

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

Prepared for

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Market Analysis: EE Programs
in Collier County, Florida, 2015

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BACKGROUND

In April 2014 the Friends of Rookery Bay (FORB) was awarded a Bay-Watershed Education and Training (B-WET) Program grant from the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service in the amount of \$99,812. The Principal Investigator was the Rookery Bay National Estuarine Research Reserve's (RBNERR) Education Coordinator Sarah Falkowski. The funding was used for five Gulf of Mexico National Estuarine Research Reserve's (NERR's) to conduct Teachers on the Estuary (TOTE) K-12 teacher professional development workshops and a sixth Reserve to support the project team with technology and climate change education expertise. The RBNERR also received funding to conduct a market analysis (MA) and audience needs assessment (NA) for the Education Department that focused on kindergarten through college field-based environmental education programs in Collier County, Florida.

FORB and Ms. Falkowski hired Tabitha Stadler of GeoBlue Coastal Management Solutions, a small business located in Naples, Florida, to conduct the MA and NA. A kick-off meeting was held on October 30, 2014 and then the MA was conducted during November, 2014 through February 2015. This report focuses on the MA, including the purpose, methodology, and results, with discussions related to its applicability to conducting the next phase of research which is the NA.

RESEARCH GOALS AND PURPOSE

The RBNERR receives annual funding from NOAA and is part of a national system of 28 NERRS throughout the United States of America that all have hands-on, field-based science, technology, engineering and math (STEM) focused educational programs for students. NOAA requires the NERR education programs to conduct MA and NA research, therefore this research project and the accompanying reports are designed to fulfill RBNERR's requirements and will be reviewed by NOAA upon completion.

According to NOAA's K-12 Estuarine Education Program (KEEP) framework an MA 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) An MA also supports organizational development through the following additional outcomes:

- Learning what has already been done and what gaps remain.

- More clearly determining the characteristics, factors, conditions and extent of a market.
- Understanding the potential opportunities and threats as they relate to the strengths and weaknesses of the organization.

The MA research was conducted in preparation for the NA which will be aimed at all teachers in Collier County, Florida, although fourth grade teachers, middle school teachers and high school science teachers are RBNERR's current target audiences. According to NOAA's K-12 Estuarine Education Program (KEEP) framework an NA "measure(s) the specific needs of target audiences. They assess target audience knowledge, skills, and attitudes relevant to proposed services. This is similar to and may overlap some audience-based information gleaned from a thorough market analysis. Needs assessments can also provide insights to how audiences want your programs to be packaged (i.e. format, costs, distance traveled, duration, etc.)" (NOAA KEEP, 2008). The research goals for RBNERR's MA and NA included:

- 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 shared understanding of RBNERR's program value and market niche,
- 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 the research goals, several terms were defined and discussed with the RBNERR Education Department staff and those are listed below for reference purposes. The terms that best described RBNERR's approach included non-formal, field-based, and STEM-focused. These were used to guide the identification of comparable programs, although environmental education was a broader term and was used in place of STEM on the questionnaire and during interviews with potential providers. Definitions included:

Non-formal education is any organized educational activity outside the established formal system – whether operating separately or as an important feature of some broader activity – that is intended to serve identifiable learning clientele and learning objectives. (Smith, 2001)

Environmental education increases public awareness and knowledge about environmental issues or problems. In doing so, it provides the public with the necessary skills to make informed decisions and take responsible action. (U.S. EPA, Feb. 4, 2015)

Nature-based learning is learning through interaction with natural materials and environments (naturebasededucation.org, 2011)

Place-Based educators believe that education should prepare people to live and work to sustain the cultural and ecological integrity of the places they inhabit. (ERIC Development Team, 2000)

Outdoor Education is education in, about, and for the out-of-doors. (Ford, 1986)

STE(A)M: Science, technology, engineering, (art), and math focused education

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 36 questions and approximately nine of them were necessary to meet NOAA MA data requirements. A list of potential providers was also developed through brainstorming with the Education Team, internet research by the Contractor, and also by asking field-based environmental education providers, when they were later contacted, if they thought anyone was missing from the potential providers list. A total of 28 potential providers were finally identified with a focus on those who were government or non-profit organizations. While there were private businesses catering to the public for ecotour programs, these were not included in this research since they were unlikely to serve students or teachers and were deemed to be of a different market sector than RBNERR.

In order to prevent unanswered questions and to provide a greater depth of information, a Provider Profile was developed for each of the 28 potential providers based on information found on their websites. The purpose of the profiles was to initially determine if they provided field-based environmental education and then also to attempt to answer as many questions as possible in advance of telephone interviews. This would allow interviewees additional time to expand on their answers to the remaining questions. The Provider Profiles are attached in Appendix B.

The Contractor attempted to contact each potential provider by emailing the Education Coordinator, or equivalent staff position, and sending them the questionnaire, the

Providers List, and their Provider Profile. The email message is provided in Appendix A. Each provider was asked to participate in an informal telephone interview although one was conducted in-person at the request of the provider. The overall response rate was 25 of 28 interviewed, resulting in an 89% success rate. Of the 28 identified, it was found that only 12 actually provided field-based environmental education programs either to teachers or students on a regular basis. One of those providers offered a program that was for teachers and not students. These 12 became the primary focus of the MA, however additional information has been included in this report when themes emerged from information gathered that related to the overall group of 28 potential providers. To determine if the potential provider was an actual provider the following criteria were used: 1) They had to intentionally offer field-based environmental education programs either to teachers or students on a regular basis, 2) Had to have staff to deliver these programs, and 3) Marketing and/or educational materials that demonstrated their intention to deliver them. Of the 28 attempted interviews, only one was unreachable via telephone for a 92% response rate. The data for the unresponsive actual provider was gleaned from the Provider Profile 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 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 2014 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 late 2014 through early 2015.

Table 1: Potential Providers of Field-Based Environmental Education in Collier County, Florida

	Organization Name	Contact Person	Title	Address	City, State
1	Big Cypress National Preserve	Lisa Andrews	Outreach and Education Coordinator	33100 Tamiami Trail East	Ochopee, FL
2	Collier County Parks and Recreation Department and Conservation Collier	Nancy Olson	Region Manager, Beach and Water	15000 Livingston Road	Naples, FL
3	Collier County/IFAS Extension	Bryan Fluech	Extension Director and Sea Grant Agent	14700 Immokalee Road	Naples, FL
4	Conservancy of Southwest Florida	Rachel Forbes	School Programs Coordinator	1495 Smith Preserve Way	Naples, FL
5	Corkscrew Swamp Sanctuary & Blair Audubon Center	Debbie Lotter	Education Coordinator	375 Sanctuary Road West	Naples, FL
6	CREW Land and Water Trust	Jessi Drummond	Environmental Education Specialist	23998 Corkscrew Road	Estero, FL
7	Everglades National Park	Allison Gantt	Education and Outreach Coordinator	40001 State Road 9336	Homestead, FL
8	Naples Botanical Garden	Britt Patterson-Weber	Youth Programs Manager	4820 Bayshore Drive	Naples FL
9	Pathfinder, Inc.	Sherry Bagley	Field Director	1310 22nd Avenue South	St. Petersburg, FL
10	Rookery Bay National Estuarine Research Reserve	Sarah Falkowski	Education Coordinator	300 Tower Road	Naples, FL
11	University of Florida Master Naturalist Program	Kate Hellegren	Program Coordinator	PO Box 110405 – Bldg. 803 McCarty Drive	Gainesville, FL
12	Wings of Hope	Ricky Pires	Director	10501 FGCU Blvd	South Ft. Myers, FL
13	Audubon of the Western Everglades	Lori Beall	Membership Coordinator	1020 8th Avenue South, Suite 2	Naples, FL
14	Big Cypress Basin South Florida Water Management District	Lisa Koehler	Administrator	2660 Horseshoe Drive North	Naples, FL
15	City of Marco Island	Nancy Richie	Environmental Specialist	50 Bald Eagle Drive	Marco Island, FL
16	Collier-Seminole State Park	Darren Flickinger	Park Service Specialist	20200 E. Tamiami Trail	Naples, FL
17	Delnor-Wiggins Pass State Park	Lori Heath-Thorn	Volunteer Coordinator	11135 Gulfshore Drive	Naples, FL
18	Fakahatchee Strand Preserve State Park	Mike Owen	Biologist	137 Coast Line Drive	Copeland, FL
19	Florida SouthWestern State College	Tina Ottman	Biology Professor	7007 Lely Cultural Pkwy	Naples, FL
20	Florida Wildlife Federation	Nancy Payton		2590 Golden Gate Parkway, Suite 105	Naples, FL
21	Golisano Children's Museum of Naples	Beth Housewert	Director of Play and Learning	15080 Livingston Rd	Naples, FL
22	Naples Zoo at Caribbean Gardens	Kayla Sherwood		1590 Goodlette-Frank Road	Naples, FL
23	Outward Bound			910 Jackson Street, Suite 140	Golden, CO
24	Picayune Strand State Forest	Heather Ferrand		2121 52nd Ave. SE	Naples, FL
25	Sierra Club, Calusa Group (SWFL)	Marcia Cravens	Outings Coordinator		
26	Southwest Florida Gulf Coast Refuge Complex: Ten Thousand Islands and Panther National Wildlife Refuges	Jessica Sutt	Refuge Specialist	12085 State Road 29 South	Immokalee, FL
27	The Naples Preserve	Becky Spear		1690 Tamiami Trail North	Naples, FL
28	University of Florida/IFAS Southwest Florida Research & Education Center	Calvin Arnold	Center Director	2685 State Road 29 North	Immokalee, FL
	<i>Denotes Actual Providers</i>				

NUMBER OF PROVIDERS AND AFFILIATION

A total of 28 potential providers were identified through brainstorming with local staff, including RBNERR, internet searches, and asking providers if the list appeared to be complete. The potential providers included every affiliation category except for the for-profit business category. This demonstrates a diverse representation of agencies and organizations that could be providing field-based environmental education. Four providers chose two affiliations including three that were nature centers/environmental education (EE) centers in addition to their state or non-profit affiliation. One provider represented both a municipal government agency and an educational institution. This meant that there were 32 responses to this question, which was asked of 28 potential providers.

