# **UGRA Volunteer Summer Study** 2023

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# Goals

- Complement current UGRA summer bacteria sampling
- Identify areas in need of further investigation
- Include interested members of the community in water quality testing
- Build relationships with river stewards

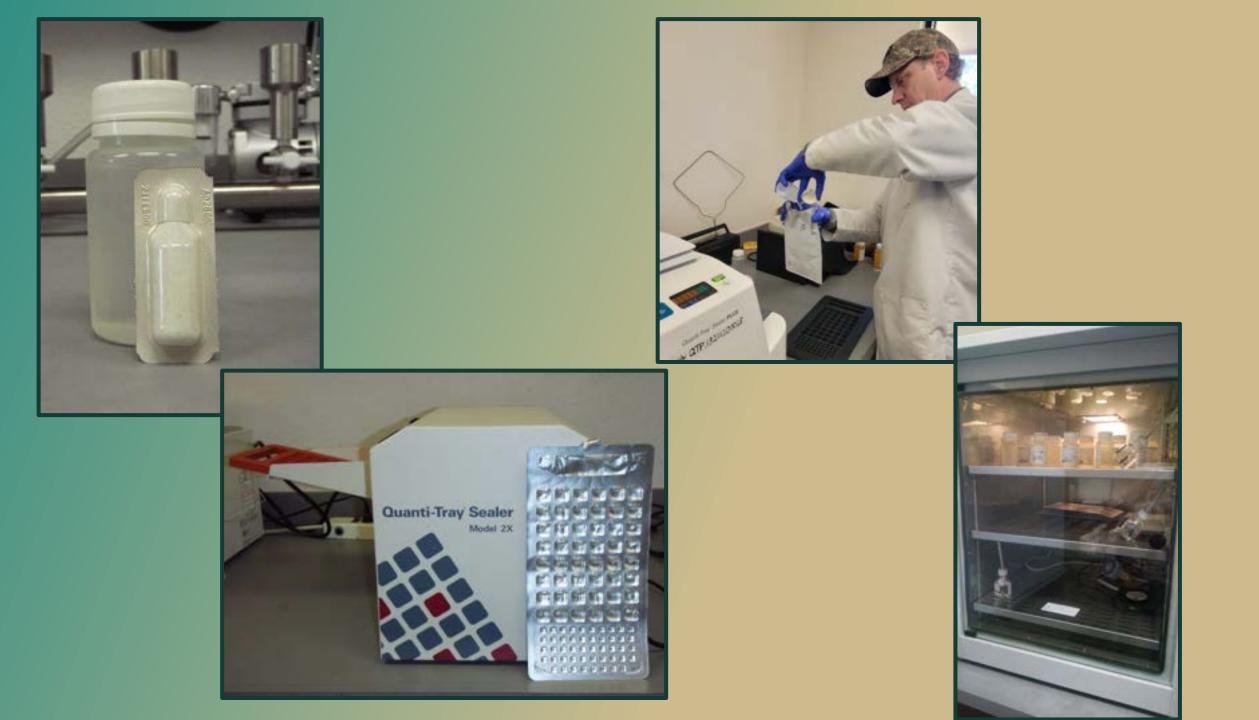
# Life of a Bacteria Sample

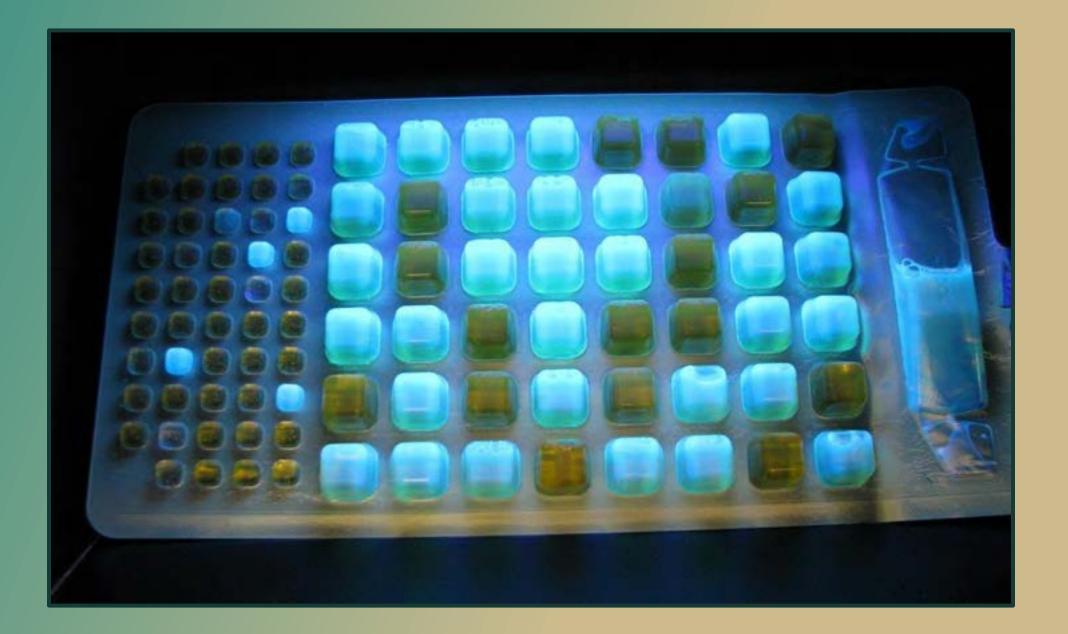


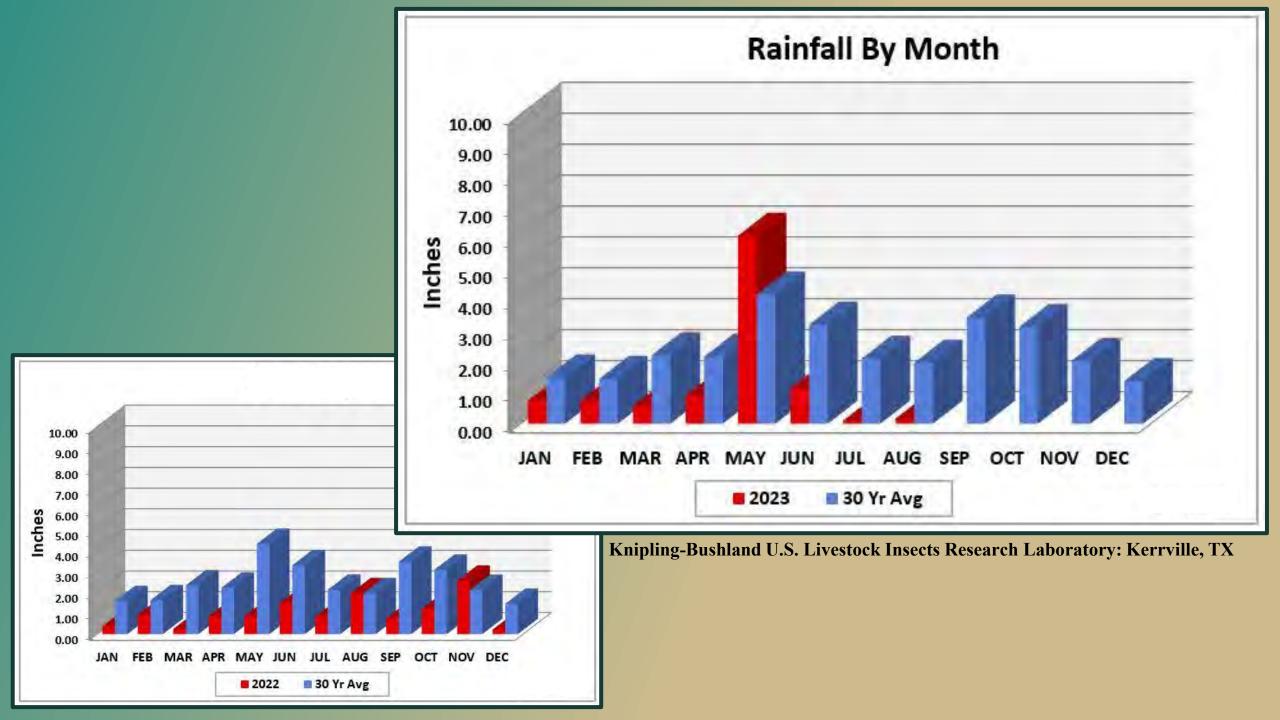




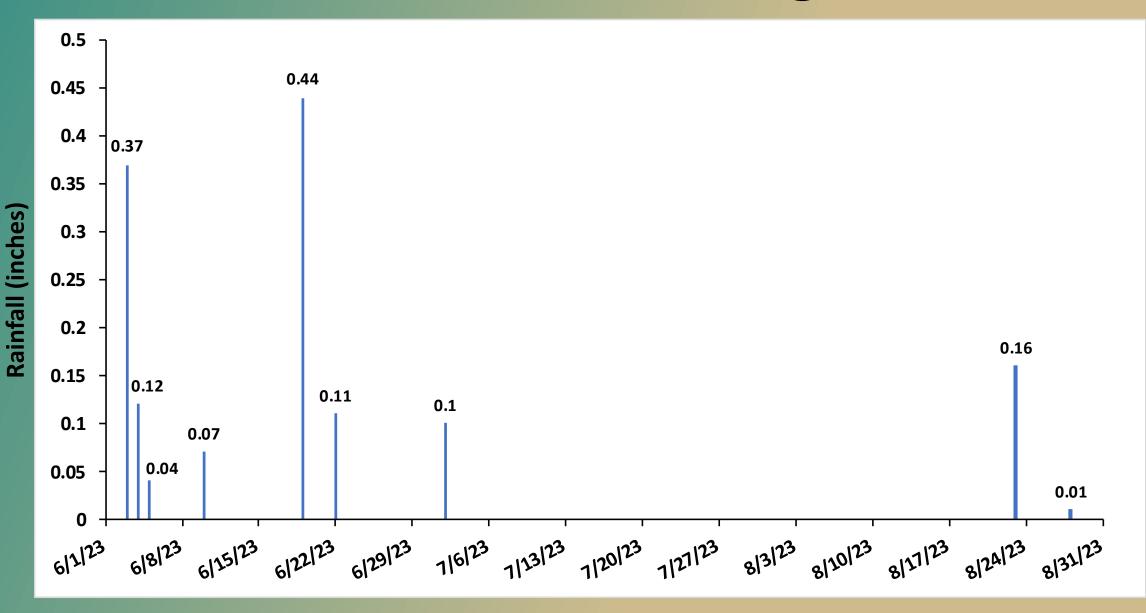
