

**Market Analysis
of Non-Formal Outdoor Environmental Education Programs
Serving Kindergarten through College Students or Teachers
in Collier County, Florida.
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BACKGROUND

In 2024 Sarah Falkowski, Education Coordinator for the Rookery Bay National Estuarine Research Reserve (RBNERR) hired Tabitha Stadler, Executive Director of the non-profit organization Environmental Protection in the Caribbean (EPIC), to update the market analysis (MA) of kindergarten through college field-based environmental education programs and an audience needs assessment (NA) focused on kindergarten through twelfth grade teachers in Collier County, Florida, that had previously been conducted in 2014.

Back in 2014, RBNERR in partnership with the Friends of Rookery Bay (FORB) and with funding from a Bay-Watershed Education and Training Program grant from the National Oceanic and Atmospheric Administration (NOAA) hired a consultant to conduct a MA and NA with the same focus and the consultant was also Ms. Stadler, formerly with GeoBlue Coastal Management Solutions. The results of this research successfully guided RBNERR education programs between 2014-2024.

RBNERR is a partnership program between the Florida Department of Environmental Protection and NOAA and is part of a national system of 30 NERRS throughout the United States of America that all have hands-on, field-based science, technology, engineering and math (STEM) focused education programs for students and teachers. NOAA requires NERR education programs to periodically conduct MA and NA research.

RBNERR is also one of approximately a dozen outdoor environmental field trip locations and organizations that were formerly part of the Collier County Public School System (CCPS) Field Trip Specialist Program (FTSP). In recent years, this program was renamed Field Sciences Experiences Program (FSEP) and significantly broadened to include programs that are not entirely field based. The FSEP is an effort coordinated by the CCPS Science Coordinators to facilitate the participation of students at multiple grade levels in science programming and field trips provided by a range of community organizations.

This document includes the results of the MA analysis including comparisons to the 2014 data.

RESEARCH GOALS AND PURPOSE

According to NOAA's K-12 Estuarine Education Program (KEEP) framework "A Market Analysis is a systematic tool for assessing other local and regional organizations that offer the same or similar services and identifying potential audiences for these services. A market analysis helps to match services with audiences while decreasing the potential for duplication and redundancy with other programs." (NOAA KEEP, 2008). The research goals for RBNERR's MA and NA included:

- Increase understanding of informal/non-formal hands-on, field-based, environmental education providers, with a specific focus on those providing

estuarine, coastal or ocean education, serving kindergarten through college students and teachers in Collier County, Florida,

- Increase shared understanding of the value and market niche of RBNERR's and other environmental education programs,
- Assess the needs, interests and motivations of teachers for participating in field-based environmental programs, and when possible, for specifically attending RBNERR programs, and,
- Apply information gained to support program improvements and new program development at RBNERR, and throughout Collier County, Florida.

In order to clarify research goals and practical benefits a kick-off meeting with the RBNERR Education Team members was conducted on March 21, 2024 and that input was incorporated into the research. The NA was an online survey aimed at all teachers in Collier County, Florida, resulting in a 2% response rate and a report. This document reflects the results of the MA.

METHODOLOGY

Based on the research goals and information gathered from RBNERR's Education Team, a questionnaire was developed and subsequently approved by the Education Coordinator. The questionnaire included 40 questions, four more than in the previous research, and unlike in the previous research NOAA did not require any particular questions to be asked. A list of potential providers was developed through brainstorming with the Education Team, internet research by the Contractor, and also by asking some of the environmental education providers, when later contacted, if they thought anyone was missing from the potential providers list. A total of 44 potential providers were identified, an increase of 16 from the previous research. This list was further divided into the six that were offering teacher training that was not associated with CCPS programs and the 16 actual providers of student programs that fit our research goals.

To determine if a potential provider was an actual provider of student programs in Collier County, Florida there were several considerations and discussions among the project team that supported the final selections. The following criteria were used:

- 1) They had to be serving students from Collier County, Florida, although they did not have to be located or offering their programs in Collier County,
- 2) They had to intentionally offer outdoor environmental education programs, focused broadly on nature or the natural world, to students on a regular basis. This criterion had previously been "field-based" experiences but was revised to better capture the landscape of providers that currently exist,
- 3) Had to have staff to deliver these programs,
- 4) Marketing and/or educational materials that demonstrated their intention to deliver them, and

- 5) Strong focus on science-based, STEM, and inquiry-based learning focused on natural resources, nature, the natural environment and conservation of natural resources. Petting zoos and field trip experiences that predominantly focused on caged animals were generally excluded unless there were strong indications that their mission, curriculum, or approach fit the criteria.

Based on information found on their websites, some providers were immediately excluded from the study for not meeting the criteria. For example, several were outside of Collier County, Florida and never responded to inquiries about whether they were serving Collier schools. For obvious providers, online internet searches were conducted to compile information that would help answer the questionnaire in advance of telephone or Zoom interviews. This shortened the length of interviews and allowed interviewees additional time to expand on their answers to the remaining questions.

The Contractor attempted to contact each potential provider by emailing and/or calling the Education Coordinator, or equivalent staff position, and sending them the questionnaire, the Providers List, and the preliminary results of the internet research. The email message is documented in Appendix A. Some providers replied via email that they were not offering these types of programs and they were eliminated as actual providers. During the original study, providers were fairly easy to reach, however, during this study it took numerous emails and calls to get a response. Due to these challenges, approaches and communication varied among those targeted including:

- All 16 of those categorized as actual providers of student programs participated in a 30 to 75 minute interview with the contractor,
- An additional two potential providers were interviewed, but then excluded from the final provider list including Everglades National Park and the Collier County Mosquito Control District,
- There were five providers that were determined to be non-providers through phone calls,
- There were five potential providers that were determined to be non-providers through emails including the State Parks/Preserves and the Shy Wolf Sanctuary,
- There were six potential providers that never responded and were classified as non-providers,
- There were seven providers that were never contacted and were classified as non-providers including the Friends of Tigertail Beach, IMAG, Kowiachobee Animal Preserve, Sierra Club, and Wonder Gardens,
- Of the six actual providers of teacher training programs, three were also serving students and were interviewed, two others were interviewed, and one failed to respond so only online information was included,

Of the 44 identified, it was found that 16 were currently providing outdoor environmental education programs to students on a regular basis and three of these were also providing stand-alone teacher training. In addition, another two providers of teacher training focused on natural resources were identified. These 16 student-providers and the additional three providing teacher training became the primary focus of the MA, however additional information has been included in this report when themes or unique approaches emerged from information gathered from the potential providers. The approach applied in this study varies in several respects from the research conducted in 2014. The teacher training that is the focus of this study are stand-alone programs that are not associated with a field trip requirement. Previously, teacher training associated with the CCPS FTSP was included as a teacher training program and these providers were combined with the actual providers offering student programs. Since the CCPS no longer requires teacher training the majority of actual providers had already, or were in the process, of phasing it out and although it is mentioned within the study, the relevance has diminished.

Categorizing programs as provider versus non-provider was challenging due to the diversity of approaches and the wide variety of what was available at various locations. Also determining what is field-based was more difficult than determining what was outdoors, and even when offered outdoors there was not always a nature, or natural world focus for the programs. The research team was well aware that “Community-based groups, service organizations, government agencies, residential centers, nature centers, zoos, aquariums, museums, youth organizations, and schools all may be involved in environmental education program development and implementation. Programs take place in a variety of environments, such as classrooms, laboratories, online, parks, school yards, vacant lots, forests, neighborhoods, school courtyards, business districts, nature centers, and community gardens” (NAAEE, 2022).

Of the 16 identified actual providers of student programs contacted for an interview, all participated for a 100% response rate. For the actual providers of teacher training, only one was unresponsive via telephone for a 94% response rate. In the previous study only one of the 12 actual providers was unresponsive, resulting in a 92% response rate, so results were similar, although there was a slightly better response rate in this study. The data for the unresponsive actual provider was gleaned from the internet research and that data was used during the analysis. Additionally, providers were asked to edit their profiles and expand upon their answers to the questions provided. The contractor typed their responses into a Word document during the interview, referred to Zoom transcripts when necessary, and used a semi-structured approach that allowed Providers to expand on their answers and discuss areas of interest. When a specific answer was required that had a temporal boundary, such as the number of participants

served, the Contractor asked for data for 2023-2024 school year which was the most recently completed full year of record. Since many programs reported recent changes or ongoing changes, this research provides a snapshot of programs in Collier County, Florida during August 2023 through July 2024 during the timeframe when the research was completed.

SUMMARY RESULTS AND RECOMMENDATIONS

1. There were an increased number of providers and increased diversity of field trip options, compared to the prior study.
2. The “wild outdoors” is becoming more unique in the current landscape of providers.
3. Overall, provider programs were mostly full and more resources would be needed for them to offer more field trips.
4. There was a reduction in the number of providers offering classroom presentations, which may be a service that CCPS and teachers would welcome.
5. In addition to in-person field trips, consider virtual field trips which overcome traditional field trip constraints and have become easier, less expensive, and more widely accepted in recent years.
6. Few providers are focused on pre-service teacher training, which may be a niche worth exploring.
7. CCPS has significantly changed its approach to STEM and field trips programs.
8. Continued connection to and coordination with other providers is generally of interest to providers.
9. High school and kindergarten through first grade appear to be the least served grades for field trip programs.
10. Boat-based programs continue to be uncommon, with only three providers offering them on field trips on a regular basis.
11. More providers are covering topical information related to estuaries, watersheds, and oceans than in the previous study.
12. There were limited, but insightful responses to the question about topical information that was not being covered including
 - a. An interest in coordinating and connecting among providers,
 - b. A passion for getting people outdoors in wild nature as a teaching and learning technique,
 - c. The need for equity in EE,
 - d. The need for a focus on stewardship and behavior changes,
 - e. The need for effective program evaluation or training to do evaluations.
13. There is an opportunity to showcase the diverse and impressive collection of providers, including their locations, assets and activities that are available to many audiences, that would likely impress and attract support.

14. There has been a significant shift in the role of teachers in field trip programs since the last study, including a reduction in prerequisite training and less responsibility for content delivery.
15. Private schools may be underserved.
16. The CCPS field trip communication and booking approach seems effective and could possibly be modeled for use with other groups.
17. Multi-day and overnight programs are much less common than half-day or shorter programs.
18. Busing problems were the most frequently cited challenge to field trips.
19. Distance travelled to a field trip is not a significant obstacle, therefore, providers should consider promoting their field trips on a countywide basis.
20. Providers would likely benefit from aligning their programs to standards and making their programs applicable to what is being taught in the classroom.
21. Providers may still need support in consistently gathering evaluation data.
22. Teachers that are repeat attenders are important for providers to recognize and keep engaged.
23. There was an increase in the available number of teacher training programs focused on estuaries, watersheds, and oceans.
24. Providers that have resources and assets may want to consider student field trips as an overall part of their “value ladder” to increase the participation in field trips and other outdoor programs.
25. Consider engaging in a buddy-school model by partnering more deeply with one or a few schools.
26. Providers may need to consider their approaches to address three recent trends that have affected schools, teachers and students including:
 - a. Since COVID and recent hurricanes, student learning levels had dropped, that behaviors and mood management were more challenging, and that there was a lack of engagement by students and parents,
 - b. Recent Florida laws that effect education are worth considering,
 - c. Technology has improved education but also is a distraction from learning and its use needs to be balanced.

POTENTIAL AND ACTUAL PROVIDERS

A total of 44 potential providers were identified, an increase of 16 from the previous research. Of the 44 identified, it was found that 16 were currently providing field-based environmental education programs to students and three of these were also providing stand-alone teacher training while another two were also providing teacher training. Combined, 18 were providing students programs and/or teacher programs. Of the 44

potential providers, three were eliminated as providers because they were located in Lee County. Two of those, the Calusa Nature Center and the Everglades Wonder Gardens, were of interest because of the likelihood that they were offering field-based education, however when asked for information and to be interviewed, neither replied after several attempts so they were categorized as non-providers. When comparing the current research with the previous effort, there is an increase in potential providers and actual providers. One factor that contributed to the increase was that the Collier County Extension Office, IFAS programs, SeaGrant and 4-H, were bundled in the previous study, but due to the differences in topics covered and target audiences they were separated in this study. It's important to note that 16 programs serve students, two serve only teachers, and four serve both students and teachers from Collier County.

Table 1: Potential Providers versus Actual Providers of Outdoor Environmental Education for Students and Teachers in Collier County, Florida

Potential vs. Actual Providers	2014 Study	2024 Study
Potential Providers Considered	28	44
Actual Overall Providers	12 total, Combined serving students and teachers	18 total w/16 serving students and 6 serving teachers

Two existing programs, the non-profit Audubon of the Western Everglades and the City of Naples, Naples Preserve, are currently offering consistent student programs but were not consistently offering them during the 2014 study period. This may be due to fluctuations in staffing or other resources because both entities have a mission and intention to offer these types of programs on a consistent basis. The Florida Gulf Coast University (FGCU) Whitaker Center may have been overlooked in the previous study, although they are currently providing field-based environmental education to middle school students in partnership with the Immokalee Foundation and have been doing that for several years. Another provider, the Naples Zoo at Caribbean Gardens, was difficult to categorize because their offerings were not strictly field-based, however, they have a botanical garden, engage in dip-netting and other field-type experiences and their conservation mission and accreditation strongly suggested affinity with field-based environmental education programs. Although they were not included in the previous research effort, they were included as an actual provider in this study. The Gore Nature Center is a new provider of programs. The FGCU Vester Center was acquired in June 2007 and it appears they were not yet offering field-based programs for Collier County students during the last study, however, they have been offering boat-based, estuary focused field trips for CCPS students over the last few years. Although, they were not in

operation during this most recent school year due to damage from Hurricane Ian which hit Southwest Florida in September 2022. Since they have been a significant provider, work with CCPS, and are directly comparable to RBNERR, they are included as providers in this study.

Teacher training programs were categorized separately from student-serving programs with three of the student-serving programs also offering teacher training including the FGCU Whitaker Center, Rookery Bay Reserve, and 4-H. There were three additional teacher training programs identified including the Florida Master Naturalist Program, the Guy Harvey Foundation, and the Everglades Foundation. The last two are new programs developed since the last study was conducted.

Table 2: Changes in Student Provider Status Between 2014 Study and 2024 Study

Organization Name	2014 Study Student Provider Status	2024 Study Student Provider Status	Explanation
Audubon of the Western Everglades	No	Yes	Now offering consistent programs.
Naples Preserve	No	Yes	Now offering consistent programs.
Naples Zoo at Caribbean Gardens	No	Yes	Reclassified in the new study.
Everglades National Park	Yes	No	No evidence of Collier Schools' Participation.
FGCU Vester Marine Center	Not included	Yes	Newly opened since last study.
FGCU Whitaker Center	Not included	Yes	May have been overlooked in previous study, but may not have been providing field trips.
Gore Nature Center	Not included	Yes	Newly opened in recent years.
Collier County IFAS Extension Office	Combined 4-H and SeaGrant	Separated 4-H and SeaGrant	Separated because of significantly different audiences, approaches, and funding.

Table 3: Changes in Teacher Training Provider Status Between 2014 Study and 2024 Study

Organization Name	2014 Study Teacher Training Provider Status	2024 Study Teacher Training Provider Status	Explanation
Rookery Bay Reserve	No	Yes	Developed the Teachers on the Estuary Program (TOTE) since the last study.
Everglades Foundation	No	Yes	Organization started since last study.
Guy Harvey Ocean Foundation	No	Yes	Recently launched a teacher training program.
Florida Master Naturalist Program	Yes	Yes	No change. Has since expanded offerings.
4-H Program	No	Yes	Currently offering training on existing curricula such as Project Wild, Project Wet.
Whitaker Center, FGCU	No/Yes (assigned to a different organization, same training)	Yes	This training was previously associated with a different organization, the Conservancy of SWFL, who is still a partner, but currently appears not to be the lead.

Table 4: Actual Providers of Teacher Training

#	Organization Name	Address	Type of Training Provided	Website
1	Collier County 4H, IFAS	14700 Immokalee Road Naples, FL 34120	Provides practical solutions to problems specific to living in Florida.	https://sfyl.ifas.ufl.edu/collier/

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2	Everglades Foundation	18001 Old Cutler Road, Suite 625 Palmetto Bay, Florida 33157	The Everglades Literacy Program	https://www.evergladesfoundation.org/
3	Florida Gulf Coast University Whitaker Center	10501 FGCU Blvd. S. Fort Myers, FL 33965	Science, Environment, Engineering and Mathematics	https://www.fgcu.edu/cas/centers/whitaker/
4	Florida Master Naturalist Program, University of Florida	2311 Mowry Road, Bldg. 78 Gainesville, FL 32611-0750	Environmental & Ecotourism	https://masternaturalist.ifas.ufl.edu/
5	Guy Harvey Foundation	757 SE 17th St Suite 217 Fort Lauderdale, FL 33316	Educational programs aimed at better understanding and conserving the ocean environment.	https://guyharveyfoundation.org/
6	Rookery Bay National Estuarine Research Reserve	300 Tower Road Naples, FL 34113	Training to understand the role they play in preserving this unique coastal environment	https://rookerybay.org/

Table 5: Actual Providers of Student Programs

#	Organization Name	Address	Website
1	Audubon of the Western Everglades	12250 Tamiami Trail East, Naples, FL 34113	https://www.audubonwe.org/
2	Big Cypress National Preserve	33100 Tamiami Trail East Ochopee, FL 34141-1003	https://www.nps.gov/bicy/index.htm
3	Collier County 4H, IFAS	14700 Immokalee Rd Naples, FL 34120	https://sfyl.ifas.ufl.edu/collier/
4	Collier County SeaGrant, IFAS office	14700 Immokalee Road Naples, FL 34120	https://sfyl.ifas.ufl.edu/collier/sea-grant/#:~:text=Florida%20Sea%20Grant%20is%20a,for%20the%20people%20of%20Florida.

