

Weeki Wachee Springs

Summary of Cave Exploration

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Karst Underwater Research

KUR Mission Statement: Committed the preservation and protection of Karst aquifers and the quality of their water by conducting relevant scientific research and documentation of surface features and corresponding underwater caverns and conduits.

- 501c3 Not For Profit Organization
- Committed to Exploration, Education, and Preservation
- Group of like minded individuals from diverse backgrounds
- Specialize in logistically challenging dives
 - Deco Habitats
 - Deco Rebreathers
 - Radio Location
 - Survey
 - Long Range

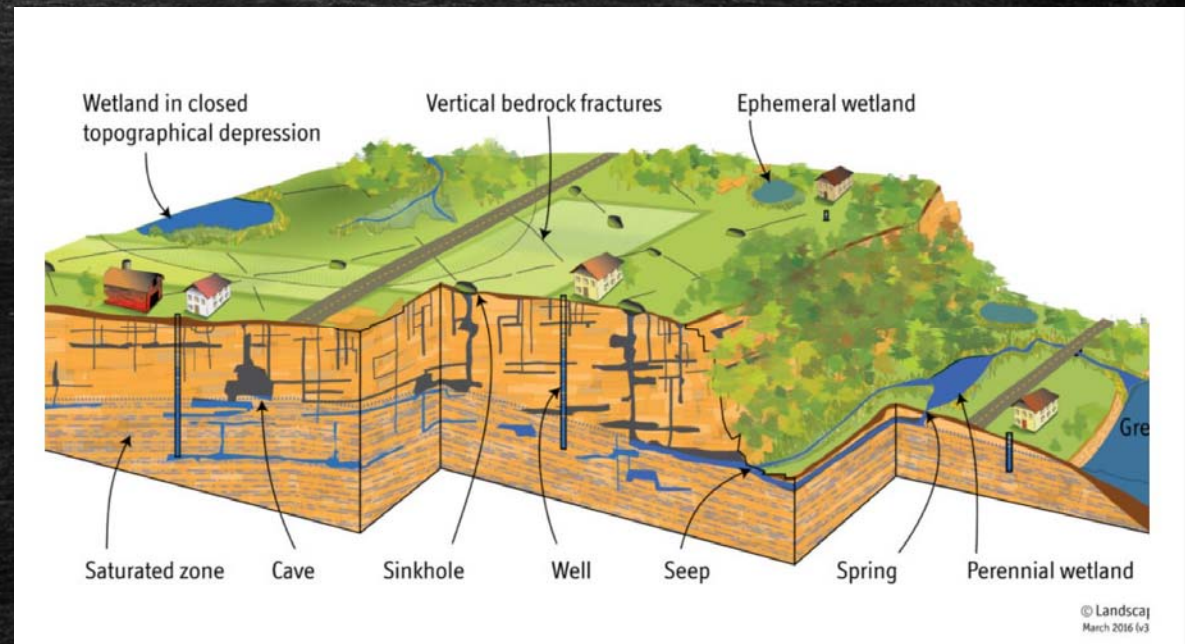
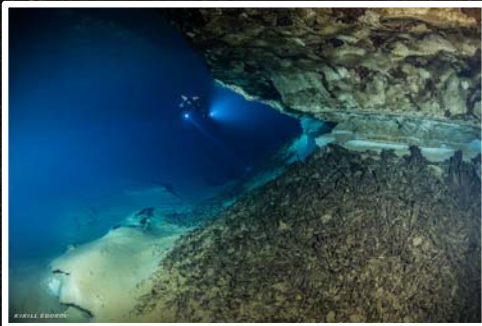
www.karstunderwater.com





What is Karst?

- **Karst topography** is a landscape formed from the dissolution of soluble rocks such as limestone.
- Mildly acidic water starts to break down the surface of bedrock in joints.
- Cavities become larger and a drainage system may form.
- It is observed that tannic water caves are larger and there are large rooms near the coastline due to mixing waters.



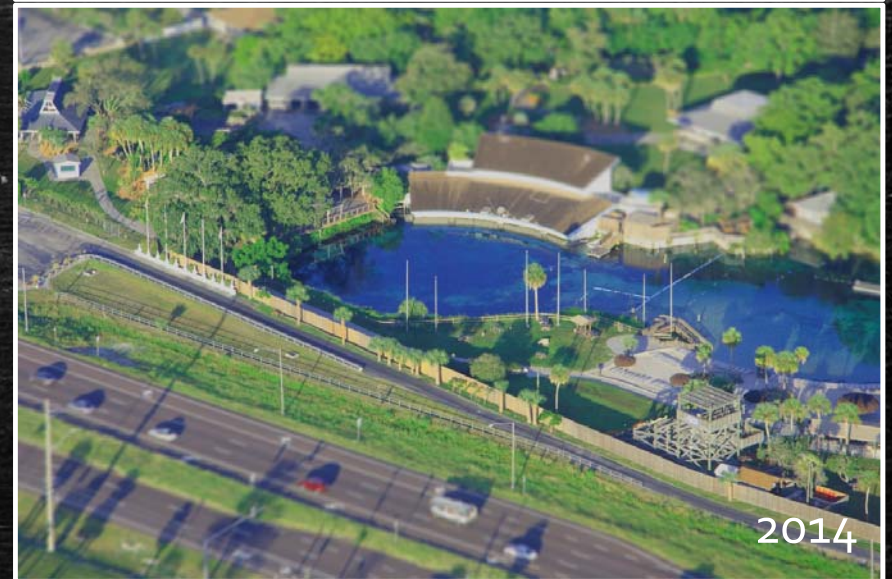
Weeki Wachee and Twin Dees



Curt Brown
Photo by Curt Brown © 2019



- 1947 – Park Opened- First Mermaid Show
- 1959 - ABC Purchased and Built Theater
- 1966 - City of Weeki Wachee incorporated
- 1982 – Buccaneer Bay Opens
- 2001 - SWFWMD purchases land around springs
- 2007 – KUR Exploration Begins
- 2008 - Weeki Wachee Becomes State Park



