

Half-day Tour (4 hrs + travel time)**Date:** *Monday or Friday***Tour:** Duette Preserve

Description: Duette Preserve is a 21,000-acre preserve located in eastern Manatee County with diverse habitats ranging from isolated freshwater marshes to scrubby flatwoods which supports numerous rare plant and animal species, including the Florida scrub-jay, Eastern indigo snake and fox squirrel. It lies in the headwaters of the Manatee River, upstream from Lake Manatee, the drinking water source for 350,000 people. This field trip will focus on the ongoing hydrologic restoration activities within the preserve. Recent work has targeted filling agricultural ditches to re-establish wetland hydrology in drained marshes and sloughs, with more than 73,000 linear feet of ditches having been filled. In an effort to better understand, quantify, and document the tangible benefits of hydrologic restoration projects in east Manatee County, the County began an environmental monitoring program in 2013 utilizing remote sensing imagery coupled with target wetland field data collection. Hyperspectral imagery is being collected to map and evaluate soil moisture, wetland hydration and functional vegetative condition across the entire preserve. The hydrologic restoration and environmental monitoring programs are being accomplished while continuous wildlife preserve land management activities such as roller chopping, timber harvest and prescribed fire are underway, posing a challenge in interpreting remote sensing data which the County is addressing. Participants will visit wetlands in various stages of restoration, from unrestored to mature systems. We will also stop by a restored ephemeral stream. Please wear walking shoes and bring sunscreen and water. Transportation within the preserve will be by the County Duette wagon.

Distance from downtown Tampa: est. 50 miles**Maximum participants:** 15**Contact:** Alissa Powers, Environmental Program Mgr, (941) 742-5980, alissa.powers@mymanatee.org

Manatee County Parks & Natural Resources 2649 Rawls Rd., Duette, FL 34219

Field Trip Leader/Guide: Alissa Powers**Transportation:** van**Cost:** *Transportation + box lunch*

Half-Day Tour

Proposed date: *Wednesday*

Tour: Crystal Springs Preserve (<http://www.crystalspringspreserve.com/>) and Zephyrhills Bottling Plant

Description: Crystal Springs Preserve is a 525-acre sanctuary devoted to environmental education and dedicated to the preservation of Florida's natural environment. Crystal Springs Preserve features a wealth of wilderness experiences for visitors. Featured within the preserve is Crystal Springs, a Magnitude 2 spring system, discharging 30 million gallons of water per day. The USGS is contracted by the southwest Florida Water Management District to monitor stage and water quality. The Zephyrhills Bottling Plant at Crystal Springs is also available for a tour. Tours would emphasize springhead protection, and monitoring for water-quality constituents of interest.

Distance from downtown Tampa: est. 25 miles

Maximum participants: unlimited (no limit imposed by the facility)

Contact: info@crystalspringspreserve.com phone (813) 715-9707

1609 Crystal Springs Preserve Crystal Springs, FL 33524

Field Trip Leader/Guide: Karen Pate, Crystal Springs, karen8948@msn.com

Transportation: van

Cost: *Transportation + box lunch to eat at the site*

All-Day Tour**Date:** *Monday or Friday***Tour:** Chassahowitzka Springs system

Description: Chassahowitzka Springs <https://www.swfwmd.state.fl.us/springs/chassahowitzka/> is made up of a dozen springs that form the headwaters for the Chassahowitzka River, which is a short river that flows about 6 miles from the headsprings to the confluence with the Gulf of Mexico at Chassahowitzka Bay in Citrus County, Florida. The Chassahowitzka springshed, which contributes groundwater to the Chassahowitzka Springs, is approximately 190 square miles of upland forests, urbanization, agricultural activities and wetland forests. This springshed covers portions of Citrus and Hernando counties. The Chassahowitzka River is designated an Outstanding Florida Water and the lower half of the river is part of the more than 31,000-acre Chassahowitzka National Wildlife Refuge. While the river's shoreline is mostly natural, the headsprings area contains a small marina with a public boat ramp and many dead-end canals upstream with residential development. The tour guide, Patricia Metz, is a USGS geologist with 35 years of experience in hydrogeology, water quality, wetlands, and watershed issues in west-central Florida.