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5	Conservancy of Southwest Florida	1495 Smith Preserve Way, Naples, FL 34102-3500	https://conservancy.org/
6	Corkscrew Swamp Sanctuary & Blair Audubon Center	375 Sanctuary Road West, Naples, FL 34120	https://corkscrew.audubon.org/
7	CREW Land and Water Trust	23998 Corkscrew Road, Estero, FL 33928	https://crewtrust.org/
8	Florida Gulf Coast University Whitaker Center	10501 FGCU Boulevard, South Fort Myers, FL 33965	https://www.fgcu.edu/cas/centers/whitaker/
9	Gore Nature & Education Center	4261 40th Ave. SE, Naples, FL 34117	https://www.gorenaturecenter.com/gore-nature-education-center/
10	Naples Botanical Garden	4820 Bayshore Drive, Naples FL 34112	https://www.naplesgarden.org/
11	Naples Zoo at Caribbean Gardens	1590 Goodlette-Frank Road, Naples, FL 34102	https://www.napleszoo.org/
12	Pathfinder, Inc.	1310 22nd Avenue South, St. Petersburg, FL 33705	https://www.pathfinderoutdooreducation.org/
13	Rookery Bay National Estuarine Research Reserve	300 Tower Road Naples, FL 34113	https://rookerybay.org/
14	The Naples Preserve	1690 Tamiami Trail North, Naples, FL	https://www.naplesgov.com/parksrec/page/naples-preserve
15	Vester Marine & Environmental Science Research Center (FGCU)	5164 Bonita Beach Road Bonita Springs, FL 34134	https://www.fgcu.edu/thewaterschool/centers/vestermarine/
16	Wings of Hope (FGCU)	10501 FGCU Blvd South, Ft. Myers, FL	https://www.fgcu.edu/cas/communityimpact/wingsofhope/

Table 6: Potential Providers found Not to be Providers

#	Organization Name	Address	Website
1	Big Cypress Basin South Florida Water Management District	2660 Horseshoe Drive, North Naples, FL 34104	https://www.sfwmd.gov/who-we-are/bcb
2	Build-a-Field Trip	3440 NE 12th Avenue, Oakland Park, FL 33334	buildafieldtrip.com
3	Calusa Nature Center	3450 Ortiz Avenue, Fort Myers, FL 33905	https://www.calusanature.org/
4	City of Marco Island	50 Bald Eagle Drive, Marco Island, FL 34145-3528	https://www.cityofmarcoisland.com/
5	Collier County Parks and Recreation Department and Conservation Collier	15000 Livingston Road, Naples, FL 34109-3808	https://www.collierparks.com/
6	Collier Mosquito Control District	600 North Road Naples, FL 34104-3464	https://cmcd.org/
7	Collier-Seminole State Park	20200 East Tamiami Trail Naples, FL 34114	https://www.floridastateparks.org/parks-and-trails/collier-seminole-state-park
8	Delnor-Wiggins Pass State Park	11135 Gulfshore Dr Naples, FL 34108-1789	https://www.floridastateparks.org/parks-and-trails/delnor-wiggins-pass-state-park
9	Everglades National Park	40001 State Road, Homestead, FL 33034-6733	https://www.nps.gov/ever/index.htm
10	Fakahatchee Strand Preserve State Park	137 Coast Line Drive, Copeland, FL 34137	https://www.floridastateparks.org/parks-and-trails/fakahatchee-strand-preserve-state-park
11	Florida SouthWestern State College	7505 Grand Lely Dr., Naples, FL 34113	https://www.fsw.edu/

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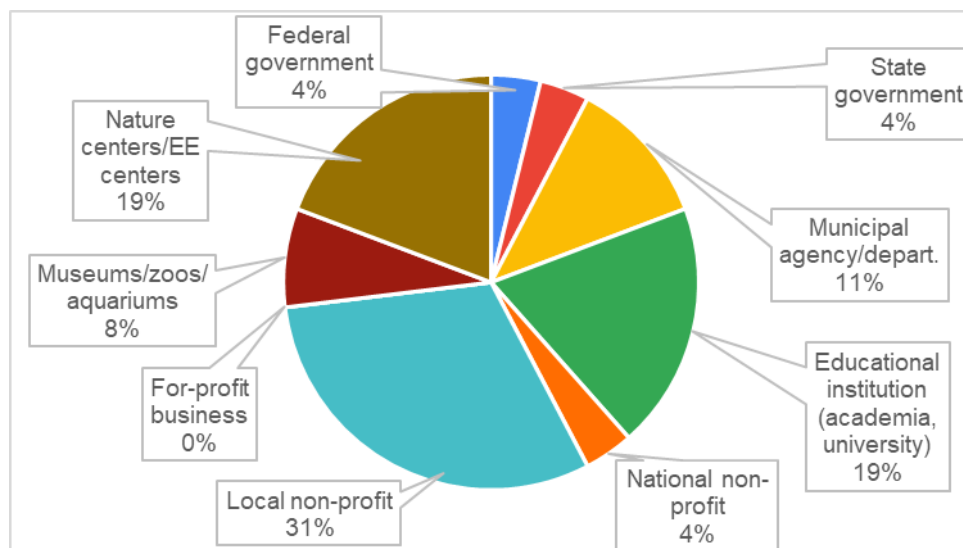
12	Florida Wildlife Federation	2590 Golden Gate Parkway, Suite 105 Naples, FL 34105-3204	https://floridawildlifefederation.org/
13	Friends of Tigertail Beach	Tigertail Beach, Marco Island, FL	https://friendsoftigertail.com/about-us.html
14	Golisano Children's Museum of Naples	15080 Livingston Rd., Naples, FL 34109	https://www.cmon.org/
15	Good Mood Ranch	306 Sabal Palm Road, Naples, FL 34114	https://www.facebook.com/profile.php?id=100086346034968
16	IMAG	2000 Cranford Ave, Fort Myers, FL 33916	https://theimag.org/
17	Kowiachobee Animal Preserve	2861 4th Ave SE, Naples, FL 34117	https://kowiachobee.org/
18	Ngala Wildlife Preserve	2755 Inez Rd, Naples, FL 34117	https://ngala.net/
19	North Carolina Outward Bound School Florida Program	400 Riverside Dr., Everglades City, FL 34139	https://www.ncobs.org/ten-thousand-islands/
20	Picayune Strand State Forest	2121 52nd Ave. SE, Naples, FL 34117	https://www.fdacs.gov/Forest-Wildfire/Our-Forests/State-Forests/Picayune-Strand-State-Forest
21	Shy Wolf Sanctuary	P.O. Box 3032, Naples, FL 34106	https://shywolfsanctuary.org/
22	Sierra Club, Calusa Group (SWFL)		https://www.sierraclub.org/florida/calusa
23	Southwest Florida Gulf Coast Refuge Complex: Ten Thousand Islands and Panther National Wildlife Refuges	12085 State Road 29 South, Immokalee, FL 34142	https://www.fws.gov/refuge/ten-thousand-islands/about-us

24	University of Florida/IFAS Southwest Florida Research & Education Center	2685 State Road 29 North, Immokalee, FL 34142	https://swfrec.ifas.ufl.edu/
25	Wonder Gardens	27180 Old 41 Road, Bonita Springs, FL 34135-5405	https://wondergardens.org/

AFFILIATION OF ACTUAL STUDENT PROVIDERS

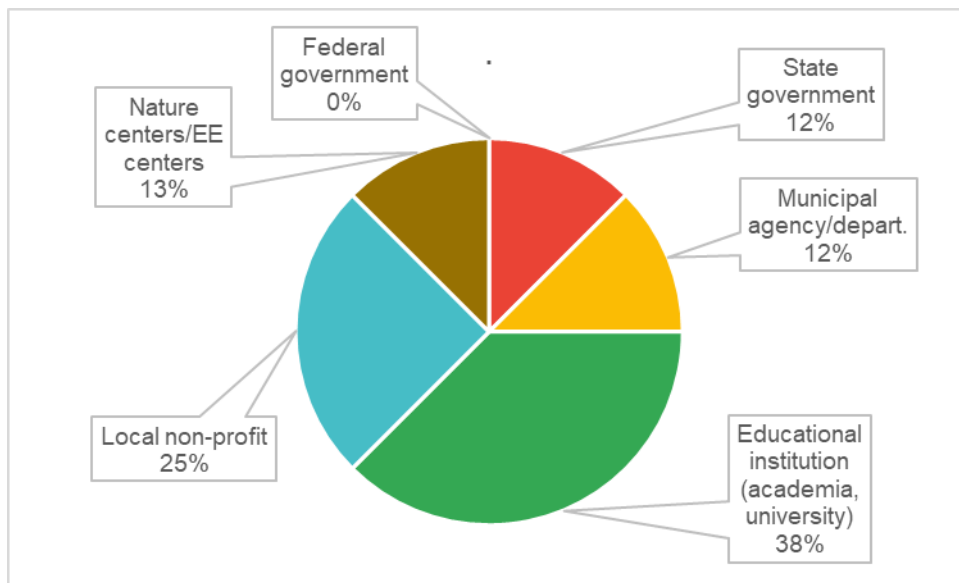
A total of 16 actual providers of student programs were identified and asked to share their affiliation. A total of 26 responses were received with several providers identifying with more than one category. The majority of respondents, 31%, were local non-profit organizations with 19% affiliated as Nature Centers/EE Centers and Academia. Three organizations, RBNERR, Big Cypress Preserve, and SeaGrant have some affiliation with the federal government. RBNERR and the two FGCU programs, Whitaker Center and Vester Marine Center, are affiliated with state government. There were zero for-profit organizations serving students or teachers in Collier County, Florida. There was one for-profit provider identified in the initial potential provider research called Build-A-Field-Trip that offers field trips to eastern Collier County, the Everglades, and other places for a fee. When asked, they said they never served Collier County schools which may be because of the high number of local and no-cost options for Collier County teachers to choose from. Overall there was a diverse representation of agencies and organizations that are providing field-based environmental education to students.

Figure 1: Affiliation of 16 Actual Providers of Student Programs



A total of six actual providers of teacher training were identified and they were asked to share their affiliation. A total of eight responses were received with several providers identifying with more than one category. The affiliation with Academia was the highest at 38% accounting for the the Whitaker Centers’s affiliation with FGCU, and that the University of Florida is connected to both the Collier County 4-H Extension program and the Florida Master Naturalist Program. Local non-profits were the second most chosen with 15% which includes the Everglades Foundation and Guy Harvey Foundation. Rookery Bay Reserve and FGCU were state government affiliated providers.

Figure 2: Affiliation of Six Actual Providers of Teacher Training



OVERALL NUMBER OF WORKERS PROVIDING PROGRAMS

Providers were asked about the number of paid people that were part of their organization and a second question about the number of people that deliver K-college programming. The answers were varied with some failed to answer the question. When possible, blanks were filled with data gathered from online sources, specifically for the number of people in the overall organization. Staffing was highly varied with providers relying on full-time, part-time, seasonal, interns, and volunteers to deliver their programs. The numbers below includes both full and part-time employees and seasonal employees were also included when they appeared to be essential to delivering the program.

There were eight organizations with over 100 employees which is due to several government and academic institutions that provide programs for example, ones such as Florida Gulf Coast University, Collier County government, and the City of Naples. The number of staff involved in the direct delivery of programs, however, was typically in the 1-3 person range, with nine organization fitting into this category. This indicates a low level of staffing for this service provided by those organizations and points to the ability of organizations to maintain a lean workforce and still deliver programs. Several providers shared information about the difficulties in finding and keeping qualified staff due to the high cost of living, particularly rents, in Collier County. Several providers also spoke to being at their maximum capacity and because of that they did not advertise or

promote their programs because they could not accept additional groups of students. A few providers said they typically did not focus on serving students, however, because they received special requests from teachers, and thought it was important, they began serving student groups on a limited basis. This may indicate the need for additional capacity within existing organizations to increase the number served, although there is no indication that student groups were failing to find appropriate field trip locations.

Table 7: Overall Number of Workers Providing Programs

# of overall employees	# of organizations in this category	# of paid people delivering K-college programs	# of organizations in this category
1-10	3	1-3	9
11-50	2	4-5	5
51-100	3	6-10	1
Over 100	8	11-20	0
		Over 20	0
N/A	0	N/A	1

ORGANIZATIONAL FUNDING

The majority of actual providers were local or regional non-profit organizations which had similar funding mechanisms including donations and grants. Several organizations earned income through admission fees including the Naples Zoo and Naples Botanical Garden. However, one non-profit organization Pathfinder charged program fees that covered the costs of their offerings and was their primary source of income. They were however, also serving private schools, not public schools. The for-profit Build-a-Field-Trip, was a potential provider that offered field trips for a fee and explained that they were in-business for many years using that model. They were not serving any Collier County schools and their clients were also presumably private schools. A potential reason for this company not having Collier County school clients is the high number of providers in the County, including many with zero or low cost field trip options.

With the exception of Pathfinder and the Naples Zoo, the majority of providers were not charging for their programs so this was not a significant source of income and they were relying on other sources of funding to enable them to offer the field trip programs. In addition, the person that participated in the interview was not always aware of, or involved with, funding-related decisions for the organization and therefore some assumptions were made based on the information available on their websites.

There were a few interesting funding situations identified. One provider received federal funds for some aspects of their education program, but they also had to fundraise

annually in order to deliver their high volume program. Two entities, with government affiliation, cited a “Friends Group” as a helpful funding mechanism and one of them received funding for full-time staff through their Friends organization. Friends Groups are non-profit organizations dedicated to supporting government entities and they typically have the ability to fund-raise or collect program fees in a way that government entities may lack. Although grant funding was occasionally mentioned by those interviewed, it was more likely that grant funding was mentioned on a website. The larger organizations, such as the FGCU Whitaker Center, were more likely to pursue grants than smaller organizations and some of the smaller organizations said they had rarely pursued grant funding because of a lack of time.

PROGRAM FEES

The NA survey of Collier County teachers revealed in the 2024 study and in the 2014 study that costs were a deterrent to participation in field trips and that free/no cost options were of interest. Providers were asked if they charge for their field trip program, which could serve as a source of income for the provider. The results were that the majority of providers, 14 of the 16, did not charge fees to teachers or students that were from CCPS schools, with two specifying no charges to Title 1 schools which is a designation for disadvantaged schools. Two providers, Pathfinder and the Naples Zoo, routinely charge schools for field trips, although the Naples Zoo offers school discounts. Some programs had grant funding to offset the costs to deliver school programs, while others charged for certain things such as the annual nominal fee to participate in 4-H, or a fee charged to the school district as part of the partnership agreement.

TYPES/AUDIENCES OF EDUCATIONAL PROGRAMS PROVIDED

Although providers were asked “What type of education programs do you provide?” the answers varied widely and the person answering the question may not have been involved in all types of programs offered by the institution. In addition, the focus of the study was on student field trip programs and there was little time spent on the other types of offerings. Therefore, these results are not comprehensive and additional research is necessary to capture the full, and seemingly extensive range of activities offered by EE providers in Collier County.

What is obvious is that all providers offered field trips, which was a criterion for being considered an actual provider. In addition, the majority of providers were willing to offer programs for elementary, middle, and high school grades, but in practice many of them specialized in specific grade levels as part of the CCPS FSP. Several providers had reduced the number of in-classroom presentations they offered, including Rookery Bay, which in the past would go to the classroom in advance of the field trip, but discontinued

that due to staffing constraints. Conversely, the Big Cypress Preserve has continued the pre-classroom visits in advance of the field trip. One non-provider newly offering programming in the classroom is the Collier Mosquito Control District. They currently have full-time educators who offer second grade, fifth grade, then seventh grade and kindergarten programs. Their approach is to be “their science teacher for the day,” applying a heavy STEM focus and specifically correlated to standards. They do not offer outdoor field trips, therefore did not qualify as a provider, however, their classroom model for STEM programming is expanding and they reached approximately 3,400 mostly CCPS students in the classroom during the 2023-2024 school year. This is likely an opportunity for growth by other providers.

Only two locations were offering live, virtual programs including Big Cypress Preserve and the Naples Zoo. Big Cypress Preserve offers students from around the world the chance to virtually visit in real-time with a Ranger from up to three different habitats such as swamp, hammocks, and coastal. This program began during COVID and is a remarkable opportunity to share Florida natural resources with a broader audience. The Naples Zoo offers an annual ZooCon event for CCPS fifth graders that brings the Zoo and its animals real-time to the classroom and that program is also recorded. It began before COVID and persists. The use of podcasts, television, or radio for youth programs was generally not offered, however, the FGCU Whitaker Center supports a radio short called “Out with the Wild Things” that shares local natural history information. The FGCU requires a freshman Colloquium class that focuses on Southwest Florida ecosystems and these classes take field trips to many locations, so that is major factor in the number of providers serving college students. However, several providers have college student groups from all over the country that visit their sites on a one-off basis. The Wings of Hope Program that is based at FGCU works with college students in a unique way since the college students teach the grade-school students as part of a college course either as paid Interns or for service learning hours. This provider considered the college students as an educational audience and they were therefore included as a provider of college programming.