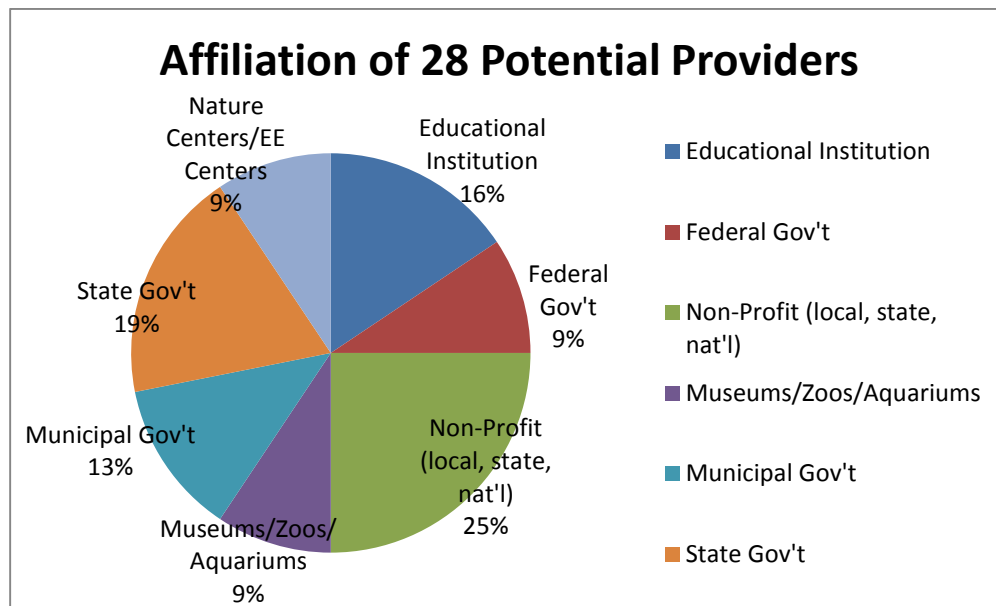


Figure 1: Affiliation of 28 Potential Providers

Of the 28 potential providers there were twelve that were currently providing kindergarten through college programming for teachers and/or students that included a field-based component. One of the programs, the University of Florida's Master Naturalist Program is unique in that it is not specifically aimed at teachers, but is an ideal teacher training program and has a coastal module. There were examples on their website of teachers and college students attending their programs and two teacher-focused scholarships. It therefore met the actual provider criteria and was included in the research results. Four providers chose two different affiliations including three that

were nature centers/EE centers in addition to their state or non-profit affiliation and one provider represented both a municipal government agency and an educational institution. This meant that there were 32 responses to this question, which was asked of 28 potential providers.

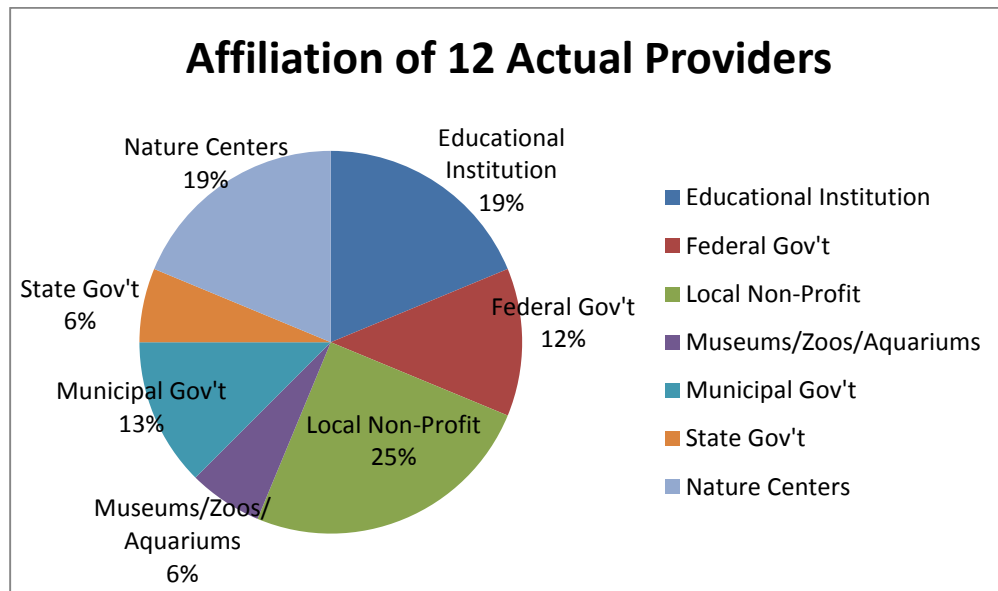


Figure 2: Affiliation of 12 Actual Providers

TRENDS IN THE AFFILIATION OF PROVIDERS

The table below compares the actual response rate for potential providers versus actual providers. Within any category of affiliation there can be great variation in make-up of the organization, such as in the number of staff or the mission-critical activities. For example, within the state government affiliation of potential providers there are state parks, state preserves, a national estuarine research reserve, and state forests which all have varying commitments to field-based environmental education. Only one state government affiliated institution is offering it at this time. All nature centers/EE centers are providing this type of programming, although this is typically the purpose of those types of institutions and therefore not a surprising result. In addition, municipal governments, local non-profits, and educational institutions were only half as likely to provide these types of programs.

Table 2: Comparison of the Affiliation of Actual Providers and Potential Providers

Affiliation of Actual Providers	Totals	Affiliation of Potential Providers	Totals
Educational Institution	3	Educational Institution	5
Federal Gov't	2	Federal Gov't	3
Local Non-Profit	4	Non-Profit (local, state, Nat'l)	8
Museums/Zoos/Aquariums	1	Museums/Zoos/Aquariums	3
Municipal Gov't	2	Municipal Gov't	4
State Gov't	1	State Gov't	6
Nature Centers	3	Nature Centers/EE Centers	3
	16		32
	16		32

TYPES/AUDIENCES OF EDUCATIONAL PROGRAMS PROVIDED

This research focused on programs that provided field-based environmental education and providers were sorted by the NOAA-required question that asked, “What type of education program do you provide?” The results showed that most providers were focusing on elementary education and none of the actual providers offered distance learning or TV/radio programs, while only a few offered summer camps. Several providers offered in-school programs, including a few potential providers who would deliver these upon request. Only the Collier County UF/IFAS 4-H program offered after school programs, making that a unique approach. By providing enrichment activities at the school in off-hours, students in the UF/IFAS 4-H program were receiving STEM education but without as many scheduling conflicts. In addition, by tapping into topic-specific interests including science, they were attracting interested students who were therefore engaged in the process. In addition, they included field-based learning as appropriate. The 4-H program has a long history and their current approach is strongly focused on STEM, which complements their historic focus on animal science and citizenship.

Table 3: Type of Educational Programs Provided

Organization Name	What type of educational programs do you provide?														
	Elementary school programs	Middle school programs	High school programs	Field trips for K-12 students	In-service training	Pre-service training	In-formal educator training	After school program	Home-school programs	Summer camps	Distance learning	Educational TV/Radio programs	Other	In-school programs	College programs
Big Cypress National Preserve	X	X		X	X				X					X	X
Collier County Parks and Recreation	X			X					X	X					X
Collier County/IFAS Extension							X	X							
Conservancy of Southwest Florida	X	X	X	X	X				X	X				X	
Corkscrew Swamp Sanctuary	X			X	X										X
CREW Land and Water Trust	X			X	X										
Everglades National Park	X	X		X	X										
Naples Botanical Garden	X	X	X	X	X				X	X					
Pathfinder, Inc.	X	X	X	X											
Rookery Bay Reserve	X	X	X	X	X				X					X	X
UF Master Naturalist Program							X								X
Wings of Hope	X			X											X
Total number of providers targeting each grade level and audience	10	6	4	10	7	0	2	1	5	3	0	0	0	3	6

Although there are exceptions, the typical break-down of grades by school type for Collier County Public Schools (CCPS) is provided as reference in the table below:

Table 4: 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

The analysis showed that six of the twelve actual providers worked with groups of college students on an annual basis. The interview process revealed that for five of the providers, these groups were in two categories including those from nearby Ft. Myers-based Florida Gulf Coast University (FGCU) and those from farther away. The FGCU attendees were usually associated with a required freshman class called the Colloquium which includes a field trip. Providers explained that FGCU professors chose their preferred field sites and then bring classes annually. They often also include a research or stewardship activity during the field trip. Several actual providers and a few potential providers hosted college groups that came from across the country to spend up to a week in south Florida and visit local places of interest. Collier –Seminole State Park is not an actual provider of field-based environmental education, but they had hosted a college group who assisted with exotic plant removal while receiving a free campsite. Most of the providers who hosted college students from afar reported that they were repeat visitors and they often asked about other sites to visit. This is a potential market for local providers who could partner by comparing their lists of colleges and cross-marking to them. Since none of the providers served more than a handful of college groups in a given year, it may be that a joint marketing approach could be developed by providers throughout Collier County to attract colleges from around the country. The fifth actual provider of college programs was the Wings of Hope Program that is based at FGCU and it works with college students in a unique way since they teach the grade-school students as part of a college course. This provider considered the college students as an educational audience and they were therefore included as a provider of college programming.

There were a few themes to the responses gathered during interviews of potential providers, meaning those not typically offering field-based environmental programs, related to the question about the types of educational programs they have offered, despite them not offering them consistently. Among site-based programs like state-affiliated parks, preserves and forests, there was a willingness to accommodate student field trip groups upon request. Some of these sites formerly offered this service but had discontinued it due to funding and staffing restrictions. Some of the others were

maintaining a long-held approach which was to accommodate school groups upon request. In addition, Florida Southwestern State College currently offers pre-service training for Middle Grade Science Education and Secondary Biology Education which could serve as a partnership opportunity for promoting field-based environmental education in schools through training local teachers to prepare for future CCPS service, including field trip experiences.

The majority, 80-100%, of school groups served by 11 of the actual providers were public school students. However, there was one notable exception, which was Pathfinder who serves 90% of private schools throughout the state and only private schools in Collier County. While most actual providers served homeschool groups, the number of homeschool students was a small fraction of the total number of students served annually. The Conservancy shared a unique approach for working with homeschool students by designating two dates on their schedule, one in the fall and one in the spring, to specifically market to homeschool groups. This approach may help with some of the challenges noted in working with this audience since they tend to include a mix of ages and are not a group with a strong group identity so the number registered and the number who actually attend vary considerably.

The top five types of programs offered included elementary school programs and K-12 Field Trip Programs, and teacher in-service training, and then a tie for middle school programs and college programs. This ranking is influenced by the existence of the CCPS Field Trip Specialist Program which is an organized program to have field-based environmental providers serve a range of grades and avoid duplication. This program requires teachers to participate in in-service training to participate in the field trips and elementary grades are the primary focus.

Table 5: Top Five Types of Programs Offered by Collier County Providers

Type of Program	Number of Providers Offering the Program	Percent of Providers Offering the Program
Elementary School Programs	10	83%
Field Trips for K-12 Students	10	83%
Teacher In-Service	7	58%
Middle School Programs	6	50%
Homeschool Programs	6	50%

The number of organizations targeting each grade level was difficult to determine. If the Field Trip Specialist Program is the focus, then there is an even and organized breakdown as expected, and it is clearly focused on elementary grade levels. However, five actual providers offer kindergarten through high school programs and have a department that serves a wide range of grades. Therefore, when analyzing the grades served by these providers, it appears that the overall focus is on fifth and sixth grade students. In either analysis, it is clear that middle and high school age students are the least served in the area. This is likely due to the obstacles to field trips encountered in higher grades such as 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 6: Grade Levels Served by 11 Actual Providers to School Students

Grade	Number of providers targeting grade in FTSP	Percent Served in FTSP (11 providers)	Number of providers offering programs by grade (includes the FTSP)	Percent Served Overall (11 providers)
Kindergarten	0	0	5	45%
First	0	0	5	45%
Second	1	9%	5	45%
Third	2	18%	6	55%
Fourth	3	36%	6	55%
Fifth	3	36%	7	64%
Sixth	1	9%	7	64%
Seventh	0	0	5	45%
Eighth	0	0	5	45%
Ninth	0	0	5	45%
Tenth	0	0	0	0%
Eleventh	1	9%	1	9%
Twelfth	1	9%	1	9%
College	6	55%	6	55%
<i>FTSP - Field Trip Specialist Program</i>				

Table 7: Grades and Providers Participating in the Field Trip Specialist Program

Organization Name	Grade Level(s) Served	Grade Served as part of the Collier County Field Trip Specialist Program	Other Grades Served	Type of Teacher Training Offered
Big Cypress National Preserve	middle	6		middle
Collier County Parks and Recreation Department and Conservation Collier	elementary		K-12 (elementary focus)	
Collier County/IFAS Extension	elementary, middle, high school		K-12	informal only
Conservancy of Southwest Florida	elementary, middle, high school	3, 5	K-12	elementary, middle, high school
Corkscrew Swamp Sanctuary & Blair Audubon Center	elementary	2, 5		elementary
CREW Land and Water Trust	elementary	3		elementary
Everglades National Park	elementary, middle		5, 6	elementary, middle
Naples Botanical Garden	elementary, middle, high school	4	K-12	elementary
Pathfinder, Inc.	middle (in CC)		K-12	
Rookery Bay National Estuarine Research Reserve	elementary, middle, high school	4, high school marine science		elementary, high school
University of Florida Master Naturalist Program				elementary, middle, high school
Wings of Hope	elementary	4, 5		

OVERVIEW OF COLLIER COUNTY PUBLIC SCHOOL DISTRICT

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 2013 as 339,642 although the overall demographics included 28.9% over the age of 65 and 18.5% under the age of 18 (U.S. Census Bureau, 2015). Much of the county is undeveloped and held in government ownership as conservation lands, but the area also includes farms, mining, and medium to dense residential development. Tourism is a primary economic driver due to white sandy beaches and water-based recreational activities.

