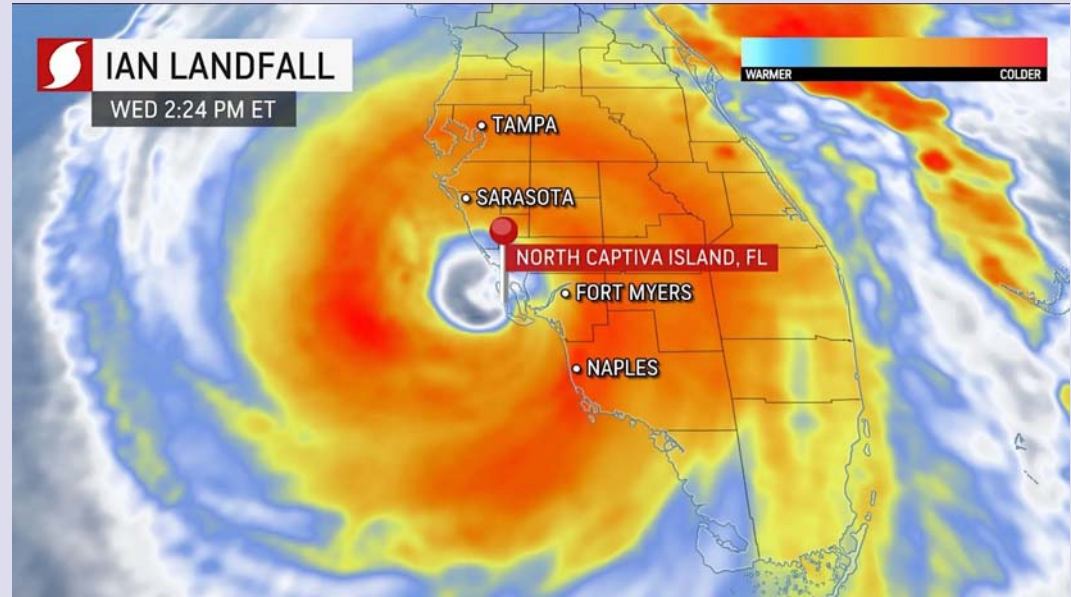


Hurricane Ian

- Cat 4 – 150 mph landfall in Cayo Costa, FL on September 28, 2022
- 12-16 inches of rain across all of central Florida, 20” locally
- Titusville, FL 26.42”
- 6-18 ft storm surge
- Record flood levels in multiple river systems