Lab



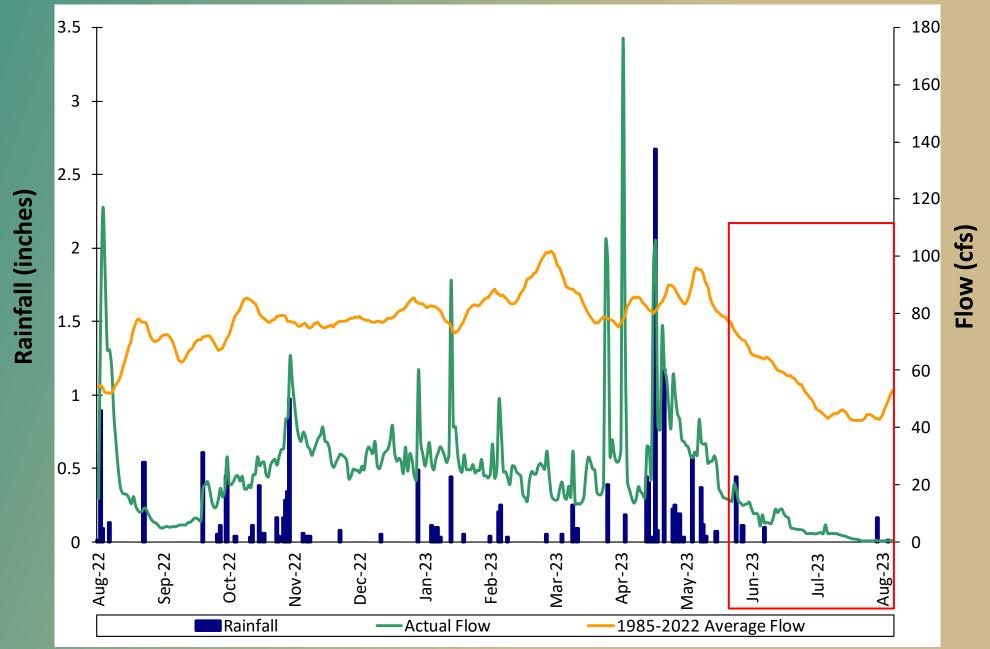


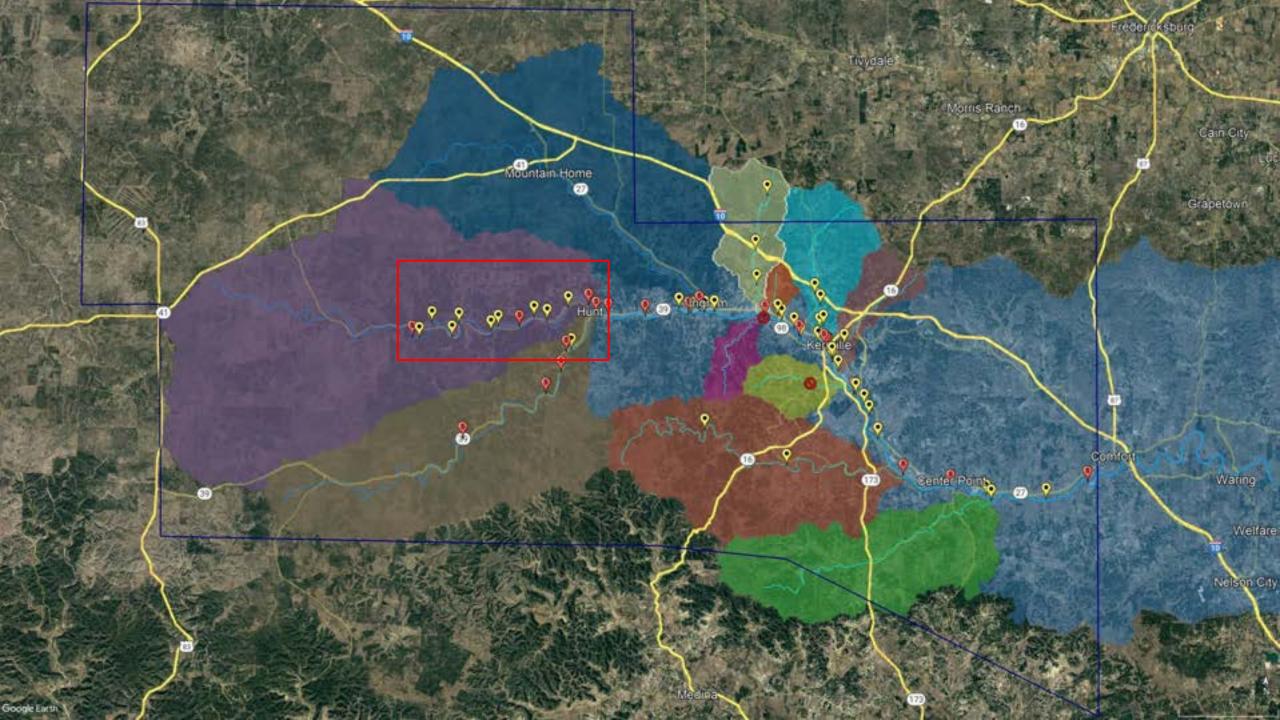


## **Rainfall Totals June – August 2023**



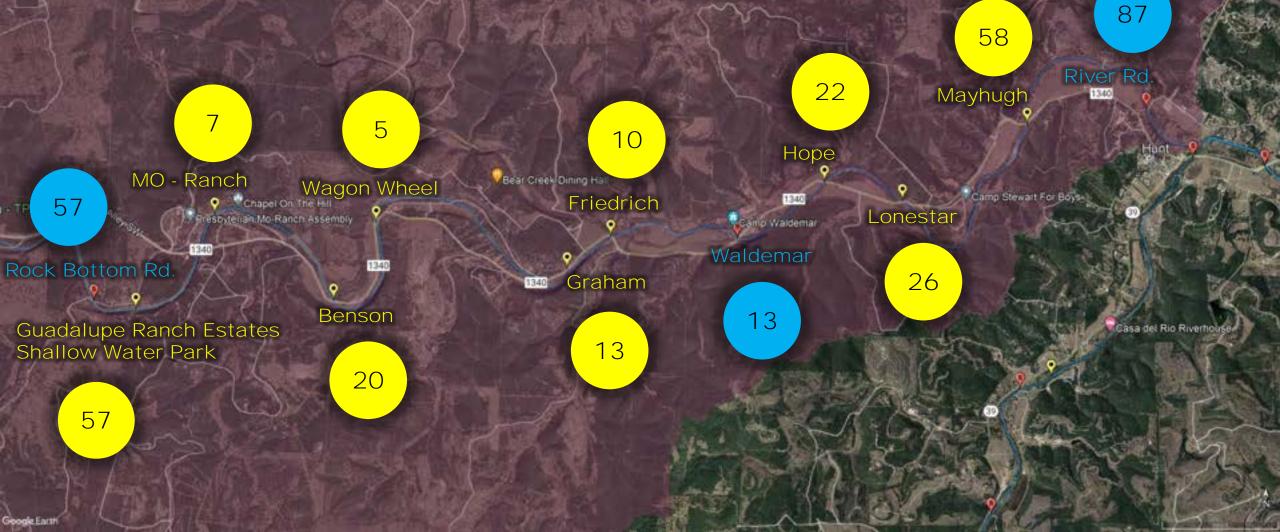
# **Streamflow vs Rainfall in Kerrville**





= Swimability Study Geometric Mean

= Volunteer Summer Study Geometric Mean



#### NF at Guadalupe Ranch Estates Shallow Water Park Sampled by Robert Bowles

#### NF at MO – Ranch Sampled by MO – Ranch Staff

#### NF at Benson Crossing Sampled by Bob and Karen Taylor



57

