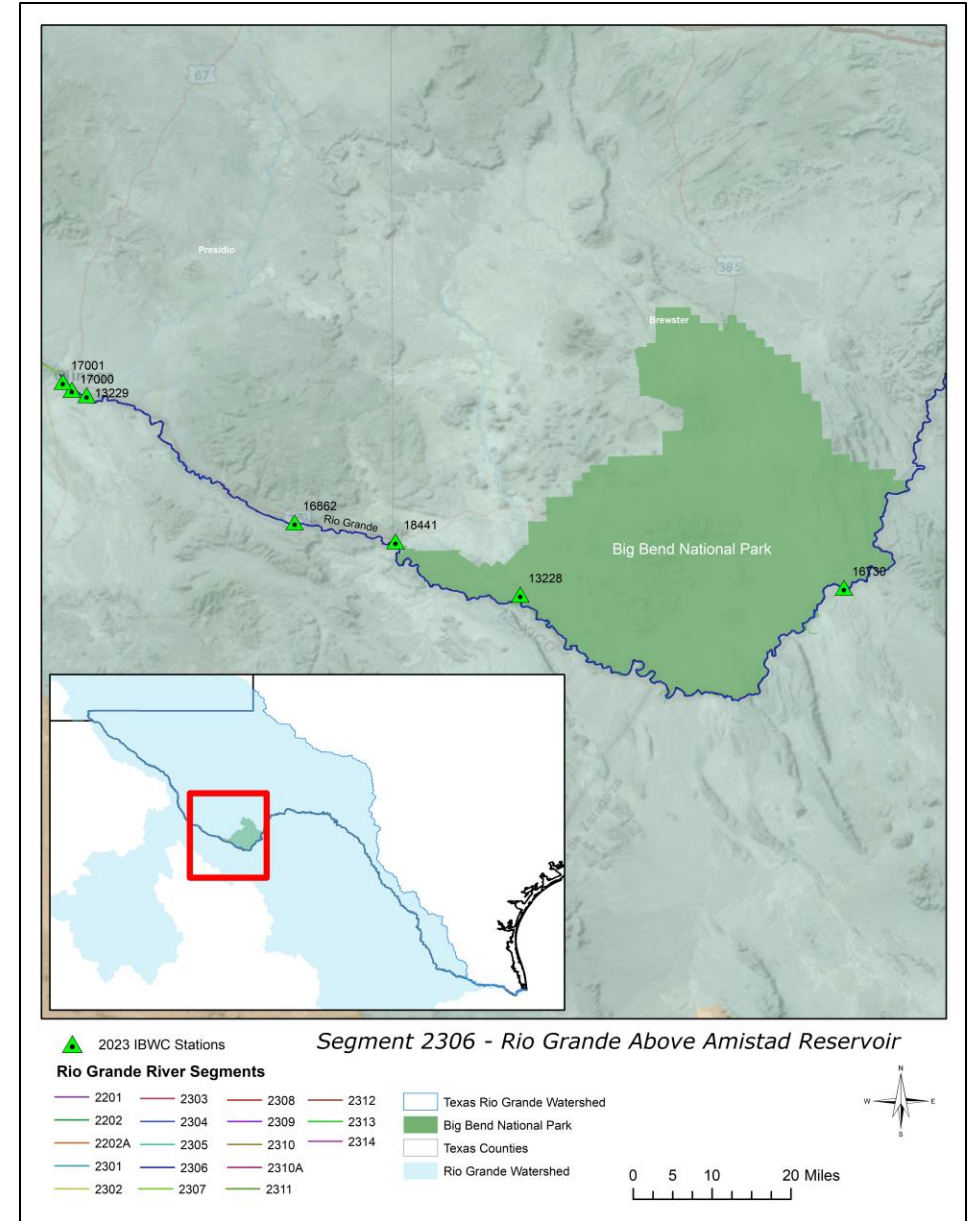
# Texas Surface Water Quality Standards

# Segments and Stations

| Seg ID | Seg Name                           | Segment Description   | Segment Type      | AU ID    | AU Description   | Flow Type | Flow Type Source   | ALU Designation | ALU Designation Source     | Station ID(s)               |
|--------|------------------------------------|---|-------------------|----------|--|-----------|--------------------|-----------------|----------------------------|-----------------------------|
| 2306   | Rio Grande Above Amistad Reservoir | 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 | Freshwater Stream | 2306_01  | From the lower segment boundary at Ramsey Canyon upstream to the confluence of Panther Gulch                                 | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 13223; 13722; 20628; 20631; |
|        |                                    |   |                   | 2306_02  | From the confluence of Panther Gulch upstream to FM 2627   | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 20623; 20625; 20626         |
|        |                                    |   |                   | 2306_03  | From FM 2627 upstream to Boquillas Canyon  | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 13225; 13226                |
|        |                                    |   |                   | 2306_04  | From Boquillas Canyon upstream to Mariscal Canyon  | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 16730; 20619                |
|        |                                    |   |                   | 2306_05  | From Mariscal Canyon to a point upstream of the IBWC gage at Johnson Ranch   | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | No Stations                 |
|        |                                    |   |                   | 2306_06  | From a point upstream of the IBWC gage at Johnson Ranch to the mouth of Santa Elena Canyon at the Terlingua Creek confluence | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 13228                       |
|        |                                    |   |                   | 2306_07  | From the mouth of Santa Elena Canyon at the Terlingua Creek confluence upstream to the Alamito Creek confluence              | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 13229; 16862; 18441         |
|        |                                    |   |                   | 2306_08  | From Alamito Creek confluence upstream to the Rio Conchos confluence   | Perennial | TSWQS Appendix A   | High            | TSWQS Appendix A           | 17000; 17001                |
| 2306A  | Alamito Creek                      | From Rio Grande confluence upstream to the confluence of the North and South Forks of Alamito Creek north of Marfa in Presidio County                           | Freshwater Stream | 2306A_01 | From the confluence with the Rio Grande upstream to Ranch Road 169 crossing  | Perennial | Routine Flow Data  | High            | Presumption from flow type | No Stations                 |
|        |                                    |   |                   | 2306A_02 | From the Ranch Road 169 crossing upstream to the confluence of the North and South Forks of Alamito Creek north of Marfa in  | Perennial | Flow Questionnaire | High            | Presumption from flow type | No Stations                 |

## IBWC Stations

- 13228
- 13229
- 16730
- 16862
- 17000 – Bacteria only
- 17001 – Bacteria only
- 18441