The Collier County School Public School District served 43,703 students during the 2014-2015 school year (Collier County Public Schools, 2015) and has 48 schools including 29 elementary schools, 10 middle schools, 8 high schools, and a PreK-thru-12 school (Everglades City School). There are also 12 Alternative School Programs. CCPS is one of the largest employers in the county with approximately 3,100 serving as teachers and 49% of them have advanced degrees. Greater than 50% of students live in a home where English is not the first language and this increases to greater than 55% in grades Pre-kindergarten through third grade. In addition, 62% of students participate in the free or reduced lunch program (Collier County Public Schools, 2015).

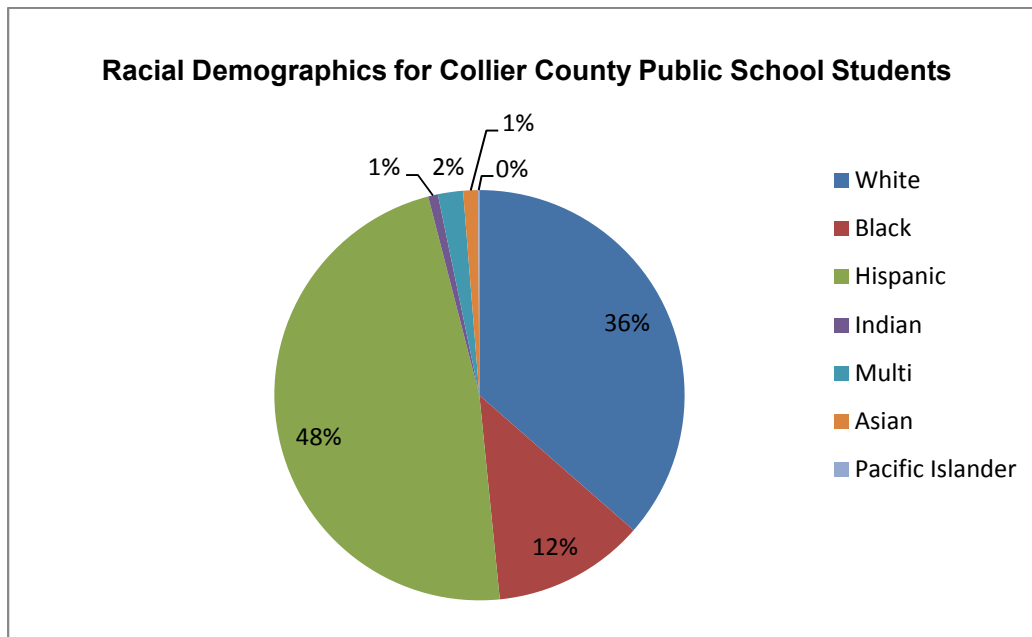


Figure 3: Racial Demographics for Collier County Public School Students

COLLIER COUNTY PUBLIC SCHOOLS (CCPS) FIELD TRIP SPECIALIST PROGRAM

The CCPS Science Department has organized local providers to offer a system of field trips and those were listed in Table 7 above. These programs typically require a one-time teacher training component that includes both environmental science information to support pre and post trip activities, information to help teach during the field trip, and information that orients them to field trip expectations and activities. This program includes field trips that are available to all 2nd, 3rd, 4th, 5th, and 6th graders and to high school marine science students. Therefore, the focus is on elementary and early middle school grades. However, if other factors are not prohibitive there may be a niche for programs that focus on middle or high school students.

Within the Field Trip Specialist Program, only one of the providers, the Big Cypress Preserve, was able to serve all of the students from CCPS during the time allotted within the school year. This timing requires field trips to avoid pre-scheduled holiday vacations, in-service training days for teachers, and testing times. Several actual providers noted the challenges associated with getting field trips scheduled. While there are field trip requirements for teachers, it is unclear whether every school is participating at the required grade level. When interviewed, providers also noted that schools and their teachers would decide whether to attend, or not attend, field trips based on a multitude of reasons. Examples given included whether the teacher was new or not, whether the school had a failing grade, whether the teacher was uncomfortable in the outdoors, and other reasons. While several providers felt that the Field Trip Specialist Program was well-coordinated, there were a few comments about challenges. Based on these responses, there may be an opportunity to increase communication between the providers in order to share ideas about how to get teachers to attend and to better understand who has attended which programs in a given year to maximize long-term learning objectives.

Below is a list of comments from interviews that focused on the role of CCPS in field-based environmental education programs:

- We are fortunate in Collier County and we are doing wonderful job and they help finance us and otherwise kids would not be able to go to a field trip and Collier is doing great and there are still some that are a challenge.
- I had a chance to work with teachers and environmental educators from all over the state and environmental education has been cut out in many counties. Look at my county and it has been receptive since day one and all have been around for a long time because of the school support and doing programs that build upon each other.

That is really unique in the whole state and the way we are covering so many grade levels. It's pretty amazing.

- The Science Coordinator at the district is instrumental in getting all the programs transportation and gets the journals printed and distributed.
- Lucky to have the relationship we have with Collier County schools and historically had a good partnership.
- Collier County Schools funding has diminished and is important
- Lack of Collier County Public Schools support.
- They can't leave the school without the teachers and three chaperones and some schools make a big deal about that.
- All Collier County public schools try to come, they fund buses and highly suggested as they come and teachers use it as part of their science grade.
- We do the boat trips with the kids and the guided nature tours and have not had any problems with the public schools allowing that.
- Some schools like Barron Collier are resource-rich and tend to have more affluent students. Schools such as Immokalee have fewer financial resources as is typical with rural or agricultural communities. Trips with schools from less affluent or more rural areas of the county often include students who have never previously been on a boat.

Table 8: Number of Trips and Students Served as part of the CCPS Field Trip Specialist Program during 2013-1014 School Year

EE Provider	Trip Name	# of students	# of trips
Corkscrew Swamp Sanctuary	Insect Adventure	683	19
CREW Land & Water Trust	Walk Through a Watershed	732	19
Conservancy of SWFL	Tigertail Troopers	841	18
Rookery Bay Reserve	Estuary Explorers	1,220	28
Naples Botanical Garden	Budding Botanists	848	19
Corkscrew Swamp Sanctuary	Wild Florida Adventures	595	16
Big Cypress Nat'l Preserve	S.W.A.M.P.	2,105	75
FGCU Wings of Hope	Panther Posse	1,383	33
Conservancy of SWFL	Water Wonders	725	17
Rookery Bay Reserve	H.S. Marine Science	343	22
Total		9,475	266

PRIVATE SCHOOLS IN COLLIER COUNTY

Although the primary focus of this research was on CCPS, there was some attempt at documenting private schools in the area. There were no fully reliable data sources on the number of private schools, the number of private school students, or teachers and the information was derived from internet searches. Based on the Private School Review website there are 31 private schools in Collier County, although one has since closed and three serve pre-kindergarten and therefore were not included in the MA. The Private School Review website also notes that 4,817 students are served by these schools. If there were approximately 20 students for every teacher, there may be 241 teachers in these private schools, 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 27 private schools currently serving kindergarten through twelfth grade students in Collier County, Florida.

Table 9: Private Schools in Collier County, Florida

private school name	address	phone	website	Grades
Able Academy	3227 Horseshoe Dr. S #111 Naples, FL 34104	239-352-7600	www.theableacademy.org	K-8
Adonia Academy	2590 Northbrooke Plaze Dr. Ste. 2015 Naples, FL 34119	239-260-1462	www.adoniaacademy.org	K-12
Cedar Montessori	10904 Winterview Drive Naples, FL 34109	239-597-7190	www.cedarmontessori.com	PK-K
Children's Montessori School	2535 Northbrooke Plaza Dr. Naples, FL 34119	239-593-6668	www.childmont.com	PK-K
Community School of Naples	13275 Livingston Road Naples, FL 34109	239-597-7575	www.communityschoolnaples.org	PK-12
Corkscrew Christian School	22022 Immokalee Rd. Naples, FL 34102	239-348-8855		PK-12
Donahue Academy	4655 Seton Way Immokalee, FL 34142	239-280-2450	www.donahueacademy.org	K-12
Easter Seals Florida Lily Academy	2801 County Barn Rd, Naples, FL 34112	239-384-5620	www.fl.easterseals.com	K-12
First Baptist Academy	3000 Orange Blossom Dr. Naples, FL 34109	239-597-2233	www.fbalions.org	PK-12
Grace Community School	871 100th Ave. N. Naples, FL 34108	239-566-7167	www.gracecommunityschools.com	K
International Learning Academy	2740 Bayshore Dr. Unit 5 Naples, FL 34112	239-774-1800	http://ilagrad.com	3-12
Island Montessori Academy	PO Box 224 Marco Island, FL 34146	239-642-2020	www.islandmontessoriacademy.org	K-4
Montessori Academy of Naples	2659 Professional Circle, #1118 Naples, FL 34119	239-597-2255	www.naplesmontessori.org	NS-9
Naples Adventist Christian School	2629 Horseshoe Dr. S. Naples, FL 34104	239-777-6404	www.naplesACS.org	PK-8
Naples Christian Academy	3161 Santa Barbara Blvd. Naples, FL 34116	239-455-1087	www.napleschristianacademy.org	PK-8
Nicaea Academy of Naples	14785 Collier Blvd. Naples, FL 34119	239-353-9090	http://nicaeaacademy.com	PK-12
Royal Palm Academy	16100 Livingston Rd. Naples, FL 34110	239-594-9888	www.royalpalmacademy.com	PK-8
Schiller International School	4995 Airport Pulling Rd. N. Naples, FL 34105	239-384-5653	http://es-school.com/	7-12
Seagate Christian School	1010 Whippoorwill Lane Naples, FL 34105	239-262-2226	www.seagatebaptist.com	K-12
St. Ann School	542 8th Ave. S. Naples, FL 34102	239-262-4110	www.stann.net	PK-8
St. Elizabeth Seton School	2730 53rd Terrace SW Naples, FL 34116	239-455-2262	www.saintelizabethseton.com	NS-8
St. John Neumann catholic High School	3000 53rd St. SW Naples, FL 34116		www.sjnceltics.org	9-12
The Christian Classical Academy of Naples	PO Box 770891 Naples, FL 34107	239-249-2626		PK-8
The Village School	6000 Goodlette Rd. N Naples, FL 34109	239-593-7686	www.villageschoolnaples.org	PK-8
Waves of Wonder Montessori School	7740 Preserve Lane Naples, FL 34119	239-566-9696	www.wowmontessori.org	PK-6

PROVIDER TRENDS AND CHANGES

Four actual providers have reduced the number of field-based EE programs they offer due to budget cuts during the recent economic downturn and loss of grant funding. Three potential providers formerly provided these programs and have discontinued them altogether and only one of those intends to start them up again in the future. Two actual providers are expanding their programs. One received grant funding to add a middle school program and the other is mentoring other communities so they can start a similar program at their location.