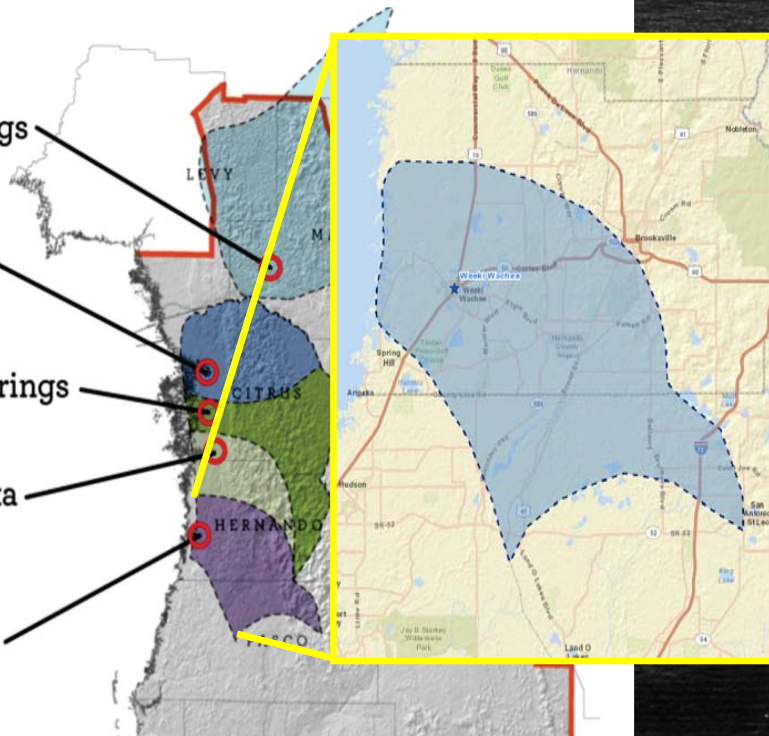
Rainbow Springs

Crystal River/
Kings Bay

Homosassa Springs

Chassahowitzka
Springs

Weeki Wachee
Springs

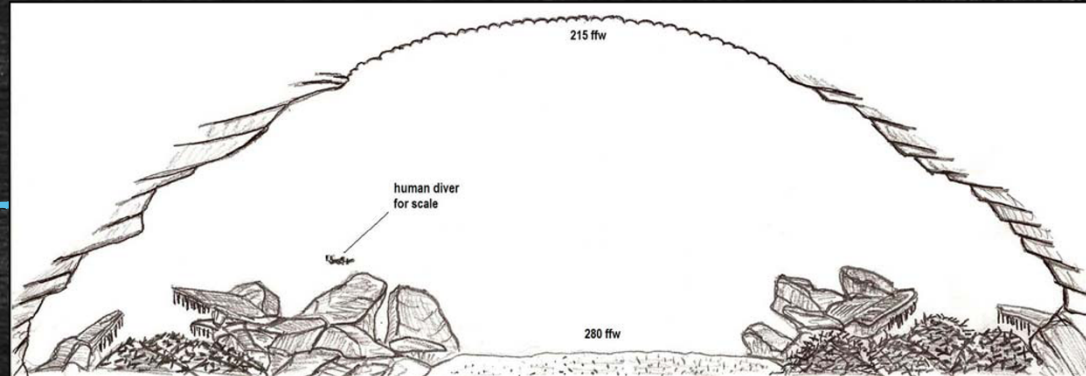
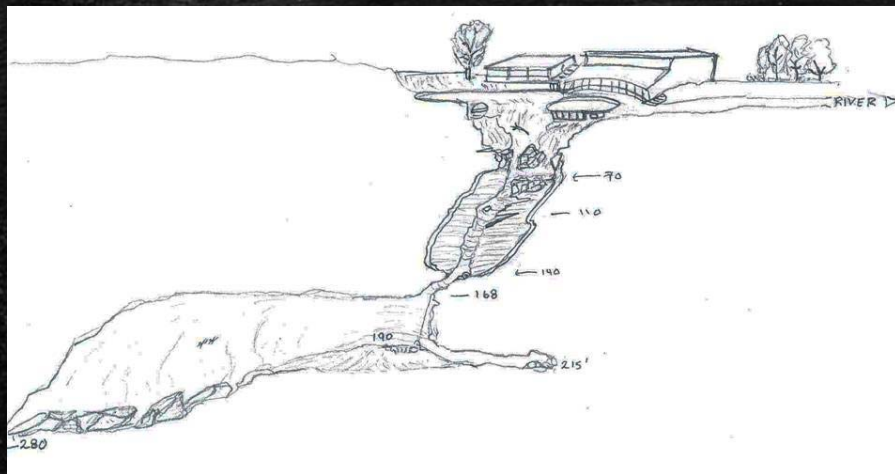