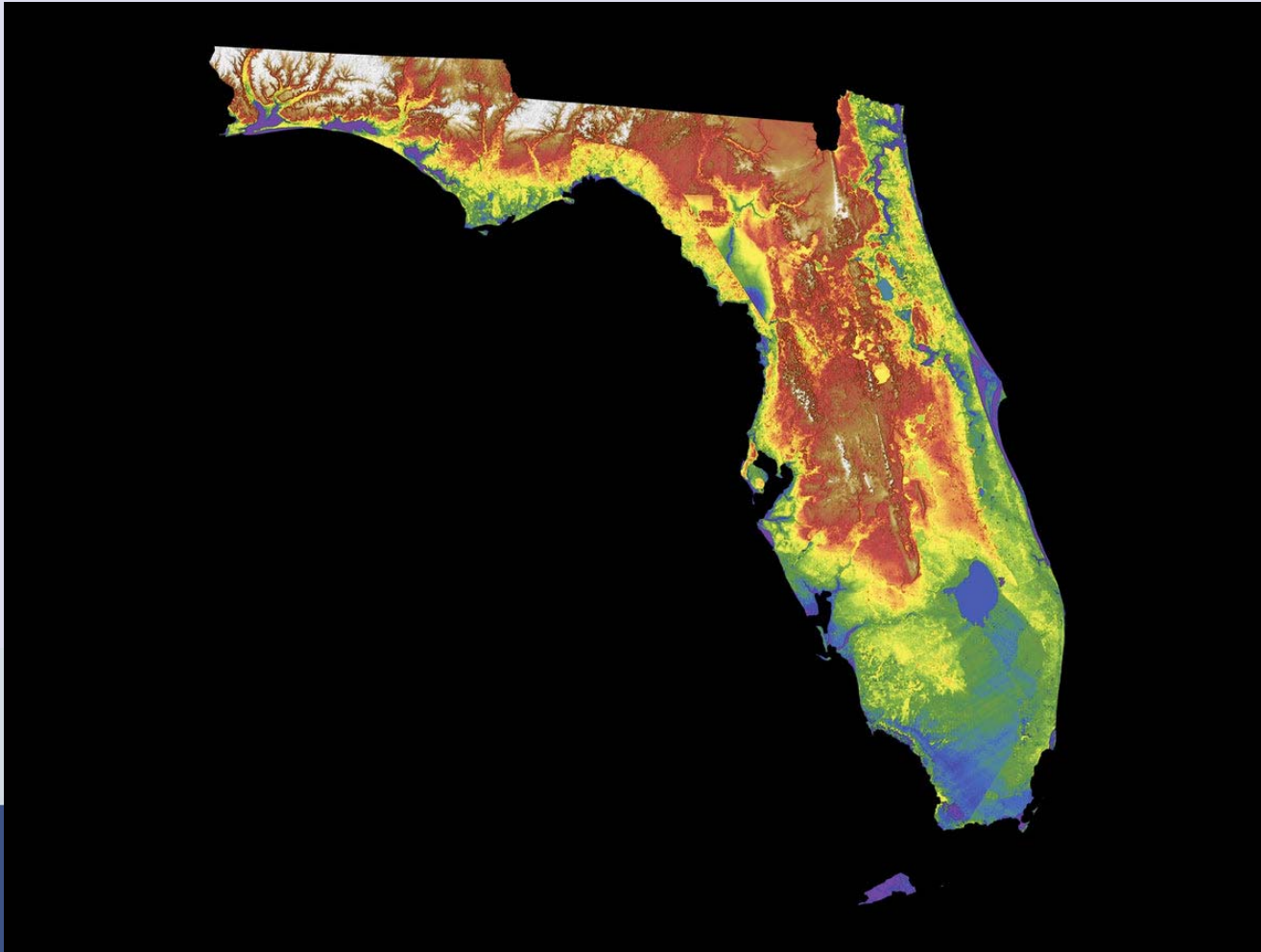
Peace River Flooding