Below are the responses to open-ended interview questions such as “Have there been changes to your school programs in recent years? If so, what ones and why are you doing this?”

- Don't go to schools anymore, we did when we had a ton of staff and lost about 12 staff in recent years, but still do on request. Used to have people designated to develop programs and go to schools and don't do them anymore.
- Several years ago the [educator] also become the Director so that limited some programming. In addition, we got direction to cut back on doing youth programs because others were doing them.
- Discontinued the middle School LIFE program (Learning in Florida's Environment) ... due to lack of funding.
- Had the LIFE program (Learning in Florida's Environment) but was grant funded and has ended.
- Lack of staff and volunteers has limited ability to offer school programs. Also lost our volunteer board member who was chair of education.
- No longer provide outreach to schools, HOA's (homeowners associations) or teacher training since 2011 and the economic downturn.
- In 2012 had 3rd-6th come and did some in-school programs, but budget cuts stopped those activities.

There were only two examples of program expansions:

- Expanding to other areas including Bear Brigade in Wekiva Florida and our partner site called Cougar Posse in Wyoming.
- Received donor funding to start the 7th grade program.

AFFILIATION WITH THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

Only two actual providers stated some affiliation with NOAA and they included the RBNERR and Sea Grant who is part of the Collier County/University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) program. Within the UF/IFAS program there are several distinct programs that provide some STEM or field-based environmental education including 4-H, agricultural programs, and Sea Grant. Currently, the Sea Grant is the only program affiliated with NOAA and they are not providing youth education at this time. Instead, they are focusing their efforts on adult and professional education in the areas of marine recreational and commercial fisheries, seafood safety, and sustainability. One exception is that the Sea Grant Agent teaches the Florida Master Naturalist Program approximately once per year, which may include teachers. Based on this result, RBNERR is the only NOAA affiliated program in Collier County that is currently providing youth education at this time. In addition, none of the potential providers were affiliated with NOAA either.

ANNUAL NUMBER SERVED

The twelve 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 chart below does not provide an accurate comparison and it has intentionally been arranged from lowest to highest to illustrate the range from 1,000 annual participants to 7,000. In addition, several providers serve participants well beyond Collier County, such as Pathfinder and the Master Naturalist Program which both provide statewide programming. This analysis does show that the cumulative total of all participants recorded is 47,161 which potentially indicates a high number of Collier County school students and/or teachers may be receiving some amount of field-based environmental education.

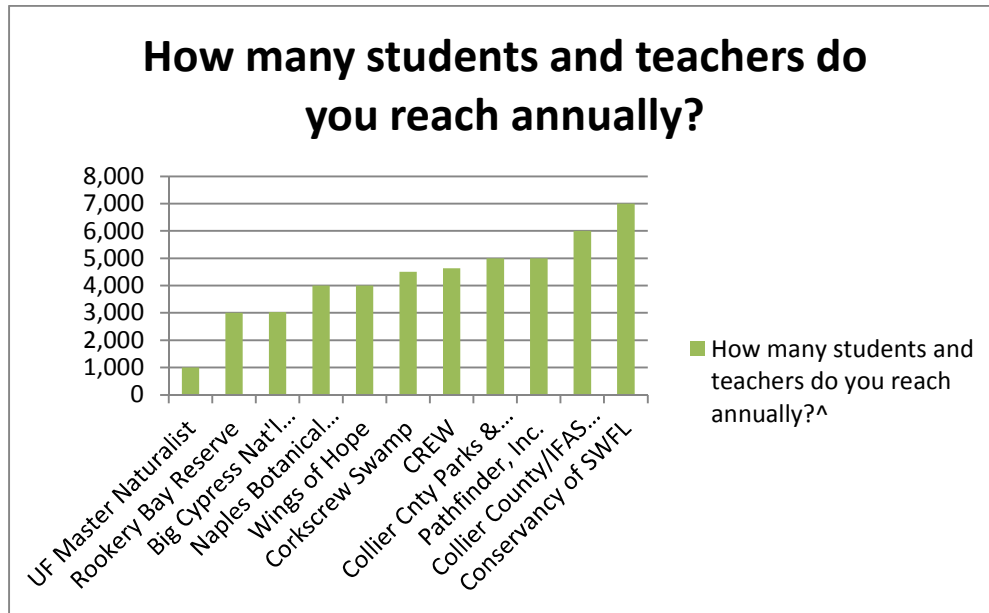


Figure 4: Number of Students and Teachers Served Annually by Actual Providers

STAFFING LEVELS

Questions were asked of providers about the total number of staff within their overall organization or department, as well as the number of staff dedicated to field-based environmental education. The results of these questions were unable to be analyzed due to the range of methods used to staff programs, the duration and types of programs provided, and the types of organizations involved in this research including how they structured their education departments or teams. For example, staffing approaches included the use of full-time and seasonal employees, interns and/or volunteers. In addition, staffing levels changed by season, by program, and by funding source. Programs ranged from a few hours on-site for a particular grade level, to more complex programs where multiple grade-levels schedule events of differing lengths throughout the school year. There were no discernible trends and the data could not be analyzed.

What may be of value to Collier County providers in terms of sharing best practices in the field is the structure of education departments or teams. Small organizations with only a few staff tended to do all program-related activities such as booking the groups, designing curriculum, and post-event reporting. Providers with more numerous education staff demonstrated a greater level of specialization among team members. For example, one provider explained that they had a staff member who only focused on adult education while another provider explained that they had a staff member who specialized in registration and did all the booking for the other educators so those staff

could focus on the curriculum and teaching aspects of the program. These institutional differences may provide insights to efficiency and therefore potential increases in the number served.

FUNDING MECHANISMS

Most of the twelve actual providers had diverse funding mechanisms and since they were all government and non-profit entities they also had similar funding approaches and were also able to receive grants and donations. In general, there were no significant findings related to funding mechanisms. 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, however, a few interesting models worth noting in terms of the general approaches for funding. Two actual providers engaged in fundraising that specifically went towards their student field-based programs and it included funding to offset the cost of buses, but in one case was also used to help pay staff, print materials, etc. Several organizations, including many with government affiliation, cited a “Friends Group” as a helpful funding mechanism. 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. One non-profit provider solely relied on program fees for its operating budget, although their audience was predominately private schools.

Table 10: Funding Mechanisms for Actual Providers

Organization Name	How is your organization funded?
Big Cypress National Preserve	federal, some grants, and donations
Collier County Parks and Recreation Department and Conservation Collier	Local taxes/impact fees, program fees, Collier County Tourist Development Council, and grants
Collier County/IFAS Extension	Local government, state university, NOAA, USDOA
Conservancy of Southwest Florida	Program fees, memberships, donations, grants
Corkscrew Swamp Sanctuary & Blair Audubon Center	Donations, program fees, specific sponsorship of the school programs through donors
CREW Land and Water Trust	Donations, memberships
Everglades National Park	Federal funding, admission fees, grants
Naples Botanical Garden	Memberships, donations, grants, admission and program fees, have donors set aside money for field trips at Title 1 schools
Pathfinder, Inc.	Program fees
Rookery Bay National Estuarine Research Reserve	State and federal funding, grants, Friends of Rookery Bay
University of Florida Master Naturalist Program	State funding, program fees, donations
Wings of Hope	Grants and donations

In addition to the question asked directly of providers about funding, various comments arose regarding funding or funding mechanisms within the context of environmental education in Collier County. Below is a list of those comments and excerpts from provider websites including specific reference to scholarships for teachers, funding trends, and grants that were used to fund programming in the area.

- While there's money for field trips for the public schools it's the mandatory field trips that go first and our stuff is extra or it may be selected by the teachers for some reason maybe because it is free.
- Collier County Schools funding has diminished and is important.
- We can't do all the schools. Lee county buses are double the cost in Collier County. A lot of teachers of schools could never come to do it. There are a few that are brand new that doesn't have the finances and a few got buses funded through their PTO (parent teacher organization).

- The program pays for their buses, except when Collier County Schools pays for buses in the fall.
- Audubon of the Western Everglades is one of our sponsors and they sponsor our programs and now they are sponsoring us again.
- Florida Wildlife Federation's local office supports Wings of Hope at FGCU and their education component by funding buses to take Collier County students for CREW hikes, purchase remote sensing cameras for the panthers, and purchase classroom materials. Have supported them for years around several thousand dollars.
- It's free and our position is you can get into a lot more schools if the program is free and you do the work for the teachers.
- Within the teacher's guide is acknowledgement of funding from innovative partnership between the National Park Service, Exxon Corporation, the National Park Foundation (NPF), and the National Science Teachers Association (NSTA). The Parks as Resources for Knowledge in Science (P.A.R.K.S.) program was created to encourage collaboration in science education between National Parks, schools and local communities. The framework of the P.A.R.K.S. program builds on NSTA's "Building a Presence for Science" initiative, which aims to improve science education by helping implement the National Science Education Standards. The \$25,000 grant awarded to 32 parks will fund a partnership between Big Cypress National Preserve and the Collier County School District that will implement an environmental education/outreach program that utilizes the American alligator and the Florida panther to highlight the importance of habitats to plants and animals in the South Florida ecosystem and enhance the awareness of endangered species.
- S.W.A.M.P has received generous donations for equipment, supplies, staffing, and transportation from: South Florida Water Management District – Big Cypress Basin, Collier County Public School District, South Florida National Parks Trust, and Friends of the Big Cypress Swamp.
- School Sponsorship Program -The generosity of private individuals, foundations and businesses ensures financial support for Corkscrew's high quality conservation education program. Initiated in 2005, Founding Sponsors connected with specific schools and classrooms to support outdoor learning opportunities and underwrite admission fees for area students. Today, Sponsors endorse a variety of activities within the Education Department at Corkscrew Swamp Sanctuary. Contributions support elementary students and teachers for Curriculum Programs which include field trip activities, Sanctuary admission, program supplies and classroom instruction. Teachers and University Professors are provided professional development opportunities under our Partner Educator program and receive year-long support. Donations underwrite coordination of

programs and workshops for Corkscrew staff, Volunteers and Partner Educators who present field lessons. Sponsors receive recognition in our annual report, student and teacher feedback and an invitation to join a field program.