It’s worth noting that among site-based programs like state-affiliated parks, preserves and forests, there was a willingness to accommodate student field trip groups upon request. In the prior study, some of these sites formerly offered this service but had discontinued it due to funding and staffing restrictions. These programs were infrequent, did not have dedicated staff, and were not promoted which is the reason they were not identified as actual providers.

Only two locations volunteered information about offering pre-service training for teachers, although that approach seems like a pro-active opportunity to promote teacher engagement in EE. In the previous study, Florida Southwestern State College

was offering pre-service training for Middle Grade Science Education and Secondary Biology Education but there was no data to support whether or not that program had continued.

There appears to be an increase in the number of locations serving homeschool groups, including some positive attitudes by Providers who said they were able to customize their programs to meet their needs and how they were flexible in terms of transportation, since bus driver shortages are a challenge for CCPS, and timing. However, one provider said they never work with homeschool groups because they include multiple ages, many chaperones, and are large groups which can damage the natural resources. The number of homeschooled students in Florida has been steadily rising over the last decade with 2,502 students, or 1.62% of the total population, participating in Collier County during the 2022-2-23 school year. However, Collier County is not one of the most popular districts for homeschooling with popular locations having two to four times as many homeschooled students. Providers offering programs for homeschool groups typically offered a program similar to what they already offer to other school groups, but adopted the approach to account for differences in the timing and ages represented.

Table 8: Type of Educational Programs Provided

Organization Name	Elementary	Middle	High School	Field Trips	Classroom	College	In-Service Teacher	Pre-Service Teachers	After School	Home-School	Summer Camps	Live Virtual	Recorded	Podcasts, TV, Radio
Audubon of the Western Everglades		x		x	x	x							x	
Big Cypress National Preserve		x	x	x		x		x				x		
Collier County 4H, IFAS	x	x	x	x	x		x	x	x	x	x			
Collier County SeaGrant, IFAS office		x	x	x	x									
Conservancy of Southwest Florida	x	x	x	x		x	x		x				x	
Audubon's Corkscrew Swamp Sanctuary	x	x		x		x					x			
CREW Land and Water Trust	x		x	x						x				
Whitaker Center, Florida Gulf Coast University (FGCU)		x		x			x				x			x
Gore Nature & Education Center		x		x						x				
Naples Botanical Garden	x	x	x	x			x			x	x			
Naples Zoo at Caribbean Gardens	x	x	x	x						x	x	x		
Pathfinder, Inc.		x	x	x										
Rookery Bay Reserve	x	x	x	x			x							
The Naples Preserve	x			x		x				x				
Vester Marine & Environmental Science Research Center (FGCU)			x	x										
Wings of Hope (FGCU)	x			x	x	x								

OVERVIEW OF COLLIER COUNTY PUBLIC SCHOOL DISTRICT (CCPS)

Collier County is a coastal county located in southwest Florida and is the home to several municipalities including the City of Naples and the City of Marco Island. The county has a total area of 2,305 square miles (5,970 km²), making it the largest Florida county by land area and the fourth largest by total area. The total population was estimated for 2022 as 397,994 which is an increase of 58,352 from the data in the previous study data from 2015. The median age is 53.2 with 18% in the birth to 19 years of age category which includes school-aged children, and the 41% over the age of 60. (Census Reporter, 2024). The population is evenly split with 50% male and 50% female. The ethnicity of the population includes 61% white, 29% Hispanic, 6% Black, and the remaining of Asian or Other ethnicities. While accurate statistics about poverty were difficult to identify, there may be as many as 18% of Collier County children under the age of 18 who are living in poverty. Much of the eastern part of the county is undeveloped and held in government ownership as conservation lands, but the remaining areas also include farms, mining, and medium to dense residential development. The top industries in Collier County include health care, retail, construction, accommodation and food services, and the government. Tourism is a critical economic sector due to white sandy beaches and water-based recreational activities that relate to the environmental education programs and field trips detailed in this report.

The CCPS District served 50,000 students during the 2023-2024 school year, an increase of 6,297 since the previous study conducted during the 2014-2015 school year (Collier County Public Schools, 2024). The district includes 64 schools, an increase of 16 new schools since the prior study, including 31 elementary schools, 10 middle schools, nine high schools, one K-12 school, one virtual school, one alternative center, two technical colleges, and nine charter schools. CCPS is one of the largest employers in the county with approximately 6,927 employees, 3,165 serving as teachers and 46% of them having advanced degrees. Approximately 54% of students live in a home where English is not the first language, which is an increase from the 50% reported in the prior study. (Collier County Public Schools, 2024).

CCPS GRADE/SCHOOL BREAKDOWN

Although there are exceptions, the typical break down of grades by school type for CCPS is provided as reference in the table below:

Table 9: Collier County Public Schools Breakdown of Grades and Academic Levels

School Type	Grades
Elementary School	Kindergarten, 1 st , 2 nd , 3 rd , 4 th , 5 th
Middle School	6 th , 7 th , 8 th
High School	9 th , 10 th , 11 th , 12 th

CCPS FIELD TRIP PROGRAMS AND FOCAL GRADES FOR ACTUAL PROVIDERS

In the last study, the CCPS FTSP was a program coordinated by the CCPS Science Coordinators to offer field trips to all second, third, fourth, fifth and sixth graders and to high school marine science students, by partnering with a network of local organizations. During the last nearly ten years since the prior study, CCPS has renamed the FTSP to be called the FSEP and has broadened beyond traditional nature-based field trips to include a wide range of STEM programming both in the classroom and outdoors, including nature-based programs and those that are in less natural settings. Of the 16 providers identified ten of them are directly providing significant educational programming for CCPS schools. Interestingly, providers that were not particularly dedicated to providing programs for a particular CCPS grade, often still had connections with and collaborations with CCPS such as the IFAS SeaGrant program which helps with the CCPS science fair and the Southwest Florida Environ-thon Quiz Bowl competition. All of the local providers knew the CCPS Science Coordinators and had some communication with them.

Despite the effort to determine the grade levels served, the exact number of organizations targeting each grade level was somewhat difficult to determine. This is in part because most of the actual providers serve multiple age groups and will serve nearly any age group when requested. Using the information gathered, a closer look at the most commonly served grades in the table below is presented to attempt to identify possible service gaps. While the CCPS FSEP accounts for many of the high volume programs delivered by providers, not every program at every site was associated with CCPS. Of the 16 actual providers that were offering programs in partnership with the CCPS, nine of those were field trips, while the Naples Zoo was offering their virtual, live ZooCon program. Based on the information gathered, fifth, sixth and seventh grade were the most targeted, while second, third and fourth were the next most targeted grade levels. In the prior study it was found that the overall focus was on fifth and sixth grade students, suggesting that this has not shifted significantly, although seventh grade has been added. The current study further indicates that there are potentially the least number of outdoor and environmental field trips being conducted for grades Kindergarten and first grade and ninth through twelfth at the high school level. In the

previous study, a lack of programming for high school students was also identified. The assumed reason for this is likely due to the need for substitutes, that the students will miss multiple classes with a range of teachers, and there are more likely to be conflicts with sports, club schedules, testing, and buses.

Table 10: Focal Grades for Actual Providers

Organization Name	CCPS FSP	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	college	Home- school
Audubon of the Western Everglades								x	x	x					x	
Big Cypress National Preserve	x							x								
Collier County 4H, IFAS		x	x	x	x	x	x	x								x
Collier County SeaGrant, IFAS office							x	x	x							
Conservancy of Southwest Florida	x				x				x							x
Audubon's Corkscrew Swamp Sanctuary	x				x		x		x						x	
CREW Land and Water Trust	x			x	x										x	x
Whitaker Center, Florida Gulf Coast University (FGCU)								x	x	x						
Gore Nature & Education Center	x							x	x	x						x
Naples Botanical Garden	x			x	x	x	x									x
Naples Zoo at Caribbean Gardens	x	x	x	x	x	x	x									
Pathfinder, Inc.								x	x	x	x	x				
Rookery Bay Reserve	x					x	x		x		x	x	x	x		
The Naples Preserve		x		x			x								x	x
Vester Marine & Environmental Science Research Center (FGCU)	x										x	x	x	x	x	
Wings of Hope (FGCU)	x					x	x								x	

PRIVATE SCHOOLS IN COLLIER COUNTY

Although the primary focus of this research was on CCPS, there was an attempt at documenting private schools in the area. There were not any fully reliable data sources on the number of private schools or the number of private school students or teachers and the information was derived from internet searches. Based on the Private School Review website there were 30 private schools in Collier County, one less than found in the previous study. Based on the Private School Review website (www.privateschoolreview.com) there are 8,040 students at the 30 private schools in Collier County that serve kindergarten through twelfth grade students. If there was an average ratio of 1:18 teacher/student there would be approximately 447 private school teachers, however, this estimate is likely to be inaccurate since there are various grades and therefore varied teacher/student ratios and some schools are focused on students with special needs and issues which can also affect ratios. Below is a list of the 30 private schools currently serving kindergarten through twelfth grade students in Collier County, Florida.

Table 11: Private Schools in Collier County, Florida

PRIVATE SCHOOL	ADDRESS	GRADES SERVED
ABLE ACADEMY	5860 GOLDEN GATE PARKWAY NAPLES, FL 34116	PK-12
CHEERFUL HEART ACADEMY	581 18TH ST SE NAPLES, FL 34117	KG-12
COMMUNITY SCHOOL OF NAPLES	13275 LIVINGSTON ROAD NAPLES, FL 34109	PK-12
EDUCATION WORLDWIDE LLC	3401 GULF SHORE ROAD NAPLES, FL 34103	KG-12
EDUCATIONAL PATHWAYS ACADEMY	1351 PINE STEET NAPLES, FL 34104	01-08
ES (Emilio Sanchez) INTERNATIONAL SCHOOL	2035 SANCHEZ-CASAL WAY NAPLES, FL 34105	06-12
FELLOWSHIP ACADEMY	1411 LAKE TRAFFORD ROAD IMMOKOLEE, FL 34102	KG-12
FIRST BAPTIST ACADEMY	3000 ORANGE BLOSSOM DRIVE NAPLES, FL 34109	PK-12
FLORIDA GULF COAST ACADEMY HOMESCHOOL	513 WEDGEWOOD WAY NAPLES, FL 34119	08-11
FOUNDATIONS ACADEMY OF NAPLES	6920 IMMOKALEE RD NAPLES, FL 34102	KG-KG
GRACE COMMUNITY SCHOOL OF GOLDEN GATE INC.	5524 19TH CT. S.W. NAPLES, FL 34102	PK
GRACE COMMUNITY SCHOOL OF NAPLES PARK	871 100TH AVE. N. NAPLES, FL 34102	PK
GUIDEPOST MONTESSORI AT NAPLES	6051 BAYSHORE DRIVE	PK-03
MONTESSORI ACADEMY OF NAPLES	2655 NORTHBROOKE DRIVE NAPLES, FL 34119	PK-12
NAPLES ADVENTIST CHRISTIAN SCHOOL	2629 HORSESHOE DRIVE SOUTH NAPLES, FL 34104	PK-08
NAPLES CHRISTIAN ACADEMY	6926 TRAIL BLVD NAPLES, FL 34108	PK-08
NICAEA ACADEMY INC.	14785 COLLIER BLVD NAPLES, FL 34119	PK-08
OPTIMAED	15275 COLLIER BLVD. #201-299 NAPLES, FL 34102	KG-12
RHODORA J. DONAHUE ACADEMY	4955 SETON WAY AVE MARIA 34142	PK-12
ROYAL PALM ACADEMY	16100 LIVINGSTON ROAD NAPLES, FL 34110	PK-08
SAINT ANN SCHOOL	542 8TH AVENUE SOUTH NAPLES, FL 34102	PK-08

SAINT ELIZABETH ANN SETON	2730 53RD TERRACE SW NAPLES, FL 34116	PK-08
SAINT JOHN NEUMANN CATHOLIC HIGH SCHOOL INC.	3000-53RD STREET SW NAPLES, FL 34116	09-12
SEACREST COUNTRY DAY SCHOOL	7100 DAVIS BLVD NAPLES, FL 34104	PK-12
SEAGATE CHRISTIAN SCHOOLS	1010 WHIPPOORWILL LANE NAPLES, FL 34105	KG-12
SSKIDS ACADEMY LLC	704 GOODLETTE-FRANK ROAD NORTH NAPLES, FL 34102	KG-08
THE VILLAGE SCHOOL OF NAPLES INC.	6000 GOODLETTE FRANK RD.N.	PK-12
UNIQUE LEARNING CENTER	5432 RATTLESNAKE HAMMOCK RD NAPLES, FL 34113	KG-12
WAVES OF WONDER MONTESSORI SCHOOL	10904 WINTERVIEW DRIVE NAPLES, FL 34109	PK-08

FORMAT, FIELD TRIP ASSETS, AND TOPICS COVERED

Actual Providers were asked about the format and delivery of their K-college programs with many similarities and a few interesting approaches. All 16 stated that their programs were “hands-on, outdoors, and experiential.” Only some of them offered classroom experiences but this varied in several ways. Only one offered a classroom visit prior to a field trip, however, this had been an approach used by other providers in the past and it was phased out due to staffing constraints. There were several that offered stand-alone classroom presentations, typically by request, with the exception of the non-provider Collier Mosquito Control District that provided a program entirely based on classroom visits. The Conservancy had previously offered classroom visits but did not this past year, however, they offered instead after school programs. In addition, they have a Learning Adventures Bus that is intended to bring the laboratory and animals to the students, however, it was curtailed for several reasons and only a few visits were held this past school year. This bus is intended to be a mobile classroom which would also help to minimize transportation problems faced by teachers and students who are seeking a field trip experience. Several locations had classrooms onsite and spent a portion of their field trip visit using equipment, seeing a PowerPoint or otherwise learning indoors. One location, the CREW Land and Water Trust had no facilities on their trail hikes and managed to deliver programs entirely without indoor facilities. When CREW wished to deliver programs such as their lecture series closer to population centers, they sought out a suitable indoor location.

Most providers failed to provide the level of detail necessary to determine if their programs were technology or experimentation based. However, there were interview questions about the topics covered and program format which provided a range of insights about what was taught and how it was covered. Standards were evident in some responses such as references to using a dichotomous key, using the skills of observation and inquiry, and learning about adaptations.

As expected among environmental educators, teaching topics focused on nature, plants and animals were ubiquitous. The topic of water quality appears to be a frequent subject. The use of technology and experimentation was also difficult to identify, but several locations mentioned scientific tools that would provide some exposure to these tools and methods.

Most of the information about field trip assets were gleaned from obvious mention of something like a boardwalk, either during the interview process or on the website. However, it is noteworthy that only three actual providers offer boat trips as part of their programs including the RBNERR high school marine science program, the RBNERR and Conservancy seventh grade program that uses the Conservancy's boat, and the Vester Center that also offers the high school marine science program. Two additional options that are available through public programs onsite at the Naples Zoo and the Conservancy. This is an increase from the previous study when it was only RBNERR that was offering it during a CCPS program, although the other providers had their public programs available at that time. Considering the extensive coastal nature of Collier County the increase in boat trip experiences for school students seems appropriate, although there are likely CCPS students that may never experience a boat trip.