KUR
Andrew Pitkin



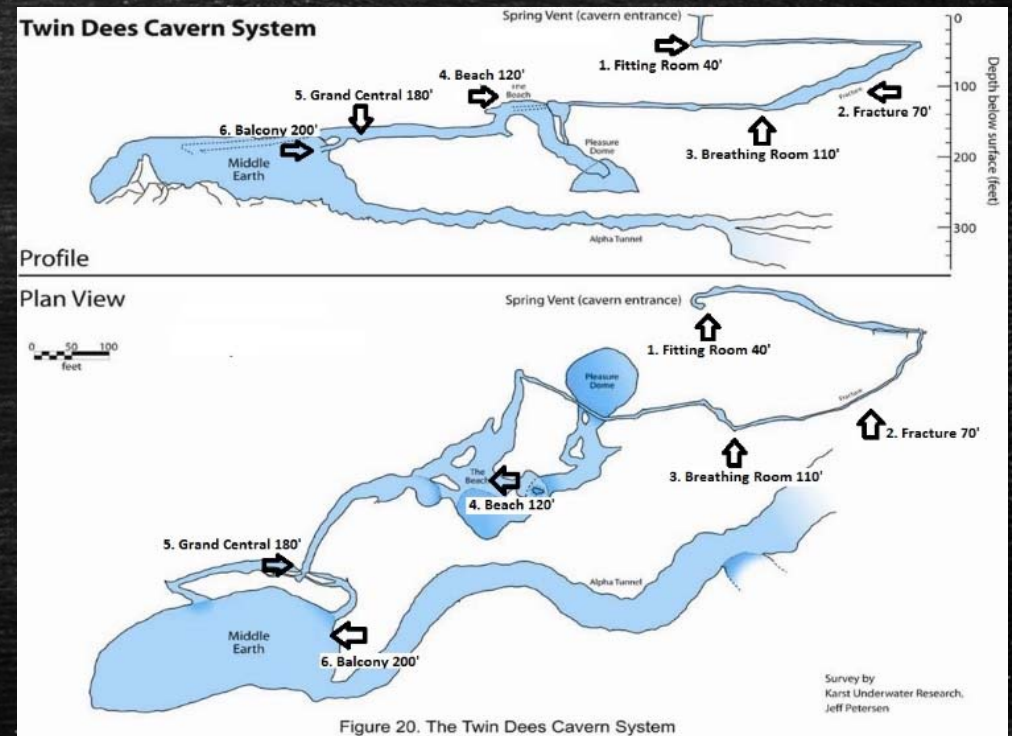
Weeki Wachee

- Extreme Flow
- 2007 Team
- 2011 Team

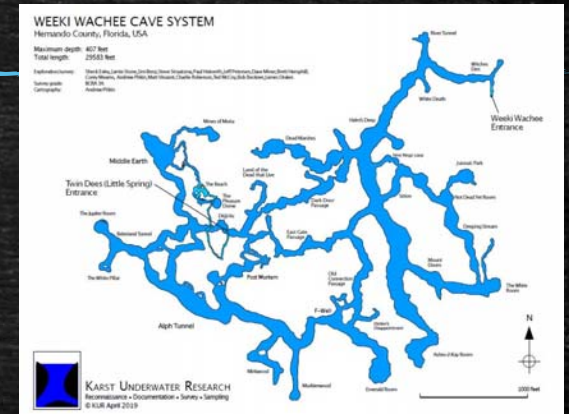
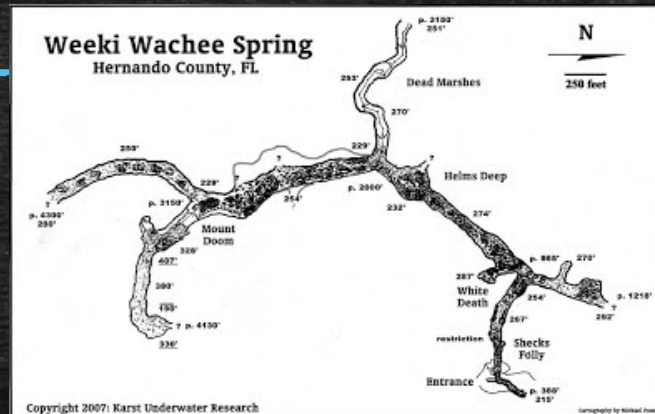
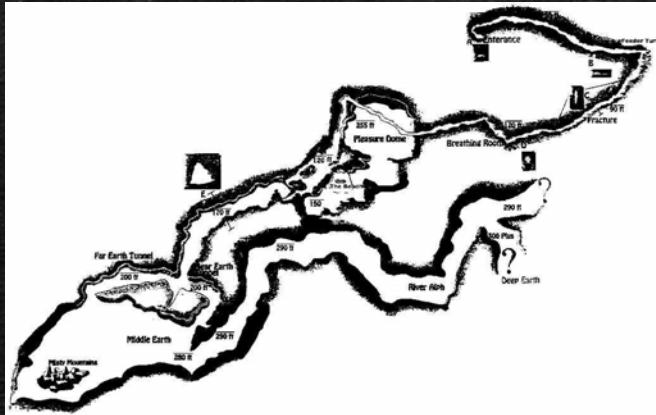