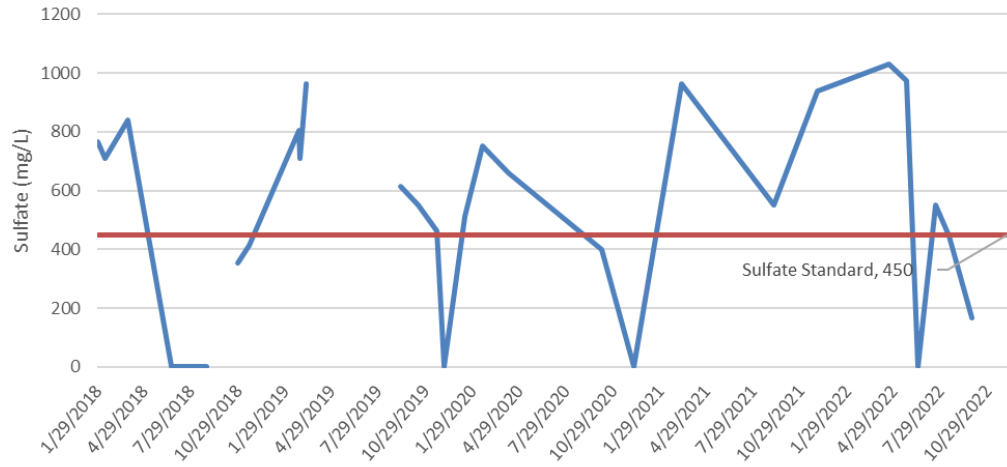
# Impairment 303(d)

|      |                                    |         |                  |    |
|------|------------------------------------|---------|------------------|----|
| 2306 | Rio Grande Above Amistad Reservoir | 2306_01 | Sulfate in water | 5b |
|      |                                    | 2306_02 | Sulfate in water | 5b |
|      |                                    | 2306_03 | Sulfate in water | 5b |
|      |                                    | 2306_04 | Sulfate in water | 5b |
|      |                                    | 2306_05 | Sulfate in water | 5b |
|      |                                    | 2306_06 | Sulfate in water | 5b |
|      |                                    | 2306_07 | Sulfate in water | 5b |
|      |                                    | 2306_08 | Sulfate in water | 5b |

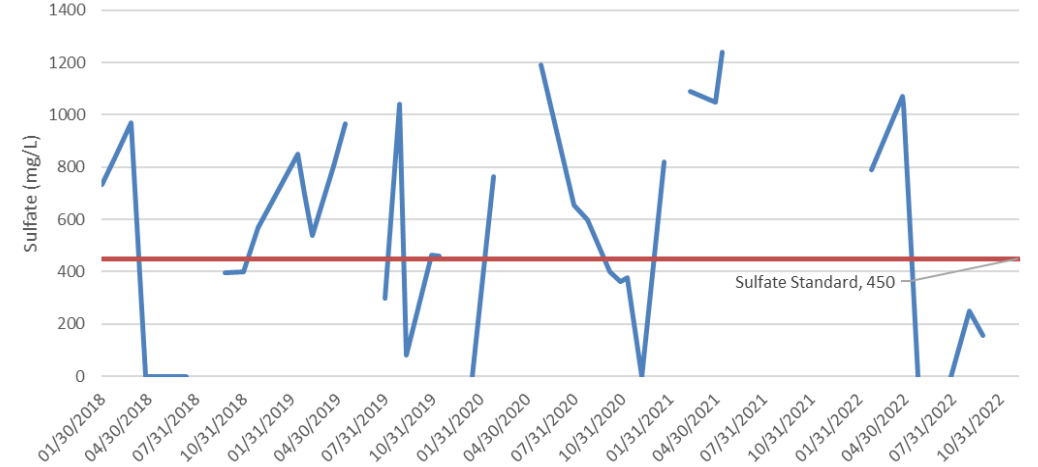
*Category 5b: A review of the standards for the water body will be conducted before a management strategy is selected.*

# Segment 2306 station results – Sulfate

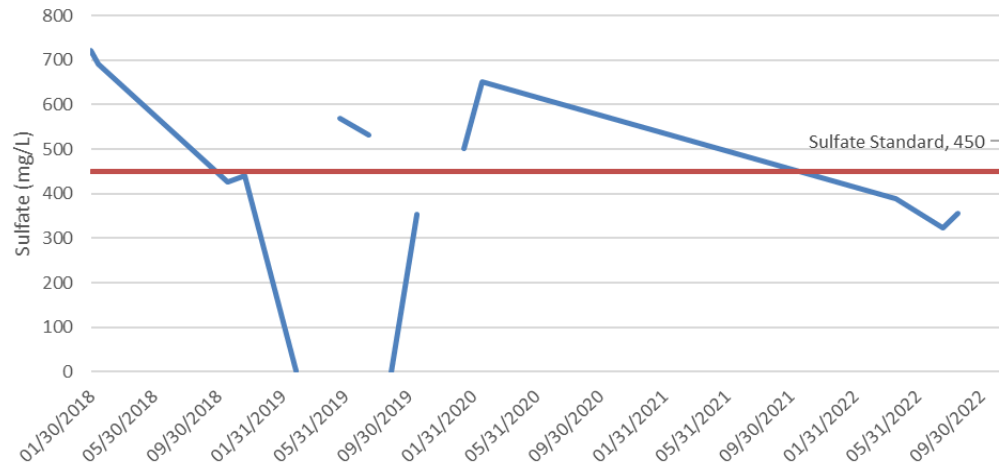
Sulfate results from 2018-2022 at station 13228



Sulfate results from 2018-2022 for station 13229



Sulfate results from 2018-2022 for station 16730



# Possible sources

## Seg Id: 2306 - Rio Grande Above Amistad Reservoir

| AU ID   | Assessment Method         | Parameter     | LOS | Sources  |
|---------|---------------------------|---------------|-----|--|
| 2306_01 | Dissolved Solids          | Sulfate       | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
| 2306_02 | Dissolved Solids          | Sulfate       | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
| 2306_03 | Dissolved Solids          | Sulfate       | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
| 2306_04 | Dissolved Solids          | Sulfate       | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
| 2306_05 | Dissolved Solids          | Sulfate       | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
| 2306_06 | Nutrient Screening Levels | Chlorophyll-a | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
|         | Dissolved Solids          | Sulfate       | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
| 2306_07 | Nutrient Screening Levels | Chlorophyll-a | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; UNK - Source Unknown              |
|         | Dissolved Solids          | Sulfate       | NS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders |
| 2306_08 | Nutrient Screening Levels | Chlorophyll-a | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders                                    |
|         | Dissolved Solids          | Sulfate       | NS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders |

LOS: Level of support for this assessment method and parameter:

- NS - Non-Support.
- CN - Concern for near-nonattainment of the TSWQS based on numeric criteria.
- CS - Concern for water quality based on screening levels.