- For public school programs we have private sponsors, we raise 50-60K each year in order to fund the busing paid by Collier County for 2nd and 5th graders.
- A teacher scholarship which is available to certified Florida teachers who are currently employed by a public or private K-12 schools is offered twice per year. Scholarships awarded will cover the entire cost of one FMNP (Florida Master Naturalist Program) core module or special topics course. Scholarships will be awarded semi-annually on a first-come first serve basis in each of the 8 geographic regions recognized by the program. The number of scholarships awarded in each region each year will be dependent on funding.
 - Audubon of Southwest Florida, through the Charles Foster Conservation Fund, offers \$225 tuition scholarships for teachers and volunteer docents of environmental centers in southwest Florida to attend an FMNP Core Module class (Freshwater Wetlands, Coastal Systems or Upland Habitats). Each scholarship recipient is asked to complete a course-related special project which contributes to the mission of Audubon.
 - Florida Native Plant Society Conradina Chapter. We are pleased to offer an annual scholarship opportunity to Conradina Chapter members to attend a Florida Master Naturalist Program (FMNP) module. New memberships are welcome in order to apply. To qualify, you must be a Conradina chapter member and reside in Brevard County.

DISTANCE SCHOOLS WILL TRAVEL

Providers were asked where their schools came from to determine if distance was a key factor in participation. While a few comments indicate that distance has been an obstacle, the overall trend does not demonstrate that distance is the primary limiting factor to school participation in field-based environmental education programs. This is a question that should be included in the follow-up NA research.

- All over the county, but the furthest away is probably north Naples middle school and really every school is 45 minutes to an hour.
- We will go anywhere in the county, but offer a lot in Immokalee, trying to get into Everglades schools and want to get more into Naples.
- Many of the schools are close, but there are a few that are much farther away
- Not sure where we served, never mapped that. Because of our location, predominantly, most are close by.

- All over, do get groups from Immokalee and the estates and Parkside is only a few minutes away and a couple from Lee County
- All over, had an Immokalee group stop coming due to distance
- All over the state
- All over Collier and Lee Counties
- One high school no longer bringing students for on the water field trips due to length of transport time versus time in field

Of the 12 actual providers, there were two that worked statewide and served any county in Florida. Several others served both Lee and Collier County and most of them were located near the border of those two counties. One provider served Collier and Miami-Dade County. The majority of the sites, including RBNERR, served schools primarily in Collier County, with the exception of the occasional college group from out-of-county.

TEACHER TRAINING

The majority of teacher training taking place in Collier County is associated with the CCPS Field Trip Specialist Program since most providers require teachers to participate in training prior to attendance. The Conservancy hosts a STEM Institute in partnership with FGCU and they provide two separate weeks of teacher training in the summer. In addition, RBNERR has offered teacher training in the past and plans to offer a Teachers on the Estuary workshop for middle school teachers in the future. The Naples Botanical Garden offers teacher training for the School Garden Program and the Collier County UF/IFAS program's 4-H Coordinator teaches teachers on a one-to-one informal basis to use their existing curriculum.

There may be an opportunity to provide additional teacher training in Collier County. However, there were extensive thematic comments related to teacher participation in training and field-based programs including obstacles such as lack of time, lack of enthusiasm, difficulties with communication, participation, and returning required documents. This presents a challenge for successful delivery of teacher training programs. One interviewee said they had better attendance from teachers from outside of the area and another mentioned the increase of online teacher training resources which may serve as competition to local efforts. Finally, it may be inappropriate to compare the teacher training associated with the Field Trip Specialist Program to other types of teacher training programs since it is required and only lasts a few hours while week-long programs like at the STEM Institute have different time, distance, and financial demands on teachers.

An interesting model program included in the MA was the Florida Master Naturalist Program offered by the University of Florida. Their approach includes using staff of other institutions, typically government or non-profit providers, to teach a set curriculum that includes classroom and field experiences that can be customized to the local area. While not aimed only at teachers, their website highlighted teachers who have participated and there are two teacher scholarships available. This curriculum and the assets that go along with it such as a pin, certification, and a database of graduates, could be used to entice teachers to obtain more training in environmental education and STEM. In addition, within Collier County there are several approved instructors and sites including RBNERR who offers the Coastal Module approximately once per year. This Module specifically includes topics that are not well represented in existing environmental or STEM curriculum in the area.

When providers were asked if they offer teachers educational/professional development credits, the only credits mentioned were those provided through CCPS. It is therefore important to ask teachers in the NA if credits, and what types of credits, are motivations for attending environmental or STEM teacher training programs. Of the 12 actual providers of field-based environmental education, eight (67%) offer some type of teacher training program. Of those eight, there were six (50%) offering credits through the CCPS Field Trip Specialist Program.

TOPICS

Providers were asked about the topics they cover within their field-based environmental education programs and a wide array of topics was submitted, although within the Provider Profiles this section received little editing. Due to the semi-formal interview process and the lack of editing or verification of topics on the Provider Profiles, there is a lack of rigor to the ranking of commonly covered topics, as required by NOAA. This is also due to the lack of consistency in labeling or describing topical content of programs by actual providers. For example, one actual provider focused on the endangered Florida panther, while other providers simply stated they focused on threatened and endangered plants and animals. Within this research the most obvious topical analysis identified was that estuarine, ocean, and coastal issues were the focus of only one actual provider. Two other providers included estuarine ecosystems as part of their curriculum and one teaches these subjects to adults. Since Collier County is a coastal county with strong economic ties to the health of its coastal ecosystems, increased focus on these topics may be warranted.

Since the lack of focus on estuarine education was a clear trend, the additional analysis of topics was unnecessary for RBNERR's focus on determining its market niche.

However, a recent research project examined the content of non-formal environmental education in the five-county South Florida region. The results of that effort were that “the most popular content area for the sample of EE providers is the conservation biology framework” (Clairy, 2013) and the “frameworks with the fewest amount of principles addressed were energy (10%), atmospheric science (19%), and ocean (21%) (p 41). Since the Clairy research looked at five frameworks, which are a suite of topics, the top five in order of most common to least commonly covered in the South Florida region included:

1. Conservation Biology
2. Earth Science
3. Climate
4. Ocean
5. Atmospheric
6. Energy

FIELD TRIP ASSETS

There was a low response rate to the question “What facilities, or other assets, do you offer to provide environmental education to school groups?” and most responses 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 two actual providers offer boat trips as part of their programs including the RBNERR high school marine science program and the Conservancy’s boat trips associated with their Discovery Center. One potential provider, which was the Naples Zoo, also offered a boat trip when school students visit their site. Considering the extensive coastal nature of Collier County it is surprising that boat trip experiences for school students are not more prevalent, and this may be worth considering in the development of future field trip experiences.

CORRELATION TO STANDARDS

Actual providers were asked whether their programs were correlated to any standards and if they were, to identify what standards they were addressing. Below is a breakdown of the response from the 12 actual providers and three of them provided more than one answer to the question resulting in 15 total responses.

**Table 11: Number of Actual Providers Correlating Curriculum to Standards,
Including the Type of Standard Identified**

Curriculum Standards	Number of Respondents
Florida’s Sunshine State Standards	8
Common Core	2
No Standards	2
Unknown	1
Other National Standards Association for Experiential Education	2
Total Responses	15

Only two of the 12 actual providers failed to correlate to some set of standards which implies that these correlations are seen as important to Actual Providers. It is probably worth asking teachers in the NA if this is of value to them and if so, then what impact does it have on their field trip related decisions.

PROGRAM EVALUATION

During the interviews the question of programmatic evaluation was asked in the form of “Do you evaluate your programs? If so, how?” Below are the open-ended responses to this question from the twelve actual providers of field- based environmental programs and they are broadly grouped by positive, negative, and other responses. In summary, approximately half of the providers conduct evaluations on each student group and most of them are using pre and post-test instruments. The other half of actual providers was not using an evaluation instrument, although several were relying on anecdotal evidence and responses from teachers and students as measures of success. Of those using a survey instrument, some complained of a low response rate due to teachers failing to use or return them. A few of those interviewed took some time to review some type of summary report in order to provide numerical information for the MA. 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 only readily identifiable obstacle to collecting this data was the difficulty in getting teachers to return these instruments, but there may be other unidentified obstacles such as lack of training, time, or other resources to implement the critical evaluation phase of education.

Positive Responses:

- Pre and post tests administered onsite when they arrive, or in the classroom when we go there.
- Teachers must provide feedback/evaluations and send pictures and projects to get their bus funding. They do a pre-test in class and send post afterward. I do an annual report for the donors.
- After each program the students and chaperones get an evaluation and they complete and turn back in.
- High school has a pre and post-test for students but administered by teachers
- We do pre and post-tests.
- Do assess the kids with pre and post-tests.

Negative Responses:

- In the past was a post-field trip teacher evaluation we did for 15 years. This year, one of our staff developed an evaluation for the pre-site visit. Have a hard time getting teachers to return the evaluation after the trip even with the stamped envelope provided.
- No. Don't do a survey to evaluate, but the kids write a thank you letter and tell us what they learned and we can assess and say 28 out of 30 say they learned about an estuary. Most of the time the teachers send an email with some feedback. Don't give a form, but get feedback.
- No.
- Don't ask teachers to do any pre and post work.
- Tried with field trip specialists and tried with pre and post-tests, but didn't work out and get feedback from the teachers.
- Sometimes we do as needed and did pre/post with adult education science seminars the first few years for our grantor, but is not standard op and don't do those all the time. We did it once or twice to get some data for something.

Other Responses:

- Unknown.
- In summer camp we do daily evaluations with all 4 teachers and they go through the entire roster and a numerical for health/content/standards, but is time consuming.

WRITTEN CURRICULUM

Providers were asked if they had written curriculum in an effort to assess the formality of programs. Of the 12 actual providers, nine responded by saying they had written curriculum while two did not, and two did not respond. One provider had written curriculum for one of their programs, but not for all of them. This generally indicates a fair amount of documentation for EE programs.

MARKETING

Providers were asked about how they market their programs and many use their website, the Collier County Public Schools website, but also word of mouth. A clear theme throughout the research is that teachers tend to be “repeat attenders.” There were several examples where teachers changed jobs and went to a different school, and then started doing field trips with their new school. Understanding what is unique about these particular teachers would be helpful for future marketing efforts. Two providers also mentioned hosting CCPS events or meetings which also provided a direct-marketing method for reaching teachers and school administrators.

Marketing methods included:

- Word of mouth, repeat attendance by schools, has never had to advertise anything we do.
- Our program is on the Collier County School website under teacher resource list, but not sure if it is under sciences. So teachers probably see that.
- Facebook, word of mouth, newsletters, website
- Our marketing team handles that and the learning adventures books get sent directly to schools, plus website, and the County Schools has an in-service training here every year and we give the Science Coordinator a package to each school to each science dept. head.
- Website, return schools, call in the beginning of the school year
- We don't do too much marketing and make sure we are actively engaged with social media. Redid website last year, small budget for marketing.
- Website
- Don't market the school programs, but is a poorly kept secret. We host the school district and the only thing we ask is that we speak to them about what we do here.

