



SAN ANTONIO  

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RIVER AUTHORITY

# Water Quality – Bacteria Dashboard

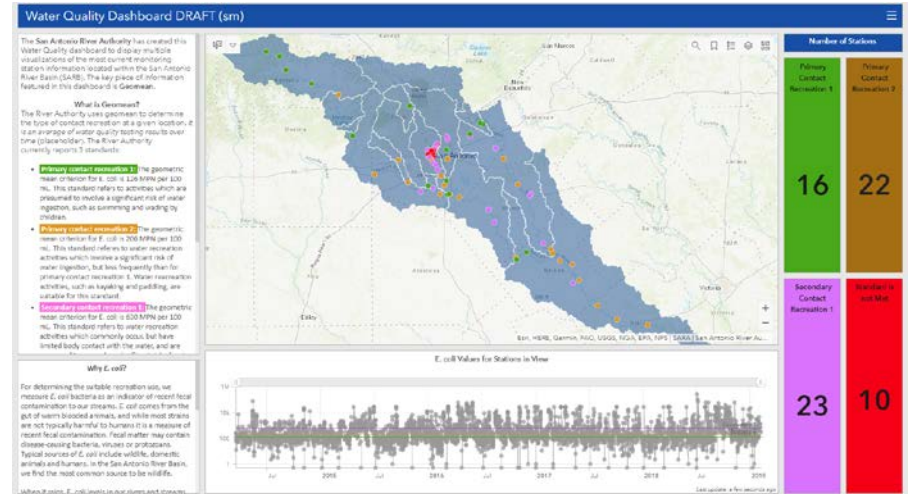
July 12, 2019



COMMITTED TO SAFE, CLEAN, ENJOYABLE CREEKS AND RIVERS

# Background

- Surface Water Quality Assessment
  - Clean Rivers Program
  - Texas Integrated Report
  - Challenges



# Dashboard

- Focuses on E. coli levels
- High level overview
- Most recent data; 5 years
- Interactive
- Informative with links to other tools and webpages.



# Demonstration

[Dashboard](#)



# Next Steps

- Include rainfall and/or flow data.
- Incorporate other parameters.



# Questions?

Michelle M. Garza  
Environmental Sciences Department  
[www.sara-tx.org](http://www.sara-tx.org)



# Overview

## Water Quality Dashboard DRAFT (sm)

The San Antonio River Authority has created this Water Quality dashboard to display multiple visualizations of the most current monitoring station information located within the San Antonio River Basin (SARB). The key piece of information featured in this dashboard is Geomean.

### What is Geomean?

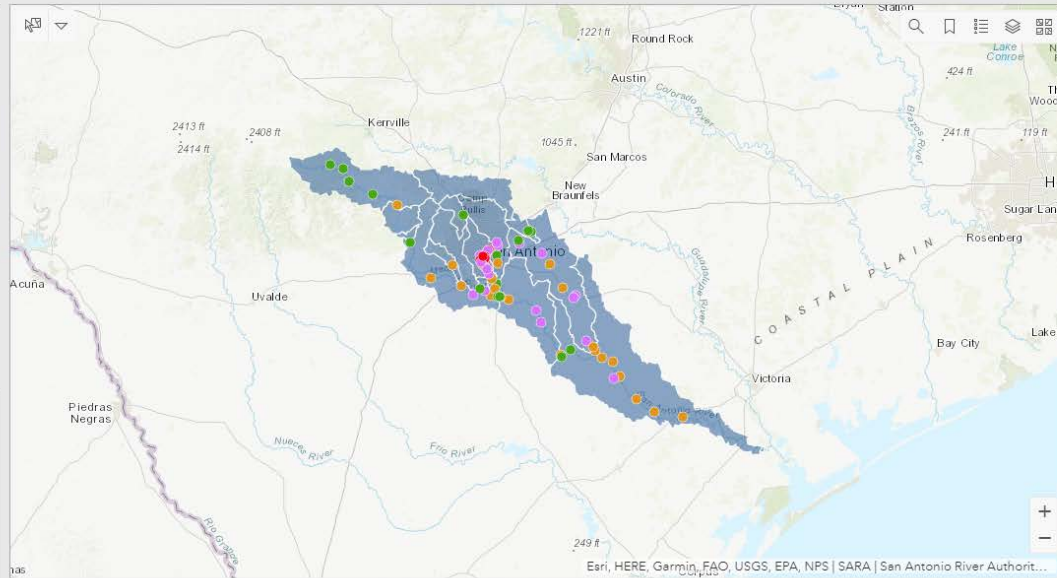
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- Primary contact recreation 1:** The geometric mean criterion for E. coli is 126 MPN per 100 mL. This standard refers to activities which are presumed to involve a significant risk of water ingestion, such as swimming and wading by children.
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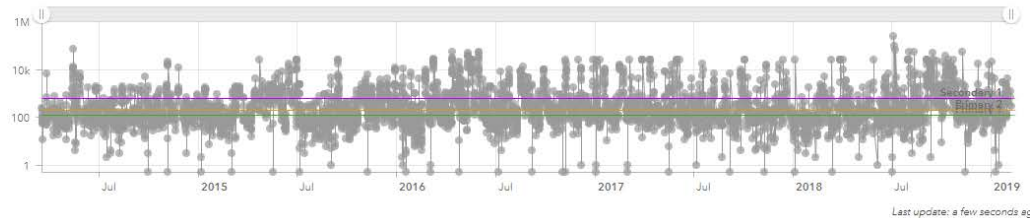
### Why E. coli?