Sources: The sources of impairment and concerns reflect "possible" source information. Possible sources include activities, facilities, or conditions occurring in the watershed that might keep the water from meeting the criteria to prevent the attainment of designated uses. These lists of possible sources are not exhaustive, and do not constitute defined targets for water quality management actions:

- PS - Point Source
- NPS - Nonpoint Source
- UNK - Source Unknown

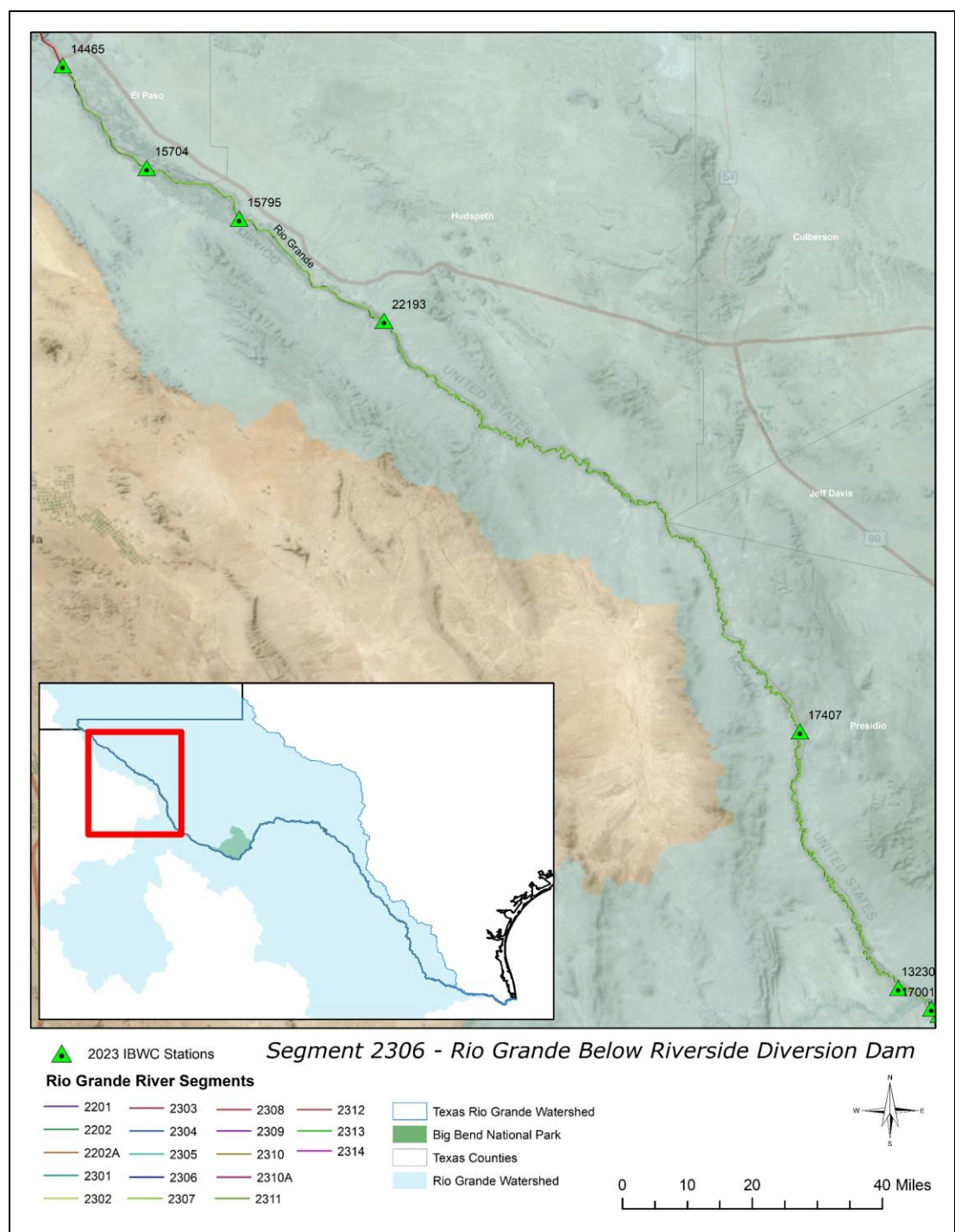
# Segments and Stations

| Seg ID | Seg Name                                 | Segment Description   | Segment Type      | AU ID   | AU Description  | Flow Type | Flow Type Source | ALU Designation | ALU Designation Source | Station ID(s) |
|--------|--|---|-------------------|---------|---|-----------|------------------|-----------------|------------------------|---------------|
| 2307   | Rio Grande Below Riverside Diversion Dam | From the confluence of the Rio Conchos (Mexico) in Presidio County to Riverside Diversion Dam in El Paso County | Freshwater Stream | 2307_01 | From immediately upstream of the Rio Conchos confluence to a point 40.2 km (25 mi) upstream | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | 13230         |
|        |  |   |                   | 2307_02 | From a point 40.2 km (25 mi) upstream of the Rio  | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | 17407         |
|        |  |   |                   | 2307_03 | From Little Box Canyon upstream to the Alamo Grade Structure                                | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | No Stations   |
|        |  |   |                   | 2307_04 | From the Alamo Grade Structure upstream to the Guadalupe Bridge                             | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | 15704; 15795  |
|        |  |   |                   | 2307_05 | From the Guadalupe Bridge to downstream of the Riverside Diversion Dam                      | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | 14465; 16272  |