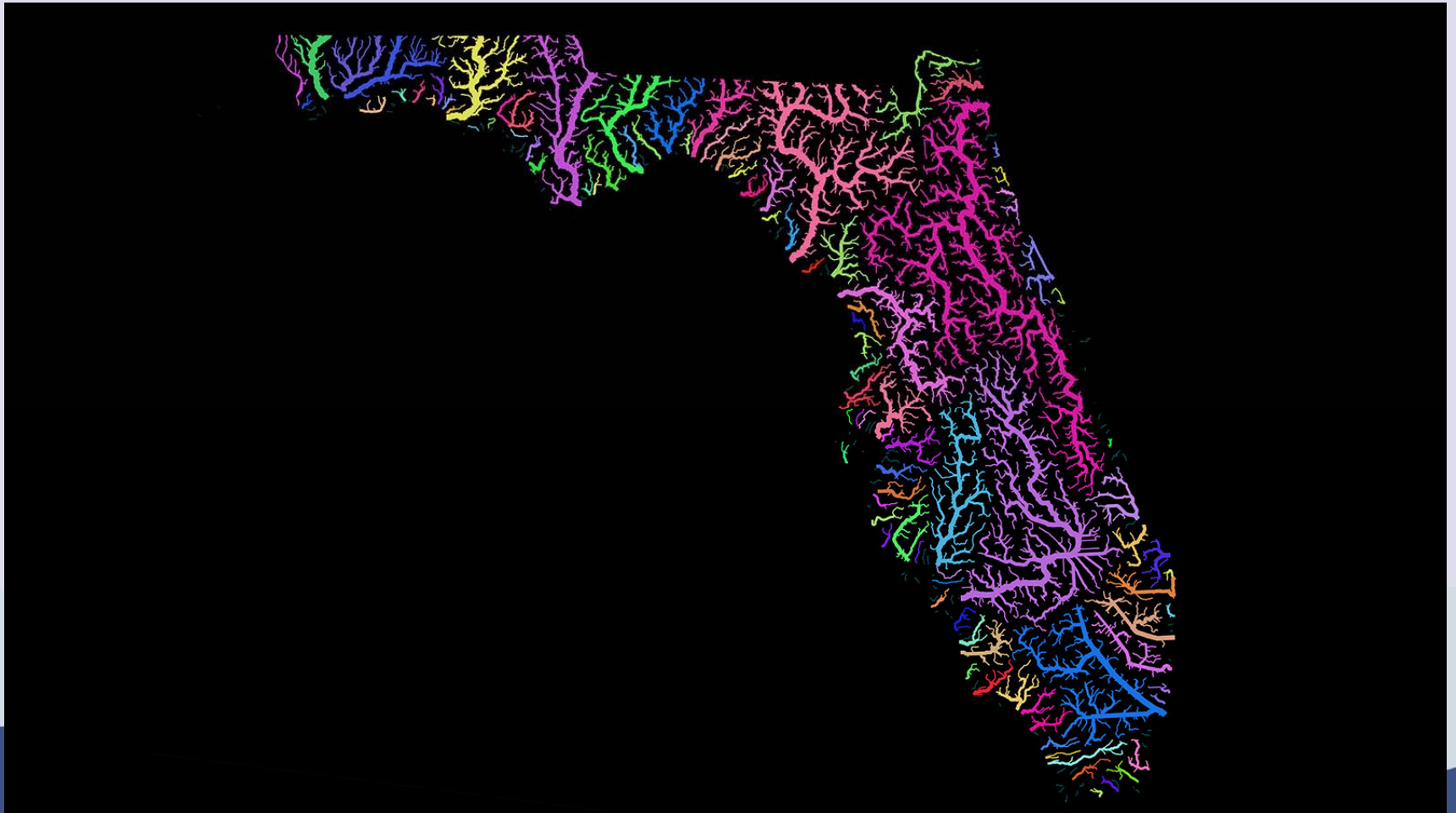
Myakka River Flooding



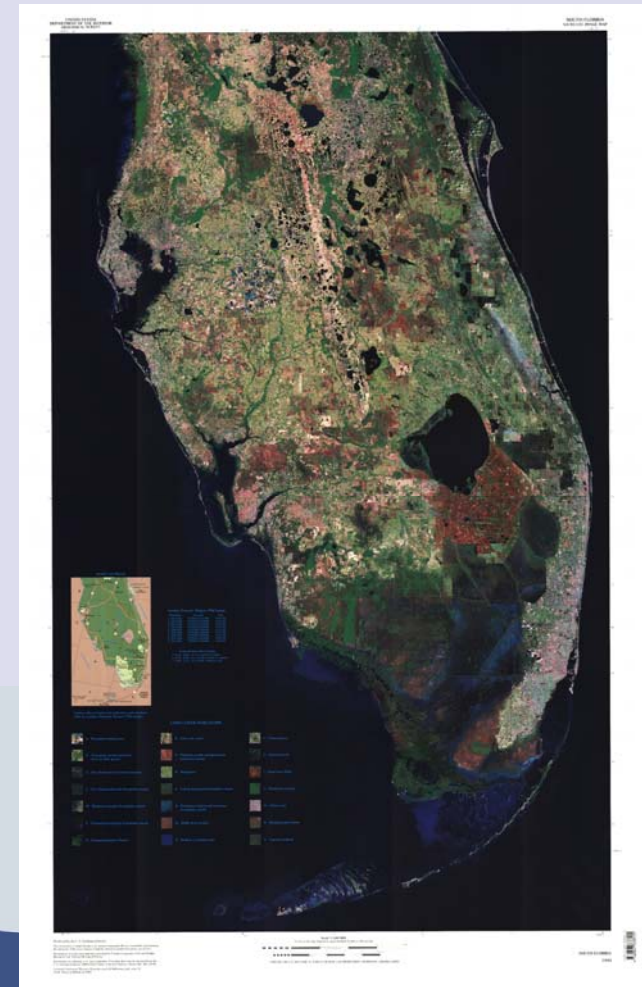