For determining the suitable recreation use, we measure E. coli bacteria as an indicator of recent fecal contamination to our streams. E. coli comes from the gut of warm blooded animals, and while most strains are not typically harmful to humans it is a measure of recent fecal contamination. Fecal matter may contain disease-causing bacteria, viruses or protozoans. Typical sources of E. coli include wildlife, domestic animals and humans. In the San Antonio River Basin, we find the most common source to be wildlife.

When it rains, E. coli levels in our rivers and streams



E. coli Values for Stations in View



### Number of Stations

Primary Contact Recreation 1

16

Primary Contact Recreation 2

22

Secondary Contact Recreation 1

23

Standard is not Met

10

Last update: a few seconds ago



# Description

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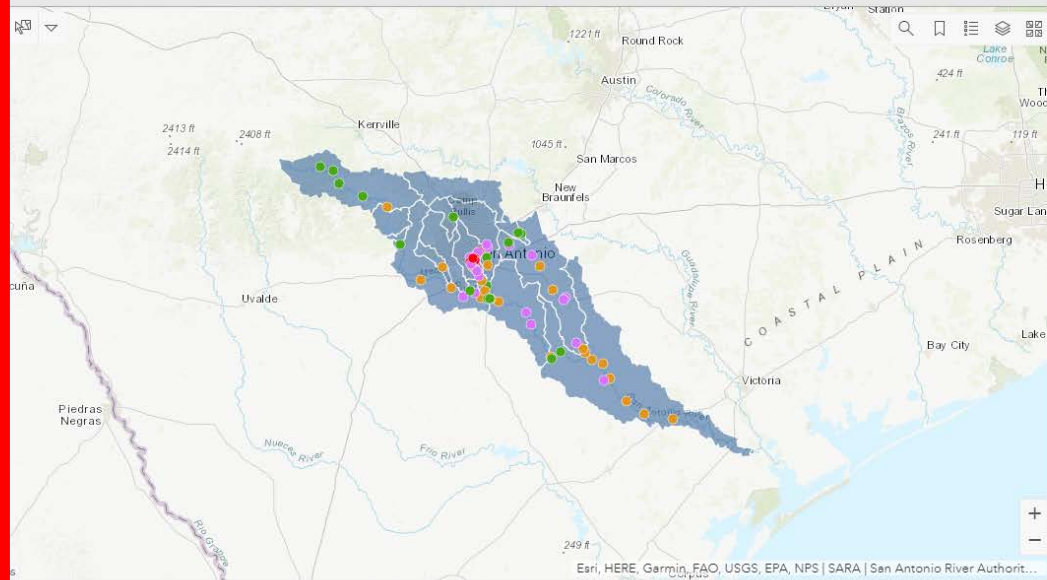
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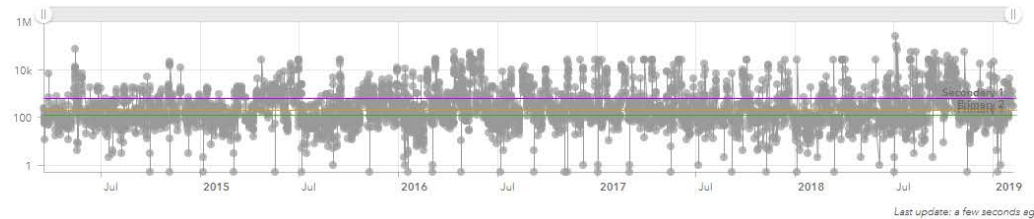
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# River Recreation Website – Current Conditions