Distance from Tampa: 75 miles**Maximum participants:** 15**Contact:** 1502 S.E. Kings Bay Drive, Crystal River, FL 34429 phone (352) 563-2088**Field Trip Leader/Guide:** Patricia Metz, USGS Caribbean-Florida water Science Center**Transportation:** van**Cost:** *Transportation + canoe or kayak rental @ \$20-\$30 for the day + box lunch*

All-Day (6 hrs) Tour

Date: *Monday or Friday*

Tour: Wall Springs springshed and estuarine and sea grass exploration near Palm Harbor, FL:

Description: The Water Quality Monitoring Program at the Southwest Florida Water Management District (SWFWMD) is willing to organize a 6-hour trip to northern Pinellas Co. to look at a couple of springs. Wall Springs Park will be toured in the morning to talk about the effects of land use and population on groundwater quality at the spring. After lunch, an afternoon kayak trip facilitated by a local outfitter (TBD) to paddle out to Crystal Beach Spring in Palm Harbor, which is also a good opportunity to see the local estuary and seagrasses in the Gulf of Mexico. This trip was suggested by SWFWMD Chief Professional Geologist, Dave Dewitt, who has assisted with similar conference field trips.

Distance from downtown Tampa: 50 miles

Maximum participants: 15

Contact: Catherine Wolden,

Field Trip Leader/Guide: Dave DeWitt, Chief professional geologist, Southwest Florida Water Management District

Transportation: van

Cost: *Transportation + kayak rental (estimated \$35/person) + box lunch*

Half-Day Tour

Date: *Wednesday*

Tour: Florida Fish and Wildlife Research Institute, St. Petersburg and USGS Coastal and Marine Geology Science Center, St. Petersburg.

Description: The Fish and Wildlife Research Institute's work includes assessment and restoration of ecosystems and studies of freshwater and marine fisheries, aquatic and terrestrial wildlife, imperiled species, and red tides. The FWRI develops the information science required to analyze and disseminate research products and engages in outreach activities to complement all programs. Freshwater projects include studies of water quality and contaminants, long-term monitoring, and minimum flows and levels. The tour would involve visiting the labs and having selected staff talk about their work.

The tour would also include a visit to the USGS Coastal and Marine Geology in St. Petersburg facility. Scientists and technical staff within the USGS Coastal and Marine Geology Program study coastal and ocean resources from shorelines and estuaries to the continental shelf and deep sea, providing expertise, tools, products, and data that address and inform a broad array of resource challenges.

Distance from downtown Tampa: 35 miles

Maximum participants: 10

Contact: Laura Yarbro, Florida Fish and Wildlife Research Institute, 100 Eighth Ave. SE, St. Petersburg, FL 33701, 727-502-4934, laura.yarbro@myfwc.com

Field Trip Leader/Guide: Laura Yarbro

Transportation: van

Cost: *Transportation + box lunch to eat on the way*

Half-Day Tour

Date: *Wednesday*

Tour: LAKEWATCH water-quality sampling at Hillsborough Co. lakes with opportunities for feedback from participants

Description: The Florida LAKEWATCH program is a volunteer lake management program with monthly monitoring activities. Through this program citizens can ensure that the lakes that they care about are monitored on a regular basis. This tour highlights one effort that involves a County employee who works in conjunction with LAKEWATCH. She collects the samples, LAKEWATCH processes and analyses the samples, and she receives the water quality data which can be used in the management of local parks/preserves. The tour may include several field sites (Lake Flynn, which has 15 years of data; Lake Frances, Lake Dan, Cypress Creek Lake #122). Opportunities for feedback from participants about how the monitoring might be improved.

Distance from downtown Tampa: 45 miles

Maximum participants: 25

Contact: Sheryl Bowman, Environmental Lands Management Coordinator, Hillsborough County Conservation and Environmental Lands Management Department

bowmans@hillsboroughcounty.org (813) 264-8513, (813) 781-8091 (c)

Field Trip Leader/Guide: Sheryl Bowman

Transportation: van

Cost: *Transportation + box lunch to eat on the way*

Half-Day Tour

Date: *Friday morning only*

Tour: Tampa Bay Water Desalination Plant Facility Tour

<http://www.tampabaywater.org/tampa-bay-seawater-desalination-plant.aspx>

Description: The Tampa Bay Seawater Desalination facility is a unique drought-proof, alternative water supply that provides up to 25 million gallons per day of drinking water to the region. Seawater coming into the plant goes through a rigorous pretreatment process then freshwater is separated from the seawater using reverse osmosis. The end product is high-quality drinking water that supplies up to 10 percent of the region's needs. The Tampa Bay Seawater Desalination Plant uses a process called reverse osmosis (RO) to produce drinking water from seawater. The desalination plant is located next to Tampa Electric's (TECO) Big Bend Power Station, which already withdraws and discharges up to 1.4 billion gallons a day of seawater from Tampa Bay, using it as cooling water for the power plant. The Tampa Bay Seawater Desalination plant "catches" up to 44 million gallons per day (mgd) of that warm seawater, separates it into drinking water and concentrated seawater and dilutes the twice-as-salty seawater before returning it to the bay.