## IBWC Stations

- 13230
- 14465
- 15704 – Mostly Dry
- 15795
- 17407
- 22193

# Segment 2307



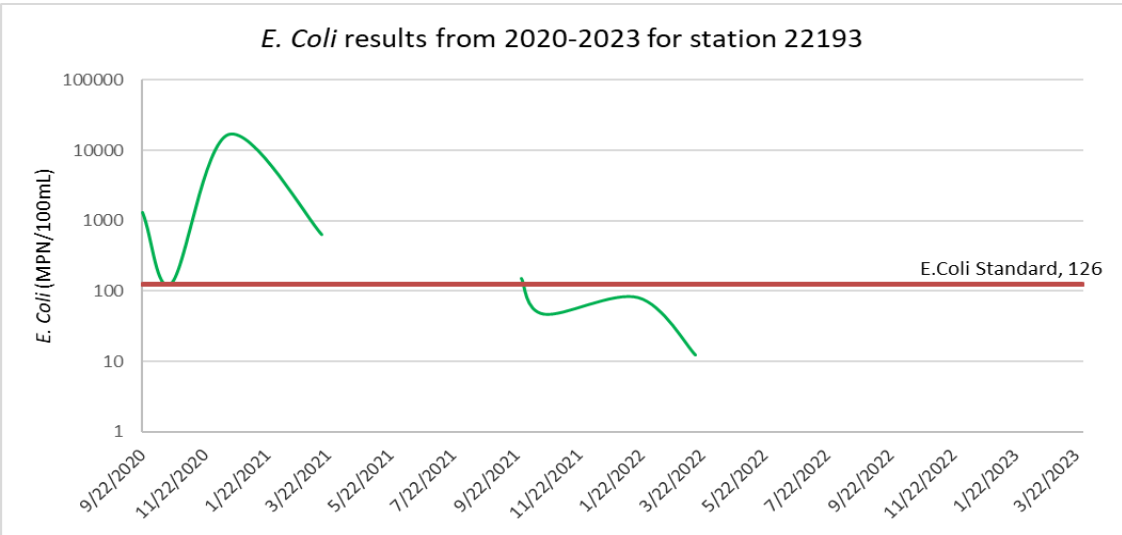
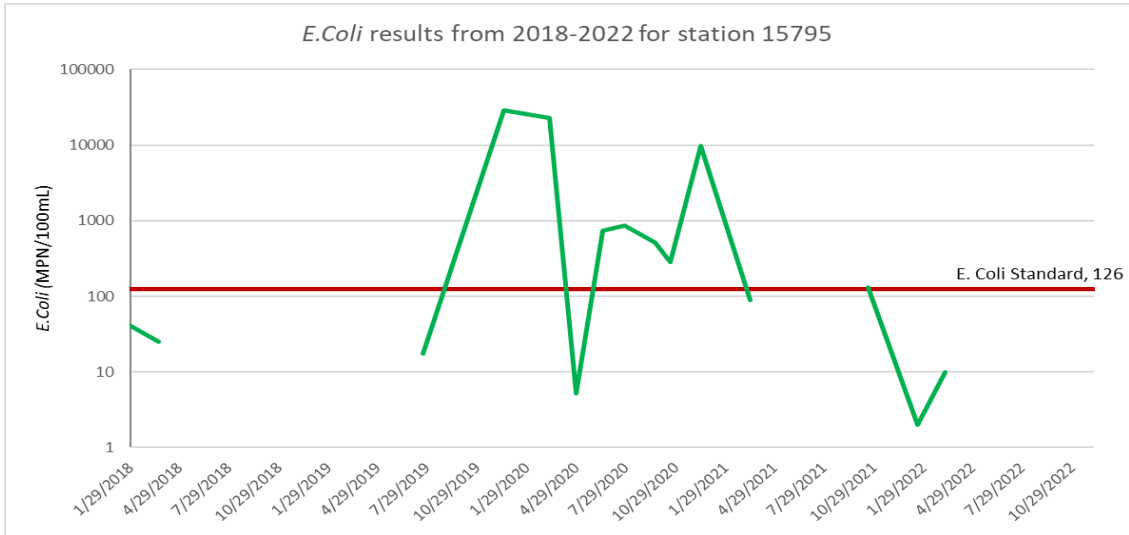
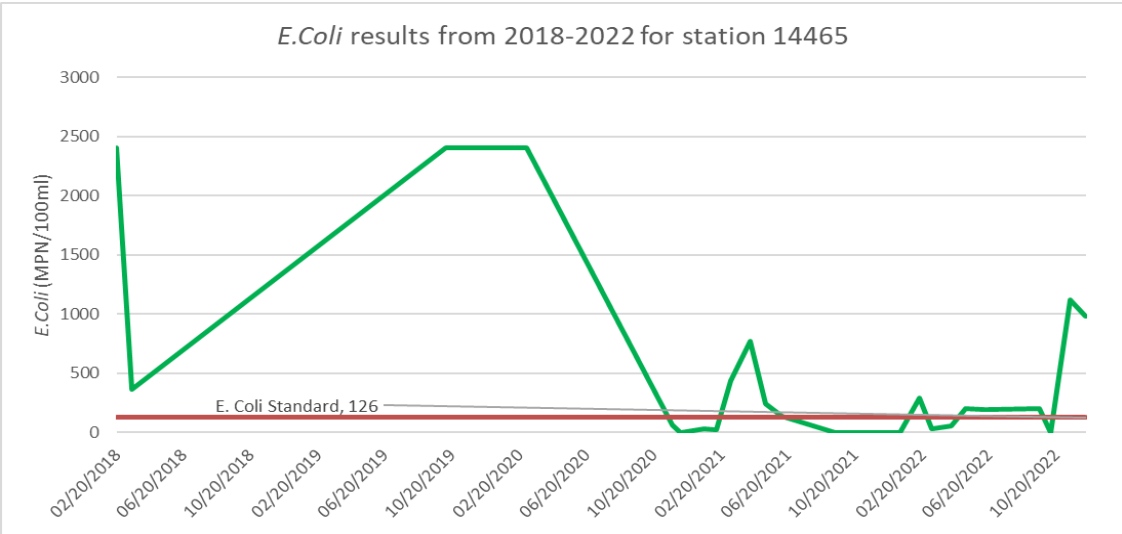
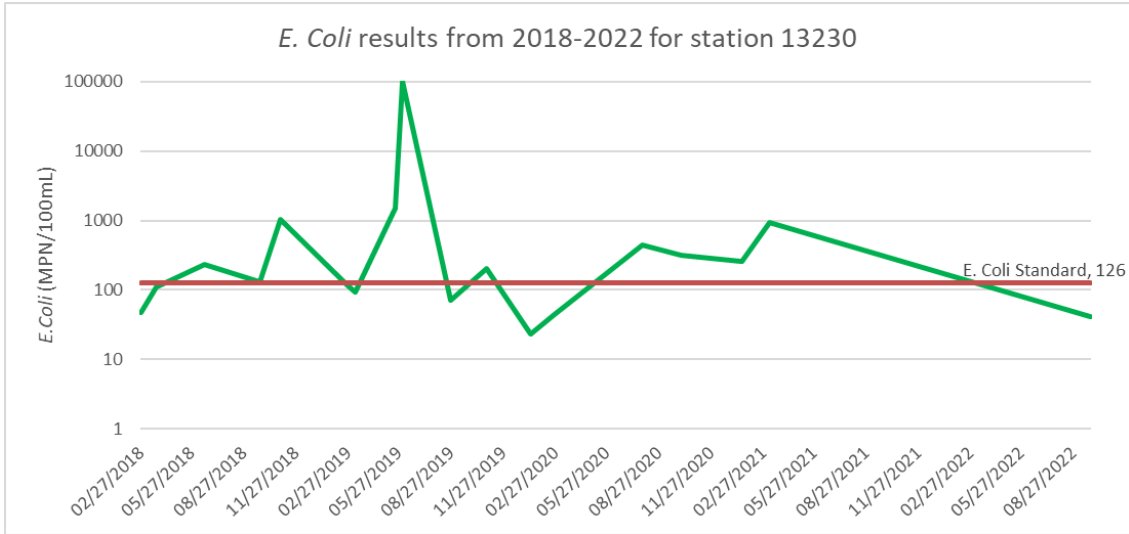