The screenshot shows a web browser window with the URL <https://www.sara-tx.org/river-recreation/paddling-trails/current-conditions/>. The page features the San Antonio River Authority logo and a navigation menu. The main content area is titled "Current Conditions" and includes a "Point Frequency" icon. A table lists various stations with their names, collection times, and E. coli Bacteria Results. A sidebar on the right contains a search bar and a list of navigation links. At the bottom, there is a "Select Language" dropdown and a "Powered by" logo.

**Current Conditions**

[Point Frequency](#)

Flow Conditions

Bacteria Conditions

[Contact us](#) for more information about the water quality in the San Antonio River Basin. For more information about the relationship between E. coli bacteria and disease-causing organisms, [click here](#).

Station ID	Station Name	Bacteria Collection Time	E. coli Bacteria Result
90069	San Pedro Creek Culture Park (San Pedro Creek immediately downstream of tunnel inlet)	04/17 at 2:27 PM	200 mpn <a href="#">Line Graph</a>
14256	San Antonio River at Mitchell Street, San Antonio, TX	04/17 at 1:55 PM	120 mpn <a href="#">Line Graph</a>
17066	San Antonio River at Mission Road, San Antonio, TX	04/17 at 1:41 PM	260 mpn <a href="#">Line Graph</a>
12897	San Antonio River at Interstate 410 Camino Coahuiltechan, San Antonio, TX	04/17 at 1:11 PM	170 mpn <a href="#">Line Graph</a>
12881	San Antonio River at SH 97 near Floresville, TX	04/17 at 11:51 AM	160 mpn <a href="#">Line Graph</a>
12879	San Antonio River at FM 791 S.W. of Falls City, TX	04/17 at 10:51 AM	190 mpn <a href="#">Line Graph</a>
12791	San Antonio River at US Hwy. 77-A, Goliad, TX	04/17 at 9:06 AM	130 mpn <a href="#">Line Graph</a>
14211	Cibola Creek at CR389 near Crosthowa, TX	04/17 at 10:17 AM	240 mpn <a href="#">Line Graph</a>

MPN—Most Probable Number (Colonies in 100 ml of water)  
NA—Data is not currently available

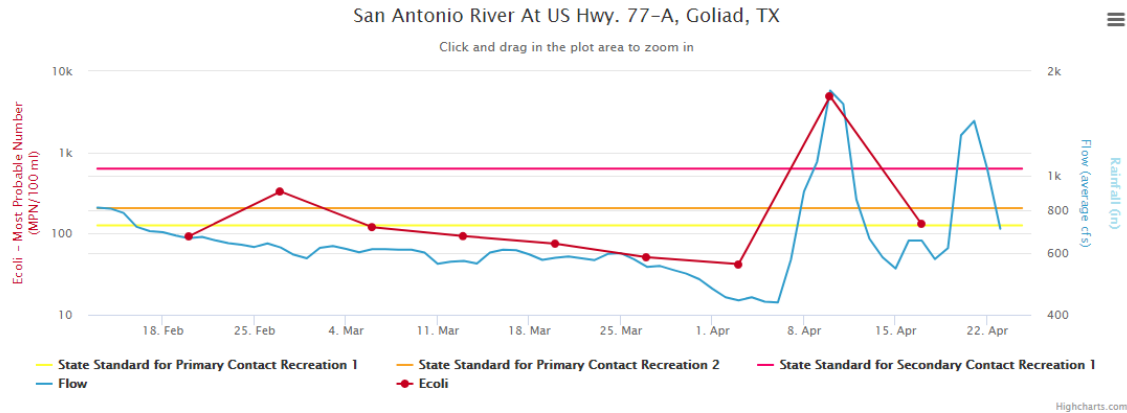
Select Language

Powered by Translate



# Current Conditions Graph

[https://www.sara-tx.org/wp-content/plugins/current\\_conditions/includes/chart.php?station\\_id=08188500](https://www.sara-tx.org/wp-content/plugins/current_conditions/includes/chart.php?station_id=08188500)



TCEQ recreational water quality standards are guidelines based on epidemiological studies using E. coli as indicator bacteria to determine a potential level of fecal contamination which may pose a risk to humans. All rivers and creeks contain a risk from bacteria. Always avoid ingesting the water and wash your hands afterwards.