Table 12: Providers Snapshot: Field Trip Assets, Topics Covered, and Activities

Organization Name	Field Trip Assets	Topics Covered	Activities including Technology and Experimentation, When Mentioned
Audubon of the Western Everglades	Take kids to various locations such as Tigertail Beach, Corkscrew Swamp, Shy Wolf Sanctuary, Naples Zoo	coastal ecosystems, estuaries, wildlife, gopher tortoises, burrowing owls, keystone species, biodiversity, shorebirds, human impacts	Dissect owl pellets, collect and analyze data, gather samples, use of nets
Big Cypress National Preserve	Onsite swamp walk and boardwalk	Water, soil, weather, the Big Cypress Watershed, its major habitats, animals, vegetation, monitoring, human impacts,	Weather station, measuring water quality, humidity, DO, Ph, soil measurements,
Collier County 4H, IFAS	Onsite garden, lake and campus, kayaking	Gardens, fishing, learning tree, aquatic wild, robots, outdoor cooking, water, fishing, sharks, sea turtles, marine debris, beekeeping, CPR, first aid and ad training,	Coding, Dutch oven cooking, gardening, fish dissection, fishing, learning tree, aquatic wild, six hours of classroom time through repeat visits, nature journaling, water testing in the lake out back
Collier County SeaGrant, IFAS office	Coastal locations	Invasive species, citizen science, seining, fishing, Florida Friendly Angler, catch and release, Lake Watch, mangroves, oyster bars, seagrass	Cleanups, seining, fishing, citizen science, catch and release
Conservancy of Southwest Florida	Onsite nature center with exhibits and walks, filter marsh, Gordon River, boat trip on Rookery Bay	scientific inquiry, and environmental stewardship, ecosystems, wildlife, water quality, id, plant parts, water cycle, dichotomous key for invertebrates, alligator and reptiles, ecosystem services, estuaries, climate change, plankton, salinity, temperature, pythons, estuaries, climate change, monitoring, field work	Boat trip, dip netting, water sampling, water graph, using a dichotomous key, plankton tow, succi disk, labs, scavenger hunt
Audubon's Corkscrew Swamp Sanctuary	Walk the boardwalk and trails, visit the swamp	Water, hydroperiods, habitats, adaptations, endangered species, natural and human disturbance, sustainability and conservation, insects and other residents of the micro-world, interdependence and adaptation, Corkscrew ecosystem, adaptations, food web	Bird beak adaptations, food web, catching insects, stations with activities
CREW Land and Water Trust	Onsite trails, cypress domes	Differences between flowering plants and non-flowering plants, evidence of fire, air plants, watersheds, water resources, wildlife, water quality, soil in each habitat hiking, wildlife, birds, skulls, soil rock habitat	Water-quality activity, where they will dipnet for aquatic animals, test the pH, and discuss water quality factors, hiking, birding, look at different skulls
Whitaker Center, Florida Gulf Coast University (FGCU)	Onsite do a wet walks and food forest, visits CREW	watershed, ocean, estuary, sea level rise, wildlife and plant life species, mangroves, sea turtles, extreme weather	water quality activity, forensics lesson and how environmental conditions affect a crime scene and how that effects artifacts or evidence, food forest session
Gore Nature & Education Center	Onsite nature center and trail walks	Habitats, uplands, hammocks, plants and animals, symbiotic relationships, water, soil, mosquitos	Labs, trail walks, observations, mosquito lab, water and soil testing
Naples Botanical Garden	Onsite garden walks and nature areas	Plants, their uses, pollinators, gardening, edible plants, insects, butterfly, adaptations, birds, seeds, flower reproduction, native plants,	Flower dissection, scavenger hunt, labs, observing seed dispersal, figuring out how to use plants to survive, making traps, stations
Naples Zoo at Caribbean Gardens	Onsite gardens and animal display tours and self-guided	Animal collection, and botanical plant collection, habitats, conservation, Zoo history,	Inquiry, using scientific tools, experiments, dip netting, use microscopes
Pathfinder, Inc.	Camp and conference centers with trails, rivers to canoe, ropes courses, pavilions, classrooms, pools, dorms and food service	dozens of curriculum choices, outdoor adventure, fire building, outdoor living skills, water, estuary, nature, history, communication, interpersonal, team building, hiking	Fire building, canoeing, nature explorations, ropes courses, night hikes, dip netting,
Rookery Bay Reserve	Onsite along Henderson Creek and Learning Center with exhibits and labs, boat trip and labs at Shell Island Road on Rookery Bay	Estuaries, water quality, mangroves, oysters, food webs, data collection, freshwater inflow, ecosystem services, plankton, sharks, birds, impacts of salinity on fish, climate change, RB history, role students play in stewardship, monitoring	Boat trip, trawling, using scientific equipment like microscopes and technology, labs, seining, do what our researchers do, use of dichotomous key
The Naples Preserve	Onsite nature center and trails	Gopher tortoises, uplands, plants and animals, water cycle, native flora and fauna, flatwoods and scrub	Hike the trail, nature exploration, read a book, read a map, show a PPT, scavenger hunt, rotations
Vester Marine & Environmental Science Research Center (FGCU)	On site marine center with labs and boats on the Estero Bay estuary	Estuaries, salt water gradients, plankton, water quality	boat trip, using scientific equipment, water sampling, using ID guides, doing a worksheet, phytoplankton tow
Wings of Hope (FGCU)	Visits CREW for trails	Florida panther, umbrellas species, wildlife and habitats, humans connection, stewardship, natural history, how biologists track and radio collar panthers for research, benefits of wildlife underpasses, wildlife infrared cameras and data	Florida panther curriculum, use of wildlife cameras and watching those videos, voluntary fundraiser for cameras, four topics covered during first visit

TOPICAL FOCUS ON ESTUARIES AND OCEANS

The majority of providers, 10 of them, stated that they covered topical information related to estuaries or oceans, with only six stating they did not. There are three programs offering boat trips on the estuary including the partnership between Rookery Bay and the Conservancy and then the Vester Station that provides high school marine science field trips in collaboration with CCPS. The other seven providers are using a combination of approaches to share these topics. Some are going to visit a body of water and dip net or canoeing/kayak and using that experience as an opportunity to talk about estuaries and oceans. At other times they have a curriculum or presentation on related topics such as fishing, sea turtles, or coastal cleanups during which they talk about estuaries or oceans. One provider noted that although they don't focus on these topics, their close proximity to the beach (notable for the majority of people in Collier County) means that these topics are locally relevant and we need to be mindful of this in our programming.

In the previous study there was only one actual provider in Collier County, RBNERR, that was focused on estuarine, coastal, or ocean topics and only two other providers included estuarine ecosystems as part of their curriculum while there is one that teaches these subjects to adults. There has been a significant increase in the coverage of these topics, although only two, RBNERR and the Vester Marine Center, focuses very specifically on these topics.

TOPICS NEEDING MORE ATTENTION

Providers were asked if there were any teaching topics they thought needed more attention and there were limited responses, and not many themes. However, at least two mentioned how important they thought it was to get kids outdoors in light of the significant amount of time that people spend indoors these days. One mentioned the importance of coordination, which came up during other interviews. A few had a specific topic in mind such as exotics or information that can be applied quickly, while others spoke of wanting to serve more, diverse students. Comments included:

Coordination and Connection Among Providers

- What is missing is the communication between FTSP and there is something cohesive among us as they go through all the different places and get it matched up with the schools and we get the CCPS science leaders involved so would love to see more cohesive curriculum work between field trips and between different years and making sure our content is tied into the classroom work and materials.
- Sites used to get together at the end (of the school year) and now we do it individually and (there is) less sharing of information.

- Love the connectivity and know the people in our market and region and a unique place and hope that we can continue to work together. I do like that we can fill gaps for other organizations like we can fill this grade level gap and there is always something to find these different places and have different experiences throughout their education and was not that sense in Chicago...and down here our barriers are tangible figuring out how we can work together and feeling like there's no hope and like partners and connect with them and all passionate we are in a place that needs help to inspire and and we get someone to visit it is a win it's so cool we have a unique place. That is not typical that I can pick up the phone and call anyone in that network and (there is) power in numbers and use them as a resource.
- I don't believe there is enough collaboration and not a popular statement – amongst leaders but does not equate to joint efforts that have impact on the education level.

Get Outdoors

- The wild nature - people are less comfortable and fear they will get hurt –and growing up and roamed the woods on a property and we learned those lessons and (will be) lost if kids continue to be sheltered – that was really the intention around this (work) and more tactile (and) engaged learning...they were not just seeing animals in cages and understanding why habitats and uplands and hammocks and wetlands (are important).
- Think it's important to get them out there.
- You can do anything and everything with them outside and you don't have to tell them no all the time So I think that we we prefer to do everything outside. Quit thinking about being inside and realize they can be outside. We need kids outside there's no two ways about it.

Equity

- I would say there is a big gap in who is actually doing and receiving this education. I think it's honestly an equity question like, which groups have access. That would probably be the biggest challenge. I think of doing this is that there is more to it than just passionate people doing the work right? If that were enough, we would be in a better place. And so it takes new voices. It takes new approaches and finding ways to get those voices included. As a young person, I think that my generation of like 18 to 35 is super overworked and really under recognized and also just unmotivated overall. I think there's this kind of apathy that could be, you know, like a a little bit of an epidemic in my group of people and people younger than me, too. So reconnecting people with land, and with something that's bigger than them.

Stewardship and Behavior Change

- I've actually was on the phone with one of our graduates. And they said that they think you should be a requirement of every citizen of Florida to take this program at least one class. The government subsidizes at least one. You can take it. You

can pick it whatever you want. But to live here you need to at least know something from our program. Which I thought was pretty, neat.

- I know what we need. I know what teachers need to deliver this information and content. So I'm good there. And now I'm like, okay, is this changing behavior? Is this shifting culture? I wanna know is, are we shifting the culture of your school to be more adaptive and understanding, to include environments or education in your daily routine? Are we doing that?
- A lot of programs focus on just getting them passionate about the environment in general. But then they don't really provide like next steps, or how you can carry it forward into conservation or sustainability. And so that is something that we really need to incorporate and do our everyday lessons.

Evaluation

- Evaluation training for providers.
- Saw there was not a lot of evaluation and was going to do that but transitioned into role and didn't have time and did a few senior research projects and presented that at conferences or incorporated into their practice – doing some minimal to achieve this objective and not most meaningful of what we can ask. A spectrum of reactions...don't evaluate and didn't want to find out if anything was wrong... there are people who don't want it and some do want it and don't have the bandwidth and all these barriers (to evaluation).

Other Ideas

- Conveying the scale of what actually impacts wildlife thriving or struggling what allows ecosystems to thrive...zoom out to the incredible biodiversity in Collier County because of this protection...there are urban pops of animals and these undeveloped areas are going away (and) we make a big change by doing one bottle recycling...for young people collectively you can do big things and pointing to reserves and the choices together we can jointly have a bigger impact.
- Under the circumstances, we feel we provide a wide variety, but we could provide so much more if we had more funding.
- Invasives, correct terminology...(recognizing) different connotation than non-native like alien, etc. (and) mechanisms of becoming introduced.
- Talk to adult angler groups (about) concepts they can teach in one hour and they can use it later on...and best practices.
- I like to see more specific info as someone who is a fisherman – regurgitation of info. that is not from here and they copied and pasted from Maryland and invite educators to think deeper on a specific topic and make it relevant to southwest Florida.
- Like to see the lack of HS (programming addressed, and) there could be more there and (the) same with Middle School and we don't provide those and we are booked and busy.

- I feel like there's in Florida not a lot of adapting EE and changing them and there are some stagnant and they keep it that way and some new ideas and progress.
- In EE, covering all students and having them have access to explore and do things on their own and (there's often) not a space for them to explore the outdoors on their own time and they are in a structured setting.
- We want to do more environmental education with our local schools, especially title one schools and provide them without cost.
- Staff and volunteers need more training for neural divergent students.

ROLE OF TEACHERS

Providers were asked about the role that teachers play in their programs and the responses below are generally grouped by the level of participation. In the prior study, approximately half of the providers expected a high level of participation including requiring teachers to lead or teach activities. In addition, the old CCPS FTSP had a mandatory teacher training component that is no longer in effect and many providers have dropped the expectation that teachers have a high level of participation. The majority of respondents said that teachers served mostly as chaperones. Only one provider stated that teachers are actively teaching a component of their field trip. Another said they would be asked to teach only if they were shorthanded. Two expressed the opinion that teachers are there to enjoy, relax, and engage. Comments included:

- They help coordinate logistics and help select students who participate.
- They come along. We confirm all of our programs a week or two out.
- They reach out and request programs
- Our teachers have been right there, Johnny, on the spot, ready to go and help us with it.
- Teachers help on the field trips. Their role is classroom management, escorting to lunch, and the computer hour they are required to spend each day.
- The teachers need to help rotate the groups from one to the next and it's a tight day.
- The teachers act as chaperones.
- They come along as chaperones.
- Teachers are there for general supervision and support. They walk in the back of the line so kids don't drop off the back of the line.
- Normally, they're kind of just there and they get to relax a little bit. Have fun on the field trip...teachers don't need to have responsibility in a place they don't know well.

- Chaperones, for first time this year tried having teachers teach something and it wasn't great.
- In the past, the teachers played an active teaching role but we've changed to staff and volunteers teaching, so call it "disciplinary" for now.
- Teachers have super easy jobs and help with the scavenger hunt on the trail, but often there's someone with them anyway.
- Sometimes the teachers will lead the kids in the the scavenger hunt portion.
- They teach two of the four stations on the 4th grade program.
- Well, we do try to make this a nice day for the teachers. We don't expect them to teach any of the information, but we do expect them to be engaged with their students. Help us with behavior management. Things like that. They it's only in the event where we're shorthanded will we ask a teacher to lead their group. But mainly we ask them to just be there. We do encourage the teachers to stay off of their phones. And as well as parent chaperones as well, to just try to be in the moment.

ROLE OF VOLUNTEERS

Providers were asked if they use volunteers in their programs. Below are the open-ended responses which are grouped by positive and negative responses. In summary, volunteers are more commonly not used by the sampled EE programs, however, the few that were using them depended on them to provide their programming. Some providers reported challenges with volunteers and few only used them when available, but did not depend on them. In light of the planning that goes into a field trip, the possibility of canceling due to a lack of volunteers seems to be a risk that most providers are avoiding. There is not a noticeable change in responses compared to the previous study.

Yes

- Yes we use volunteers for all our education programs.
- Two dedicated volunteers and could not do it without them.
- Yes, they have level two clearance (to work with CCPS)
- Use volunteers in many

Maybe

- Some volunteers, but mostly seasonal staff and interns
- They may assist if the class is large
- We use them as they are available and then fill in staff when they are not.

No

- No volunteers for youth ed programs
- No volunteers
- Don't use volunteers much in school programs and they have other roles.

- No, all paid staff
- All paid staff with the students, no volunteers.
- No
- Not much
- Now hiring seasonal staff. Yes, in the past. A lot of times they would use volunteers. We have a lot of volunteers that used to be teachers, and they are really passionate about continuing helping students. And so they used to have a lot of volunteers.
- Tried using volunteers to teach, but did not work well...backgrounds and people with limited availability....so there's been a lot of resources put into some of those volunteers, and a lot of time and effort, and then they just they're gone.

COMMUNICATION WITH TEACHERS

Providers were asked how they communicate with teachers. Below is a list of responses that shows that email communication is most popular, although occasional phone calls were mentioned, some had forms, and there was widespread reliance on the CCPS coordinators and website. Those associated with CCPS FSEP book their programs in August.

- Email - We confirm all of our programs a week or two out.
- On the phone, or via email
- Email and a few phone calls
- Email with teachers – portal
- During the first week of August we set up a time ... and asks every 6th grade teacher to be in a meeting for this.
- (CCPS) elementary science school...send that to all the third grade and they sign up and then...communicates after they are signed up, same with survivors work with middle school and science coordinators and we have limited dates and they help us pick and choose between those classes.
- We used to do that in the past we would go directly to the teacher, but now that we are focusing on title one schools the designation changes year to year...we work with the district.
- All sign up in August - email communication with teachers mostly there is always a lag in responses because they are so busy during the school year and sign up goes well
- All set up through CCPS...they pre-pick dates and the kids come. The teachers coordinate through CCPS and communicate directly with us by email to confirm dates and when they have last-minute questions relating to their students.
- Coordinate dates with CCPS science coordinators

- Booking done on a Google form - Booking in August takes place for all...email details to plan for the trip and training.
- Through Foundation...through CCPS
- They find out info. online and we don't advertise.
- We sent them an outline of the curriculum via email. maybe a call prep
- We have a distribution list and promote field trips – also when they have been on a field trip here they get an “its never too early to book your field trip” email – word of mouth – with teacher turnover we've had to reintroduce ourselves.
- Teachers use both online form, and send that to us, and I will say we have a mix of who calls or books online and refer back to the form for the bookings.
- Usually teachers get ahold of her - Emails mostly to coordinate and best for her cause she is not near a phone.

TEACHER REQUIREMENTS FOR FIELD TRIP PROGRAMS

Providers were asked if there were requirements for teachers prior to bringing students on field trips and if any of those were associated with CCPS programs. Presumably the providers have forms and logistical arrangements that the teachers complete, but the question was intended to capture anything beyond that and specifically training or orientation. Most of the providers said nothing special was required, although two of those previously had required training as part of the CCPS FTSP and one had an orientation when the program first began. Some providers have more than one program, and the providers and programs that currently require training include:

- Big Cypress Preserve requires new teachers to attend the training for their sixth grade program which is part of the CCPS FSEP
- The Conservancy of SWFL requires a virtual teacher training for their third grade Watery Wonders which is part of the CCPS FSEP
- The Naples Botanical Garden requires training for their fourth grade Budding Botanist where teachers lead activities, which is part of the CCPS FSE program
- Rookery Bay Reserve in partnership with the Conservancy of SWFL requires seventh grade teachers to attend in person training each year due to safety, regardless of CCPS requirements, due to the field trip being on a boat
- Rookery Bay Reserve requires teachers on an in-service day for CCPS to participate in training for their high school marine science program.

PROPORTION OF YOUTH AUDIENCES SERVED

The majority of respondents failed to answer the question asking about the proportion of audiences in the categories of public schools, private schools, homeschool, or college

groups. This may be because some programs were out of their purview or perhaps it was difficult to quantify, or not tracked in this way. There are however some notable approaches to be considered. The Big Cypress Preserve continues to be the only program that serves every student of a single grade, sixth, in their CCPS partnership. In addition, the Naples Zoo offers Kindergarten through 5th grade students the ability to participate in their live, virtual ZooCon program, although this is not a field trip. Other providers take whatever number of students they can manage for their assigned grade. Pathfinder is the only provider targeting private school students, charging them for programming, and seeking outside funding to offer programs for public schools. Most providers were open to accepting a range of public, private, homeschool and college groups as requested. With the exception of Pathfinder, the others served primarily public school students, then private schools, then homeschools in terms of the proportion of their audiences which makes sense because that mirrors the overall proportion of those types of students in the County. There are seemingly more private schools that could participate in field trips and this could be an area of opportunity for providers.