#### NF at Wagon Wheel Crossing Sampled by Clinton Morse



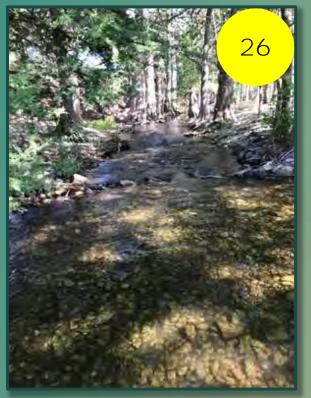


#### NF at Graham Crossing Sampled by Bob and Karen Taylor

#### NF at Friedrich Crossing Sampled by Bob and Karen Taylor





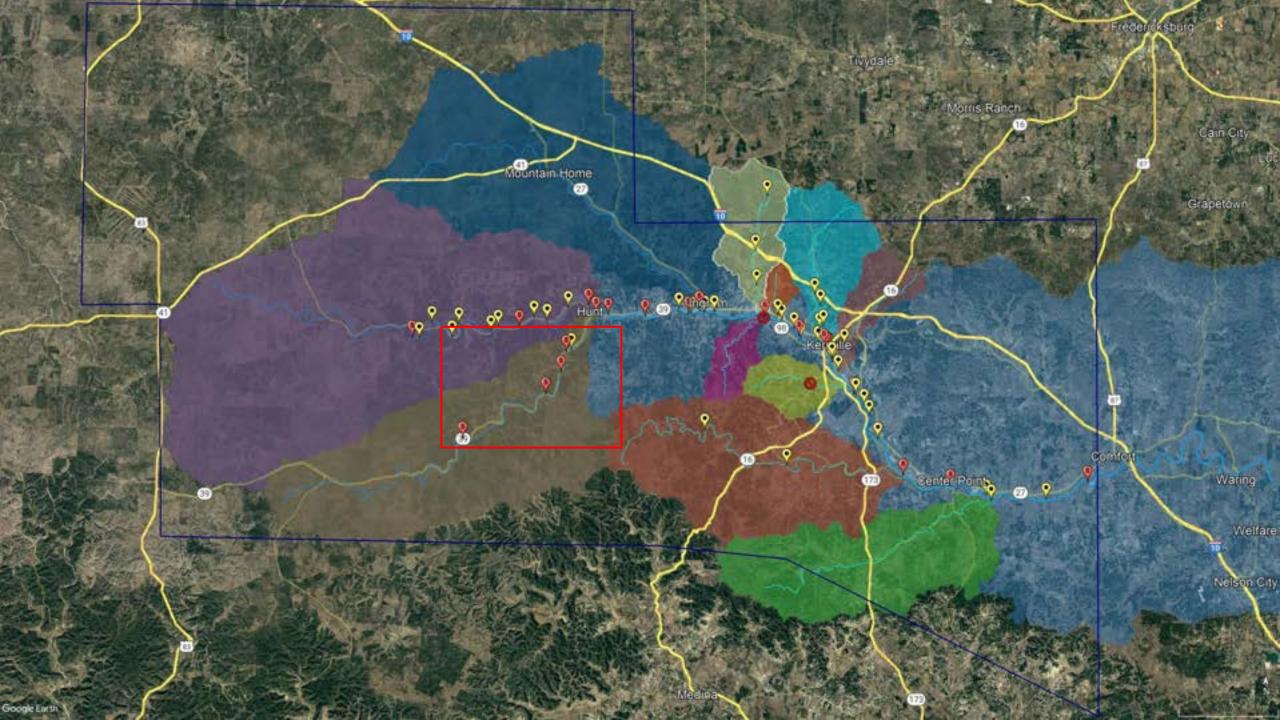


#### NF at Lonestar Crossing Sampled by Bake Foster

NF at Mayhugh Crossing Sampled by Bake Foster







#### = Swimability Study Geometric Mean

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Volunteer Summer Study Geometric Mean