Twin Dees (Little Spring)

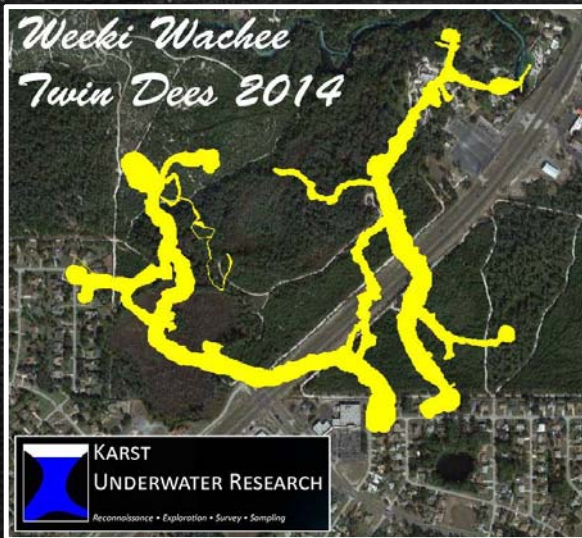
- Originally dove in the 1970 and explored in the 1980's.
- KUR Divers found a way on in 1996
- KUR Divers continue on CCR 2011-Present



Exploration Continues



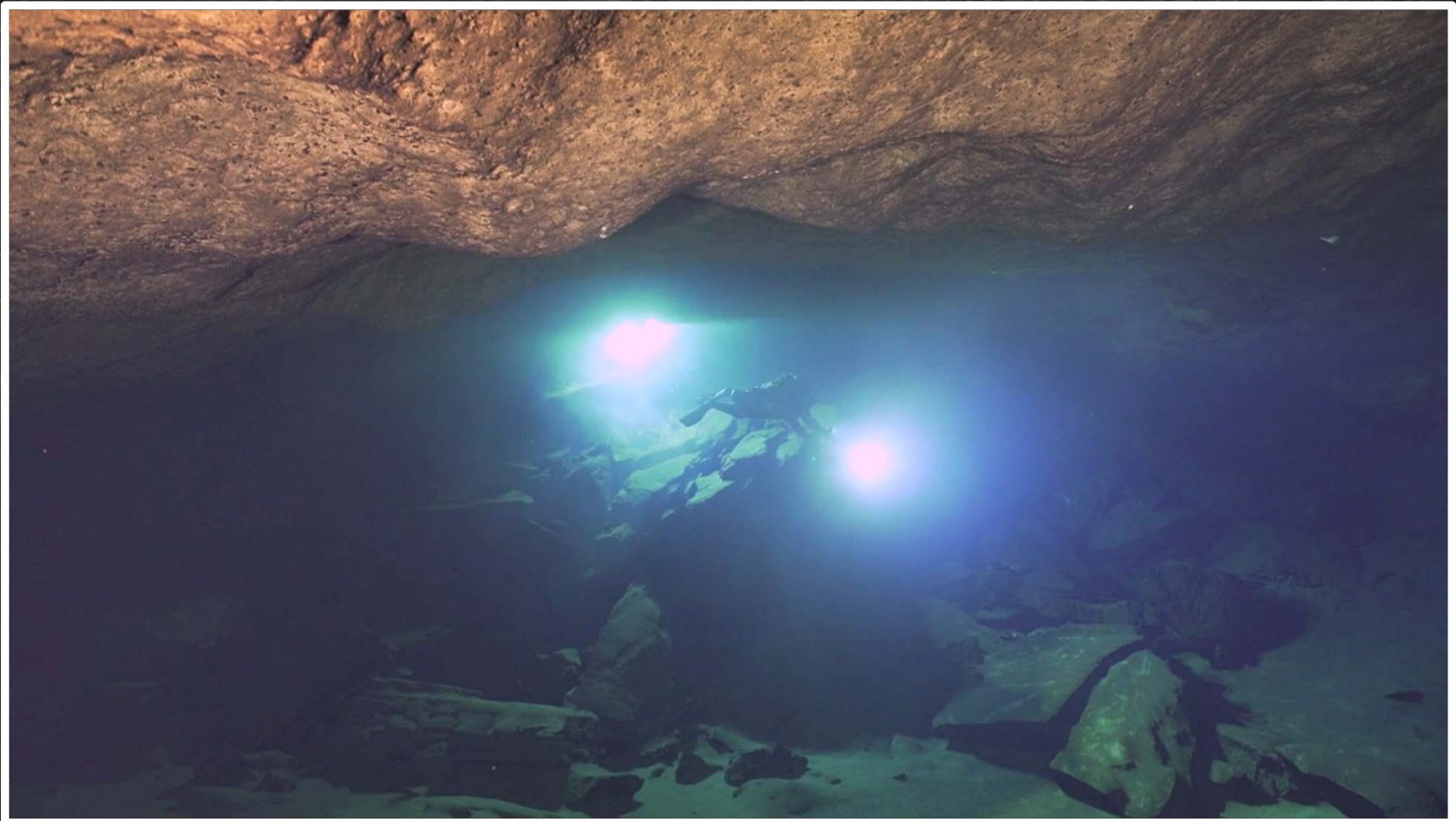