PROGRAM DURATION AND TIMING

There were six providers that offered programs lasting 1-2 hours and only one that offered short 45 minute to one hour programs. There were six others that offered programs lasting three hours and up to a half day, which is four hours. Many talked about the timing as being “ideal” but that issues with buses or other changes and delays required them to be flexible and willing to shorten programs with notice as late as an hour just before arrival. The impacts of busing challenges that shortened the length of programs was a significant challenge shared widely by providers. Two providers either failed to answer or had so many different delivery times, they could not provide a simple answer to the question for analysis. Pathfinder was the only provider that offered full-day, multi-day, and overnight programs that provided that type of experience which could be beneficial to students. During the interview about impacts from COVID, their representative shared a story about a new school they were working with that had 100 students in their class, but only 50 showed up, because “the other 50 families...(the) parents didn't feel comfortable. They were like, we don't know about sending our kids away. This would be the first time we did it....We still have parents that are nervous about sending their kids on overnights.”

When providers were asked when they offered their programs it was predominantly weekdays during the school year with the exception of teacher training, which was typically in the summer, and alternative programs that were not field trips. High volume programs spoke about booking “every single school day between August and April.”

Others varied their grades by season for example serving seventh grade during October, then High School during December through March, then fourth grade February to April.

DISTANCE SCHOOLS WILL TRAVEL

Providers were asked if the distance travelled was a key factor in participation. In the prior study, there were a few comments that indicated that distance has been an obstacle, but the overall trend at that time did not demonstrate that distance is the primary limiting factor to school participation in field-based environmental education programs. However, in recent years, the bus driver shortage which limits the number of buses available for field trips has impacted the length of time available for the field trip to take place. Therefore, the distance to the field trip has become an issue that is reflected in the comments received. Considering that busing issues will likely continue for several years, increased coordination among providers and CCPS may allow for more field trips if for example a school that was being cancelled due to distance was able to go to another provider, if that provider were flexible enough to provide a program for a grade level that they did not usually serve.

- No, all kids attend
- They come from throughout Collier County
- One of the schools walk here, so they have no transportation issues.
- Only due to the time on the bus, administrators have pulled trips that were scheduled due to bus time exceeding trip time
- Busing problems and distance - they feel frazzled and 80-90 had to shorten their field trips and some had to cancel and they were too far away or couldn't get buses.
- That location was hard for places that are far away.
- Distance travelled from buses and had them cancel and couldn't get buses or the field trip was too short.
- The whole point of the mobile classroom was to reach those that are too far.
- They are further away and so buses mean they have to go back early or come late and so a lot of schools who had previously come were not able to this year due to busing.
- (The field trip) used to be 9 a.m. to 1 p.m. and now shortened... and they get last minute cancellation of the buses...our school district is so big.

CORRELATION TO STANDARDS AND WRITTEN CURRICULUM

Actual providers were asked whether their programs were correlated to any standards although three skipped this question and no data was available. The majority of

providers, 12 of them, had written curriculum and were correlated to standards. Only one was not formally correlated and did not have written curriculum, but they said they “work with teachers to connect to standards or curriculum.” CPALMS was the most mentioned tool for correlation, which is an online toolbox provided by the State of Florida, that helps educators implement teaching standards. The Sunshine State Standards, NGSS standards, and Cambridge Standards were all mentioned. One provider had a graduate student update their standards, while another recently realized that the standards they connect to had not significantly changed and that they were still up to date on their correlations. Another provider tied their programs to standards, not only to science and math, but also to social studies, language arts, and history. One provider was working to make their program tie to standards more visible to teachers on their website and in their promotional materials saying “Some long term clients over the last year who've been come to us for years because they want to go to a program that aligns with their school standards... That's one of the reasons we're making a a bigger pivot to say like these do align... and to develop new curriculum that is impactful especially for where we're at in Florida. So it's definitely a trend I've noticed, is teachers more and more wanting to see that - Does it align with school standards?” The Naples Zoo was transparent about their alignment to standards and had the standards on their website under the description of each program like this, “Standards Achieved: II.A-C, III.B.1, IV.A-E, IV.B.1, IV.C.1-2, IV.E.1, IV.E.2, VI.A.1-3, VI.B.1, VI.E.1, VII.A.1, VII.B.1, VII.C.1, VII.D.1”

PROGRAM EVALUATION

During the interviews the question of programmatic evaluation was asked in the form of “Do you evaluate your programs? If yes, what do you do with that information? If no, why not?” Below are the open-ended responses to this question from the actual providers with mixed results. Approximately four of them were not currently doing any evaluation, although one of them had done it in the past and will do it in the future. Of the ones saying they do evaluate, most are evaluating teachers, and only some of them are evaluating student learning and experiences. Several relied on a debriefing-style conversation with teachers or CCPS staff to get feedback, which is less empirical than a direct survey of audiences served. The use of graduate students and an external evaluator were novel approaches to gathering the evaluation data. In the previous study, challenges related to getting evaluation back from teachers was noted, and one provided made a point of having the teacher do the evaluation before they left the field trip. There is an increase from the last study in the number of providers reporting that they are evaluating their programs, however, since grantors, donors, and agencies typically require both quantitative and qualitative evidence of past performance, it may be helpful to support providers in more consistently gathering this information.

Not currently doing much on evaluation:

- We have plans to evaluate and done a few surveys after site visits not a program as a whole – is feedback survey.
- Before and after each school year's field and lab experiences we discuss program delivery with CCPS coordinators -- making adjustments for class needs and changes in technology.
- No evaluation - talk to professors and teachers afterwards and ask what they want and if they want something changed it is very customized - and they all come back so that is good - they do it for class and got good feedback
- Sometimes. There are no requirements for evaluations by (our organization) for these programs. CCPS does not require evaluations, however, we have attempted several either in partnership or internally.

Yes, we are doing evaluations:

- We do a brief pre and post three questions with students and do that for every third grade and that is reported and use that data for grants. Teachers get a general survey and how they liked it and switched that is done during the field trip, during lunch, the teacher does the survey and there are no emailed surveys going out. We get a lot of good teacher praise and well run and enjoyed it.
- So the way I have evaluated the program is, I started doing online anonymous surveys with teachers
- We offer schools the opportunity to evaluate us and use that to improve, based on their feedback. It's a teacher survey, not the kids, it would be logistically challenging onsite for two hours to do that so we offer schools an opportunity to evaluate us.
- CCPS did an evaluation and sent it to us and adjusted it. That was where we saw a huge uptick in satisfaction of the kids wanting to do it, or in the stuff that was tactile, that was engaging. CCPS asked the teachers and they did it and provided it to us. They sent out like a a questionnaire to the teachers.
- We send teachers an evaluation after the program – we get a really low response rate – nothing for the kids.
- We have a survey we send out to the teachers at the end of the school year.
- And we definitely do evaluations from teachers and students after every trip.

Other thoughts on evaluations:

- For all others, besides CCPS, we have survey we give them for like the summer lecture series. We have a notecard with a QR code on it a business-size card and on the back has the website and list of programs they can keep the card or I'll collect it. Questions like Was this engaging? What did you learn? Is there anything you wish?
- For a teacher training we hire an external evaluator for the first two years, but not the last year during the no cost extension.
- Had a grad student who studied and did a pre and post-test and they evaluated each day.
- And we definitely do evaluations from teachers and students after every trip. But maybe a little bit more tailored to a grant focus would be the future. And they're

requiring a lot more, you know, survey and background data. But yeah, we need more information about the impact of our programming and who we're serving. That's definitely something we'd want to develop more over here.

- So the way I have evaluated the program is, I started doing online anonymous surveys with teachers. I think I used Microsoft like, OneDrive forms...they're just really easy. And they even can create a QR code that can be scanned. And so I created online surveys for teachers. As the program was getting towards the end of the program after they had been through maybe 80% of it at that point of the day, I asked them if they would be willing to participate in that survey. I try to keep it really brief, maybe just 8 or 9 questions just rating the program. I tried to get information like, what grade level are they? Public private charter? If they're a title, one school. So I got that data. As. And then just evaluating things. Questions like, did this meet your expectation of an environmental education program? Field trip? Did it meet the standard that you would be covering for your grade level? You know. Were they above, or were they below standard? That kind of thing, the pacing of the program. Is it too fast? Is it too slow? Is it just right? The quality of the presentations? And then I made sure that I asked sort of an open-ended questions at the end, basically any other suggestions, you know. Adding, taking things away that kind of thing, and and that that was helpful, because sometimes we did get I couldn't really hear our presenter or the pacing was a bit too fast today, or things like. And then, because it was live and I could go and check that then I knew to bring that up with our staff. I could either bring it up that day before everybody left. If I felt like it was really really pertinent, or if I started to see a trend, then I can bring it up with our staff, maybe following week, or whatever before programs began again. I also did that with our, but I also did it with FGCU students. I made an a separate one. Did they find it beneficial for their service learning or was it a waste of time for them? Would they come back? Would they recommend this to other students at FGCU students.

ANNUAL NUMBER SERVED

The sixteen primary providers in Collier County track the number of people served in different ways. For example, some separate out public programs from school programs and others combine those audiences. Therefore, the table below does not provide an accurate comparison or total, but it provides a general range that programs serve between 50-100 students per year to up to approximately 4,000-5,000. In addition, several providers serve participants well beyond Collier County, such as Pathfinder. This analysis shows that the cumulative total of all participants recorded is 21,122 which is approximately half of the 47,161 Collier County school students reported in the previous study. It is worth noting that several providers had lower numbers than usually during the 2023-2024 school year due to busing issues, staffing constraints, and in the case of the Vester Station, they were still recovering from Hurricane Ian that hit in 2022.

Table 13: Annual Number of Students Served

Organization Name	~Number	Comments
Audubon of the Western Everglades	90	not just field trips
Big Cypress National Preserve	2500	field trip only
Collier County 4H, IFAS	7000	Total service w/no breakdown by type or audience
Collier County SeaGrant, IFAS office	30	days w/youth, not individual students
Conservancy of Southwest Florida	1216	
Audubon's Corkscrew Swamp Sanctuary	n/a	
CREW Land and Water Trust	1125	
Whitaker Center, Florida Gulf Coast University (FGCU)	50	for 4 weeks
Gore Nature & Education Center	211	
Naples Botanical Garden	4,000	
Naples Zoo at Caribbean Gardens	n/a	
Pathfinder, Inc.	100	
Rookery Bay Reserve	300	
The Naples Preserve	400	
Vester Marine & Environmental Science Research Center (FGCU)	0	this year, but 450 usually
Wings of Hope (FGCU)	4,100	
Total	21,122	

PROGRAM PROMOTION OR MARKETING

Providers were asked how they were marketing or promoting their programs. As previously mentioned, many providers were partnering with CCPS to provide school field trip programs and the promotion was through their portal, emails, to teachers on in one case a meeting with teachers. Several providers also mentioned that their teachers were repeat attenders, which was a significant finding from the previous study, and therefore no promotion was necessary. In addition, several providers expressed how they were full and did not have the capacity to serve additional groups. Some of the providers work in large institutions with public facilities such as nature centers or learning centers or the Zoo, however, none of the providers referred to their institutions

branding, marketing and outreach efforts, which are likely reasons that the community has institutional trust in these organizations and may prompt teachers to attend. The results of this interview question served to validate information gleaned from previous questions.

- Does not market
- Never had to attract or advertise and can't take more people than we already take.
- It's word of mouth. open house on August eighth. No staff to do more programs.
- Usually teachers get ahold of her, most find out by word of mouth. We do not market our programs as we cannot handle any additional programs because of staffing.
- Grades through CCPS science coordinators, nature center word of mouth.
- No, no! We work through the School District...my understanding from conversations with them is that that's kind of what they regularly do they coordinate the trips for the schools with the different service providers.
- Email teachers on their list, works with CCPS
- Email with teachers – portal –we have a distribution list and promote field trips – also when they have been on a field trip here they get an “its never too early to book your field trip” email – word of mouth – with teacher turnover we've had to reintroduce ourselves.
- This is coordinated directly with CCPS
- Website is our number one with our information we do like to go to outreach events, the CCPS steam expo... any other community partner events
- No promotion, only targeting CCPS currently (and relying on them to get the word out to their teachers). If others call, we may or may not provide a trip, based on resources.
- Reached out to Lee county at one point ...so far only been conversations

RESOURCES MADE AVAILABLE TO TEACHERS

Providers were asked if they made any resources available to teachers such as handouts, study guides, pre-visit activities, classroom visits, etc. As previously discussed, only the Big Cypress Preserve continued to visit the classroom in advance of the field trip. However, providers frequently supplied pre-trip materials, classroom activities that could be done before or after the field trip, and pointed to resources on their websites that could be used by teachers. However, one provider had the following comment about why they did not provide additional resources, “We used to have a full pre-visit guide, especially for self-guided programs, but it was a struggle to get teachers to open their schedule and it wasn't worth our time to update it. It was clear no one is looking beyond what day is my field trip –our website is robust and leave it up to them. The following represents the open-ended responses to this question along with information gathered from provider websites.

- Pre-recorded presentations available on the website, bird ID guide, too.

- Pre packet and pre-site visit in the classroom.
- Handouts, study guides, and pre and post-visit activities.
- Online resources through SeaGrant
- Teacher training materials and stuff on the website like the Virtual Nature Center Visit video, touch tank adaptations lesson plan, hermit crab touch tank video, Lightening Whelk touch tank video, alligator, etc.
 - We do have a packet for fifth and second grades
 - I also send them plenty of materials, for, like prep for the field trip. They could incorporate into their classroom lesson plans if they want to do activities that will kind of prepare them for the field trip or that relate to the content that we'll be covering.
 - We sent them an outline of the curriculum via email.
 - We had monthly check ins with teachers and provided them with supply kits and dropped at the school and they enacted the modules and they filled out a reflection and see how it went and what they were using.
 - We used to have a a full pre-visit guide, especially for self-guided programs, but it was a struggle to get teachers to open their schedule and it wasn't worth our time to update it. It was clear no one is looking beyond what day is my field trip –our website is robust and leave it up to them.
 - Template for the Promise Globe so that students can write their promise on how they will help our Earth while in the classroom. They bring their promises with them and put them in the Promise Globe when they arrive.
 - Sent copies of what would be at each station along the boardwalk.
 - Post field trip, sent with teachers such things as word searches, coloring pages, etc.-all to reinforce what was presented during the field trip.
 - But as far as a packet, we always do give the teachers information for some things that they can do post program. And we do make this a requirement where they have to educate other people about what they've learned. And they get a separate activity sheet to work on that where they sit down with, mom or dad, brother, or sister, and they go over the things that they learned about in a much more condensed form. I think it's like 8 questions.
 - So the what we do is tell them anything that's on the website. They're welcome to use some of that stuff. I have some things that I've worked on in the past, that I will be adding, in particular.
 - Require teachers to attend in person training each year. Pre-activities are provided, not required. Pre-visits were done in the past but due to time constraints/staff resources they were removed from scheduling.
 - Instead of the pre-visit they created a video that introduces our faces and shows all the spaces the kids will be in. It is an interactive video that the teacher plays in the classroom and has a toolkit of biofacts, equipment to review. This worked out great and the students were prepared. The only downside I felt / saw with eliminating in-person pre-visits was the loss of our staff meeting the kids and having that face-to-face engagement.

REASONS FOR ATTENDING

Based on provider responses, the list below was compiled of both specific reasons why teachers chose to attend EE programs, including positive outcomes that are the reasons why these programs are valuable. These responses are from providers and not from teachers. There are several comments about the perceived importance of getting kids outdoors, how it's fun, different than the classroom, and therefore engaging. Two providers mentioned that they had teachers attend their programs that were formerly students, which speaks to the longevity of some of the local providers.

Reasons that teachers attend EE programs, according to EE providers:

- We've had teachers that came as students and they are into it!
- Have had teachers that came as students.
- Motivation – it is power to take high achieving kids to do more and explore more deeply and also a way to spark kids who have not been sparked by the in classroom stuff and that can get a kid engaged. They care deeply about teaching and this is an effective way and they enjoy getting out of their four walls and do it in a supportive way.
- Always told it is part of their science grade, can be used as a threat, we tell the kids it's part of their science grade and all the teachers think that too.
- For the most part they are looking for something hands on and interesting and they want that it's organized and grateful to come here and follow the rules and the educators (have) not a whole lot to do and the kids have fun, see animals and like activities and fits in well to the curricula.
- They're interested in what we're teaching
- If I can spend time on the water instead of class I would do it.
- Is unique, plus the surprise of unexpected finds (in nature), labs, boat ride, trawling is special, fun.
- Every year we see more and more kids say, I've never been outside like this. I've never been this far away from civilization...I'm so glad you're here doing this because it's their first instance of having that experience. They live in a city. Their parents don't do this. Their families don't do this. They've never connected with nature on this level. So I hear that often. So even just taking them outside for a hike and we see a rabbit - They're floored.
- We walk them into different habitats, they're able to actually walk into a seasonal marsh and they walk into a cypress dome, which, when they come, it's normally pretty dry, but there's still a little bit of water, and so I think it's cool to get them into the environment. And like at first, they're normally a little hesitant, they don't want to get their feet wet, but once they're in there you can't get them out.