- › **Primary contact recreation 1 standard** (126 most probable number per 100 ml): Activities that are presumed to involve a significant risk of ingestion of water (e.g. wading by children and swimming).
- › **Primary contact recreation 2 standard** (206 mpn per 100 ml): Applies where water recreation activities occur that involve a significant risk of ingestion of water, but less frequently than for primary contact recreation 1 (e.g. wading by children and swimming).
- › **Secondary contact recreation 1 standard** (630 mpn per 100 ml): Activities that commonly occur but have limited body contact and are presumed to pose a less significant risk of water ingestion than the primary contact recreation 1 standard (e.g. fishing, canoeing and kayaking).
- › Provisional data subject to revision.



# Map Area

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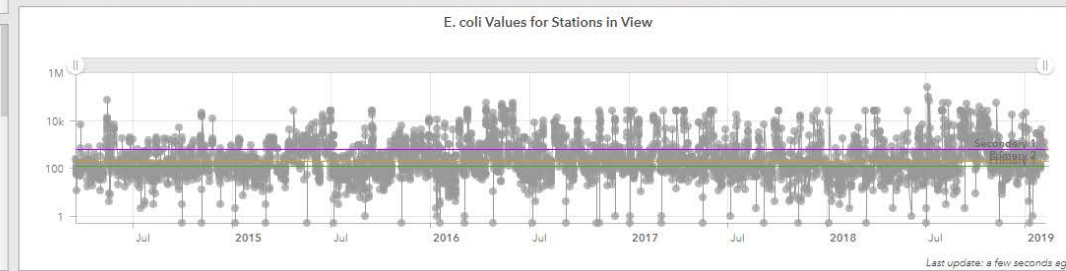
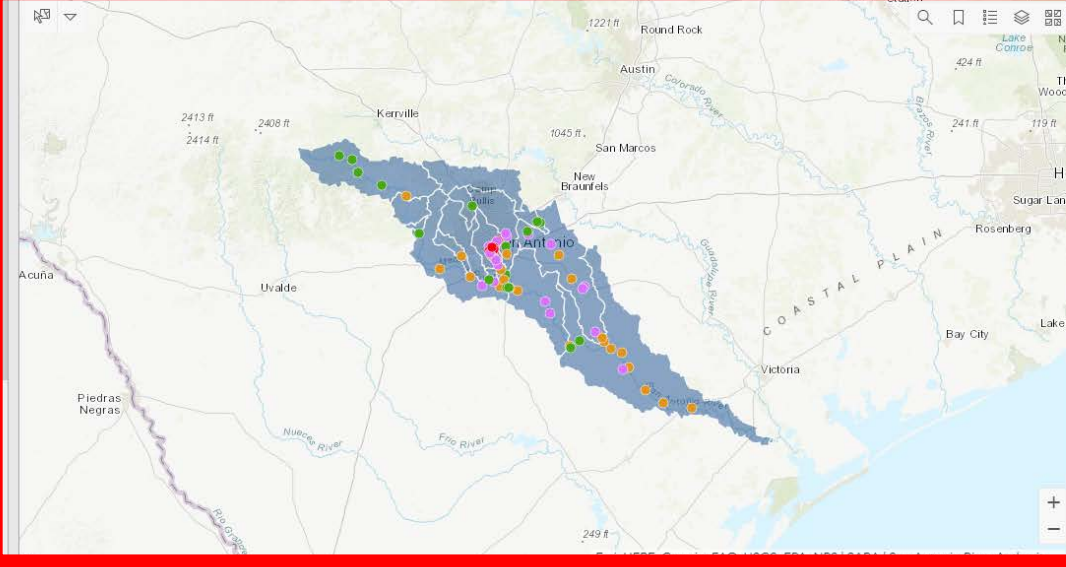
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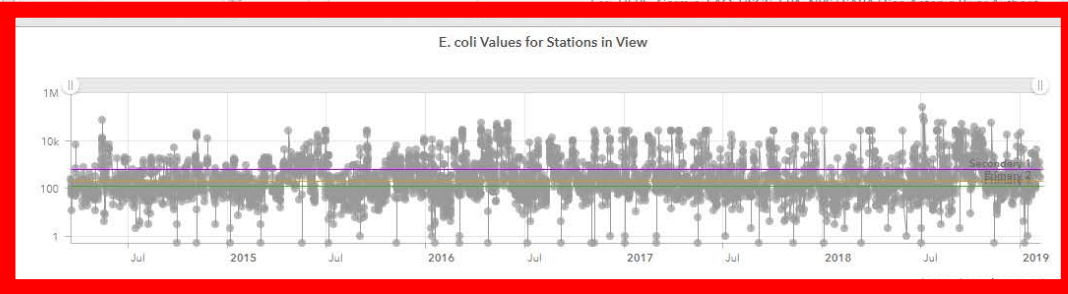
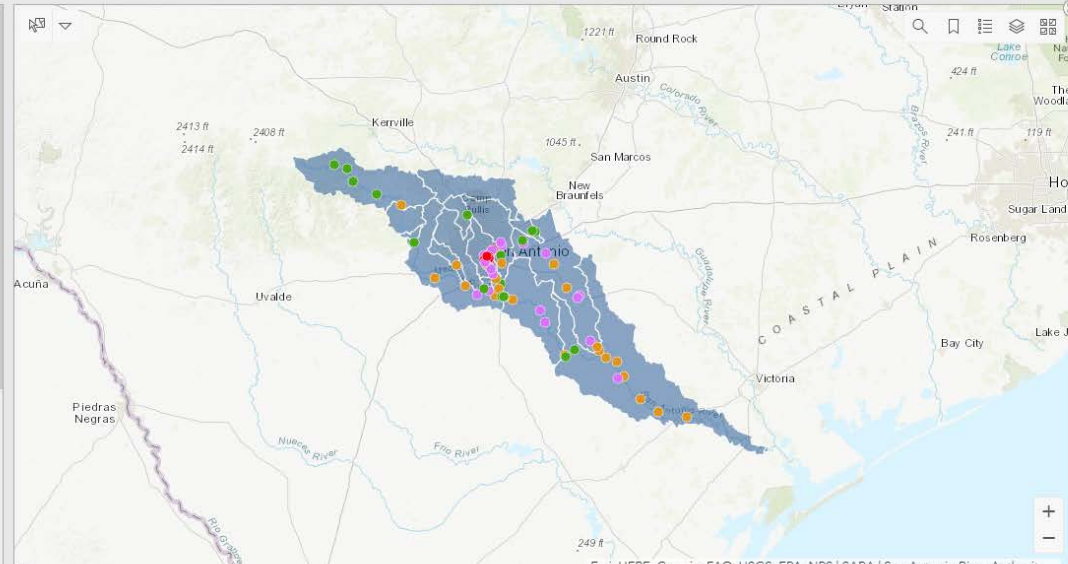
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# Station Count