It's All Connected! - 2014



Total length 2014: 17,825 feet
Max depth: 407 ffw



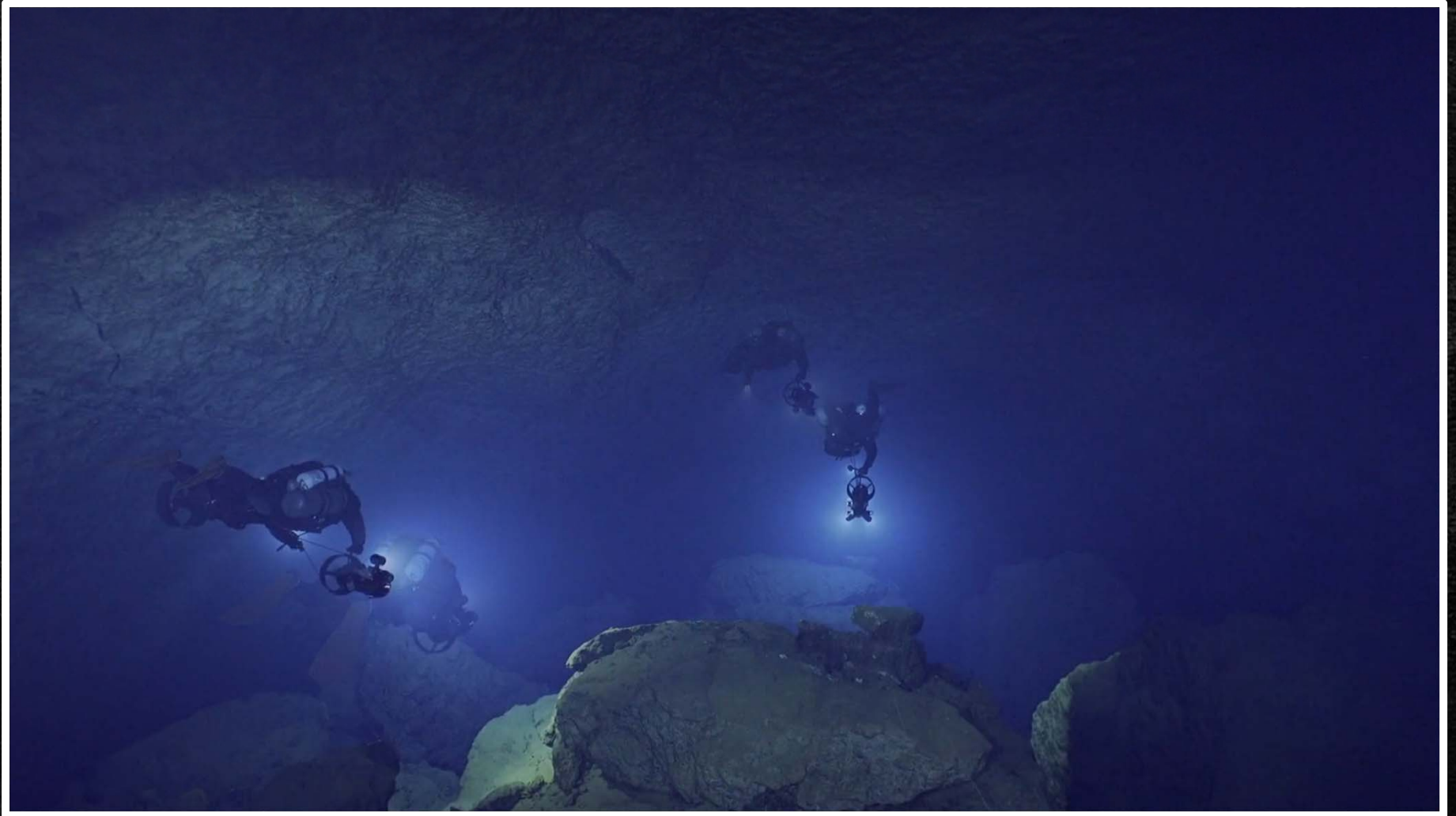
The Beleriand Passage – Twin Dees



Sirion - Passage



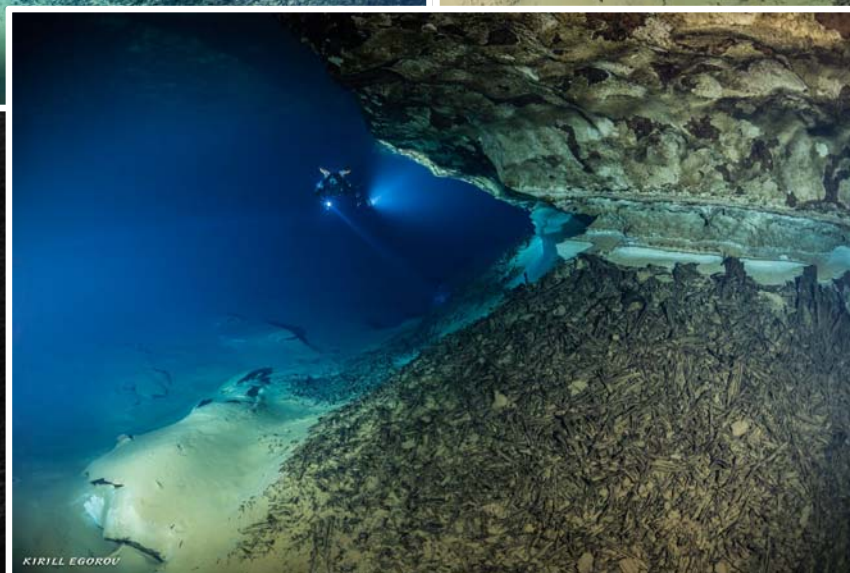
Mount Doom – Weeki Wachee

