



Characterizing the Kickapoo Creek in Henderson County Watershed

Project Update

Texas Institute for Applied Environmental Research
Stephenville, Texas

July 23, 2020



Project Partners

- Texas State Soil and Water Conservation Board (TSSWCB)
- Texas Institute for Applied Environmental Research (TIAER)
- Angelina & Neches River Authority

Federal Clean Water Act

- Requires States to establish Water Quality Standards to achieve objective & goals
- Requires States to identify waterbodies failing to meet water quality standards & not supporting their designated uses
 - this list of impaired waterbodies is known as the *Texas 303(d) List*, developed by TCEQ



Why we are here

Bacteria Impairment

- Kickapoo Creek is not meeting the water quality standard for primary contact recreation
 - Due to elevated levels of bacteria, *E. coli*.
 - Depressed dissolved oxygen impairment is classified as 5c – indicating that additional data or information needed
- TIAER performed a Recreational Use Attainability Analysis on Kickapoo Creek in 2014



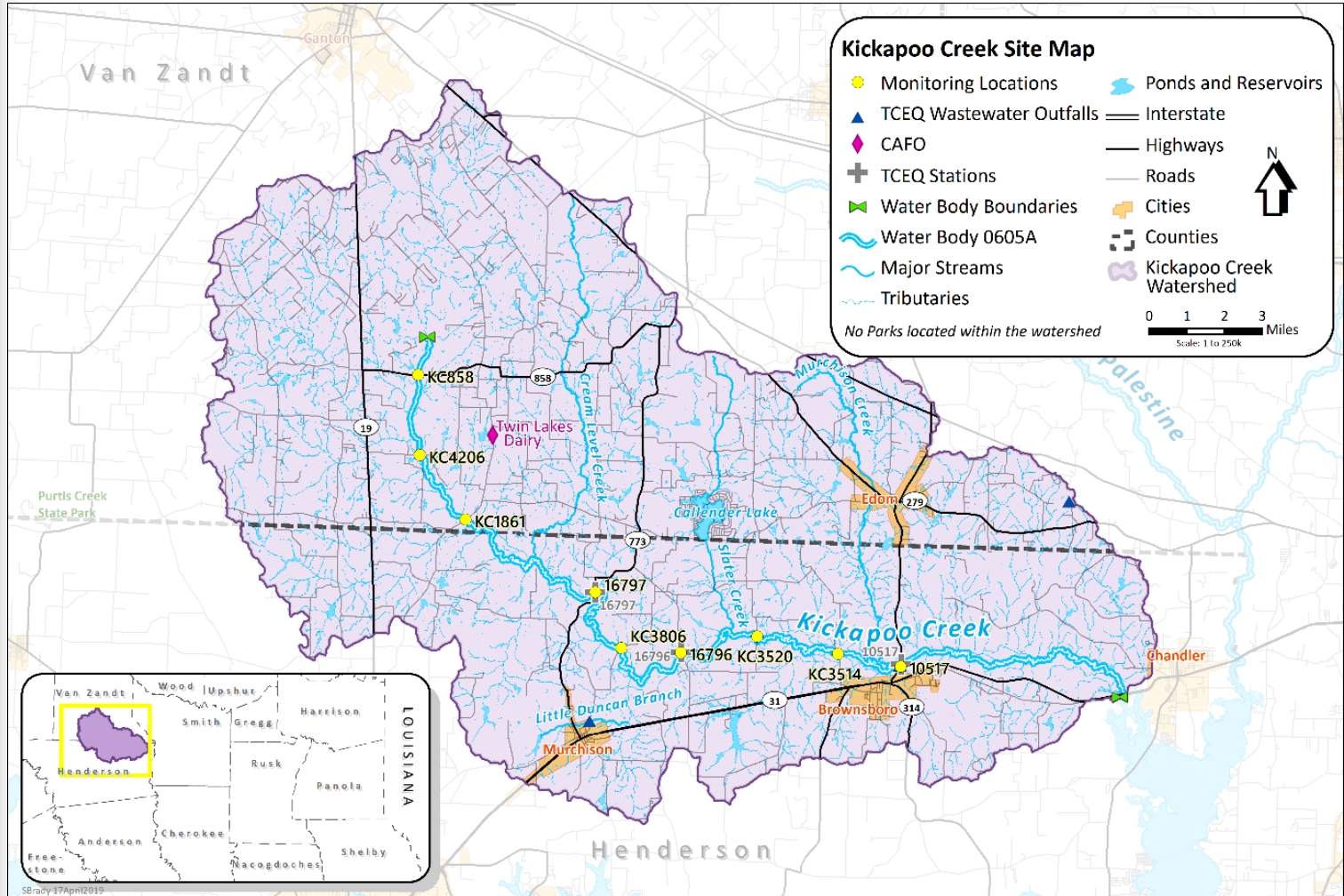
Purpose

- To better assess Kickapoo Creek and identify potential causes and sources of pollution, additional water quality monitoring and data inventory are needed
- Stakeholder involvement and understanding of water quality is needed to determine the best route for dealing with impairments in the watershed