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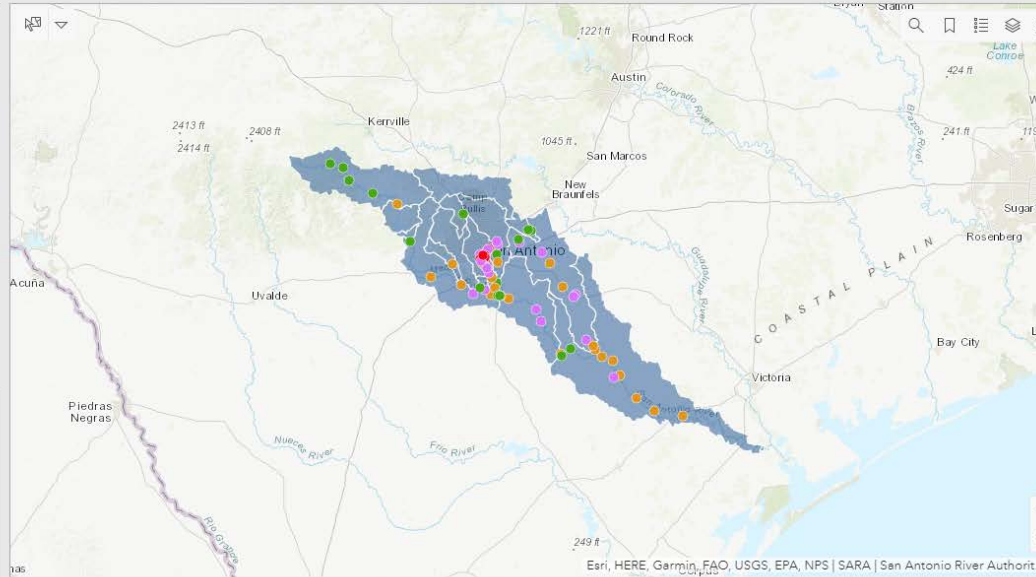
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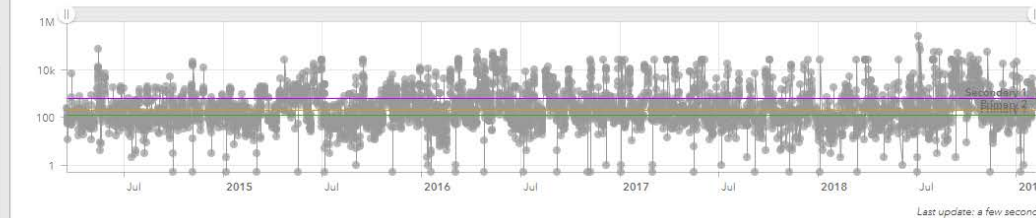
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# Stream Assessment Layer