- Provide the standards to make it attractive to school based individuals but that is not where we live, we like to create and do, there is more to be learned if we are not tied to them is it better that we have it.
- Passionate staff
- During Covid 4-H was about the only one that got in the schools. So we just have a reputation of following through and being there for the kids
- They can walk so they have no transportation issues.
- Homeschoolers get ahold of us and we tailor what they want done and do that with the schools too -work with the teachers to connect to standards or curriculum - talk to professors and teachers afterwards and ask what they want and if they want something changed - it is very customized - and they all come back so that is good - they do it for class and get good feedback.
- A lot of teachers have been with (us) for years and years, and they know the content. And because the program, the flow and the content, has stayed the same over many years... I think it helps them be able to kind of predict what's coming up next. It gives them some peace of mind as to we have no big surprises...It can sometimes be a bit on the repetitive... but it has its advantages to the students. It's brand new.

BARRIERS TO TEACHERS ATTENDING

Providers were asked for their opinion on what might be some barriers to teachers attending field trip programs. Quite a few focused on the current issues with busing, while other shared a wide range of thoughts on this issue.

- Bus problems. Had to change a lot of stuff and toss some stuff and this year they cut us another hour now be on the bus at Noon-12:30 so they get there at 10-10:30 and buses very unreliable and the kids were crying and there's no bus – this year, no time to eat lunch, and they eat on the bus but some drivers won't allow that. Before they would get a few minutes then go home and now they have damp clothes and shoes and they all have to sit in the cafeteria and sit outside and dry or go back to classes wet. They may have an hour or 1.5 on the trail and barely do it in an hour – it's like a drive by – we redid it completely again - they are doing a shortened revised version and they don't know the difference – they are on the bus for over an hour and get here for just one hour – dip netting can get cut out – but yes it's worth it – they may never have the opportunity to go in the swamp – if they get something out of this – it's got to be doing something
- CCPS buses/bus drivers not available for field trips (is this not affecting sports?) also causing decreased hours on trips,

- Distance travelled from buses and had them cancel and couldn't get buses or the field trip was too short.
- Used to be 9 a.m.- 1 p.m. and now shortened there field trip may be one hour and they get last minute cancellation of the buses – our school district is so big.
- Had some teachers that didn't like it that much and sometimes it's not their bag, some that are scared of the swamp.
- When you do it.
- With the teacher shortage and a sense of being overworked and hard for them to get back to us and read all the emails and to confirm details and we get so many students and different teachers and hard to book transportation and they get different messages from principals and from us.
- When students went back to school (after COVID) they gave the teachers really prescribed curriculum so they didn't have to figure out the modality and harder to get hands on outdoor learning into schools when they are so prescribed since and want them to be at the exact same place in the lesson from classroom to classroom and that has stuck around.
- Education laws have changed by jeopardizing teachers who would use it and we are cautious what we are putting teachers in.
- COVID, virtual learning and kids lost a lot of soft skills and they are different children – lacking the how to get along in a group
- Overnight commitment.
- Not being able to bring a whole grade at one time. The size of our building and preserve limit the size of a group.
- We had to cancel some trips due to boat/dock maintenance and there was at least one complaint, so the inconsistency of what we can provide – the teachers forget or are afraid of changes or found an alternative field trip.

CHALLENGES WITH TEACHERS

Providers were asked if they had any particular challenges in working with teachers and how they managed to overcome those challenges. Most responses to this question continued to focus on the busing challenges with several saying how positive their working relationship was with teachers.

- The main difficulty has not been teachers. You can't talk to them whenever you want which is hard to plan and we are between the site and the teacher. They have a different schedule and so we build in a lag time to plan.
- Had one group of kids that all didn't go because the school was afraid of the weather so they all missed their field trip and could not put it back into their schedule. Another class had to cancel but got them in at the very end during first week of April. Sometimes wild fires get in the way, the buses couldn't leave due to smoke from a fire. Busing problems.

- No the only the most recent one that and I don't know if it was a true challenge the kids needed to come by bus, and they had no bus funding left. So I had to pay the buses. But our teachers are not problematic.
- My experience with teachers is they don't want to work with you and they say here you go here's my class and I want to develop stronger programs with them but they want us to take over their class and they won't look at this together.
- We were affected by busing this year and last a lot of shifting of schedules and let us know if they have to shorten their trip and they don't know until the morning of and that is last minute and they can't get there on time and leave early – they feel frazzled and a real 80-90 had to shorten their field trips and some had to cancel and they were too far away or couldn't get buses
- Nothing that stands out with teachers. We always deal with weather in how we schedule and this year it was really wet this year a lot of rain and unusual, work around the rain.
- People can't find us and we are remote and there are two different Sanctuary roads and they go to the wrong space and logistical challenges.
- We may have had one bus problem but wasn't a regular occurrence and because of the busing scenario they had to leave immediately at p.m. and creates a challenge to deliver it in a tighter time period but we figured it out - delivering programming in a in a tighter time period.
- We are further away and so buses mean they have to go back early or come late and so a lot of schools who had previously come were not able to this year due to busing.
- They are always great to work with and they are really good on the field trip about getting students to listen and stay engaged and I always really enjoy working with them.
- No, they're always great to work with. I've never had any issues with teachers with lack of communication, and they're normally really good on the field trip about getting their students to listen and stay engaged and stuff like that. So I always really enjoy working with the teachers, and I haven't had any issues like I said.
- Busing was an issue for teachers this past year.
- Challenges with teachers, they get a lot of pre instruction and it is all written down, but then some they didn't know why they were here and did not have students divided. Some have a sub come for the day and they are expected to lead.
- Biggest challenge has been the bus driver shortage – the trip is supposed to be 3 hours and now it's running between the stations.
- Used to have a a full pre-visit guide, especially for self-guided visits, but it was a struggle to get teachers to open their schedule so it wasn't worth our time to update it and it was clear no one is looking beyond what day is my field trip.
- (Field trip) used to be 9 a.m. to 1 p.m. and now shortened.

- Some are more enthusiastic or interested than others, but all enjoy it and getting on a boat is great.
- Teacher challenges for registration arise from the booking person is not the one who is showing up, so the information we send in advance may not get to the people on property. The new entrance it is more seamless and is better now
- In the classroom we have some teachers in tune and aware of their class and see them succeed in the new environment and some teachers take this as an opportunity and sit back and not participate their learning.
- Whole other set of challenges is the need (demand) for teachers and say I'm not a math teacher, or teaching science and (it's not their subject area) and they are in this situation, not comfortable, and not trained in this.
- Most are repeat and have a ton of repeat clients. They are hard to lock down, challenges getting info. on time and the trouble is waiting for info. to plan appropriately.
- Actually on program, I would say, the biggest challenge that we would run into is a lack of alignment in our styles of discipline. The teachers have a much more hard line about certain things where we allow certain things to happen, and we may discuss it. But we're not going to discipline the students in the same way that the teachers might. And so there's definitely like a meeting of minds of we're gonna let this continue. There's some natural repercussions that we think would benefit the student more than us being like, Don't do that. And so that is the thing that we see in the field, probably most often. But I wonder if that same stuff would work in a classroom setting versus in the setting that we have the kids where they're outside. They're walking around. It feels a little lawless so they can hold each other accountable in a better way. And we're not asking them to sit at a desk and listen to us the entire time.
- We were going to ask teachers to try to help and learn ahead, it was the first time we did that, but the section she had wasn't that great and the other teachers did not come back and they missed all the stuff outside.
- Most teachers have been before and know what to expect.
- Not knowing or having clear what CCPS needs and wants.
- Teachers changing (turnover).
- Maybe not that comfortable with science or outdoors – obstacle to them teaching – feels like they are lazy and noncompliant but they are likely scared and overwhelmed.
- No time for teachers, overwhelmed, overworked – schools cover so many societal issues.
- They are overwhelmed and untrained to deal with science and outdoors.

TEACHER TRAINING PROGRAMS

A total of six teacher training programs were identified as serving Collier County teachers, focusing on nature, natural resources, science, and conservation, but not part of the teacher training required for teachers to participate in CCPS field trip programs and not part of particular program. The programs identified were stand-alone programs that are summarize below.

Table 14: Snapshot of Teacher Training Programs

Host Organization Name	Teacher Training Program Names	General Topics	Duration	# Teachers Trained	Cost	Stipend
Collier County 4H, IFAS	Project Learning Tree, Project Wet, Project Wild	Trees, aquatic life, wildlife	6 hours	20-24/year	N/A	N/A
Everglades Foundation	The Everglades Literacy Program	Everglades, watersheds, food change, endangered species, invasive species, water quality and quantity, restoration	6.5 hours	1,300/last year	N/A	\$100
Whitaker Center, Florida Gulf Coast University	Schulze STEM Institute and Sustainable Waters	STEM science, and climate change, sea level rise, extreme weather, aquatic topics, estuaries, oceans, mangroves	STEM is 5 days, Waters 4 days	50 in STEM, 7-9 for Waters	None	STEM = \$1,000, Waters=\$1,120
Florida Master Naturalist Program, University of Florida	Florida Master Naturalist Program	Broad range of Florida natural resources, plants, animals, issues, coastal, upland, etc.	25 hours	352/last year were either K-12 or EE	\$250-\$425, teachers scholarships available	None
Guy Harvey Foundation (GHF)	GHF Teacher Training	Marine focus, ocean, fish, seagrass, manatees, sawgrass, plastic pollution, adaptations, sharks, reefs, food web	1 or 3 day	N/A	None	N/A
Rookery Bay National Estuarine Research Reserve	Teachers on the Estuary (TOTE)	Estuaries	15 hours	10-20/year	None	Varies - \$0, \$100, \$300

Interviews were conducted with five of the six teacher training providers, not including the Guy Harvey Ocean Foundation, making it an 84% response rate. Overall programs lasted from one day to up to five days, and took place at various times including during the summer and during the school year, on weekdays, weekends, in the day or evening. The FMNP is the only program that charges teachers, although there were sometimes nominal fees to cover food or certificates, and FMNP has a scholarship available for educators. All programs included some resources for teachers such as handouts, handbooks, a kit of tools to use to deliver classroom lessons, online resources and lesson plans including videos. Two programs including the FGCU Whitaker Center, RBNERR and 4-H taught between 10-50 teachers per year, while the others taught upwards of 100-1,500 per year. Only the Guy Harvey Ocean Foundation had a teacher training program that appeared (they never responded to a request for an interview) to be entirely virtual, the other were predominately in-person although some parts of the

program were virtual to reduce transportation time and costs and allow more teachers to participate. They all conducted evaluations, although this could not be confirmed for the Guy Harvey Ocean Foundation program.

The Everglades Foundation program provides an interesting model where they train teachers in-person for approximately 6 hours, then give them lesson plans and tools to use curricula specifically targeted to their grade level and standards. Their goal is to have all the teachers in all grades teaching the lessons designed for that grade so that students get repeated and scalable knowledge about the Everglades ecosystem. There are also incentives to broaden inclusion through whole-school stewardship activities through schools applying to be a Champion School. This approach makes it easier for teachers to teach what are sometimes difficult science topics because of the tight and intentional link to standards. The approach is also inclusive of the whole school and multiple grade levels, and the school can opt to include outdoor or field trip learning. With their record-breaking year teaching 1,300 teachers throughout the State during 77 trainings and over a hundred schools applied to be Champion schools, the approach is well received and can inform other providers.

- **4-H, IFAS** – Staff are facilitators certified to teach:
 - Project Learning Tree (K-8 teachers) is a program of the Sustainable Forestry Initiative that has a State Coordinator and EE providers can become instructors and certify teachers in this curriculum.
 - Project Wild (pre-K-12th), Aquatic Wild (K-12), and Growing up Wild (ages 3-7) are programs of the Association of Fish and Wildlife Agencies that also have a State Coordinator and EE providers can become instructors and certify teachers in this curriculum
 - They also teach the Florida Master Naturalist classes.
- **Whitaker Center, FGCU** has an ongoing teacher training and one that was recently piloted through grant funding, but that they want to continue offering.
 - At the Schulze Summer STEM Institute for Teachers for K-12 educators, participants will be immersed in the research-based practice of writing and facilitating engaging inquiry-based STEM activities focusing on the SW Florida environment. Inquiry-based pedagogies have been shown to improve student engagement, comprehension, and retention. The workshop infuses technology into the week and incorporates field instruction. FGCU faculty from the College of Education and the College of Arts and Sciences and Conservancy Staff bring a balance of expertise to you during the workshop week. The Schulze Summer STEM Institute for Teachers connects real-world environmental research with evidence-based, hands-on instruction. Since 2013, the STEM Institute has worked with over 200 K-12 teachers from the five county area and beyond! Teachers sign up including 2 cohorts of 25, with 50 teachers total primarily from Lee and Collier Counties. Teachers receive a

- \$1,000 stipend and they create a module to use in their classroom. Annual. STEM topics include water quality, pythons, forensics, wet walk and food forest session on FGCU campus and the Conservancy campus.
- Sustainable Waters Teacher Training program – was a B-WET grant-funded pilot program on climate and sustainability that ended in July 2023 and took place during COVID but FGCU hopes to continue the program. It was Lee county focused but they anticipate expanding it to other counties. It's a place-based climate change curriculum focused on visible impacts in southwest Florida, increased extreme weather, sea level rise, and aquatic topics such as watersheds, oceans, estuaries, wildlife and plant life species such as mangroves and sea turtles. The curricula follows the NOAA model for environmental action plan frameworks and at the end of the year there is a symposium where the kids present and get awards. The funding began when COVID happened and the program was going to be a four day in person training, but instead did online modules. The first cohort was invited during the Fall of 2021 and the second cohort during the Fall of 2022. Also, Hurricane Ian struck in 2022 which disrupted the program. They had monthly check ins with teachers and provided them with supply kits that were dropped at the school and the teachers enacted the modules and completed reflection forms to see how it went and what they were using. There were two pathways including a canned curriculum and another version that was create your own adventure and they picked one. There were 7-8 teachers per year over two years.
 - **Florida Master Naturalist Program (FMNP)** is an adult education program developed by the University of Florida and provided by participating organizations. FMNP training will benefit any persons interested in learning more about Florida's environment, seeking educational contact hours, or wishing to increase their knowledge for use in education programs as volunteers, employees, ecotourism guides, and others. Their mission is to promote awareness, understanding, and respect of Florida's natural world among Florida's citizens and visitors. The FMNP teaches those who teach others about Florida's unique ecosystems and wildlife. FMNP Instructors teach participants about Florida's environment using science-based information and interpretive techniques that prepare participants to share their knowledge with others. In turn, FMNP graduates share their knowledge and foster principles of sustainability, connectivity, and biodiversity to assist others to understand and respect Florida's natural world as a community to which we all belong. One of their target audiences is "Teachers and professionals who wish to acquire educational contact hours for continuing education." (FMNP website). Programs are 40 or 24 contact hours and the people that actually teach the classes are from 85 organizations such as NGO's, environmental education centers, nature preserves, recreation departments for counties, and more. The training schedule is at the discretion of the instructors but typically include local field experiences. There is a scholarship available for educators.

- **The Guy Harvey Ocean Foundation** (information from their website) is committed to preparing educators around the world to teach students about marine science, highlight maritime career opportunities with a focus on females and minorities and to inspire future generations to conserve our oceans. They're goals are 1) A scalable Teacher Workshop Program across the state, country & internationally, 2) Standardized teacher training workshops, 3) Increase in teacher efficacy. It includes educational content introduction and implementation and engaging hands-on teacher experiences. Guy Harvey and team created an innovative, blended-learning model, which includes online and in-person, hands-on content for use worldwide. We offer opportunities for professional development through teacher training workshops. Teachers and science supervisors can become Certified Guy Harvey Education Ambassadors and continue to offer professional development in their schools and districts.
 - Elementary resources are standards-based & state approved marine science curriculums, teacher accredited programs with international distribution platforms and endorsed by Florida Department of Education. They fall under four categories: marine animals, marine plastics, marine environment & coral reefs. They include our Guy Harvey Collections which include classroom presentations, teacher guides, and lesson plans for free
 - Middle School Education Page. Our team has created an innovative, blended-learning model, which includes online and in-person, hands-on content for use worldwide. Our middle school resources include our Guy Harvey Collections, Short courses, Sawgrass to Seagrass and FPL Manatees which has presentations, teacher guides, videos and lesson plans.
 - High School Education Page. Our team has created an innovative, blended-learning model, which includes online and in-person, hands-on content for use worldwide. Our high school resources include our Guy Harvey Collections, Short courses, Sawgrass to Seagrass, FPL Properties of Seawater, Marine Science 101, Brightmark Plastics and Guy Harvey Magazine which has presentations, teacher guides, videos and lesson plans.
 - Live virtual trainings, 1 or 3 day I person workshop including hands out outdoors ocean, bay or everglades, FL virtual schools workshop is a work on your own pace
- **The Everglades Foundation, Everglades Literacy Program** – Teacher training for pre-K-12 teachers that focuses on a set of lesson plans, or curriculum, with three per grade level available online about the Everglades ecosystem, plants, animals and many broad science topics. They are thematically designed for both standards, but also for great appropriateness and they pivot from each other so students can build content knowledge through multiple grades. Their ultimate goal is to ensure every classroom is teaching these three lessons. Developed with partners and stakeholder input, everything is tied to standards and fits seamlessly into classroom teaching. Trainings last ~6.5 hours, in-person, with some or all in the classroom and some outdoors. Teachers increase their

knowledge about the Everglades and leave with a set of lesson plans for their grade level and all the materials necessary to teach those lesson plans. Trainings are brought to the teachers where they are and conducted around the state by regional coordinators. Schools can apply to be Champion Schools which work to complete criteria and integrate with and engage the whole school community in stewardship.