Plan of Action

- Routine monitoring (monthly) at 9 sites on Kickapoo Creek
 - $\text{NH}_3\text{-N}$, TSS, VSS, $\text{NO}_2\text{-N}+\text{NO}_3\text{-N}$, TKN, $\text{PO}_4\text{-P}$, TP, BOD, and CHLA
- Conduct 24-hr DO monitoring (in conjunction with routine monthly) at 3 locations

Kickapoo Creek in Henderson County



Routine Monitoring Locations

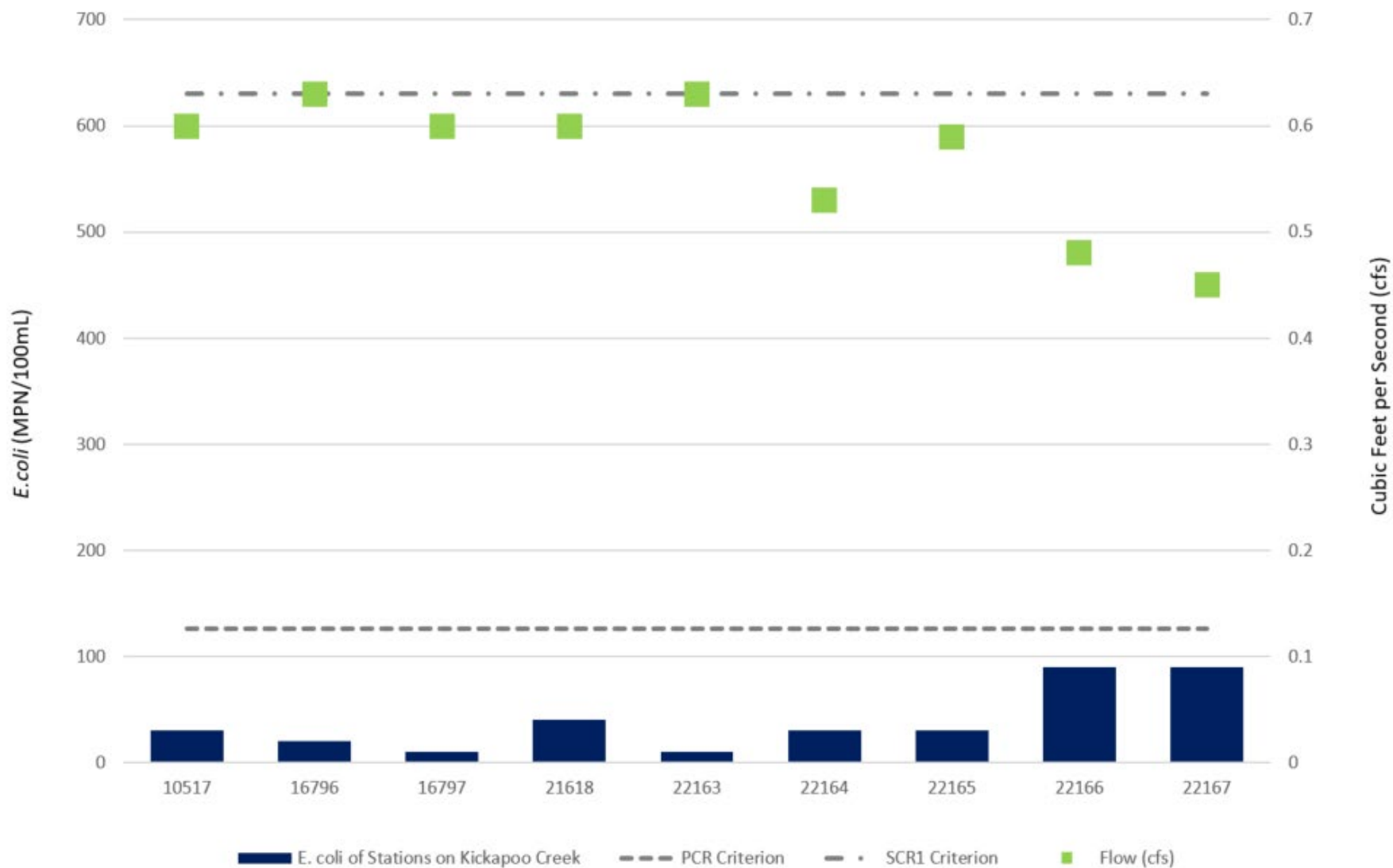
Kickapoo Creek

Site ID	Site Description	Latitude	Longitude
10517	Kickapoo Creek crossing at FM 314 in Henderson County*	32.309099	-95.605826
KC3514	Kickapoo Creek crossing at Henderson CR 3514 in Henderson County	32.309099	-95.605826
KC3520	Kickapoo Creek crossing at Henderson CR 3520 in Henderson County	32.319451	-95.67152