31 Downstream 31 from Angel Falls Flaming Arrow Seago Rd. 23 Mystic

River Inn Resort & Conference Center

16

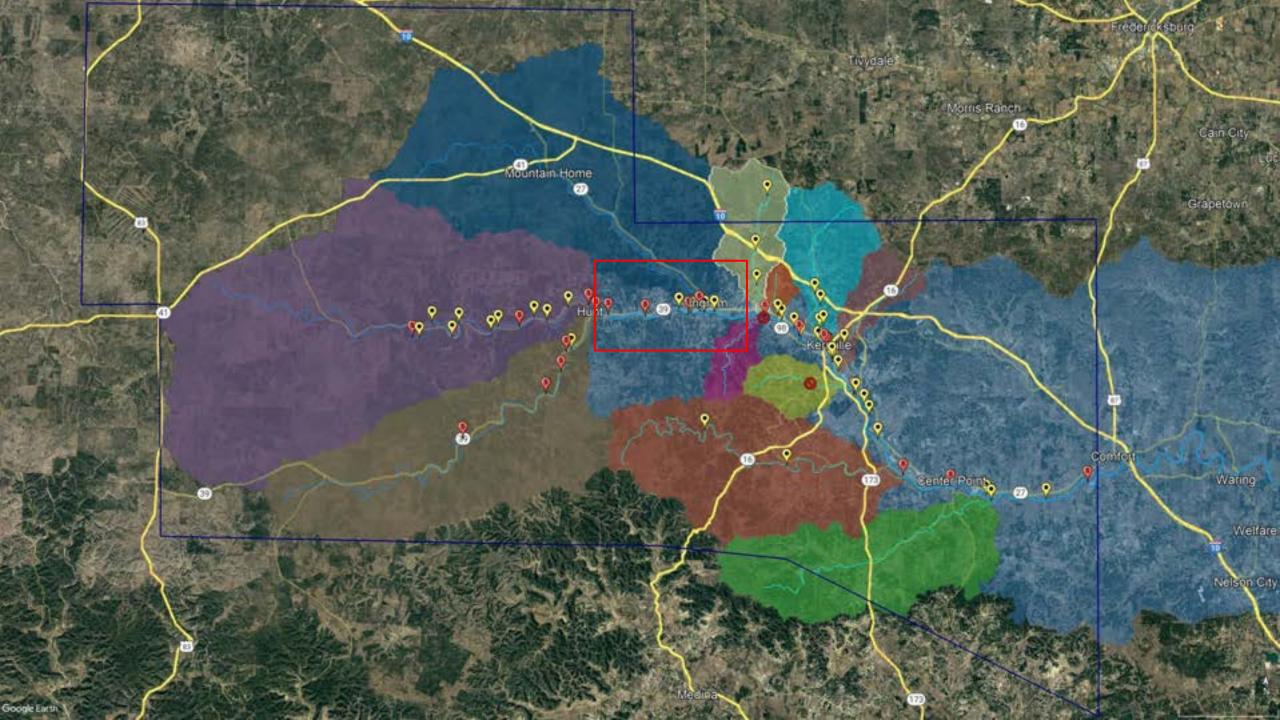
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Google Earth



#### SF Downstream from Angel Falls Sampled by Dee Elliott



#### Swimability Study Geometric Mean

= Volunteer Summer Study Geometric Mean

Basecamp Resolt

VoridMark Hunt Stablewood Springs

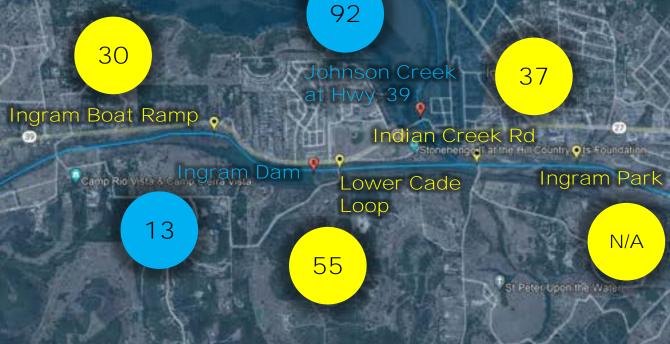
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39