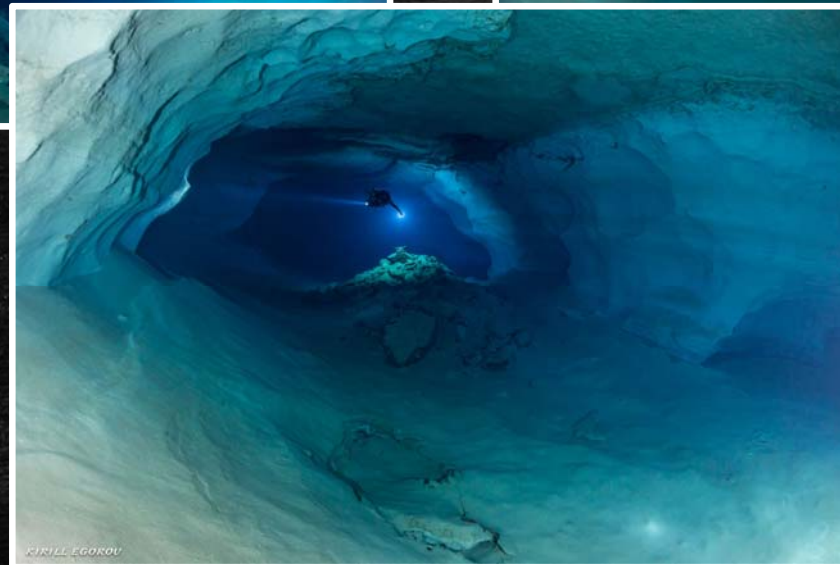
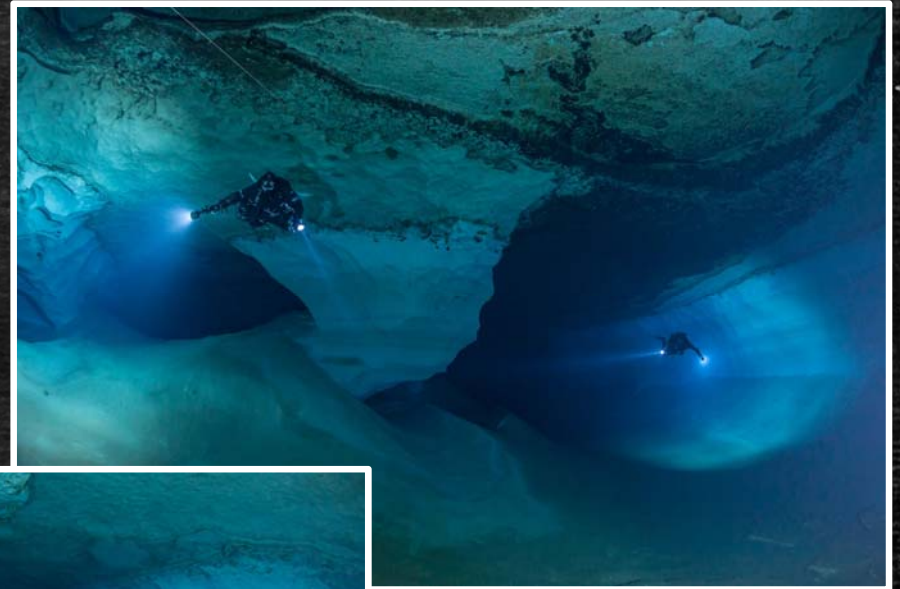


Logistics: Small Opening to Big Cave

- Absolutely a Team Effort
- As dives grew, more support was needed
- All equipment must be shuttled down a manhole size solution tube to 40'