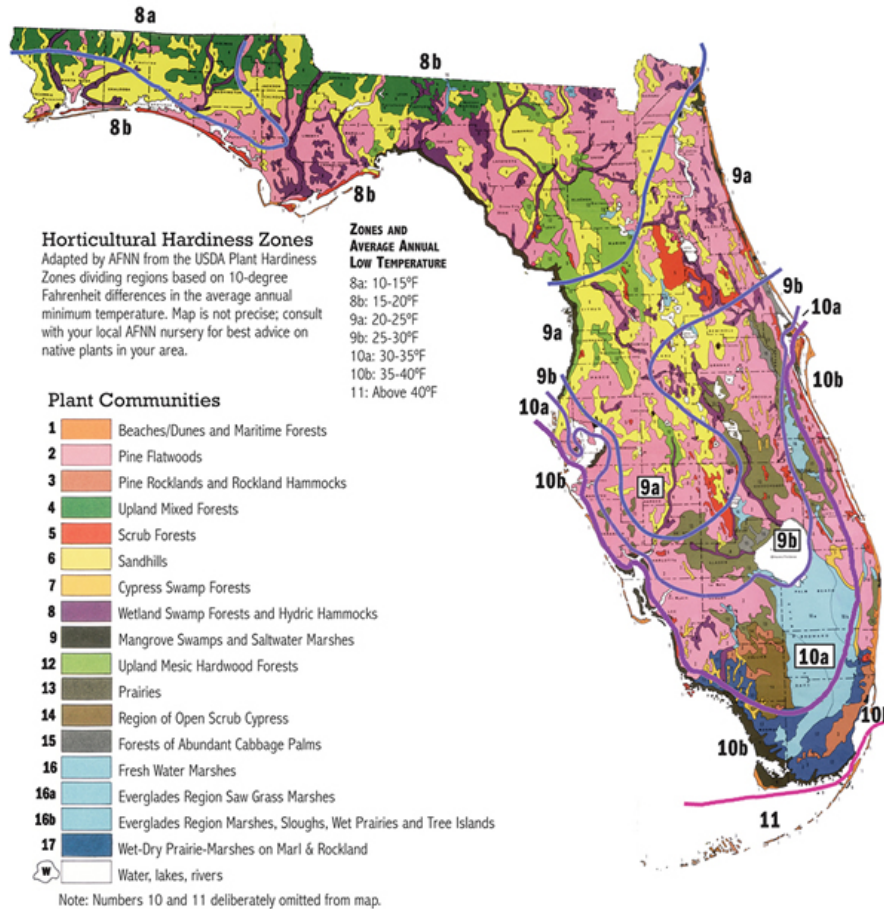
Florida's Topography