- Most comes from word of mouth like a teacher leaves one that has come for years and brings it to the new school – a few from website searches and gives us a call. Attend FCIS conference every year but not a huge marketing boom for us.
- Website, Collier County Schools website
- Marketing the courses is really the responsibility of the instructors. We have a website and downloadable materials.
- Don't - repeat schools

Based on the questionnaire responses, the top five marketing approaches included:

1. Website
2. CCPS website
3. Word of mouth
4. Don't market
5. Repeat attendance

ROLE OF VOLUNTEERS

Providers were asked if they use volunteers in their programs and if so, how were they used. Below are the open-ended responses which are grouped by positive and negative responses. In summary, volunteers are commonly used in EE programs, but not universally used. Some providers reported challenges with volunteers such as getting them to help at the right time of year and training them to handle the tasks assigned during an EE programs.

Positive:

- Yes, to help with the field trips and they lead at one of the stations that the kids rotate through.
- They help when our kids are in the discovery center the touch tank is manned by volunteers and they help and assist.
- Our programs are volunteer run. Divide two classes into 4 groups so need 4 volunteers (unless teacher is trained). Have 15 of 110 volunteers that focus on youth education and many are former educators. Dependent on seasonal volunteers and most are snow birds. Better coverage for 2nd grade than 5th grade. Have volunteers that live on site from England to help with slightly off season programs (not snow birds).
- Volunteers help teach the 4th grade program and captain a second boat for the high school program.
- The program is taught by certified volunteer experts throughout the state

- Students teach the 5th and 6th graders and are like volunteers.

Negative:

- Not usually. The volunteers that are friends of barefoot beach assist with the programs.
- Volunteers are club leaders, but not usually involved in school programs.
- If we get lucky, we have volunteers.
- Not during the field trip specialist program because it occurs when there are not many volunteers. With other field trips I use volunteers when I can to have two people and be the second co-leader. Docent volunteers are generally available throughout the Garden to answer questions.
- Have used volunteers in the past and our board are volunteers and have helped with events. Our technical and facilitation skills are unique so is difficult to have volunteers.

ROLE OF TEACHERS

Providers were asked about the role that teachers play in their programs and the responses below are grouped by the level of participation. Many of the providers expect teachers to assist in teaching or leading the field trip program, including most of those associated with the CCPS Field Trip Specialist Program. On the contrary, several expounded on the importance of teaching teachers along with the kids and thought it was positive to have the teachers feel like guests. The next section discusses challenges that EE providers have in working with teachers, including gaining their active participation. If resources allow, some challenges could be alleviated by allowing teachers to have a more passive role in EE programs.

Higher level of participation:

- Once teachers take the required workshop, and then can teach a section, but only when they are comfortable.
- Teachers work alongside a ranger to plan and lead the group activities.
- Teachers do the dip netting for 3rd and teach more for the high school
- 4th grade Collier County program -Students rotate through 4 stations that are led by the teachers. Teachers can't register without taking the training.
- Help teach 4th grade with half of students with staff and other half with teacher and a volunteer, they just go along on the high school trips.
- The teachers must participate in a workshop and when they come out she provides a guide which is the second tier of training and they learn from that

guide. The second year I require them to co-teach with that guide and by the third year they can guide on their own.

Lower level of participation:

- Teachers don't even have to be there and would leave the kids and the teachers don't do anything.
- The teachers are not expected to do much.
- They're guests as well.
- They handle the overnight time and have to attend with kids, but don't teach.
- None
- Teachers don't have to take any training at all and want them to learn along with 4th and 5th grade and hard for them to take time off work to do it.

COMMUNICATION WITH TEACHERS

Providers were asked how they communicate with teachers and if there were challenges or opportunities in communicating with them. Below is a list of responses that shows that email communication is popular, that they rely on the CCPS website and that some have specific information they provide either on their website, through packets, checklists, or other tools. An interesting approach is being used by the Corkscrew Swamp Sanctuary. They get a jump on planning by checking the school's websites in the beginning of the school year to see how many kids and teachers are participating. Next, they jump start the year by calling when school starts to map out the calendar and see who is going where. By the beginning of September, the calendar is set for the whole year and additional groups are plugged in around the school groups.

- Pre-site-visit to the schools, emails otherwise, have packets, checklist, etc.
- If teachers want to come they call or email and then we coordinate with the supervisor to see if we can adjust the schedule.
- Email
- Email and phone (can book online)
- Some are done with their science coordinator and some are the team leader for that grade.
- Collier County Schools science department website and then also their website where they can request a field trip online. Email and also word of mouth. Groups will call her the first week of school and they do the same thing every year.
- Mostly email communication

- Teachers must attend a workshop, given a link afterward to schedule their dates and a letter is emailed back to confirm
- Teachers are pretty good. Every year there is something that comes up where I just tweak and I had one year where an entire group didn't show up and the teachers forgot and I didn't confirm and didn't get on the master calendar so I revamped how I confirmed. They will tell who guides and who can't and then she sets her people based on that and sometimes they switch that on me and then she is short a person and now it is very detailed with exactly with who is coming and how many I need to make it clear.
- One of the biggest is that they are so busy and this is an extra thing they have to plan for – to get stuff from them like medical and liability waivers and hard to find time to have a long conversation with the teachers – would like to discuss goals and skills and what they need to work on and things to focus on and having a conversation is difficult.
- When the county decided to have everything electronic, used to do flyers, but now only post on the website and parents can sign up from there
- Can't directly email all 4th grade teachers at once due to some Collier County restrictions
- Our program is on the Collier County school website under teacher resource list, but not sure if it is under sciences. So teachers probably see that.
- Kind of up to the teachers to come to us and they click on the (Collier County Schools) science department website and then also our website and also word of mouth and a group will call the first week of school and they do the same thing every year and then when they move on then see the old teachers notes and they call.
- We have a pretty good process with new schools and we have a conversation and plan the trip and make a schedule and tailor each schedule for each school and have all the information and send a 30 day checklist and have a student meeting and chaperone meeting.
- Email and assign dates, visit in the classroom at the end of the year.

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, so this will be an area of focus for the NA. According to providers, there are some common themes to program attendance in that teachers who already attend,

then tend to repeat their attendance to a particular program. There seems to be the inverse association as well, in that high teacher turnover results in less likely attendance at EE programs. There were some examples where a teacher's attendance was disrupted such as due to leaving the position, a health issue, or that the school received a poor grade and field trips were prohibited. However, teachers who attended in one position sometimes began attending a different field trip in their new position. There is some combination of internal and external factors that are motivating certain teachers to attend and therefore better understanding these reasons could provide helpful insights to promoting increased attendance among Collier County teachers.

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

- Collier County provides buses, part of their science grade, many have been coming for years
- Have long-standing relationships with many
- The same ones return, limited space, we're trying to create that spark
- I did a good job and I could relate to those kids and made being outside pretty cool and did a good job with children and adults and they got something out of it and had a good time. I have a long standing relationship with teachers.
- The diversity that we have is really beneficial to them and linking them to sunshine state standards and our field trips are jam packed with hands on components that get the kids out in nature and our field trips are incredible hands out and the animal thing. We bring live animals to all field trips and classroom.
- Most come year after year and is a good fit. Our niche is doing EE extremely well is quality NOT quantity.
- Like to teach kids and get them to focus.
- So many have been coming for many years and they are easy to re-plan and the teachers know what to do, where to be, etc.
- Experienced, knowledgeable, passionate guides who are enthusiastic and adventurous.
- We feature different and unique animals that are not superstars.
- Well rounded field trip to learn, not just look, and use the Reserve as a living laboratory, outdoor classroom.
- People put it on their resume and she gets people following up and asking and people use this for acquiring jobs and for ecotourism and they are a boat captain and they say I am a certified master naturalist.
- It is so organized and teachers like that. Brings everything back with their curriculum and teachers really like it does not put a lot of work on the teachers.

EE program outcomes, which may be part of the value that is being delivered to teachers:

- These kids need to be out there and are so fearful of the natural world and when they get done with us they are not. We get the “educate others” form and constant thank you notes and they send to us.
- We had a little girl and she quieted the whole neighborhood over a wildlife problem and the kids are becoming better people and are kinder people. After 14 years, you see students and they say you really changed my view on the natural world.
- Selfish focus on elementary because my kids are in elementary school
- I did a good job and I could relate to those kids and made being outside pretty cool. Talked about snot and boogers and I did a good job with children and adults and they got something out of it and had a good time. We would salt the beach with shark teeth and do sea turtle eggs with ping pong balls. They get dirty and see a real fish.
- We used to offer class on forensics there was a murder on the cottage on the beach and did all these experiments to solve the murder when CSI was really popular.
- Now we invite adults to our kid’s field trips and vice versa. We do a lot of multi-generational trips and they learn from each other.
- I know some of the focus now is STEM education and some is to gear kids, like with our afterschool things, is a focus on what kids are teaching. For me, we’re trying to create that spark and when we have 2nd graders, that is their first exposure of nature, and a lot are afraid. Some are excited about a squirrel and they have never seen one and they live in Immokalee and getting them excited and interested. They work their way through each grade level and when we ask if you came here before and they remember the dip pond. It’s about making connections for them and hopefully they carry with them. Our program works pretty well. It goes over a lot of different things and goes over conservation and respecting wildlife and a broad spectrum of interests and it’s really about fun and wanting them to really leave here loving what they say. And they can teach their families about it and their parents have had a chance to come out.
- The diversity of programs that we have is really beneficial to them and linking them to Sunshine State Standards and our field trips are jam packed with hands-on components that get the kids out in nature and our field trips are incredible and the animal thing. We bring live animals to all field trips and classrooms.
- They have a good time and a lot have never been out in the woods.
- The kids are so busy with sports, activities, and we let them sit with their journal to draw and write and look and sit there and be quiet and not talk and just listen and feel and be and be out there in the wilderness and then it takes them a minute and they like that whatever you see, feel, want a little quiet time for them to take it all in.

- My little office is full of letters and pictures from kids. That is the pay off and how I keep volunteers coming back and send them the letters and I like when you taught me about this and it is always fun to see what you get back and it is funny what you take from it sometimes. Some are hilarious especially from 2nd graders and says awesome in big giant letters. Dragon flies have veins and they send the funniest letters and it keeps my volunteers coming back and we are doing a good job. I saw a white bird on the boardwalk and it looked cool or they drew a picture of an ant.
- Most come year after year and is a good fit. Our niche is doing EE extremely well is quality NOT quantity.
- One of the benefits of our program is we have a little flexibility and they are in a natural system you don't know what you will find. If we see bear scat and be flexible to incorporate what we find. Some programs are more rigid and some are more regimented and ours can go with the flow as needed.
- Get the people to fall in love with it. People relate to the environment in different ways – painting, aesthetic, science, art, etc. – we all see nature through our own lens. Get them out there and form their own personal relationship and get them connected back to nature and got to feel the connection with nature. Wow swamps are cool places let's save them, enjoy them, and share them with our kids and grandkids. Preserve as much as we can to improve our quality of life so our future people have these options. My example is Mel Fin. He is the reason the Fakahatchee got preserved. The people that came before us allow us to do what we do. All we can do at the end of our career is to pass the baton. Connects us from the past to the future.
- He learns from all those other scientists. We as biologists get to do really cool stuff, and then my swamp walks just get better. Try to bridge it. I get the privilege to work with these incredible people. My responsibility is to share that information. The swap walks get to share those.
- The program has a nice range which includes water, which is always going to be an issue. We're also spending time on educating children on how to interact with wildlife like when you see a bear or raccoon and instill that these are wild animals.
- Not like being in nature and have them close their eyes and listen is so very different and for many it's their first experience. Hard to respect and want to save something if you have nothing to compare it to.
- There is a final challenge in their journal about living with panthers and bears and they have to educate at least two people. It really works and we see families say they slowdown in panther habitat and turn off the water and they love knowing something that mommy and daddy do not know.