Distance from Tampa: 45 minutes (Gibsonton, FL)

Maximum participants: 20

Contact: Kathleen Goelz, kgoelz@tampabaywater.org

Field Trip Leader/Guide: TBD

Transportation: van

Cost: Transportation only

Half-Day Tour

Date: *Monday or Friday*

Tour: Robinson Preserve Wetlands Restoration area, Manatee Co., FL

Description: The Robinson Preserve Wetlands Restoration project <https://restorethegulf.gov/sites/default/files/Robinson%20Preserve%20Wetlands%20Restoration.pdf> is part of the Connecting Coastal Waters (CCW) initiative that NOAA leads with partners to restore the extent, functionality, and resiliency of Gulf Coast wetlands and provide a science-based inventory of wetland hydrology restoration projects that make the greatest contribution to that goal. Goals for the Robinson Preserve Wetland Restoration project include: 1) creation of coastal upland and wetland habitats and tidal creeks that would be designed to incorporate projected near-term sea level rise; 2) creation of high-quality estuarine subtidal habitats; and 3) restoration of a natural hydrology linking the coastal upland, wetland, and estuarine areas within the Preserve. The wetland restoration work was being done on agricultural lands, coastal areas, and in areas that have been subject to phosphate mining (the latter in collaboration with the mining companies).

Distance from Tampa: 60 miles

Maximum participants: 15

Contact: Charles Hunsicker, Director, Parks and Natural Resources Department for Manatee Co., FL
(941) 745-3727 (office), (941) 737-4765 (cell)

Field trip Guide: TBD

Transportation: van

Cost: *Transportation + box lunch*

Half-Day Tour

Date: *Monday, Wednesday, or Friday*

Tour: Mote Marine Laboratory behind-the-scenes tour, Sarasota, FL

Description: Originally focused on sharks, research at Mote Marine Laboratory <https://mote.org/about-us> has expanded to include studies of human cancer using marine models, the effects of man-made and natural toxins on humans and on the environment, the health of wild fisheries, developing sustainable and successful fish restocking techniques and food production technologies and the development of ocean technology to help us better understand the health of the environment. The tour will include a behind-the-scene guided tour of unique facilities and presentations by one or more research staff focused on ocean acidification, chemical and physical ecology, and/or marine/coastal environmental health.

Distance from Tampa: 65 miles

Maximum participants: 15

Contact: Pamela Siderski, Outreach Coordinator, 941-388-4441, ext. 618

Field trip Guide: TBD

Transportation: van

Cost: Transportation only

All-Day Tour – discretionary**Date:** *Monday or Friday***Tour:** Homosassa Springs State Park <https://floridastateparks.org/park/Homosassa-Springs>

Description: Visitors can see West Indian manatees every day of the year from the park's underwater observatory in the main spring. The park showcases native Florida wildlife, including manatees, black bears, bobcats, white-tailed deer, American alligators, American crocodiles, and river otters. Manatee programs are offered three times daily. At the Wildlife Encounter programs, snakes and other native animals are featured. Recreational opportunities include picnicking, nature study, and bird-watching. Transportation from the visitor center on U.S. 19 to the West Entrance is available by tram or boat. The park has two concessionaire-operated gift shops and a concessionaire-operated café with a selection of beverages and snacks. Plan 3 1/2 to 4 hours to tour the park. Check the Ranger Programs for a list of interactive events throughout the park each day. Included in your admission is a boat tour that transports visitors along Pepper Creek from the Visitor center to the West Entrance to the Wildlife Park. Rangers give an introduction to the park and the Florida Park Service. Native wildlife is identified along the way. The pontoon boats are accessible with a ramp for wheelchairs. There is an elevator from the Visitor Center level to the Boat Dock for wheelchairs and strollers.

Distance from downtown Tampa: 75 miles**Maximum participants:** TBD**Contact:**

Field trip leader/guide: TBD

Transportation: van

Cost: *Transportation + park admission (\$13) + box lunch*