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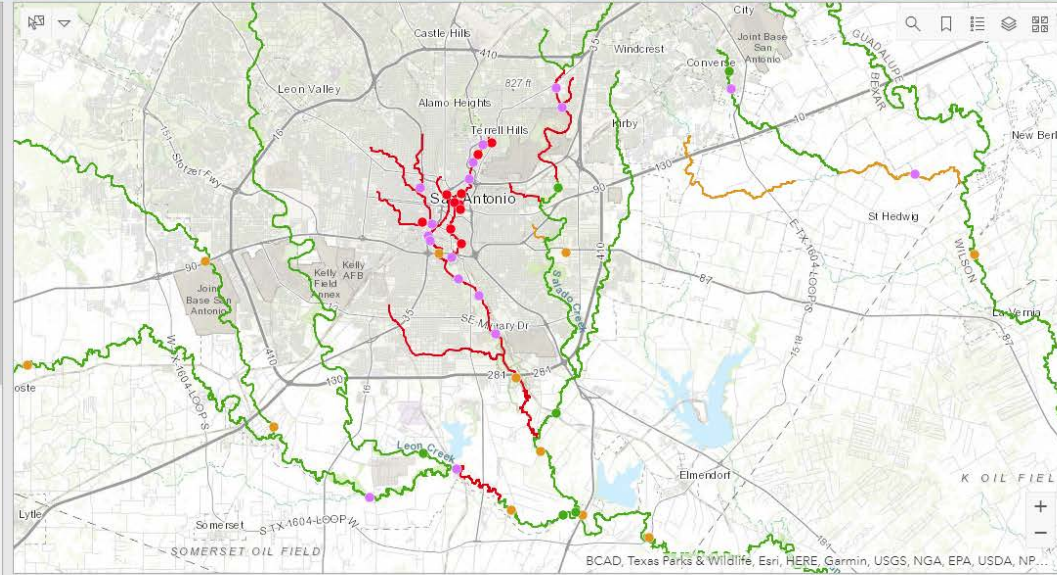
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### Number of Stations

Primary Contact Recreation 1

6

Primary Contact Recreation 2

11

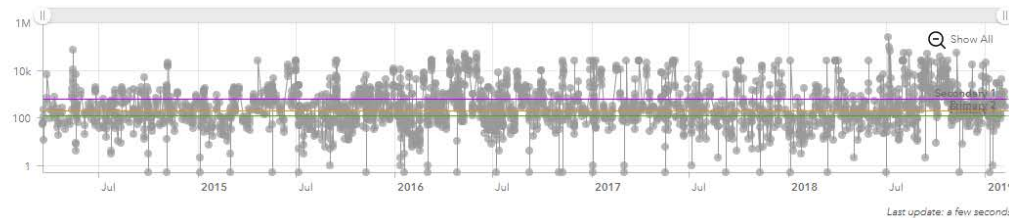
Secondary Contact Recreation 1

17

Standard is not Met

10

E. coli Values for Stations in View



Last update: a few seconds ago