# Impairments 303(d)

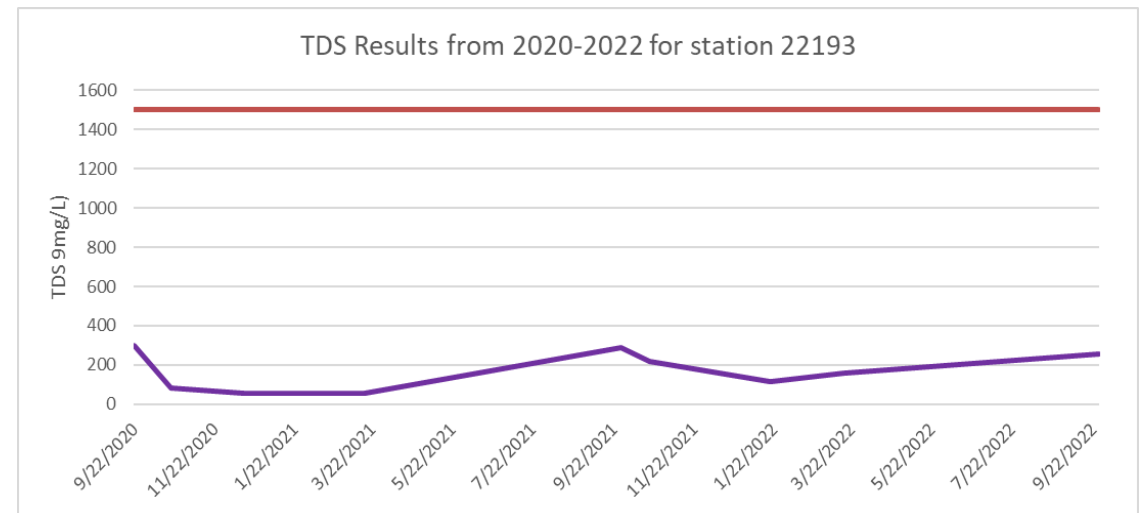
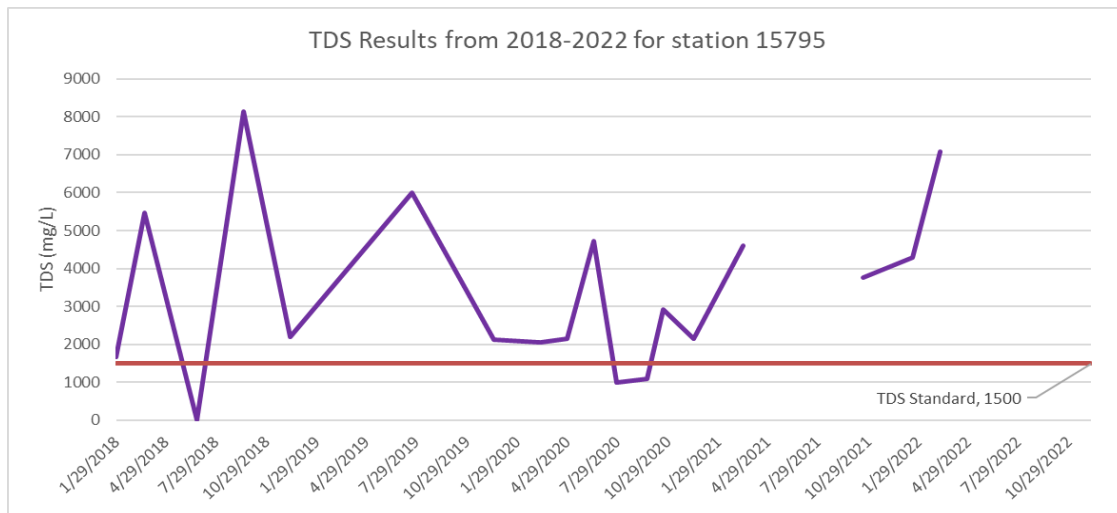
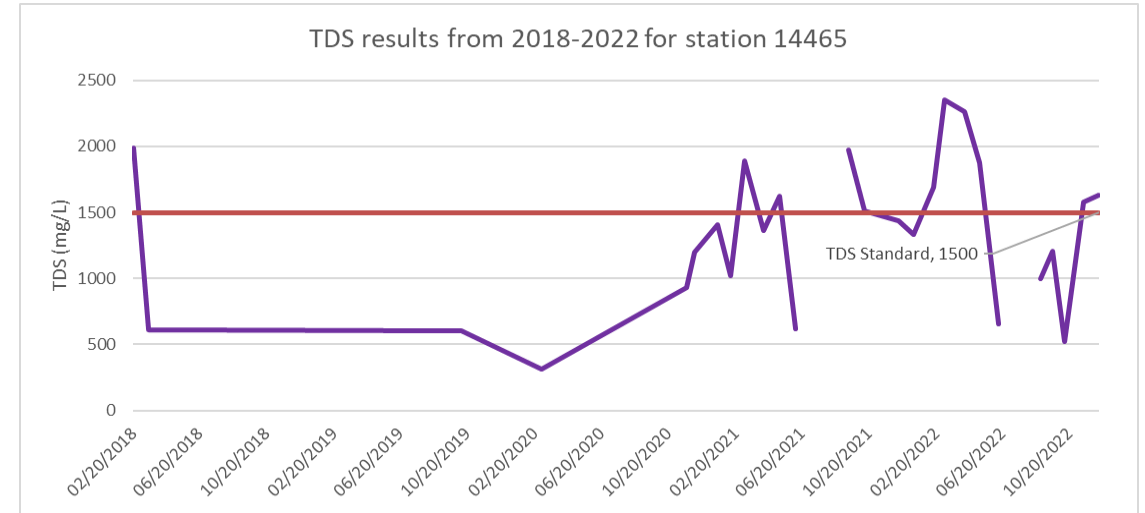
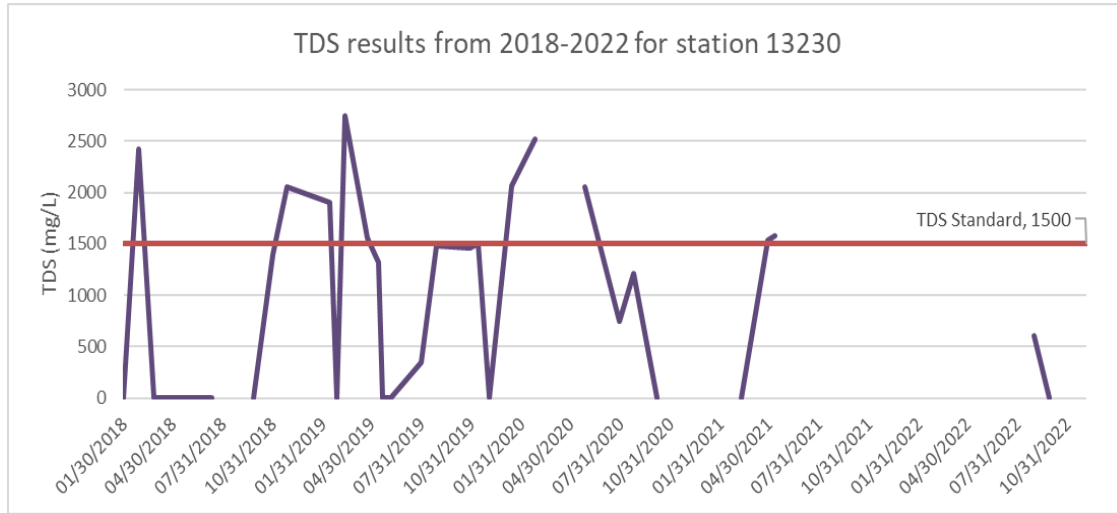
|      |  |         |                                    |    |   |
|------|--|---------|------------------------------------|----|---|
| 2307 | Rio Grande Below Riverside Diversion Dam | 2307_01 | Chloride in water                  | 5c | N |
|      |  |         | Total dissolved solids in water    | 5c | N |
|      |  | 2307_02 | Chloride in water                  | 5c | N |
|      |  |         | Total dissolved solids in water    | 5c | N |
|      |  | 2307_03 | Bacteria in water (Recreation Use) | 5c | Y |
|      |  |         | Chloride in water                  | 5c | N |
|      |  |         | Total dissolved solids in water    | 5c | N |
|      |  | 2307_04 | Bacteria in water (Recreation Use) | 5c | N |
|      |  |         | Chloride in water                  | 5c | N |
|      |  |         | Total dissolved solids in water    | 5c | N |
|      |  | 2307_05 | Bacteria in water (Recreation Use) | 5c | N |
|      |  |         | Chloride in water                  | 5c | N |
|      |  |         | Total dissolved solids in water    | 5c | N |