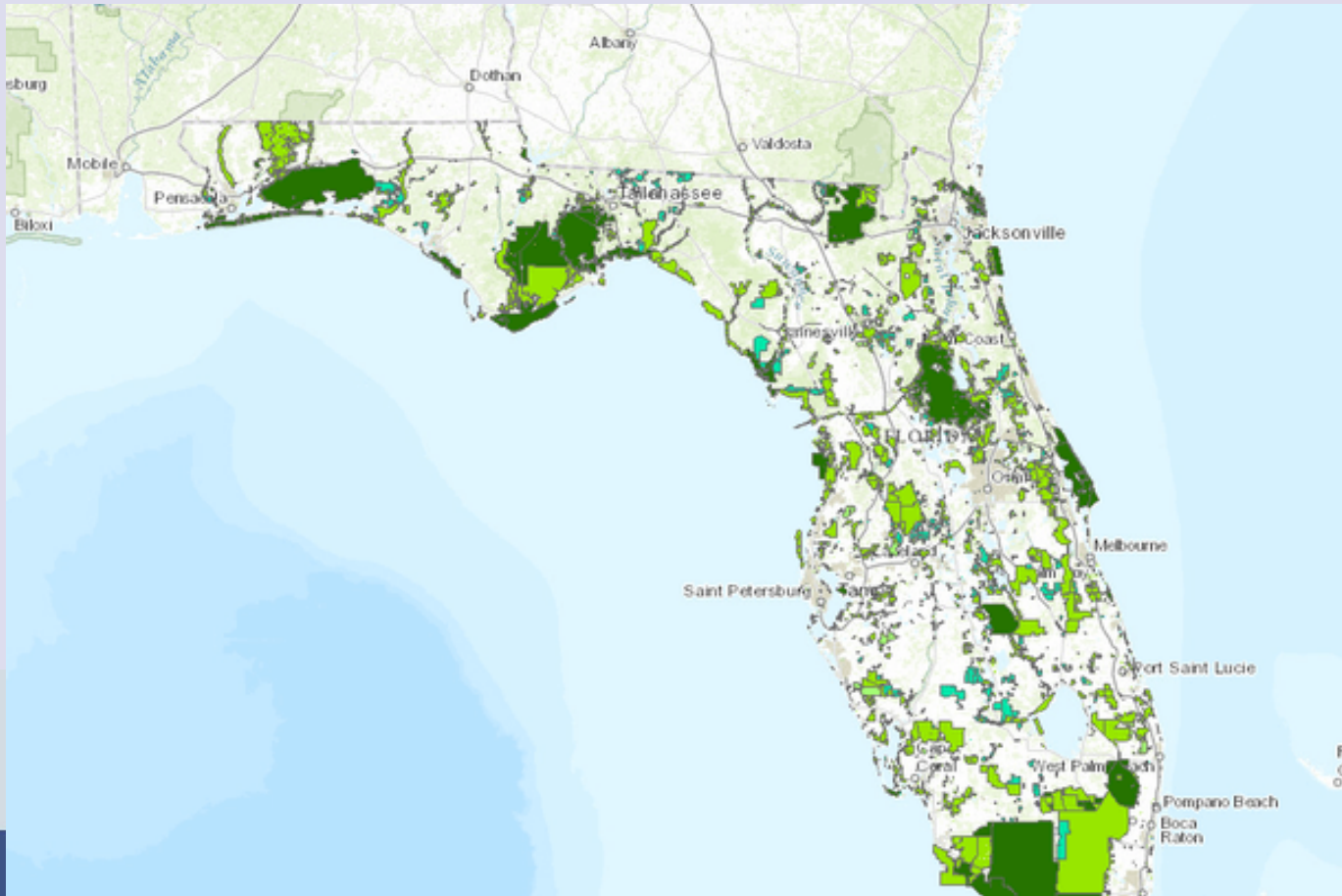
Rivers of Florida



Florida's Historic Ecology vs Today



Florida's Conservation Lands



Blue Spring State Park Bank Stabilization Phase I and II

Project completed October 2021

Taylor Kroll, P.E.

Conservation Engineer

Florida Fish and Wildlife Conservation Commission

Project contributors include:

wood.