16796	Kickapoo Creek crossing at FM1803 in Henderson County	32.312309	-95.705716
KC3806	Kickapoo Creek crossing at Henderson CR 3806 in Henderson County*	32.313565	-95.732693
KC16797	Kickapoo Creek crossing at FM 773 Henderson County	32.334668	-95.745165
KC1861	Kickapoo Creek crossing at 1861 in Van Zandt County	32.361167	-95.805017
KC4206	Kickapoo Creek crossing at CR 4206 in Van Zandt County*	32.385408	-95.826422
KC858	Kickapoo Creek crossing at FM 858 in Van Zandt County	32.416093	-95.828130

*indicate sites where TIAER will conduct 24-hour DO

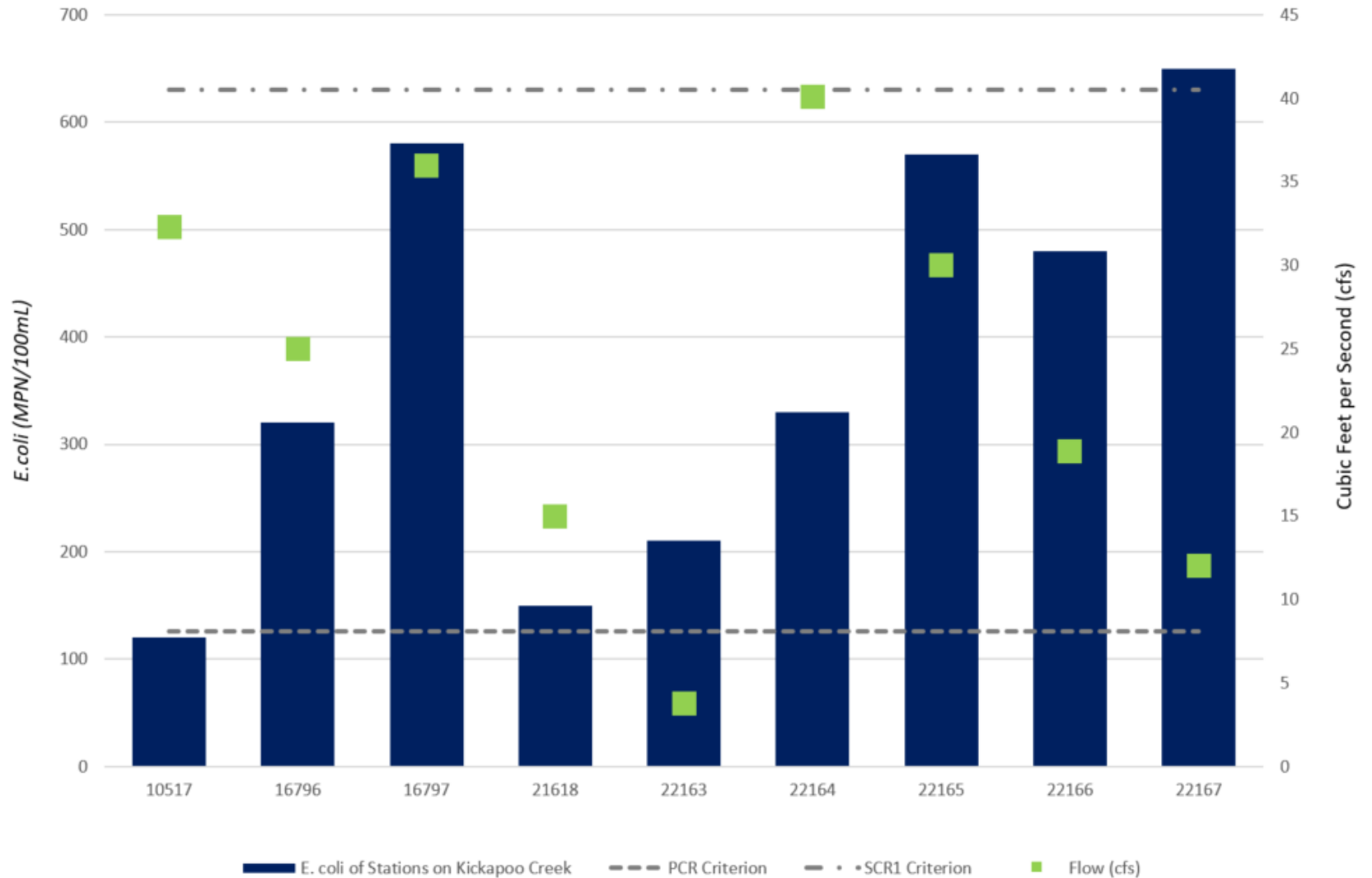
All data are preliminary and subject to change.