*Category 5c: Additional data and information will be collected or evaluated before a management strategy is selected.*

# Segment 2307 station results - Bacteria



# Segment 2307 station results – Total Dissolved Solids



# Possible Sources

| Seg Id: 2307 - Rio Grande Below Riverside Diversion Dam |                                       |                        |     |   |
|---|---------------------------------------|------------------------|-----|---|
| AU ID   | Assessment Method                     | Parameter              | LOS | Sources   |
| 2307_03   | Nutrient Screening Levels             | Total phosphorus       | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |
| 2307_04   | Nutrient Screening Levels             | Ammonia                | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Dissolved Solids                      | Chloride               | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels             | Chlorophyll-a          | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |
|   | Bacteria Geomean                      | E. coli                | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Nutrient Screening Levels             | Nitrate                | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Dissolved Solids                      | Total dissolved solids | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
| 2307_05   | Nutrient Screening Levels             | Ammonia                | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Dissolved Solids                      | Chloride               | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels             | Chlorophyll-a          | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |
|   | Dissolved Oxygen grab screening level | Dissolved oxygen Grab  | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; UNK - Source Unknown   |
|   | Bacteria Geomean                      | E. coli                | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Nutrient Screening Levels             | Nitrate                | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Dissolved Solids                      | Total dissolved solids | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels             | Total phosphorus       | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |

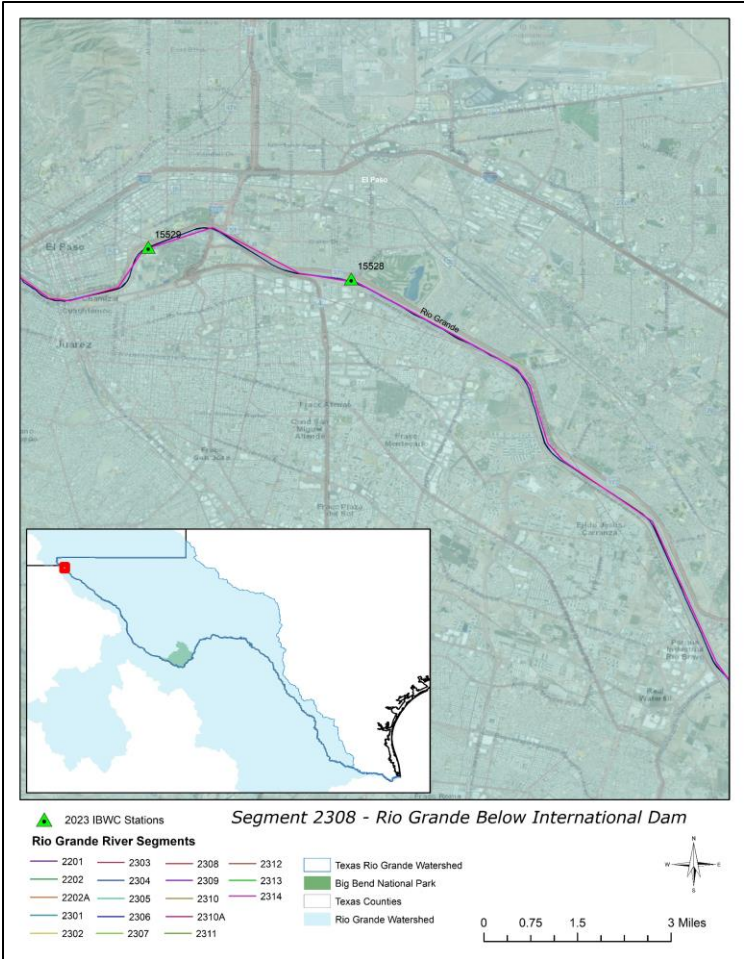
| Seg Id: 2307 - Rio Grande Below Riverside Diversion Dam |                           |                        |     |   |
|---|---------------------------|------------------------|-----|---|
| AU ID   | Assessment Method         | Parameter              | LOS | Sources   |
| 2307_01   | Dissolved Solids          | Chloride               | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels | Chlorophyll-a          | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |
|   | Bacteria Geomean          | E. coli                | CN  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Point Source Unknown                                    |
|   | Dissolved Solids          | Total dissolved solids | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
| 2307_02   | Dissolved Solids          | Chloride               | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels | Chlorophyll-a          | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |
| 2307_03   | Dissolved Solids          | Total dissolved solids | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels | Ammonia                | CS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Dissolved Solids          | Chloride               | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |
|   | Nutrient Screening Levels | Chlorophyll-a          | CS  | NPS - Crop Production (Irrigated); NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source |
|   | Bacteria Geomean          | E. coli                | NS  | NPS - Non-Point Source; NPS - Sources Outside State Jurisdiction Or Borders; PS - Unknown Point Source                                    |
|   | Dissolved Solids          | Total dissolved solids | NS  | NPS - Crop Production (Irrigated); NPS - Sources Outside State Jurisdiction Or Borders  |

# Segment and Stations

| Seg ID | Seg Name                           | Segment Description   | Segment Type      | AU ID   | AU Description  | Flow Type | Flow Type Source | ALU Designation | ALU Designation Source | Station ID(s) |
|--------|------------------------------------|---|-------------------|---------|---|-----------|------------------|-----------------|------------------------|---------------|
| 2308   | Rio Grande Below International Dam | From the Riverside Diversion Dam in El Paso County to International Dam in El Paso County | Freshwater Stream | 2308_01 | From the Riverside Diversion Dam to the International Dam in El Paso County | Perennial | TSWQS Appendix A | Limited         | TSWQS Appendix A       | 15528; 15529  |

- IBWC Stations

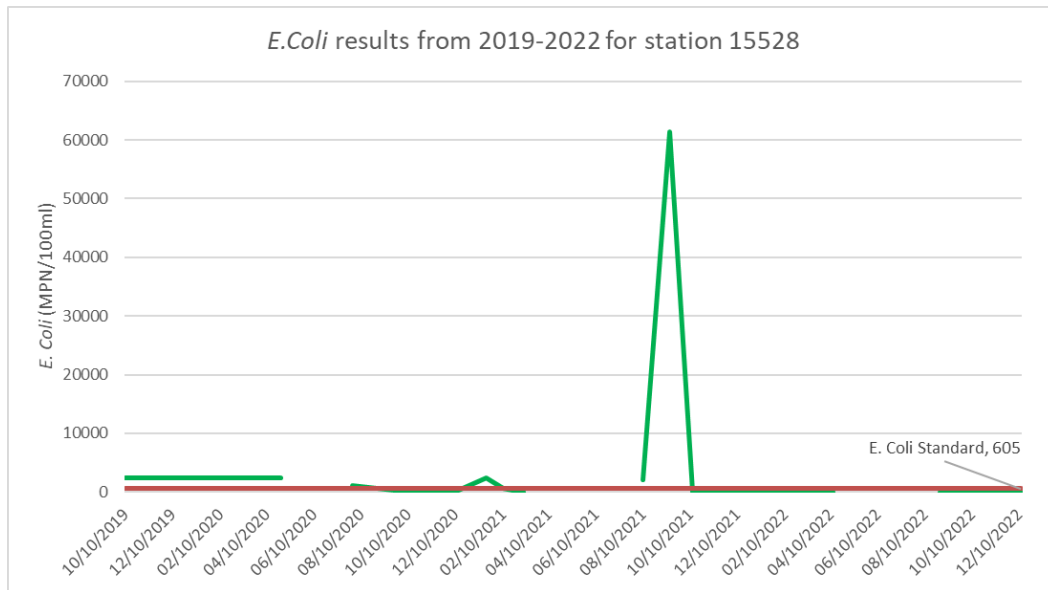
- 15528
- 15529



# Impairments 303(d)

|      |                                    |         |                                    |    |   |
|------|------------------------------------|---------|------------------------------------|----|---|
| 2308 | Rio Grande Below International Dam | 2308_01 | Bacteria in water (Recreation Use) | 5c | N |
|------|------------------------------------|---------|------------------------------------|----|---|