- **Rookery Bay Reserve, Teachers on the Estuary (TOTE)** is a (K-12) teacher training program provided annually. Teachers use TOTE to increase their understanding of estuary science, including climate change, and they learn how to engage students in the investigation of changes in their local environment using data obtained from the reserves' monitoring programs. With this program, teachers and students can interact with scientists, find information about local environmental issues, and participate in field trips and community conservation projects. Typically participation ranges between 10 to 20 teachers, annually. TOTE workshops offer multi-day (or a minimum of 15 contact hours) hands-on, field-based professional teacher development sessions at Research Reserves in support of estuarine education. These trainings are hands-on and investigative and guide teachers to be able to encourage student-driven projects.

PROVIDER TRENDS AND CHANGES

Providers were asked what changes or trends they have seen or experienced in the field of EE including if there were changes due to the global COVID pandemic and the 2022 impact of Hurricane Ian. The following open-ended responses were grouped by themes.

COVID-related Comments

- Since covid teachers commitment started slumping, they wouldn't do their stuff or use their own money to buy things, I don't care – this was the trend –but feels like in the last couple years we're getting better teachers and they are coming around. Had some really great new teachers.
- During COVID I said I'm buying iPads and going virtual next year, others thought they would be back in a few months, and the Alliance got her three iPads and put one in each habitat. Each school (already) has a backpack with all the equipment that they have in the field...Was real time and they could hear the birds and all and see her standing in the water. We would splash each ...it was really fun. They did follow along in the classroom. It worked for those teachers who were young and some who had been through the program. But there were some that used it as a time to tune out...However, two (teachers) who had been here as 6th graders dressed up as park rangers and got all the equipment out and they were getting water out of the sink and the kids were engaged and they had questions...Now she can bring the swamp to the entire world like that! They reached over 5,000 through STEAM in the Parks Expedition and will do more of it

next year including a group in Tokyo... .so lucky we had service out there and got the iPads.

- Did virtual field trips during the pandemic and a 45 minute field trip virtually to cat's claw and monument trail.
- COVID was the biggest shift and shifting to virtual was interesting and did it and learned from it and still use aspects of it.
- Effects of these teacher shortages and communication issues are there still... there is definitely those COVID kids didn't get the social engagement in the way you have to manage a field trip or their attention spans.
- Our 3rd grade is currently completely outside post-COVID and we changed the workbook and rotations changed – may bring one rotation back in the classroom/lab next year – learning goals the same – kept the virtual teacher training since COVID.
- During COVID we didn't do FTSP for two years.
- Saw the differences in numbers of people coming out and switched our lesson plans to virtual.(COVID)
- Did some on zoom to the classroom during COVID.
- For FTSP teacher training because they lead two of the four stations, was on hiatus during COVID and then did free training for everyone – last few years required everyone to go through it – since no one had been trained since 2019 they required all to go through it – was a good sized group almost 40 teachers.
- ZooCon has not changed due to COVID – was always remote.
- Behavior is the number one we noticed since COVID and hurricanes and especially with camp kids and we have them for a longer time and behavior in regard to attention span, inability to follow rules, a lot of feelings and shutting down around feedback and direction. Noted the last couple of years – call them COVID kids – social behaviors and a lot of feelings and even with kids the last four weeks it's very evident that their inability to express themselves in a way that is productive and helpful to them.
- Staffing when COVID hit I was the only staff member left and that was required by our accreditation and had to let go all my staff...let us focus on what we do at before we branch out again and have solid footing here and rebuild.
- The value of education and educators was evident (during COVID) We do a version of early childhood training...their foundation of their being happens before the age of 5. Can you catch them up or are those effects are lasting? Is this behavior tied to something missed out on?
- COVID virtual learning and kids lost a lot of soft skills and they are different children and like, these are different children coming on field trips than what I saw in 2019...They're just really lacking...How do you get along in a group, and so I think it makes it not an appealing thing for teachers. And I just wonder how much longer they're gonna try to make this happen.
- We were full on Tuesday for a while (adult programming) but since COVID we are rebuilding our audience again and presentations are way down.

- So one of the things, and we hear it a lot from our teachers. And we see it a little bit in the kids. But when we are with our students they're so engaged because it's a non-traditional learning environment. So they are automatically engaged because they're outside of their classroom setting. So that's a plus for us...But what we have seen as a result of COVID and as a result of the hurricanes is the the level. Their level of reading has gone down. Yes, so that's a big deal. We are seeing more paraprofessionals coming in, and more of our teachers are saying, we have more learning needs than they did prior to both COVID...The learning gap happened with COVID as in addition to just socialization skills, so to speak.
- I think with student population is settling down but out of the pandemic and shut downs we saw a lapse in emotional maturity...There was definitely a drop in what felt like the baseline. For where students are at for a certain age. Groups like we'd be working with an 8th grade that felt like 5th grade and that would be like that across many schools. And that's starting to kind of like realign itself, with what we know as the norm or what we remember as the norm. But I still think that there was definitely interpersonal impacts as well on the way that students feel comfortable interacting with each other and the relationships that they have with each other. There was a bigger disconnect the last couple of years, and it seems to be smoothing itself out, now that they've been back in the classroom for a few years. I think the teachers also shared that as well...immediately following the pandemic.
- I was hopeful that we would be careful about what we invited back in after COVID and be choosy how we allocated our time and we learned to slow down but its' ramped up even further and why? Are we making up for lost time is it technology? That pause did not reset the way I thought it would.
- Absenteeism is different now and we are disjointed now – no data, but I think it feels like that our students'... absentee rates are up, why? We took a long break and there's disorganization and we're not as cohesive - like the culture isn't there – (before) we knew the kids and parents better and the birthday circuit and (now it's) less true with younger son and that has an effect and dissolved the community requirements – our responsibility to each other has changed.
- When students went back to school they gave the teachers really prescribed curriculum so they didn't have to figure out the modality and harder to get hands on outdoor learning into schools that they are so prescribed since COVI and want them to be at the exact same place in the lesson from classroom to classroom and that has stuck around - at first in COVID some teachers liked this of being prescribed to have less to worry about, but their administrators want to walk into a classroom and know your doing the same topic on the same day and harder to get (EE) into the curriculum.

Hurricane Ian-related Comments

- Didn't see a difference since Ian.
- 2022 was also disrupted by Ian and had our training and then we were closed all of October and some were never rescheduled we had so many staff from Lee County and had a dozen staff that lost everything.

- So now with Ian, the thing that we saw was a shift in the needs, the the basic human needs of students, students had lost their homes...so we found that students needed to -There was an importance of making sure that they felt safe, that they felt welcomed. And we also just spoke to teachers ahead of time like Are you all going to be bringing your school lunch. How many of the students will be having school lunch? That kind of thing, and we just kind of made sure that we had a backup of healthy but safe snacks...because we did find that for whatever reason. Now, the school always provides that lunch. But for some reason some kids were just. They didn't speak up. They didn't say anything. And then, you know. Then they get this little kid just there, and they don't have a lunch...So we made sure that the basic needs, like food were provided.

Busing Impacts

- Busing seems to be an issue and it is a change the numbers changed a great deal.
- We ran into transportation thing and is unfortunate and not having enough drivers and tied to their daily school. This is why we don't see high school and middle school, the schedules are jam packed for high school and we tend to see those younger ages.
- Heard about regular school pick up and the buses were 45 minutes late and miss part of school day.
- Bus driver shortage.

Getting Outdoors

- I think that many of the parents are taking the easy way out and doing indoor things and not so much, always taking kids outside. One of the biggest problems and why don't people don't want to go to CREW is because there's alligators. There's all these wild things out there. I think people have a lot of excuses not to take children outside. That would be the something I'd say over 40 years
- Don't bring super young ones into the wild nature - people are less comfortable and fear they will get hurt...
- The thing I learned about writing grant proposals is just getting people out and learned with grad and undergrad students – never thought when in operations and research – it's fun and get them out to go and look at data.
- We used to do camps and can't do them anymore and kids are not interested in nature anymore - serious - not in the summer camps at least - never had enough sign up - that's not fun without a group - used to be we had 10 years ago and would have to turn them away - all day camps 8 hours camping, stay at Myakka and did a museum one overnight and had to turn kids down and gradually went way down - not doing them anymore because of a lack of help, camper interest, and time.
- Well, a lot of the students do have a fear of the of the outdoors. It's just the fear of unknown. The greatest fear is fear itself, but the thing about it is we take them out there. And we're like, look, in these types of settings you can hike and you can be safe...You gotta understand that you're in the wildlife's home. So when

someone comes into your home, you expect them to respect it and not trash it and not be loud and things like that. And we tell them that, you know we're not going to pick the wildflowers. We don't collect insects and lizards.

- Societal Issues
- This year we took to heart the new education law in Florida – learned about them through champions for learning and had a training on it and the law was vague, (so now we) can't talk about food justice or environmental justice that would cause feelings - couldn't make anyone feel bad, regardless of how we feel about it that is the law, stick to the script
- EE has changed a lot, prior to COVID wouldn't have thought twice to talk about climate change with public schools, but not now – cautious what we share with teachers now we had previously - slow food international they have excellent curriculum. Fair is about food justice and shared with curriculum the education laws have changed by jeopardizing teachers who would use it and we are cautious– that changed quickly in last few years.
- We've kind of retired (some classes) just because of where things are at and studying history in Florida ...because I think the type of simulation activity that it is is immersive, and they get to experience it...and we've shied away from the historical things for a while now... But I think it's sad that we can't do these things. But I understand...So not everyone feels as comfortable with the historical classes, and I get where they're coming from.
- We had a very large school cancel last year because the parent complained...that one of our staff members had their pronouns on the name tag and so they stopped coming altogether and changed providers. So we had a positive working relationship. They were happy with our programming. But I think with all the legislation they didn't feel comfortable. So we're definitely dealing with the repercussions of legislation right now and trying to navigate a way that's equitable and respectful of individuals while also allowing us to continue doing our work. Tough balance, weird, where to be inclusive while being told, we can't be inclusive to the fullest extent.

Other Changes and Observations

- Going backwards –we got rid of FCAT and there's no comprehensive science exam and more focus on reading and math and no science in 6th and 7th grades (they) do not have a science vocabulary.
- I think that Collier County is changing dramatically with the new development and influx of population and don't have a specific idea about how that will play into future programs but the demographics are shifting and the number of children and families are changing.
- We are also seeing a change for both of those in our migrant population. So we are getting a lot of students who are migrating from different places around the world. And it's not just our Spanish speaking students. We have students that speak Creole French...Russian, Ukraine. And so the need of just now, we can't. provide content, or our materials cannot cover all of those

- different languages. We asked the teachers, do you have English language learners?... And so when we know that we have a high population of those students coming in we make sure that we talk to the teachers ahead of time...can they be paired with a peer, or sit closer to a teacher or something like that?...We just make sure that we are focusing more on the pictures...we will point to the picture and we'll say it...So we are getting more of that migrant population from all corners.
- So that's called Nature's Rocks, and we have gotten away from that for a couple of reasons. One the rocks actually became pretty expensive and hard to find, to get. Smooth white rocks. And then we started having the discussion that while it's very cool to do that. Those rocks are not native. And we would tell the teachers what type of paint to use but we weren't always sure. So then we could be adding pollutants to the ground. So we decided that you only leave footprints and take memories. Take the rock back and leave it there. Went against that philosophy. Pull it back and decide not to do it so, and we actually went back out and collected the rocks.
 - As a young person, I think that my generation of like 18 to 35 is super overworked and really under recognized and also just unmotivated overall. I think there's this kind of apathy that could be, you know, like a a little bit of an epidemic in my group of people and people younger than me, too. So reconnecting people with land, and with something that's bigger than them.
 - Increase use of technology and ability to do things remotely and to do videos and post them and have people in the world see them. That's certainly come up, you know, really changed educational quite a bit.
 - For the 7th grade we created a video that introduces our faces and shows all the spaces the kids will be in. It is an interactive video that the teacher plays in the classroom and has a toolkit of biofacts/equipment to review. This worked out great and the students were prepared. The only downside I felt / saw with eliminating in-person pre-visits was the loss of our staff meeting the kids and having that face-to-face engagement
 - Pre-visits (to the classroom) were done in the past for 4th grade but due to time constraints/staff resources they were removed from scheduling.
 - Projects demand more resources than ever before.
 - Staff and volunteers need more training for neural divergent students.
 - Hard to get staff due to cost of living in Naples.
 - Staff can't afford to live here.
 - We are seeing a a greater need of paying interns, because this, like they're like, I need to get paid.
 - In the new facility - doubled the number of campers this summer and will allow us to do more for school based and now it is the education center—conferences and bring professionals together and leverage the opportunities to show who we are and host people on site is a game changer and looking to welcome more students -opened beginning of March 2024.

- They've endured a global pandemic and they are rising to the occasion. And they're doing great now...I work with young people all the time elementary through college. We got hope we're doing. We're going to be okay.

OTHER PROGRAMS OF INTEREST

The focus of this research was on field trip programs aimed at school students, however, providers occasionally shared interesting programs beyond those categories that may be of interest. A sample of them is listed below.

- The local private school, Seacrest Country Day School has an ecology club that does dragonfly monitoring annually at the Big Cypress Preserve. They also have some students do water sampling for approximately the last eight years at the Naples Botanical Garden.
- CREW Land and Water Trust offers Strolling Science Seminars on specialty topics which are treks for adults. They also offer these for kids on a range of topics.
- The Naples Botanical Garden has their "Let's Grow" program geared towards teachers and volunteers about building and sustaining a school garden.
- The Naples Botanical Garden in partnership with CCPS promotes "Read Clubs" encouraging middle and high school to have after school environmental clubs including Saturday field trips to promote early career learning.
- The Naples Botanical Garden participated in a pilot program "Plants and Climate Change Education" in partnership with the US botanic garden program to develop plant-centered climate change models for middle school audiences. They developed brand new curricula and are currently working with the Immokalee Academy during the summer and after school to field test new curriculum including field trips.
- The Naples Preserve worked with the City of Naples Youth Council, a group of high school students that apply and work with City Council and raised money for a bench and wrote a it's a story that was made into 21 educational signs installed along the boardwalk. It educates the public about wildlife and plants through a fun character, Omar the great horned owl.
- The CREW Land and Water Trust works extensively with FGCU students partnering with the clubs and groups like the ornithology club and food forest group, offering service learning and recreational student events like night hikes and trail hangouts.

SUMMARY CONCLUSIONS

- 1. There were an increased number of providers and increased diversity of field trip options, compared to the prior study.** There appears to be an increase in the number of providers and an increase in the diversity of offerings, meaning more opportunities for teachers and students to participate in field trips. This could also be considered additional competition for providers, meaning they may want to consider reflecting on, better understanding, and articulating their market niche. Forty-four potential providers were identified, an increase of 16 from the previous study. Although some of these were in Lee County and unlikely to be serving Collier County. In addition, a total of 18 were categorized as actual providers providing student programs or teacher training, which is an increase of 6 since the 2014 study. However, the categorization of provider versus non-provider was approached differently between the 2014 and current study. In addition, the Naples Zoo has opened a new education center and the annual public survey by the Collier Community Foundation identified the environment as a topic of interest.
- 2. The “wild outdoors” is becoming more unique in the current landscape of providers.** Providers, such as RBNERR, are in a unique market niche due to their natural site-based learning platform, robust resources, and skilled staff to offer field trips. More deeply embracing this platform of the wild outdoors and articulating its importance and the difference between this experience and more contrived experiences may be helpful in achieving programmatic goals. This recommendation was developed through the characterization of provider versus non-provider, which revealed several organizations that were offering animal encounters which were ultimately deemed as non-providers because they were less focused on natural resources and conservation and also less focused on providing a natural outdoor environmental education experience. The newly identified potential providers included the Shy Wolfy Sanctuary, Mood Ranch, Ngala Wildlife Preserve, and Kowiachobee Animal Preserve, although they were not all aimed at teachers and students. The increase in these types of experiences, which are more constructed and controlled when compared to a wild natural setting may be telling when combined with the knowledge that people spend more time indoors than ever before in history. This awareness created an opportunity to reflect on what it means to be an outdoor, field-based, conservation education center. For example, the Naples Zoo was deemed a provider in this study because of its conservation mission, content focused on using the animal collection as a platform to teach about the natural world, its onsite botanical garden, and more. This is contrary to the classification in the previous study when it was the only potential provider identified with a significant

animal collection. One provider, which provides overnight, outdoor, experiential learning programs shared that students are blown away by seeing a rabbit and that they consistently remark how they have never before been this far away from the developed world. This same provider also shared that a new school that was planning to participate sent only half of the students the first year because parents were uncomfortable (although this may have had more to do with the overnight element than the nature-based element). This research was conducted with the assumption that student explorations in nature are essential for developing STEM and critical thinking skills, and also for developing an understanding of, and a relationship with nature so that much-needed environmental conservation behaviors are developed. In this instance, it's knowing what you are *not* that may help providers to more clearly know who they are because the opportunity to be in a wholly natural space for an extended time is becoming rarer and we may have audiences that are less familiar with or seeking these experiences.