August 21, 2019 monitoring event



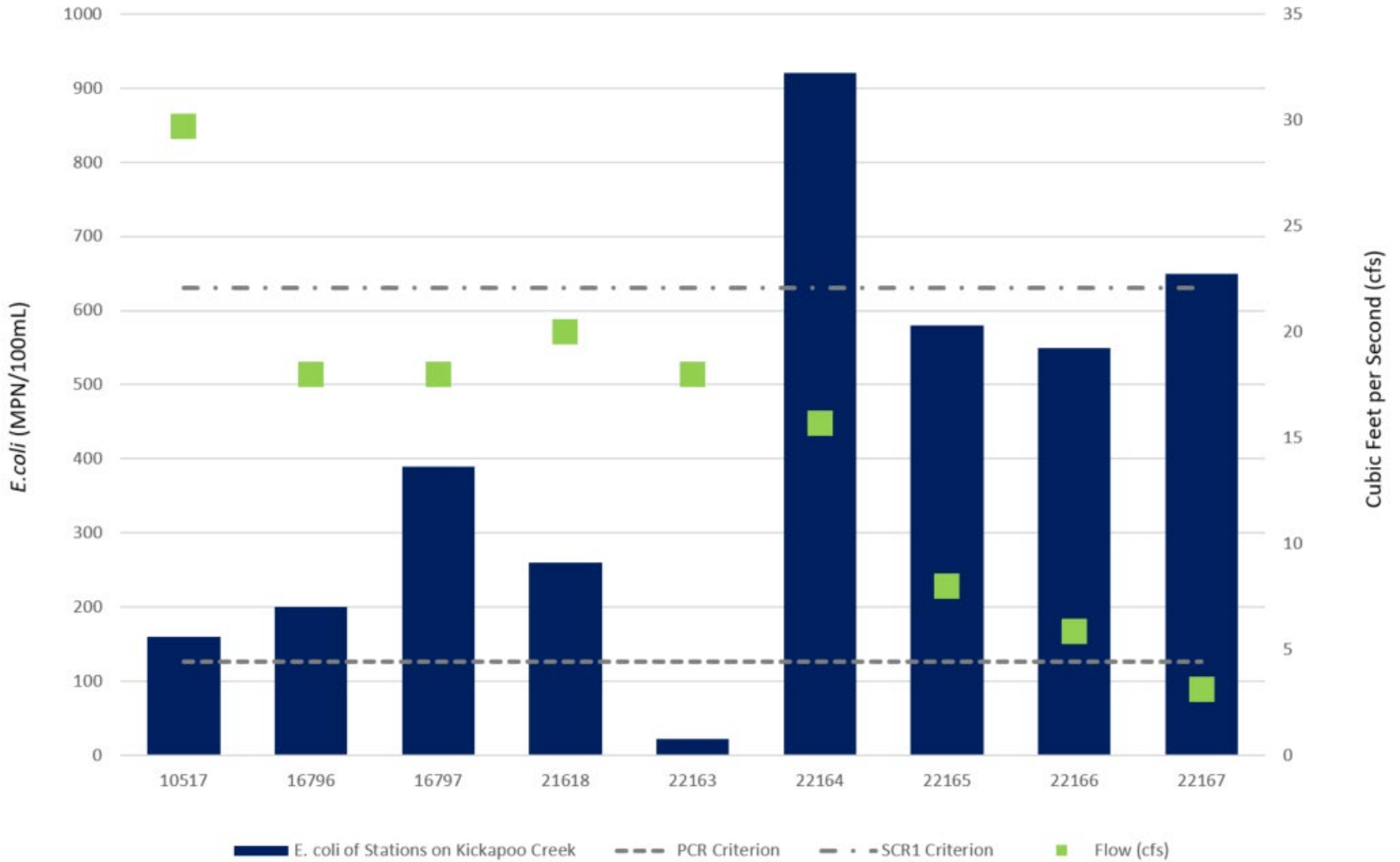
All data are preliminary and subject to change.

February 5, 2020 monitoring event



All data are preliminary and subject to change.

May 7, 2020 monitoring event



Project Summary

- Kickapoo Creek has been monitored monthly
- First stakeholder meeting was held March 3, 2020 in Brownsboro, Texas
 - 12 stakeholders in attendance
 - Meeting went well
 - Stakeholders had several questions regarding bacteria sources

Next Steps

- For month to month preliminary data results: www.kickapoo creekwpp.com
- Begin working on project proposal for a watershed protection plan
 - TSSWCB RFP out late summer
- Due to COVID-19, we are unable to hold an in person stakeholder meeting
 - A Kickapoo Creek newsletter will be created and sent to stakeholders to keep engagement

Questions?

Project Website:

www.kickapocreekwpp.com

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