History

- One of 33 first magnitude springs in Florida
- Long history of occupation, shell mounds along the run accumulated over 3,000 years of human activity at the site
- Gold Rush prospector turned orange grower Louis Thursby purchased Blue Spring in 1856. Before the railroad in the 1880's, Thursby's Blue Spring Landing was active with steamboat activity, shipping tourists and goods to Jacksonville and beyond.
- In 1970, 2 years before Blue Spring State Park was established, researchers tracked 14 manatees in the spring run. By 2005, after years of park improvements and manatee protection efforts, wintering manatee numbers exceeded 200 and by 2018 that number skyrocketed to 485. On January 19, 2022 there were a record 664 manatees in the spring.
- Blue Spring became a state park in 1972 with the help of Jacques Cousteau after he filmed the episode called The Forgotten Mermaids in 1971. The documentary brought attention to the manatee and the importance of Blue Spring as a winter refuge, greatly influencing the state's decision to purchase the land.



Project Concerns/Issues

- Shoreline erosion and undercutting causing tree fall into the run.



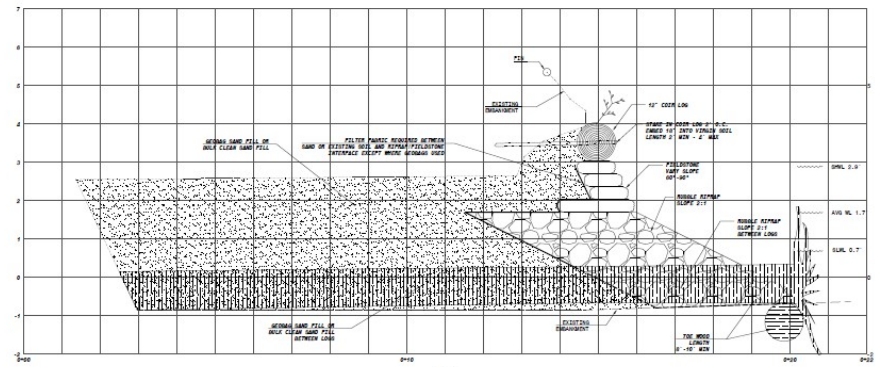
Project Concerns/Issues

- Significant bank failure at the head spring.