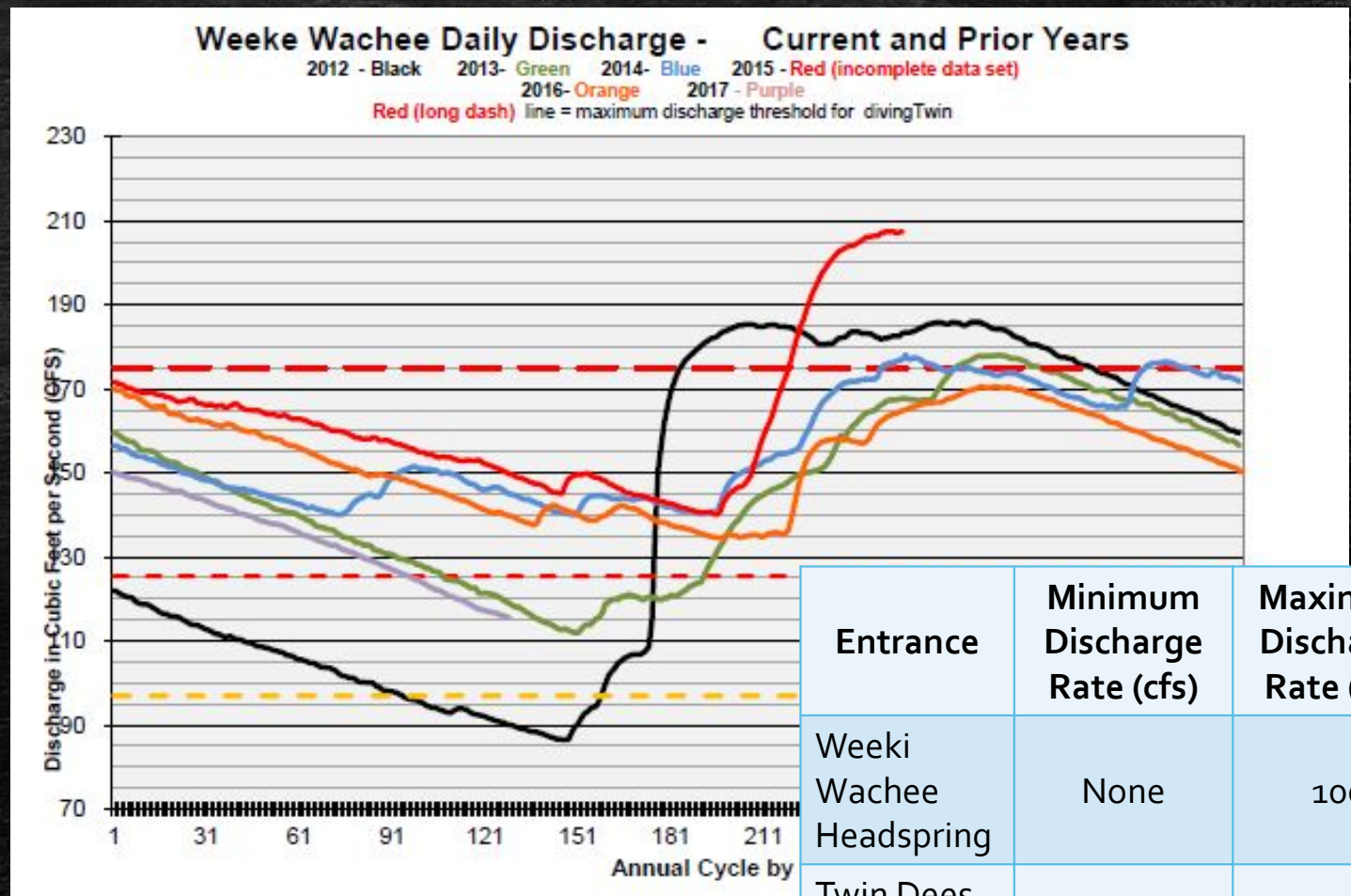




Seasonal Diving



- Seasonal rainfall ~55" Annually
- High infiltration soils
- Does not flow year round
- Rainfall largest contributing factor
- Indicator of aquifer health



Caves and Wells

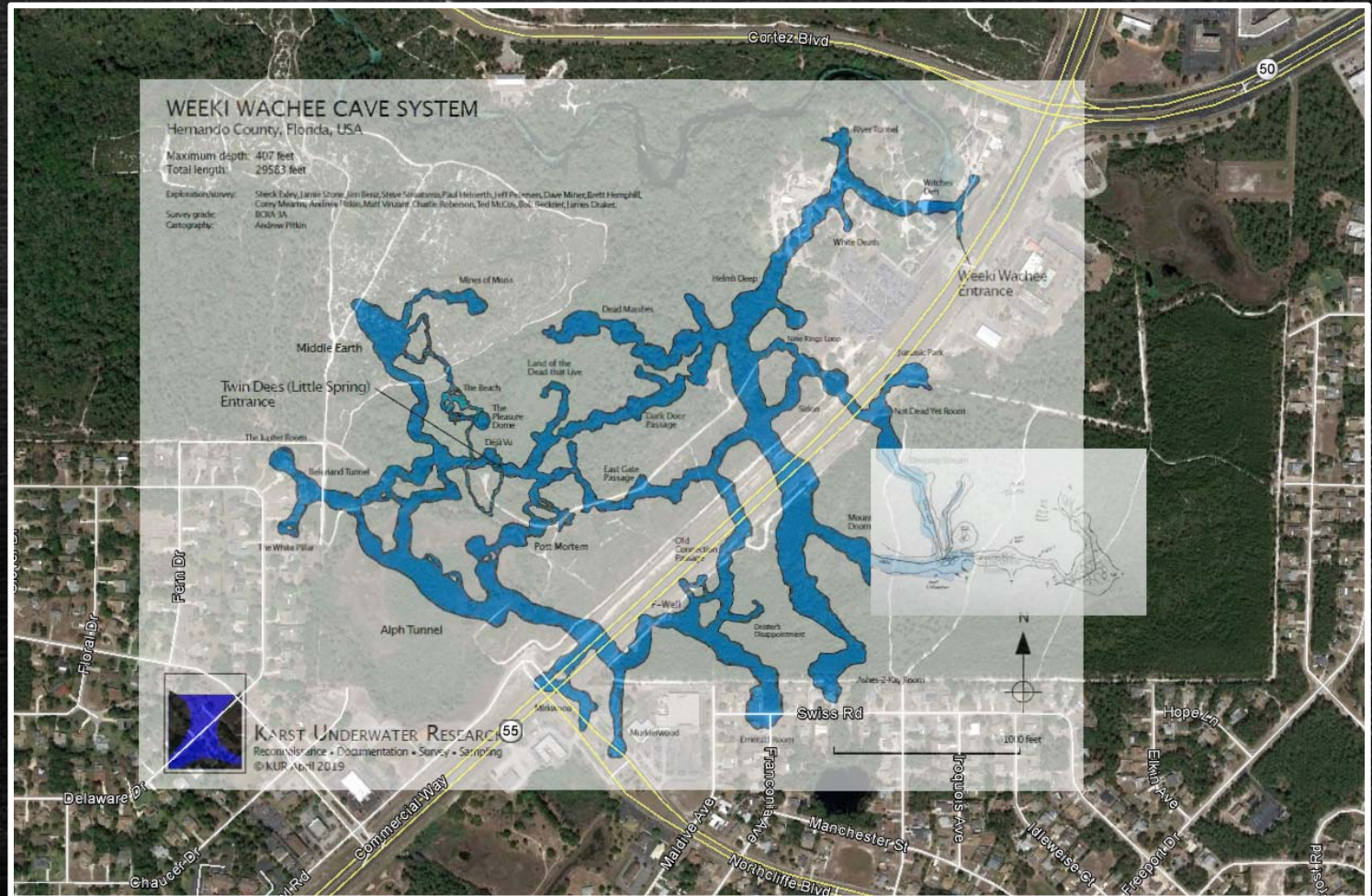
- 2013- Located F – Well
- Surface activities directly effect groundwater
- High infiltration rates
- Shallow karst and fractures (ponds)
- Pollutants could move quickly
- Rain or lack of plays a major role
- Public supply, irrigation, and other water use directly effect groundwater