3. **Overall, provider programs were mostly full and more resources would be needed for them to offer more field trips.** Most providers are maxed out in terms of the number of students they can serve with the staff that they have. They are consistently filling all of their time slots and several wanted to serve more but were unable due to several constraints. There may be an overall need for more resources for field trip providers to offer more free programs since teachers were clear that cost is a deterrent to participation. The majority of providers have three or less staff, while another one-third having five or less staff. However, several of the providers were associated with an entity that has over 100 staff members at its highest organizational level. If there is collective interest in providing field-based learning to more students, then increased staffing and therefore funding for EE programs would be necessary. However, there are other constraints such as impacts to nature, transportation, and the difficulty finding qualified staff that can afford to live in Collier County. Most programs do not charge for their field trips, which teachers in the NA indicated was an important element to maintain. However, there are programs that successfully charge for services. In addition, there may be a creative approach where funding was funneled to field trip providers since teachers continue to report that cost is a deterrent to participation. CCPS pays or has paid some field trip providers directly. This may then support the ability of local providers to serve more students and teachers.
4. **There is a reduction in the number of providers offering classroom presentations, which may be a service that CCPS and teachers would welcome.** Classroom presentations will never be a substitute for nature-based experiences, but there seems to be a decrease in the number of providers

offering this service, a receptivity by teachers for it, and an opportunity to create a model where the classroom presentation is supporting a future field trip experience. A few providers had reduced the number of classroom presentations they offered either as part of the field trip experience or separately, although Big Cypress Preserve continued successfully to include a pre-trip classroom visit. The Collier Mosquito Control District recently began offering STEM-focused classroom presentations and were well-received and are growing the program. In addition, CCPS welcomed them and this approach into their offerings to teachers. In light of the many constraints to field trip participation, additional classroom experiences may help accomplish some educational goals but may also serve as a first step in encouraging teachers to participate in a future field trip and would also support the relationship building with schools.

5. **In addition to in-person field trips, consider virtual field trips which overcome traditional field trip constraints and have become easier, less expensive, and more widely accepted in recent years.** There may be value in adding virtual field trips to RBNERR offerings because while the experience for students is quite different than a field trip, there are many constraints on field trips, and this model has become easier, less expensive, and more widely accepted in recent years. Two providers were offering virtual programs on a consistent basis including the Naples Zoo, which had been offering ZooCon for years and also the Big Cypress Preserve which began offering a virtual site visit during COVID. Big Cypress allows teachers and groups from around the world to virtually visit three habitats with a ranger, including the same discovery of plants and animals they encounter during an in person visit. This also allows more people to virtually experience rare and sensitive habitats that are difficult to access and would be too highly impacted to allow groups to visit. The use of podcasts, television, or radio for youth programs was universally not being done, however, since the significance of these approaches are unknown it was not a clear whether these approaches would be well-received and worth pursuing.
6. **Few providers are focused on pre-service teacher training, which may be a niche worth exploring.** Only two locations volunteered information about offering pre-service training for teachers, although that approach seems like a pro-active opportunity to promote teacher engagement in EE. In the previous study, Florida Southwestern State College was offering pre-service training for Middle Grade Science Education and Secondary Biology Education but there was no data to support whether or not that program had continued.
7. **CCPS has significantly changed its approach to STEM and field trips programs** since the last study. Providers need to be aware of these changes and to adapt and maximize opportunities within the new approach. In the last study, the CCPS FTSP was a program coordinated by the CCPS Science

Coordinators to offer field trips to all second, third, fourth, fifth and sixth graders and to high school marine science students, by partnering with a network of local organizations. During the last nearly ten years since the prior study, CCPS has renamed the FTSP to be called the FSEP and has broadened beyond traditional nature-based field trips to include a wide range of STEM programming both in the classroom and outdoors, including nature-based programs and those that are in less natural settings. Of the 16 providers identified ten of them are directly providing significant education for CCPS schools. Interestingly, providers that were not particularly dedicated to providing programs for a particular CCPS grade, often still had connections with and collaborations with CCPS such as the IFAS SeaGrant program which helps with the CCPS science fair and the Southwest Florida Environ-thon Quiz Bowl competition. All of the local providers knew the CCPS Science Coordinators and had some communication with them.

8. **Continued connection to and coordination with other providers is generally of interest to providers.** In the prior study, the suggestion was made to collaborate more with the FTSP providers and present to the CCPS School Board and others to maintain visibility and support. Now that the program has demonstrated longevity and broadened significantly, this may be less relevant. However, several providers expressed the view that providers could coordinate better to avoid duplication, spark innovation, and connect over shared STEM programming goals. Some suggested that better coordination could lead back to the more systematic approach used in the past. Others simply missed the time when all of the providers met together with CCPS, since now they all meet with them separately. A small group of providers began connecting during COVID and several of them appreciated that effort and continued to get value from the get-togethers. The Botanical Garden also hosts a monthly event for environmental organizations that is well received. Prior coordination efforts, such as the Southwest Florida EE Alliance have waned in recent years and providers were difficult to reach during the study demonstrating how busy they were, so adding another task may be an obstacle.
9. **High school and kindergarten through first grade are the least served grades for field trip programs.** Providers seeking a niche may consider developing a program for these age groups although field trips for young children and high school students both have their challenges, which may explain why these groups are potentially undeserved. Although the effort to determine the grade levels served, the exact number of organizations targeting each grade level was somewhat difficult to determine. This is in part because most of the actual providers serve multiple age groups, and will serve nearly any age group when requested. Based on the information gathered, 5th, 6th and 7th grade were the most targeted, while 2nd, 3rd and 4th were the next most targeted grade levels.

In the prior study it was found that the overall focus was on fifth and sixth grade students, suggesting that this has not shifted significantly, although an additional grade, 7th grade, has been added. The current study further indicates that there are potentially the least number of outdoor and environmental field trips being conducted for grades Kindergarten and first grade and 9th-12th at the high school level. In the previous study, a lack of programming for high school students was also identified. The assumed reason for this is likely due to the need for substitutes, that the students will miss multiple classes with a range of teachers, and there are more likely to be conflicts with sports, club schedules, testing, and buses.

10. **Boat-based programs continue to be uncommon, with only three providers offering them on field trips on a regular basis.** Offering boat-based programs is a unique and special niche that provides an important experience for students to experience coastal ecosystems. Considering the extensive coastal nature of Collier County the increase in boat trip experiences for school students seems appropriate, although there are likely CCPS students that may never experience a boat trip. Highlighting this issue with partners such as the Marine Industries Association may be worth pursuing. Those that offer boat-based programs may benefit from highlighting this as a unique experience.
11. **More providers are covering topical information related to estuaries, watersheds, and oceans than in the previous study.** RBNERR and other providers should consider what is unique about their coverage and delivery of EE related to estuaries, watersheds, and oceans because many providers are also covering these topics which were not being well covered in the previous study. Ten of the 16 providers stated that they covered topical information related to these topics, with only six stating they did not. There are currently only two, RBNERR and the Vester Marine Center, that focus very specifically on these topics. This is a significant increase since the previous study when only one actual provider in Collier County, RBNERR, was focused on estuarine, coastal, or ocean topics and only two other providers included estuarine ecosystems as part of their curriculum while there was one that taught these subjects to adults.
12. **There were limited, but insightful responses to the question about topical information that was not being covered including 1) an interest in coordinating and connecting among providers, 2) a passion for getting people outdoors in wild nature as a teaching and learning technique. 3) the need for equity in EE, 4) the need for a focus on stewardship and behavior changes, 5) the need for effective program evaluation or training to do evaluations** that are worth considering and incorporating into providers approaches and thinking.

13. **There is an opportunity to showcase the diverse and impressive collection of providers, including their locations, assets, and activities that are available to many audiences, that would likely impress and attract support.** Collective efforts to feature these assets and opportunities may benefit both providers and the wider community. Collier County has an impressive array of nature-based field trip locations that are also typically available to the public and other audiences, which are offering a wide range of educational experiences on a wide range of nature-based topics including assets such as boats, boardwalks, nature trails, nature centers, plant and animal collections, exhibits, experiments, technology and more.
14. **There has been a significant shift in the role of teachers in field trip programs since the last study, including a reduction in prerequisite training and less responsibility for content delivery.** Providers that continue to expect teachers to play a greater role or engage in prerequisite training are likely to experience resistance in light of this shift in expectations. In the prior study half of the providers expected teachers to teach or lead some of the field trip programming, specifically in field trips associated with the former CCPS FTSP. In addition, those providers also typically required training prior to attending the field trip. Currently, the majority of field trip providers expect teachers to serve as chaperones and they do not require training in order to participate.
15. **Private schools may be underserved** since the majority of providers focus on public schools and there does not seem to be an effort by any provider to systematically reach out to private schools, although there were some activity-specific partnerships with private schools. These include Seacrest Country Day School which has an ecology club that does dragonfly monitoring annually at the Big Cypress Preserve. They also have some students do water sampling for approximately the last eight years at the Naples Botanical Garden. The Garden also has its Let's Grow, school garden network that may include private schools.
16. **The CCPS field trip communication and booking approach seems effective and could possibly be modeled for use with other groups** such as private schools, charter schools, or homeschoolers. Effective communication and field trip bookings are taking place in coordination with CCPS, using their portal or through the Science Coordinators. It appears that there is an expectation by CCPS and teachers that providers need to be ready to book field trips in August, which requires a level of certainty about dates and resources that may be challenging, although this challenge was only mentioned by one provider. Although it may require coordination throughout the private and charter school network, there may be a way to collaborate with them and other providers to communicate and conduct bookings more systematically to serve these audiences.

17. **Multi-day and overnight programs are much less common than half-day or shorter programs.** Although it would be a significant shift and require many resources, the longer and overnight opportunities may be worth exploring. It's an underserved niche that would provide a more immersive experience while also supporting other types of skill development. Pathfinder is successfully offering these types of programs on a statewide basis. Parents may show some hesitation, which may be an obstacle, but the opportunity to be close to and learning from nature on an extended basis is not currently offered locally.
18. **Busing problems were the most frequently cited challenge to field trips.** If providers can alleviate the challenges associated with busing, they will be able to serve more teachers and students, better control the amount of time they have with students, and minimize stressful last minute changes. Busing issues were the predominant challenge mentioned in multiple ways by all providers. Lack of available bus transportation effected schools' ability to attend field trips that were far away, shortened field trip visits, and caused chaos and hardships felt by teachers, students and providers. Providers said that busing was the most significant barrier to teachers attending field trips. There were overall a lower number of students served by several providers and this may have been caused by busing issues, although staffing shortages and other issues were also factors.
19. **Distance travelled to a field trip is not a significant obstacle, therefore, providers should consider promoting their field trips on a countywide basis** because there are few teachers that felt distance was an issue, with the exception of being affected by a lack of reliable busing
20. **Providers would likely benefit from aligning their programs to standards and making their programs applicable to what is being taught in the classroom.** Although most of the providers were already doing this, more than in the previous study, its importance was also noted in the NA and providers shared that they had gotten this input directly from teachers.
21. **Providers may still need support in consistently gathering evaluation data.** There is an increase from the last study in the number of providers reporting that they are evaluating their programs, however, since grantors, donors, and agencies typically require both quantitative and qualitative evidence of past performance, it may be helpful to support providers in more consistently gathering this information. The Conservancy had their teachers complete the evaluation onsite during lunch which resulted in more reliable data. CREW used a QR code passed around on a business card as a way for general public audiences to evaluate presentations. FGCU applied grant funding towards hiring an external evaluator. RBNERR engaged a graduate student to do an in-depth analysis of their field trip programs.

- 22. Teachers that are repeat attenders are important for providers to recognize and keep engaged.** Providers had few challenges with teachers, which is a reduction in challenges from the prior study. One provider said that, “since COVID teachers commitment started slumping, they wouldn’t do their stuff...this was the trend. But (it) feels like in the last couple years we’re getting better teachers and they are coming around and had some really great new teachers (this year).” These positive working relationships point to a receptivity among the teachers participating in field trips to continue. Two providers shared that they now had teachers attending their field trips that had formerly participated as students, and that as a result they were very enthusiastic about the field trip. A minor theme was that the classroom learning and management differed than outdoor, nature-based learning and management and that those differences were both exciting and interesting, but also a minor challenge for the classroom teacher and provider teacher. The recognition that teachers were dealing with a lot of challenges was also a theme.
- 23. Overall there was an increase in the available number of teacher training programs focused on estuaries, watersheds, and oceans.** For providers such as RBNERR that wish to distinguish themselves, examining and articulating their niche may be helpful. For RBNERR, it may be beneficial to explore and articulate the local connections, the estuarine and NERR focus, and the unique field-based learning provided. Providers of teacher training programs were handled differently in this study compared to the previous study for several reasons including that CCPS is no longer requiring training associated with their field trips. The teacher training programs were separated from the teachers and student programs with three providers offering both teacher training and student field trips and three others offering only teacher training. RBNERR was one of the providers that launched their Teachers on the Estuary (TOTE) teacher training since the last study was conducted, along with the Everglades Foundation and the Guy Harvey Ocean Foundation, and there were some similarities in content. However, the approach is quite different with RBNERR TOTE having a local focus and a focus on national estuaries, while the others are aiming at a larger statewide audience and have a broader range of topics. Considering the high number of schools, teachers, and students there still continues to be ample opportunity to deliver teacher training and RBNERR’s positive reputation will likely be enough to continue participation in what is offered.
- 24. Providers that have resources and assets may want to consider student field trips as an overall part of their “value ladder” to increase participation in field trips and other outdoor programs.** Virtual fields trips, classroom presentations, and other strategies could serve as a first step towards a more

immersive outdoor field trip experience or perhaps shorter experiences could lead along the ladder to longer experiences. Developing a more intentional programmatic journey may lead to increased mission-impact and the associated stewardship. A value ladder is “a marketing strategy that is designed to take customers on a journey from a low-priced entry-level offer to a high-priced premium product.” However, in the non-profit world this is also interpreted as taking them on a journey where they dip their toe into your mission and then fully embrace it into their lives. A value ladder intentionally increases program offerings to repeat customers so they move along the ladder. However, without appropriate tracking, there is a risk of offering a wide range of programs to a wide range of people that may not be as targeted and immersive.

25. **Consider engaging in a buddy-school model by partnering more deeply with one or a few schools**, offering repeat and frequent programs, often due to proximity or a shared interest in a topical focus area. There are several examples of this including AWE working with the Marco Charter Academy on field trips, the Botanical Garden on their pilot Plant Climate Change program and Let’s Grow school garden program, and the Naples Preserve working with a nearby elementary school because they could walk to their location.
26. **Providers may need to consider their approaches to address three recent trends that have affected schools, teachers and students including:**
 - a. Since COVID and recent hurricanes, student learning levels had dropped, that behaviors and mood management were more challenging, and that there was a lack of engagement by students and parents in classroom learning.
 - b. Recent Florida laws that affect education were mentioned including one provider that did training for the staff to comply and avoid potential legal implications to their non-profit. Another discussed dealing with a parent complaint that caused the school to cancel the field trip. Others talked more broadly about adjusting their curriculum to be sensitive to the political climate along with a few general observations that science literacy had decreased.
 - c. Technology was primary praised and used as a tool to improve education and its use has increased dramatically since the previous study. However, there were also comments, mostly from teachers, about how technology was a distraction from learning and hindered educational goals. Balancing the competing positive and negative impacts of technology is another trend worth considering.

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APPENDIX A: EMAIL TO POTENTIAL PROVIDERS

Subject Line: Your help is needed - Market Analysis of K-12, EE programs

Dear [insert full name here]:

I'm conducting a market analysis of environmental education programs that are serving kindergarten through college students and teachers in Collier County, Florida. Your organization, [insert organization name here], has been identified as a potential provider of these programs.

The project is funded by the Rookery Bay National Estuarine Research Reserve and is important to help environmental educators by identifying best practices, service gaps, and opportunities.

I've attached a list of questions to let you know the information we are gathering and a list of the other providers that we will also be contacting.

Please let me know a good time to meet with you via Zoom for about 30-60 minutes.

Your input is valuable and I thank you for taking the time to respond to this research request.

Sincerely, Tabitha Stadler

What is a Market Analysis?

It is educational research for assessing local and regional organizations that offer the same or similar services and identifying potential audiences for these services. A market analysis helps to match services with audiences while decreasing the potential for duplication and redundancy with other programs.

Research Goals

- Increase understanding of non-formal, hands-on, field-based, environmental education providers, with a specific focus on those providing estuarine, coastal or ocean education, serving kindergarten through college students and teachers in Collier County, Florida,
- Increase understanding of environmental providers program value and market niches,
- Apply information gained to support program improvements and new program development throughout Collier County.



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