Category 5c: Additional data and information will be collected or evaluated before a management strategy is selected.



Station 15528 was dry for most of 2018

Station 15529 was also dry for the most part

*E. Coli* results still indicate levels higher than standard

# Possible Sources

## Seg Id: 2308 - Rio Grande Below International Dam

| AU ID   | Assessment Method         | Parameter        | LOS | Sources  |
|---------|---------------------------|------------------|-----|--|
| 2308_01 | Nutrient Screening Levels | Ammonia          | CS  | NPS - Sources Outside State Jurisdiction Or Borders                                  |
|         | Nutrient Screening Levels | Chlorophyll-a    | CS  | NPS - Sources Outside State Jurisdiction Or Borders; NPS - Urban Runoff/Storm Sewers |
|         | Bacteria Geomean          | E. coli          | NS  | NPS - Sources Outside State Jurisdiction Or Borders                                  |
|         | Nutrient Screening Levels | Total phosphorus | CS  | NPS - Sources Outside State Jurisdiction Or Borders; NPS - Urban Runoff/Storm Sewers |

# Segment and Stations

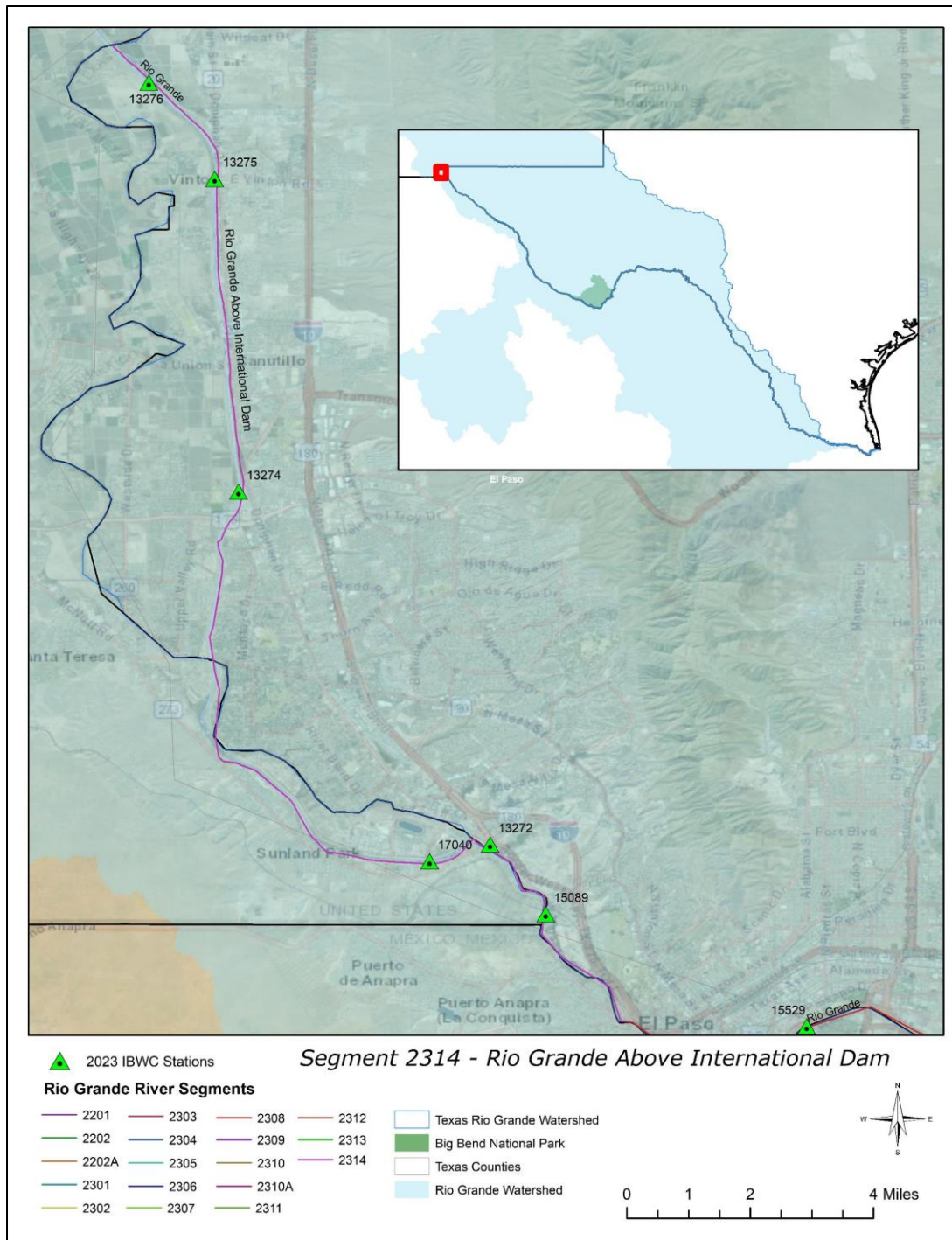
| Seg ID | Seg Name                           | Segment Description   | Segment Type      | AU ID   | AU Description  | Flow Type | Flow Type Source | ALU Designation | ALU Designation Source | Station ID(s)   |
|--------|------------------------------------|---|-------------------|---------|---|-----------|------------------|-----------------|------------------------|---|
| 2314   | Rio Grande Above International Dam | From International Dam in El Paso County to the New Mexico State Line in El Paso County | Freshwater Stream | 2314_01 | From the International Dam upstream to the Anthony Drain confluence           | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | 13272;<br>13274;<br>13275;<br>13276;<br>15089;<br>17040 |
|        |                                    |   |                   | 2314_02 | From the Anthony Drain confluence upstream to the New Mexico/Texas state line | Perennial | TSWQS Appendix A | High            | TSWQS Appendix A       | No Stations   |