22

Schumacher

30



#### GR at Ingram Boat Ramp Sampled by Nellwyn Sadler

GR at Lower Cade Loop Sampled by Alice King

GR at Indian Creek Rd. Crossing Sampled by Nellwyn Sadler

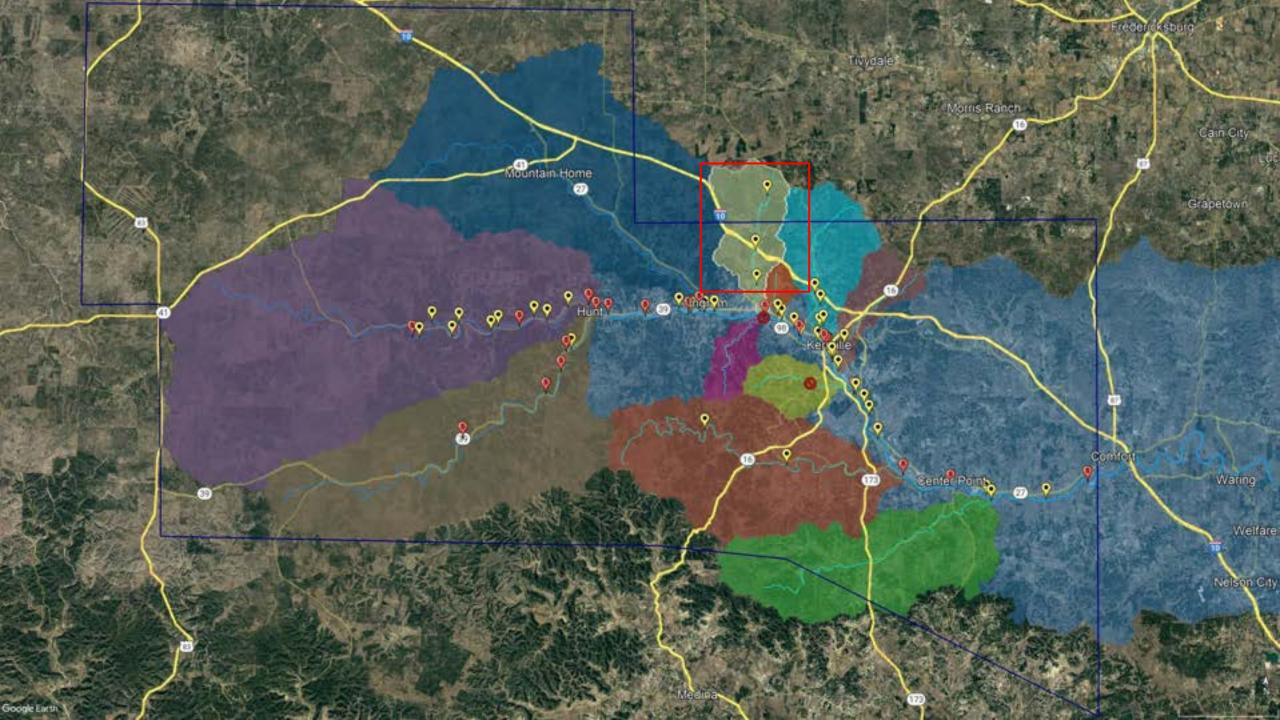








#### GR at Ingram Park Sampled by Patrick Andrews



#### = Swimability Study Geometric Mean

= Volunteer Summer Study Geometric Mean

• Goat Creek at Headwaters 3

Henderson Cemenary

Socold Lat

63

Goat Creek at • Interstate 10

24

Buckhoin Lake/Resolt

Kernel Goat Creek at KOA

1338

James Avel väitisän Jeveliv

#### Goat Creek at Headwaters Sampled by Maura Windlinger

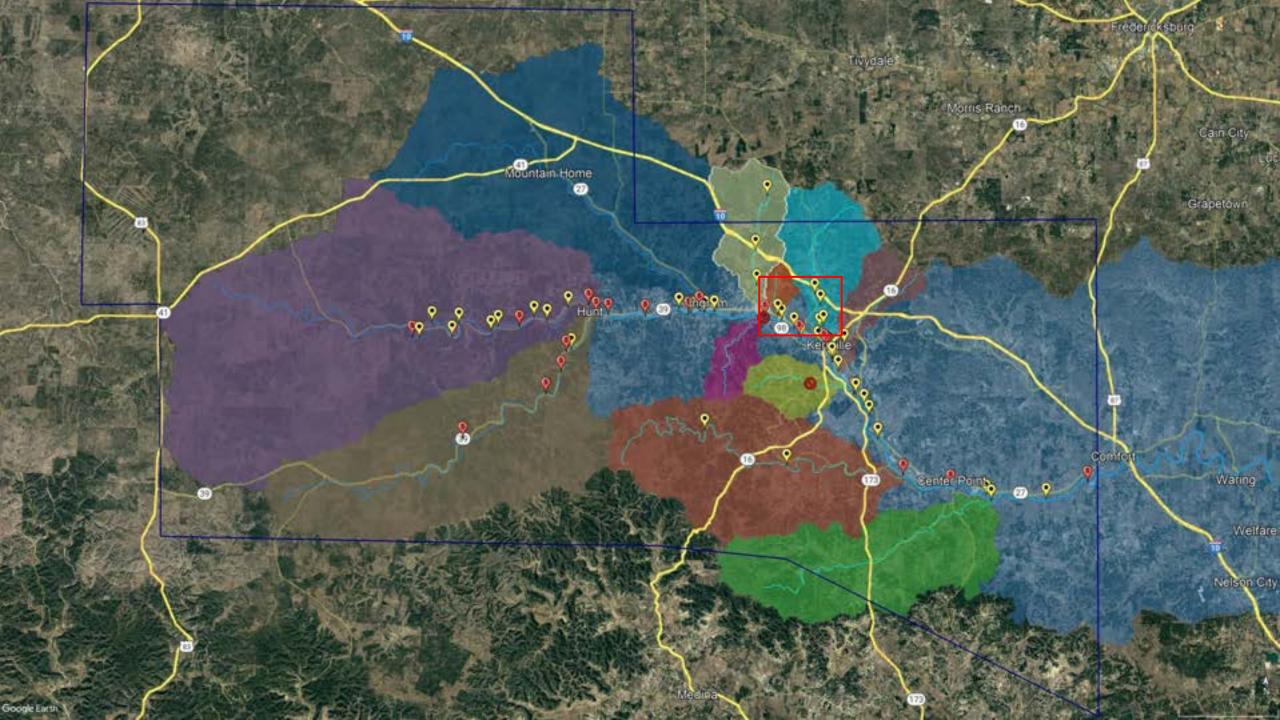




#### Goat Creek at I-10 Sampled by Maura Windlinger / Palmore Baxter

#### Goat Creek at KOA Sampled by Palmore Baxter





#### = Swimability Study Geometric Mean

Birts Bar BiQue-

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Bear Creek rossing

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Bear Creek at Bear Creek Rd.

Dry

= Volunteer Summer Study Geometric Mean

N/A

4

(Kayak)

98)

Knapp Park

8

Nimitz Dam 🎙

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Lime Creek at Lime

Creek Apartments

Impact Chin

Cypress Park

(Kayak)

Town Creek at 16 Town Creek Rd. N/A Town Creek at 9 Morris Rd. DIBAT Kertville Sports Complete N/A Town Creek at Guadalupe Cemetery N/A Town Creek at

Wamantala

Schreiner St.