OBSTACLES TO ATTENDING

Based on provider responses, this list was compiled of reasons why teachers had difficulty in attending programs. These responses are from providers and not from teachers, so this will be an area of focus for the NA. Several themes have emerged including that teachers are busy and have many pressures on them, that buses and substitutes are challenges, chaperones were difficult to find, and providers lacked resources to accommodate additional groups.

- Had a school cancel because the teacher saw an alligator and thought it wasn't safe.
- We can't expect the teachers to be experts on our property especially K-5 level since they have so much to teach anyway.
- One high school no longer bringing students for on the water field trips due to length of transport time versus time in field, plus staff turnover at school. Problems for the teachers include scheduling substitutes, coordinating busing for the trip, dealing with other teachers who don't want the students out of school for an entire day; also, administrators who may not understand the value of the class may provide obstacles to scheduling.
- Time for teachers to participate. And maybe awareness of what we do. How the hell are they going to fit it in to what they do? A lot of 4-h is simple to implement and their staff can come in and teach it. Teachers have to pick and choose. Transportation is a problem. We can get out to the schools, but it is hard to say learn by doing but being able to get transportation to sites. For our camps, getting vans through park and rec or rent buses. Field trips are limited and close by schools.
- Having the correct number of chaperones is difficult for some schools. Turnover, teachers change jobs more now than they used to.
- Chaperones can be an issue. School requires different levels of chaperones _level 1 and 2 those that can't be alone with the kids and that can sometimes cause an issue. Our volunteers are level 2 chaperones and can be alone and we are all background checked and screened and that can cause a problem. Has to do with ratios around water and is a 6:1 and they confused "guides" with "chaperones" and the guide still needs another adult for their group and have to an adult with each of the smaller groups. Pretty much working with teachers is fine they are great with guiding and are good with communication and
- Corkscrew decided that with chaperones needing background checks and can't get parents to come because they work or are absent, it was too hard for teachers to get it all done and to take three days to come to the program and prepare for the trip.

- We don't have staff. In season the beaches are crowded. They are busy.
- They don't have room for more groups they are restricted by funding. Our remoteness is tough and so many are not familiar with us.
- Our prices are comparable to other trips they are taking, but is an obstacle for public schools and the overnight fees especially.
- The forests are so far out and all the restricted school budgets and transportation. Which is a shame.
- We target elementary, harder for junior high and high school.
- We're full because of the time period we can get help (seasonal help and volunteers) plus the best time to come weather-wise and our dates are limited and we are at capacity and can't impact FCAT, Christmas break, Thanksgiving break, etc. Right now can just fit everyone in and no room for a storm day.
- When [the school] had their status as an F school and principal saying not until F grade comes up.
- We can't take a ton of people because we don't have time or the resource like a parking place so we don't market and the schools come and we encourage them to come April and May to avoid season. Collier County beaches are packed with seasonal residents and tell teachers they won't have a good time because bathroom lines and traffic.
- We are limited in where we can go. Only 2 outreach staff, one full-time and one part-time. Usually teachers call us and sometimes we turn them away and have a waiting list.
- We really don't have enough people to do all of them and between early release and all that. Selection is first-come and those participating before get preference and can add more schools if there is room.
- I object to taking animals into the classroom because wildlife in the classroom is a negative because you can't tell them they are not pets when you have a bird in your hand and it is a contrary message. Be careful, yet letting kids pet them.
- Only time turn away is when everything is all full. Only have four open days in April right now. For example, Poinciana elementary they just don't take field trips and she has been trying to get them to take a field trip and they won't, even though they are nearby.
- I would get them strung with labs and part of the curriculum at the university and everyone would hem and haw and one way was when students graduated and through their transition and finishing course work and start student teaching and they would learn about bullying and gender issues and I asked if she could give a seminar about EE and cross-curriculum and different resources that they could use. The feedback I got was interesting and these are teachers teaching future generations and some thought I should be speaking to folks who wanted just to

teach science. I taught different ways that it is not just for science classes and also some had a hard time because I talked about evolution and some of the teachers were creationists and that was kind of scary to me. Some were really not that comfortable with taking EE into their classrooms. These were the new teachers that could have chosen different seminars, so these were the ones that chose to come to EE in the classroom and said bring the outside in and the inside out and that was one that I gave and even among those who chose to come it is really hard reaching these teachers. I think that it is such an important nut to crack you get one teacher and think of all the individuals that they will reach.

CHALLENGES FOR TEACHERS AND PROVIDERS

Throughout the research process, there were numerous comments that identified challenges faced by teachers and challenges faced by providers. Some of those focused around teachers and providers working together. Responses that fit into this category have been grouped by the following six themes:

1. Teachers are busy, have a lack of spare time and therefore it's hard to get them to complete tasks for providers, or providers have to offer more to make it easy for them,
2. Teachers sometimes lack EE knowledge and are not comfortable in the outdoors, which can negatively impact a field trip or require additional work for the provider,
3. Teaching positions may have a lot of turnover and the inconsistency is perceived by providers as being disruptive to EE programs,
4. Teachers will return year after year on a field trip, which provides a rich, long-term experience for all involved,
5. The amount of effort and enthusiasm of teachers is perceived by providers as important for a successful EE field trip experience,
6. Testing and technology are additional challenges.

Busy Teachers:

- Wanting to have workshops for teachers and they were definitely interested – but it was do you offer them in the summer or weekends or after school and what is the best time?
- How to get them to sign up for these courses and some were totally onboard and some were not.
- Busy, have to cover a lot of information with the kids, lots of requirements

- Lack of time.
- Harder for formal educators to get the buses and time off .
- Our evaluations are pretty basic and hopefully take five minutes, but have a hard time getting teachers to return the evaluation after the field trip even though we give them a self-addressed, stamped envelope.
- If we make sure the students do the evaluations onsite we have a good return rate, but if it goes to the school it rarely comes back even though we send a self-addressed stamped envelope.
- Offer three options [for teacher training], either early release day and teachers like that or during an in-service or no school day and a Saturday. Give all three options or sometimes just ask the teachers and they communicate with them for the best time. I offer a lot of workshops and am flexible and give them a few different options. I related with them I have young kids as well and work with them and had a single mom teacher who brought their kid with them. Usually offer three per grade level.
- Teacher training is so important and is typically really hard to find an extra teachers training day.
- We can't expect the teachers to be experts on our property especially K-5 level since they have so much to teach anyway.
- One of the biggest is that they are so busy and this is an extra thing they have to plan for – to get stuff from them like medical and liability waivers and hard to find time to have a long conversation with the teachers – would like to discuss goals and skills and what they need to work on and things to focus on and having a conversation is difficult.
- Teachers don't have to take any training at all and want them to learn along with 4th and 5th grade and hard for them to take time off work to do it.
- Problems for the teachers include scheduling substitutes, coordinating busing for the trip, dealing with other teachers who don't want the students out of school for an entire day, also administrators who may not understand the value of the class may provide obstacles to scheduling.

Teachers may lack EE knowledge and outdoor comfort:

- We get teachers that are afraid and uncomfortable in the outdoors. Some freak out when they see some wildlife, but if they put on a brave face and the kids will too. When I bring kids over they want to know if that is poisonous like they are out to get them.
- Now we are the point where teachers were not brought up outside and when teachers grew up outside the young teachers there aren't as many teachers that were brought up they grew up on video games.

- They have varying experience levels both as a classroom teacher and with research/environment/outdoors.
- Last year one teacher was uncomfortable with being in the swamp and perhaps they will come back next year.
- There's this whole shift in the demographics if we can't teach our teachers EE then they can't pass it on. Teaching the teachers EE it should be mandatory and it is not and in all colleges it should be part of their training they should be teaching them about our natural resources.
- We can't expect the teachers to be experts on our property especially K-5 level since they have so much to teach anyway.
- The confidence level is really low and need to leave them comfortable to leave them dip netting. The kids love the dip netting and nice to have the booklet and they get to carry it around and that is their field guide.
- Had a school cancel because the teacher saw an alligator and thought it wasn't safe.
- That is not new anywhere, there are awesome teachers that you want to clone and some are so scared out here.

Teacher turnover:

- Some teachers have been here, they keep moving the teachers around.
- The non-local teachers (college) are more consistent in attending
- Did a lot [of environmental education] for Naples High years ago and now the teachers gone so no.
- Its better when the same teachers come and they contact us and they know what they are doing since it is a set program.
- When she schedules schools, the returning teachers get first priority and because of seasonal restraints there are only certain days that will work.
- When I was a kid and went to school there was the same 1st grade teacher for her whole career. We never keep them and our retention rate is right around 50%. We get them to that point [where they can teach during the field trip] and then they switch grades and they move to a different school or different grade and then I have to get new guides.

Returning teachers:

- As they go through the different ages. I've had parents come out with their kids and they came as kids themselves and the teachers that always come out continue to and that retention and that has been really great to have teachers doing it for 14 years.

- So many have been coming for many years and they are easy to re-plan and the teachers know what to do where to be etc. Sometimes it makes it difficult to introduce new experiences and curriculum and they don't want to change since they think this works and are easy. So if we have a new course it is often difficult to get them to change.
- Teachers will call and I have a long standing relationship with teachers because I had worked for the museum and the teachers came [to the new site] because they followed me here.
- If teachers looking for a resource they will email and ask questions and we do a lot of networking and teachers who are looking for information.
- We do get quite a repeat group of teachers that have come to us every year for the same programs for the same age levels.
- Most comes from word of mouth like a teacher leaves one school that has come for years and brings it to the new school.

Enthusiastic teachers are helpful to EE providers:

- Our remoteness is tough and so many are not familiar with us. They may go [elsewhere] with their own kids on the weekend, but we start at ground zero. As with many field trips – a lot are great and they are required to come ahead of time and you get those teachers that want to check out and that it is a day off for them – that can be a problem. That is not new anywhere, there are awesome teachers that you want to clone and some are so scared out here.
- Convincing teachers to do the pre-activities, waivers, booking, etc. in advance in a timely manner.
- If you are the teacher, do not rely on the 45 minute in-school presentation ahead of time. Need to fit in things ahead of the trip.
- Some teachers are involved and interested and others consider it their time off.
- With any school you have good and bad teachers and those that care and those that don't. With all the demands on them and teachers leaving and there are a lot of new teachers. It used to be that teachers would go the extra mile and used to have teachers grade after hours and put their own money into material and over the years they don't anymore. We can't get teachers to go to a workshop on Saturday. Wanted to target Florida bear curriculum and were going to hold it right after school and feed them and they still wouldn't come. Don't even put them on anymore. Educators from other sites, like Lee County will come, but don't do for teachers anymore because Collier County won't come to anything. They complain now because they don't get paid for that Saturday workshop and they do get ceu's, but it's easier to take something online.