- IBWC Stations

- 13272
- 13274
- 13275
- 13276
- 17040



# Segment 2314



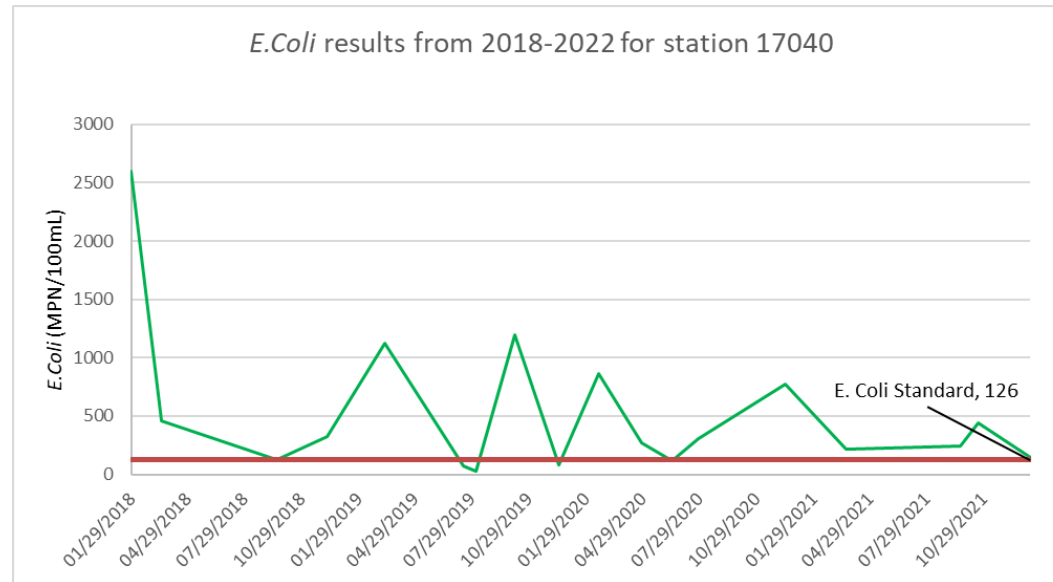
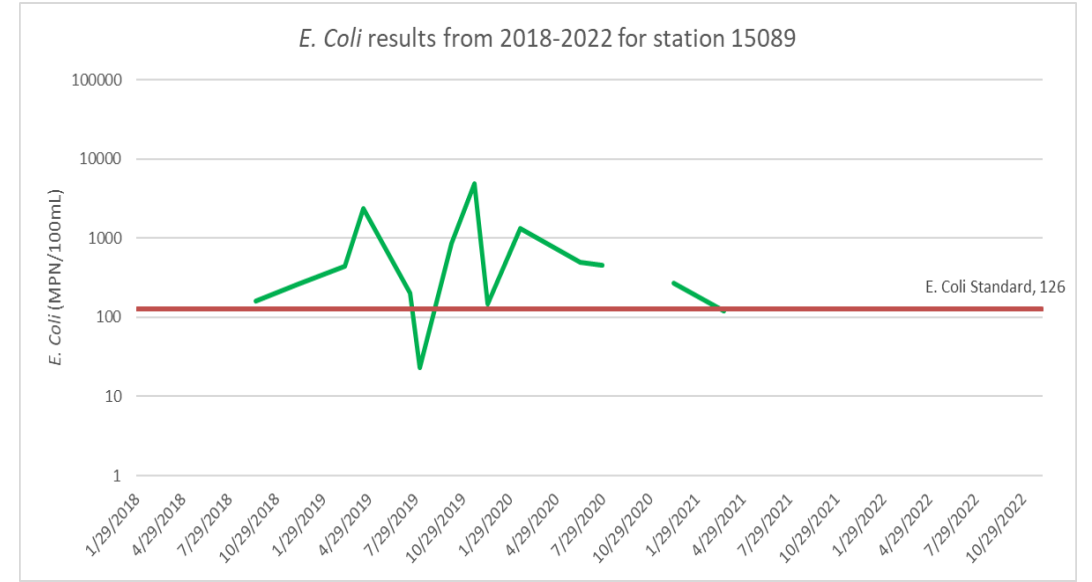
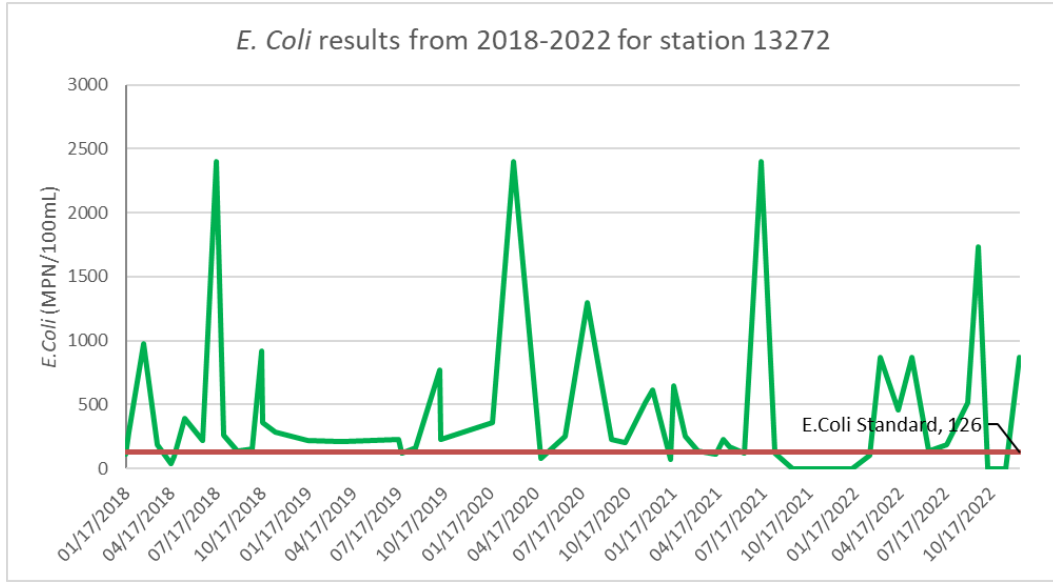
# Impairment 303(d)

|      |                                    |         |                                    |    |   |
|------|------------------------------------|---------|------------------------------------|----|---|
| 2314 | Rio Grande Above International Dam | 2314_01 | Bacteria in water (Recreation Use) | 5c | N |
|------|------------------------------------|---------|------------------------------------|----|---|

*Category 5c: Additional data and information will be collected or evaluated before a management strategy is selected.*

- Stations 13274, 13275 and 13276 had limited data. Stations were dry majority of the time
- The few results still indicated high bacteria

# Segment 2314 station results - Bacteria



# Summary of Upper Rio Grande Segments 2306, 2307, 2308, and 2314

Impairments in these segments are (303d):

- Bacteria
- Total Dissolved Solids
- Chloride
- Sulfate

Main source of pollutants is non-point sources

Current issues:

- Drought – dry stations
- Accessibility issues

CRP will continue monitoring and providing data

# Contact info and webpages

- Lisa Torres – [lisa.torres@ibwc.gov](mailto:lisa.torres@ibwc.gov)
- USIBWC – Clean Rivers Program  
<https://www.ibwc.gov/CRP/Index.htm>
- TCEQ 2022 Integrated Report  
<https://www.tceq.texas.gov/waterquality/assessment/22twqi/22txir>
- Texas Surface Water Quality Standards  
<https://www.tceq.texas.gov/waterquality/standards>





Questions?