85

Guadalupe Park

#### GR at Knapp Park (kayak) Sampled by Carl and Katy Kappel





#### GR at Cypress Park (kayak) Sampled by Carl and Katy Kappel



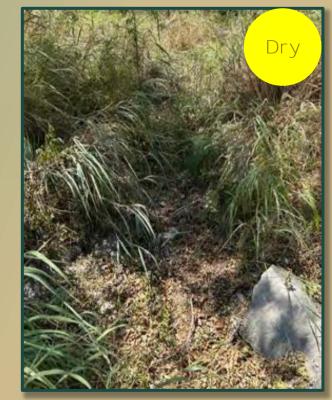




#### Town Creek at Town Creek Rd. Sampled by Phillip Youngblood

#### Bear Creek at Bear Creek Rd. David Bartels





Lime Creek at Lime Creek Apartments Sampled by Patrick Andrews

#### Town Creek at Morris Rd. Sampled by Trudy Eberhardt

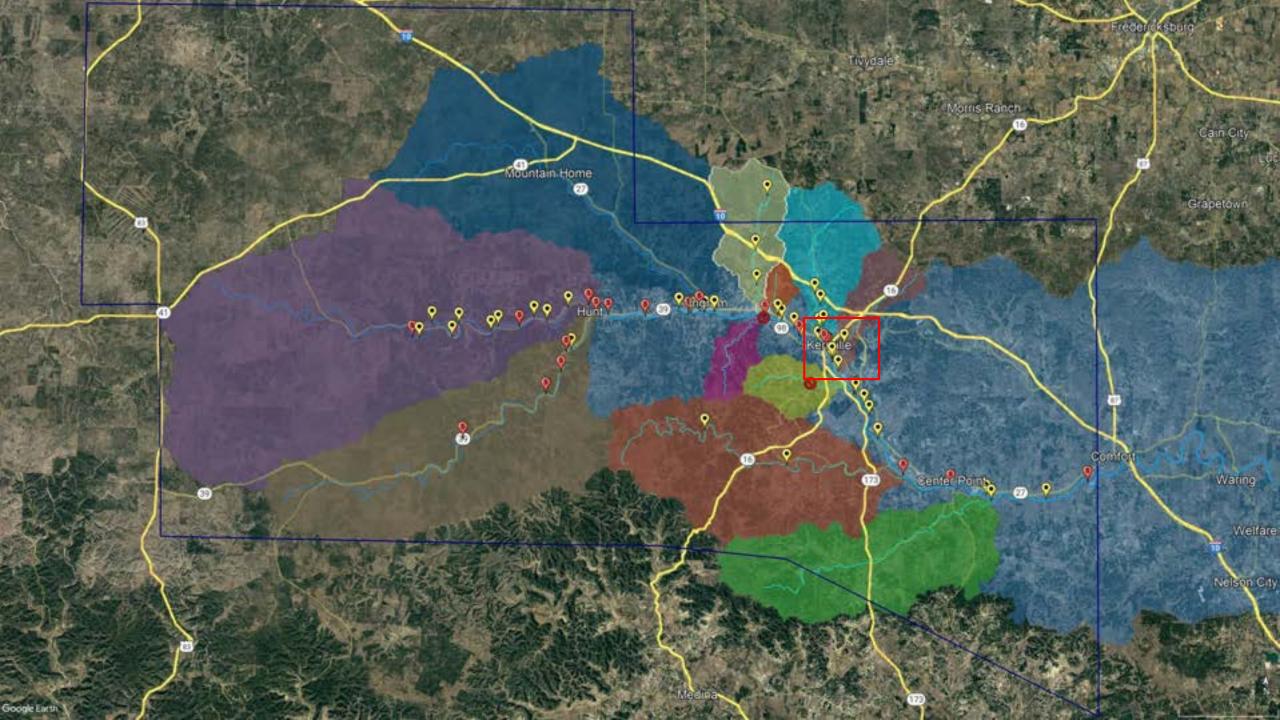




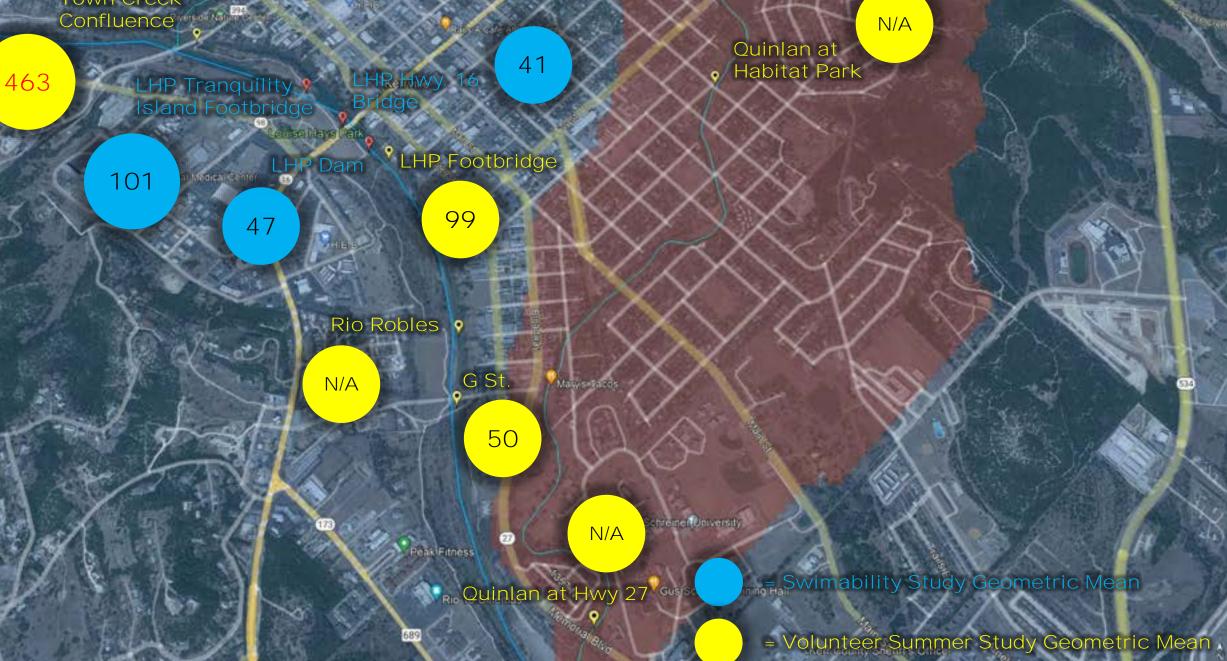
#### Town Creek at Guadalupe Cemetery Sampled by Jim Gardner

Town Creek at Schreiner St. Sampled by Jim Gardner





Town Creek



#### GR at Town Creek Confluence Sampled by Trudy Eberhardt





#### GR at Louise Hays Park Footbridge Sampled by Sherry Wilson



GR at G St. Sampled by Deb Youngblood

#### GR at Rio Robles Sampled by Larry Hesketh

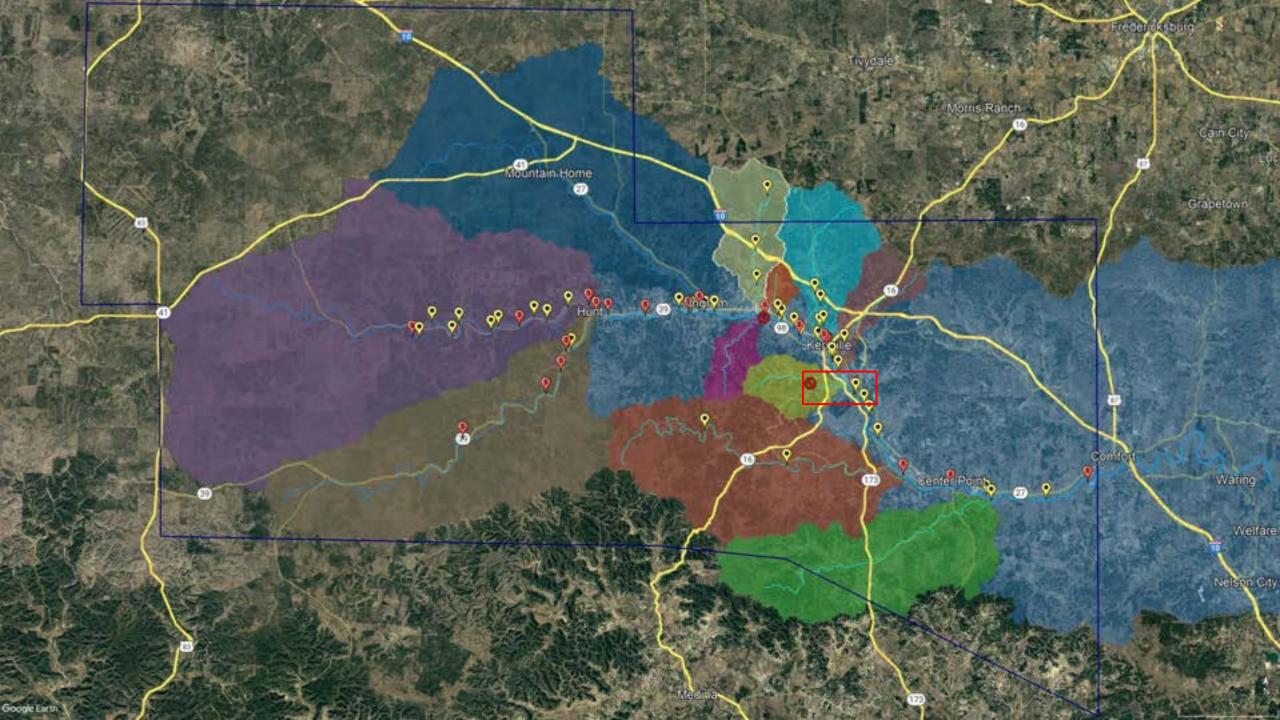


# N/A

#### Ouinlan Creek at Habitat Park Sampled by Larry Hesketh

Ouinlan Creek at Hwy. 27 Sampled by Lizbeth Lopez





Camp Meeting Creek at Ranchero

Dry

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187

ift World

Ine. Uneue of Westein Ad

Kerrville - Schreiner Park

RV Parking

Breindangs Grillers Ale

Kerwille Schreiner Park

Plat Rock Boat Ramp

N/A

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HIL County Youth Event Cente