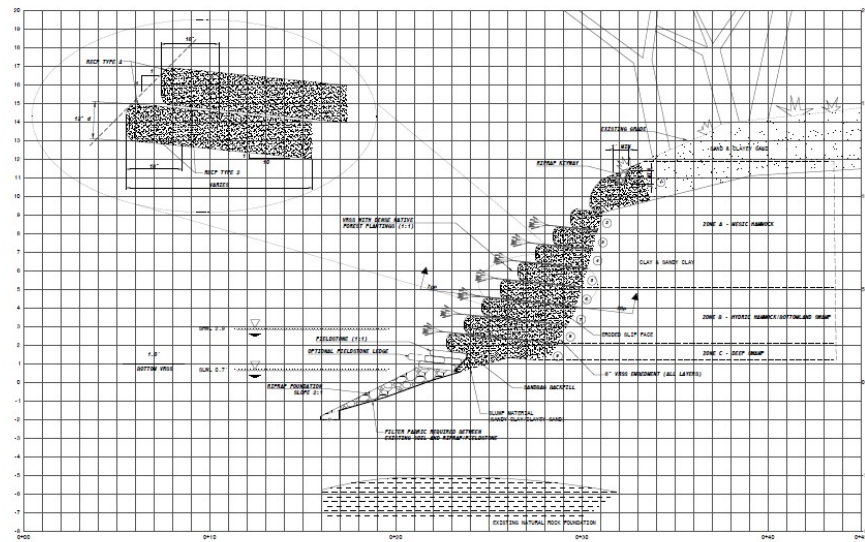


Planning and Design

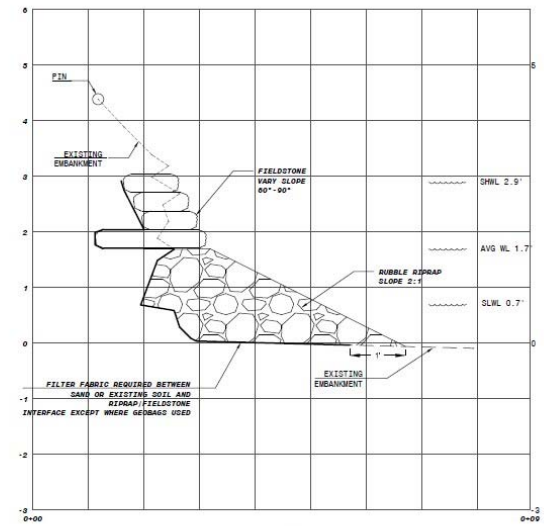
- Park desires engineered solution with natural aesthetic and minimal impacts.



QUANTITIES FOR QUALITY FILLING ZONE 16 (APPROX. 11 LF)					QUANTITIES FOR QUALITY FILLING ZONE 16 (APPROX. 11 LF)					QUANTITIES FOR QUALITY FILLING ZONE 16 (APPROX. 11 LF)							
ASP MAP (CF)	ASP MAP (CF)	FIELD STONE (CY)	FIELD STONE (CY)	TOTAL SAND (CF)	TOTAL SAND (CF)	ASP MAP (CF)	ASP MAP (CF)	FIELD STONE (CY)	FIELD STONE (CY)	TOTAL SAND (CF)	TOTAL SAND (CF)	ASP MAP (CF)	ASP MAP (CF)	FIELD STONE (CY)	FIELD STONE (CY)	TOTAL SAND (CF)	TOTAL SAND (CF)
6.81	563.51	6.81	100.00	40.61	4066.91	6.86	17.88	1.00	100.00	20.14	179.38	6.81	100.00	6.86	100.00	40.61	4066.91