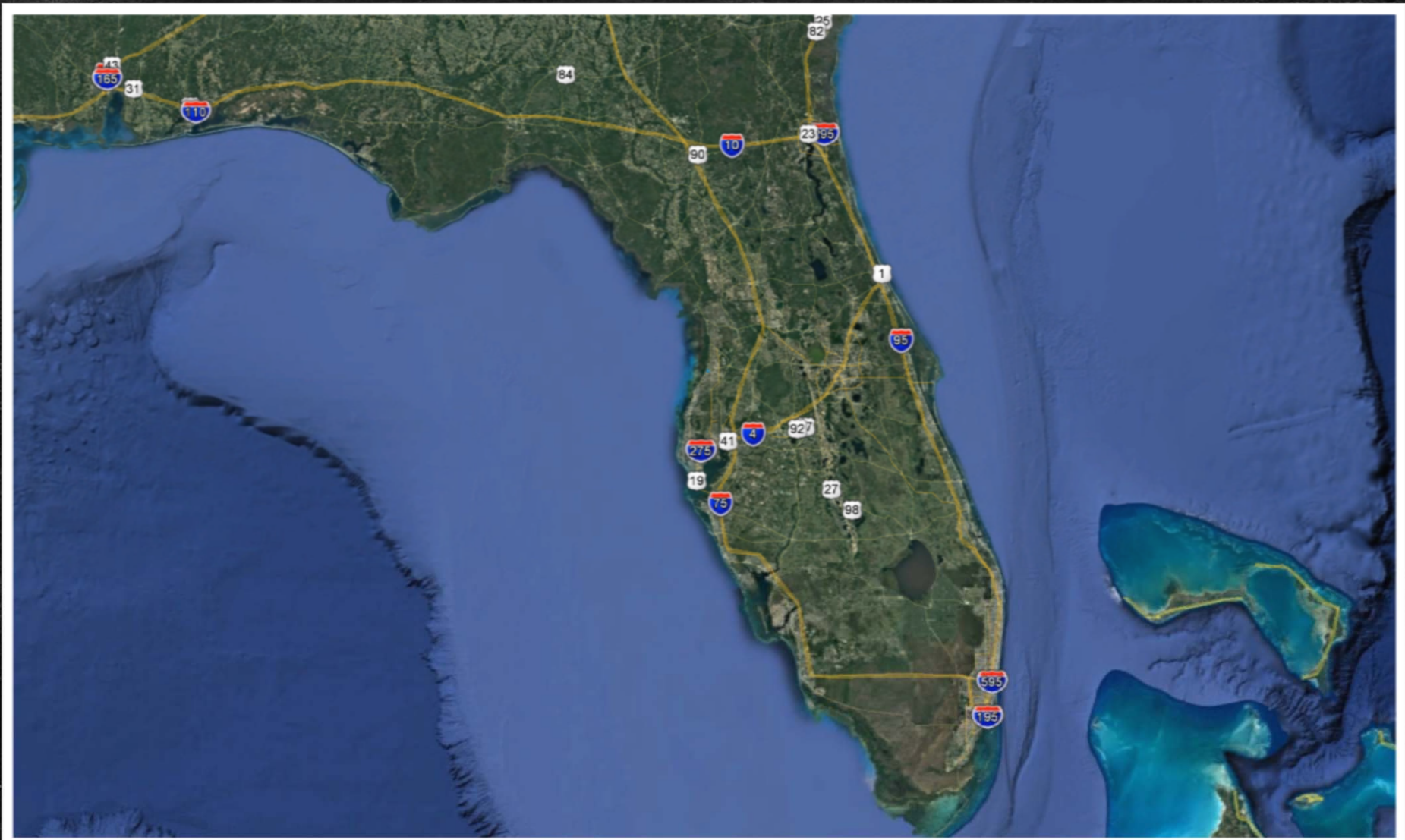


Map

Weeki Wachee / Twin Dees Cave System

Total Passage – 31,000
linear ft.
Maximum Depth – 407 ft.





QUESTIONS?