23

STOP AND

Flat Rock Dog Park

= Swimability Study Geometric Mean

= Volunteer Summer Study Geometric Mean

#### GR at Flat Rock Dog Park Sampled by Sherry Wilson

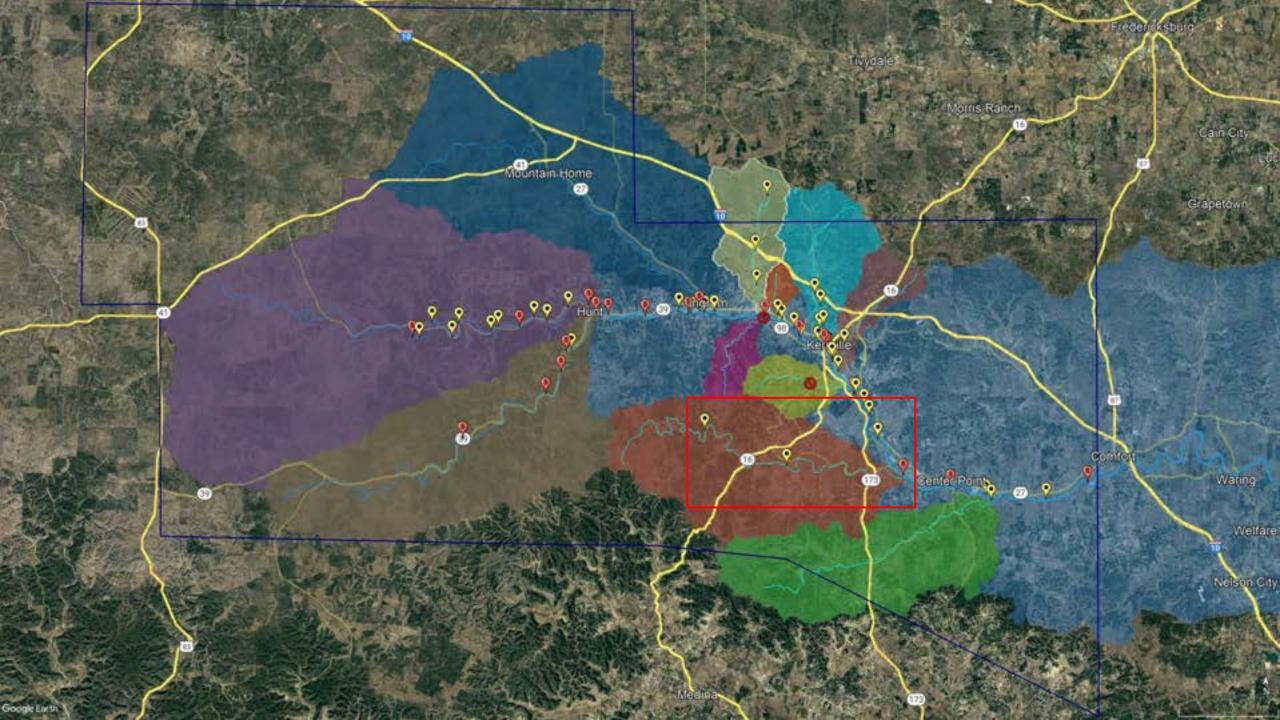


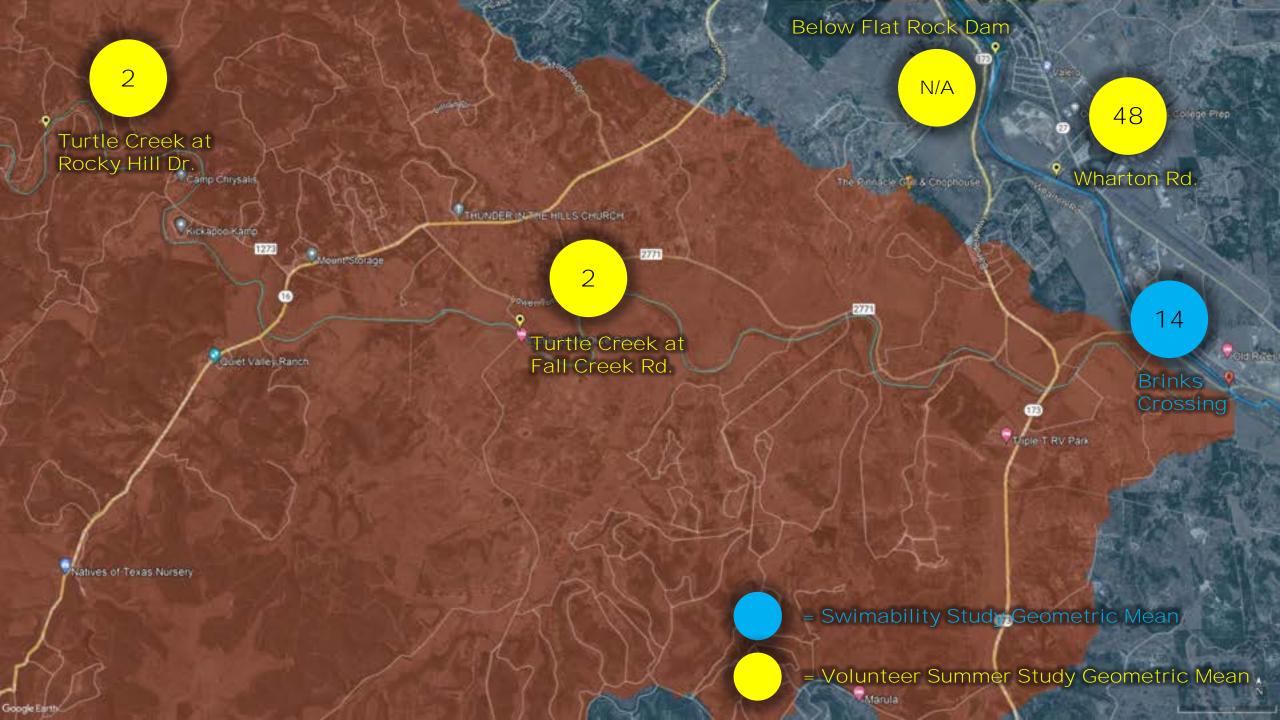


#### Camp Meeting Creek at Ranchero Rd. Larry Hesketh

#### GR at Flat Rock Boat Ramp Sampled by Jim Gardner







#### GR at Wharton Rd. Sampled by John Hornung





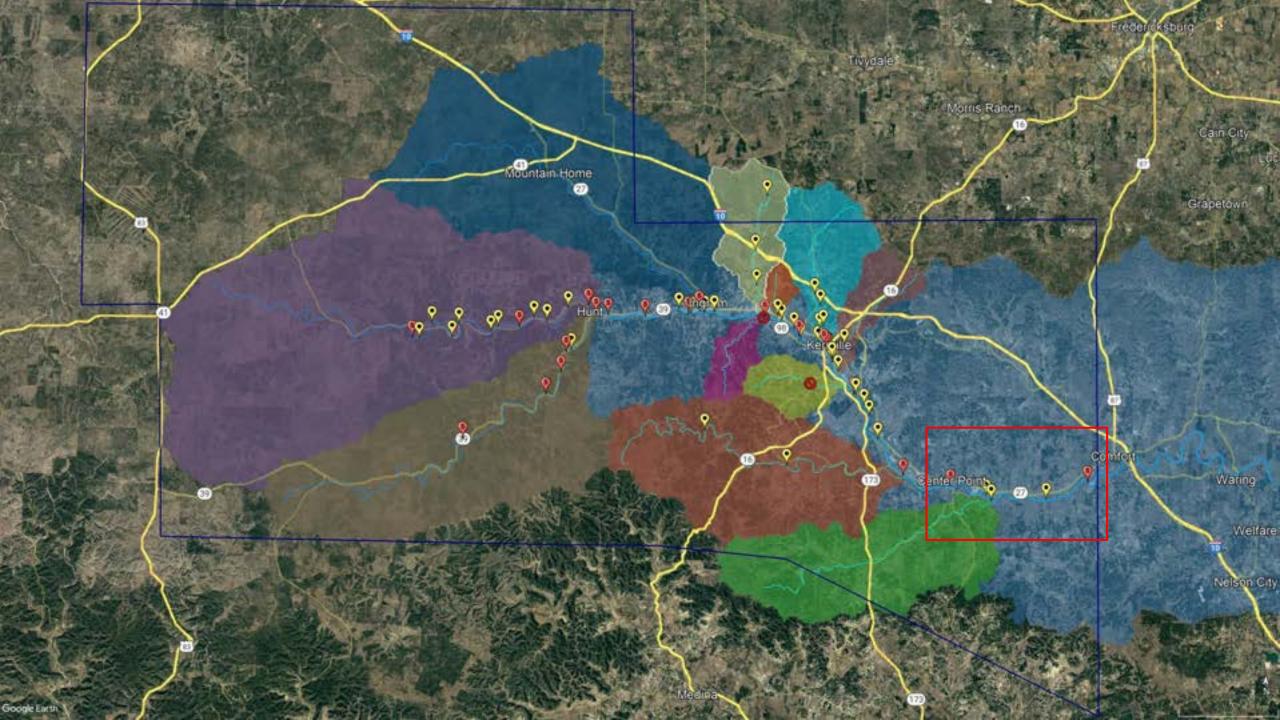
Turtle Creek at Rocky Hill Dr. Sampled by Kathy Loring

Turtle Creek at Fall Creek Rd. Sampled by Kathy Loring





#### GR Below Flat Rock Dam Sampled by Clark Williams



Gente Center Point Dam

51

Elm Pass Woods Wedding Festival and

Count K9 Club

480

ATTACK AND

Los Dos Amigos