THE ROAD (CF)	ASP MAP (CF)
100.00	10.74
100.00	10.74



Tree Removal



Blue Spring Run – Base Rip Rap



Blue Spring Run – Base Rip Rap



Blue Spring Run – Fieldstone



Blue Spring Run - Completion



Blue Spring Run - Completion



Blue Spring Run - Completion



Blue Spring Run – Recent Photos



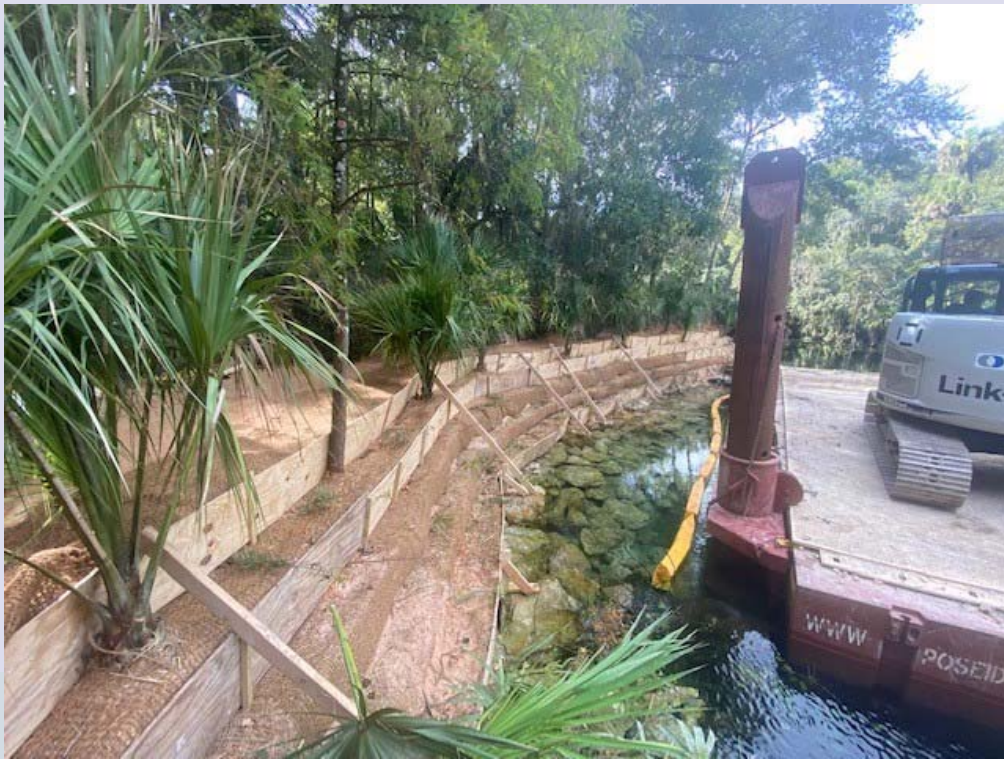
Headspring Construction



Headspring Construction



Headspring Construction



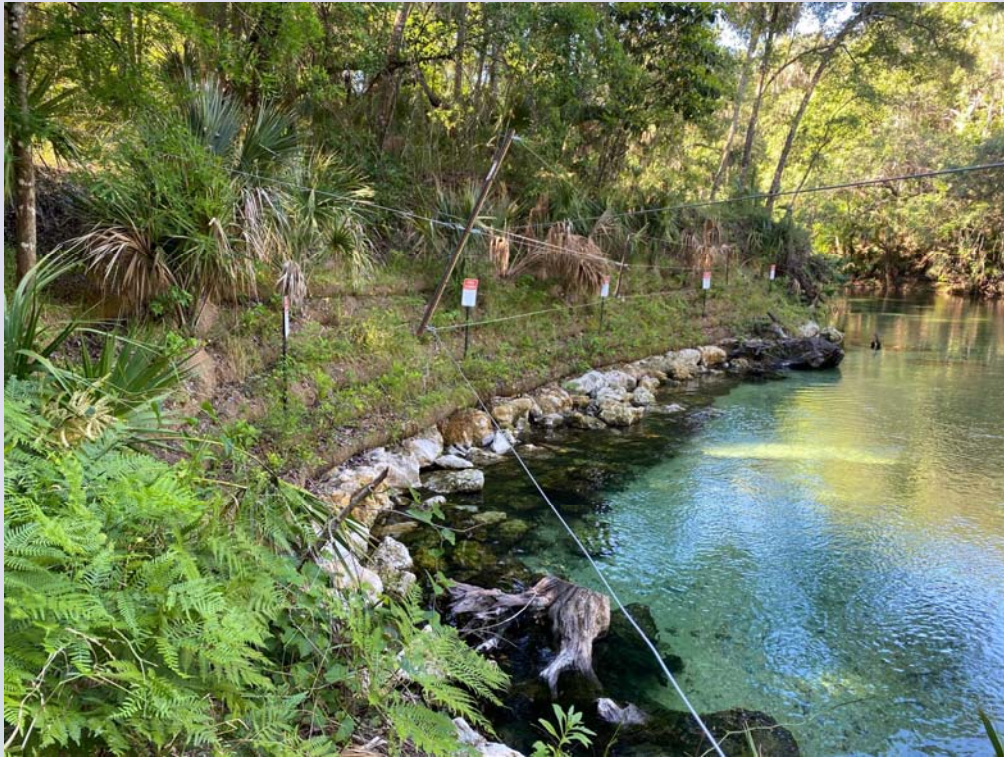
Headspring Construction



Construction Completion



Recent Photos - Headspring



Aerial View



Aerial View



Next up.....Phase III



More pictures....



Questions?

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Conservation Commission
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Project Contributors Include:

wood.