111

Government Crossing

Verde Creek Confluence

71

Los Cedros Ranch

283

Bacchus Caves

J3 Companies

27

Upstream of Cestal Ealerson Testas Lane Valley

85

QLa Calabria Pizzeria and Cate

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24

Hermann Sons

Bending Branch Winery

= Swimability Study Geometric Mean

= Volunteer Summer Study Geometric Mean .

Google Earth

#### GR at Government Crossing Sampled by Patricia Higgins



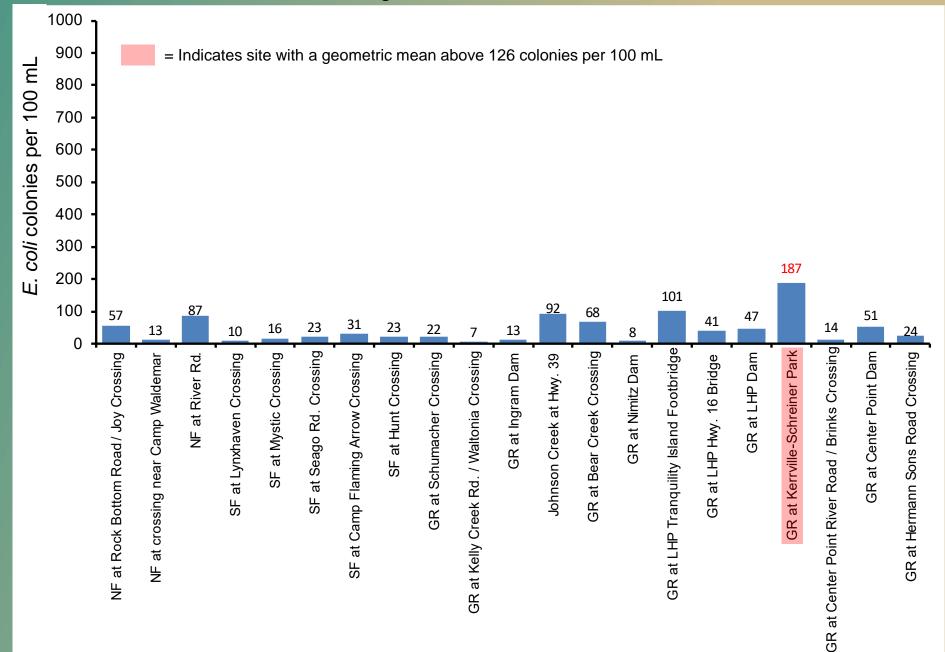
**GR at Verde Creek Confluence Sampled by Patricia Higgins** 

GR Upstream of Lane Valley Sampled by Paz Lovett

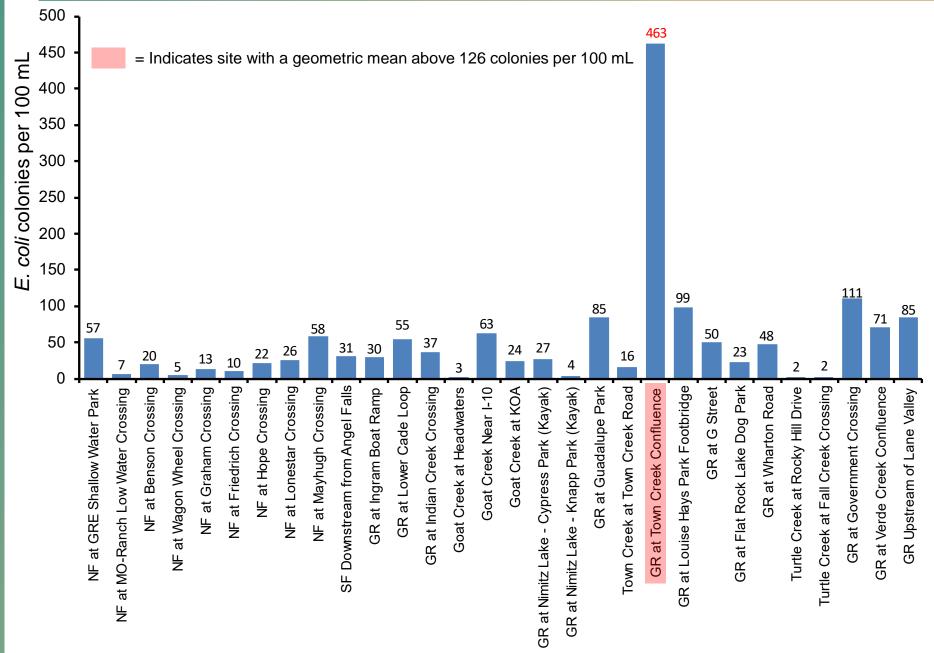




## **Swimability Geometric Means**



### **Volunteer Geometric Means**



# THANK YOU!

# See you next summer!