- You need a dynamic teacher.
- It's free and our position is you can get into a lot more schools if the program is free and you do the work for the teachers. More than making a lesson plan and then tell them to do it and the teacher gets to learn and enjoy along with their students. What teacher will say no that is ready made and someone else does the teaching? There's no money and they are busy and hard for schools that really need this sort of opportunity and they don't have the funding to provide this amenity. And less coastal and more inland areas need nature – more the inland schools that have less opportunities and students that have no resources at home and they really need to be taken to the woods. If they were going anywhere they would go to the beach than state parks and reserves and other natural areas.
- When we started the high school program 7 years ago we knew we needed to tap into the right teachers and who were together and actively engaged with students when they are out there. We wanted it to be a success and it is very hands on in the swamp and hand-picked the teachers. The teachers help 100% and have a teacher training when they come out and they do much of the trip. They had one new teacher this year, but the new person took her spot.
- Some don't care (about the pre/post activities) and some do all of it.
- For many years we were able to supply a backpack to every school and give it to the teachers and so when they get out here they know what to do. We can't afford to renew it, and they can get their own or find the one that was lost or watch the YouTube video, but it's like pulling teeth. And it's an easy day out here for them and you can see the light bulbs coming on for the kids.
- Teachers in the field trip specialist program works really well with the teachers that are really interested. If they are not interested, they have to do the field trip and they don't want to do the training. I like to teach kids and get them to focus. Some are into it and can count on them, but other ones wonder if they paid any attention at all.

Testing and technology are challenges:

- Some teachers don't want kids to use the devices (with HS group the staff and teachers have to get on the same page about usage).
- Pressures from FCAT and common core.
- Testing has always thrown a wrench into scheduling this program and affects what they can do in the classroom in advance of their visit.
- They're being tested on everything and when they are doing their review and some have never taught plant science and don't know it themselves, like plant reproduction and the concept between bee, flower and fruit. Don't fault teachers, and I do these FCAT reviews that they are tested on plant science and last time they see

it is a year and half between it is on their test. We can take the burden off the teachers.

TOPIC IDEAS AND SUGGESTIONS

All potential providers were asked if they had ideas for topics that needed greater coverage or if they had other suggestions for EE in Collier County. A wide range of open-ended responses is listed below. There were few consistent themes, but several interesting ideas emerged including creating a group of EE providers to network and learn from each other, including the mention of a previous effective network. Several responses focused on varying audiences such as teaching parents, teaching young professionals in the County who will be future decision-makers, and focusing on 5th-8th grade since it is when values are formed.

- Educating Others Form is what we use with students and wishes all other programs would do this – send out a little piece of paper so the kids would educate others what they learned at this program. Most say see you later and you don't hear back but not like that with the Posse. All the programs should send home a form so kids should educate their friends and neighbors.
- It's not the children, it's the parents. If the parents are unwilling to take the kids to the park and get out and get into nature then the kids can't do it. This is our biggest problem if they could make time one morning per month to take your kids out into nature to get them to learn about our area which is so unique. A lot of places don't have what we have. There's so much to see. If we could do anything, it's get through to the parents to get their kids out.
- The one thing that was always a challenge and we still see it is that there is turnover and an aging population and it makes it difficult for people to understand the environmental issues of our community. We can teach our kids and then they don't stay here, because they can't afford to live here. They are not the ones making decision about our community. The ones affecting our decision makers are the ones that are uneducated and we still need to reach out and educate our adult folks who are living here. They are the ones at council and commission meetings and those folks are making decisions about our community. I think our hot group is the 30 year olds who decided to move here and this is a great place and they moved from the outside are the upcoming leaders and are going to be active in our community. We don't target them and no one else does. They only know what they knew from where they are from like New York, Boston, or Pennsylvania.
- I wish all the agencies could hit as many kids so that each year we were hitting each kid every year. I see such a huge difference in the kids that did those other programs. If we've already covered it in fourth grade we bring that up on our sixth

grade trip and they say we've learned about that at Rookery Bay or wherever and I see that a lot. All of our programs are working if we could just cover all those kids in the lower levels and if they could all be hit every year.

- We need to be on the same page information-wise. I'm wondering about that Everglades Foundation curriculum because the teachers don't need something else to take up their time and they never did any kind of scouting out to see what was in place in Collier County.
- There are so many other opportunities it should be a constant thing and we have so much information, that I really think there should be someone – in the school district or government- that heads of environmental education for Collier County. Just build that into the curriculum. Talk about partnerships and all these nature preserves and state parks and historical museums. There are so many we could be going to and so much they could learn. There are so many scientists in this area, too.
- I'm interested in trends, trends in recreation and outdoor recreation and people don't understand that doing things outdoor and environmental education is what people want. Organized athletics and gym memberships are declining and two parents working can't cart everyone everywhere. This is what people want and we are not providing it.
- What I would like to see happen and this may not be for some kind of formal certification for environmental education so that when people go to a nature center they know that these people know what they are talking about because anyone can hang a shingle and take people out. I followed a new person on a walk and she made this stuff up. No standards. Like to be licensed - in order to drive a car. I don't want to regulate it or manage for best practices and people see a lot of money to be made. I've noticed that the volunteer base is old and ageing and the young people want to do.
- I wish we did more of it (environmental education) in parks and we (formerly) did a good job and it was fun.
- Create a working group of environmental educators with school teachers to come up with best practices and ask them what they are looking for and why are you not calling?
- Until we make it important, than others won't see it as important. Do a collaborative program. Maybe several sites provide instructors and site sharing and have a group in Collier County and we used to do this and had an environmental education group that met and we don't do that anymore because we're busy. No one knows what anyone else is doing there could be duplication of services. There's no "hey can I help?" Don't know target audience. We could help each other market our programs. Maybe meet twice a year before season and meet after season in September and kind of introduce ourselves and hold it at different locations to see the sites and meet

people we can help market your place and come together. Get down and dirty in Collier County - bird watching if each would contribute a day and a couple of photographs. That's a resource and there's even TDC money to do that and do the historic tourism.

- Years of a continuum to learn environmental education. By the time of age 13 or 18, your world views are formed and influenced by other events. That 5-8th grade range is critical and it's important to start young and continue. A one-time dog and pony show may not work and survey all the kids on the boats.
- People want the history for the old funky buildings and what is buried underneath the condos and all.
- Agriculture is not being well enough covered. There used to be agriculture (ag.) in the classroom program that went away. Maybe not so much ag. as science and food systems. In terms of environmental education, there is lots of environmental education, but don't think there is that critical look at our environmental issues. Environmental education has been criticized in the past of being green Nazis and instead should be giving critical thinking skills. What is our role in the community? People have a lack of understanding of how our communities work. We focus on the animals to get kids attention. Term wicked issues, complex, multiple issues, value systems, we want a 20 second sound bite and that's a challenge.
- I think that one that was surprising from the research was that not many [existing programs] focused on just oceans. Just surprised me since we are next to it and our class covers fresh, salt and brackish water environments.
- I've changed my views on the targeted outcomes. I recognize that most kids will be citizens and not researchers and that is a good thing that they use it. Don't know about snakes and birds but know pollution is bad. Natural resources folks focus on the classic of what did they learn? But some agencies like NOAA think it is ok to convene people.
- I'm going to praise our outdoor programs in this area. We used to meet as part of SEEK and we have a close relationship and we all know each other and we all play well and as a result with the good level of communication we have targeted Collier County kids in a way that they make sure these kids have different opportunities and different age levels. At the end they have that walk and they lay it out with a really big picture and they establish that with a big picture approach.
- It's all about collaboration. No agency can do it alone, we learn so much more from each other and the end product of conservation and biodiversity is much more effective.
- We're in a good place because STEM is the hot buzz word and is easier for teachers to justify this and teachers are really, really weak on topics such as geography and social studies and they are not tested on these. We looked at the highlighted areas

of the Caribbean and they can't name that and these are from private schools and could not identify Florida on the map. They cannot read maps and they don't know what is out there and social studies in general and is the one that gets cut when they don't have time and that is a real shame and we are trying to get people to be stewards but they need to have a sense of where we fit into that.

- Getting them away from technology for a couple hours is amazing – in the last several months now so many people have phones on their cameras and they want to take pictures and usually don't allow participants to use technology and usually don't allow them to bring their tablets with them. There's been some research (AEE is having a symposium on how to incorporate technology into education like geo-caching and GIS) and it is going there and will be hard to find areas where you can't avoid it. There are benefits for having them have it.
- Is amazing for a lot of kids and never been outside at night and never done that.
- Outreach is an area I believe is lacking across the board and I think we have the freedom [at our organization], more than others, to expand our outreach into the schools. It is my endeavor to start webcam lessons, piloted for once a month, to individual classrooms. Short 15 minute activities where we can bring real science into the classroom. Good way to nurture community relationships
- I hope that we can step up and offer more EE, although this is not in writing and not anything in the next 5 years, but maybe when we can pick that up again and we have been understaff for the past few years and the Department of Interior doesn't consider it a priority over national resources and fire programs, but we all agree that it is missing in this area that we have these two great refuges and expand and get back with school groups.
- The college age group would be good to pick it up – panthers - at a higher level with college with their habitat needs and recovery and how they are managed. They are difficult to manage, as a charismatic species and how impacted by humans and development and is a gap for us.
- Another one is at the higher level is habitat restoration and college level and how climate is influencing mangrove and marsh ecosystems and how we would hope to restore that right now it is changing knowledge and important knowledge and had several students reach out to them about that. Also a lot of estuarine and marine programs are a little more popular with other agencies that are able to do education. We also liked getting out to upland hammocks, pine prairies and pine forests – the only other place we know that is doing that is Big Cypress preserve. We let that habitat education fall to the wayside.
- Willing to do more with K-college, but don't have staff do more supposed to be volunteer-based, but can't get volunteers. They are starting a Friends group as a

non-profit and get people to set up a program and there would have to be training. Can only do stuff in January and February and then volunteers gone.

- If you think about how some of the models show within the next 50-100 years we could be under water. We are connected to our natural resources, whether we like it or not and we have a governor that does not believe in climate change and lots of disenfranchised people didn't vote and having an educated citizenry is so important especially in a vulnerable state like FL. How do you do that? Teachers – both informal and formal and if there can be sharing. It's hard for those formal teachers. They are strapped and how do you get the formal teachers and students to the informal setting it is a big deal. Buy-in at the superintendent level is huge and if you can get with them and know they meet with certain people at certain times of the year and teachers will have to do it and the way I got schools was to go to the principal if you went to the science teachers no way. If the principal says all 8th grade classes are coming then they will. They will be mandated to participate. More buy-in from science teachers than English teachers, but sometimes got art teachers. Where and who do you get to get the folks out there and they can't afford the time and if it is mandated they don't have a choice. There isn't much more that is more important that eco-literacy.

Although actual providers were asked about topics that needed more attention, there was a low response rate and providers typically focused more on the audience or approach. However, the following is an approximate list of the top five topics that providers believe need more attention:

1. Ocean and coastal
2. Climate
3. Educating others (in a variety of ways)
4. Stewardship
5. Miscellaneous

SUMMARY CONCLUSIONS

- While organizations vary greatly within any category of affiliation, this research indicated that only one state government affiliated institution is offering EE at this time, all nature centers/EE centers are providing EE programming, and municipal governments, local non-profits, and educational institutions were only half as likely to provide these types of programs.
- Four actual providers have reduced the EE programs they offer due to loss of grant funding or budget cuts during the economic downturn.

- Three potential providers formerly provided EE programs and have discontinued them altogether and only one of those intends to start them up again in the future.
- Two actual providers are expanding their programs. One received grant funding to add a middle school program and the other is mentoring other communities so they can start a similar program elsewhere.
- The twelve actual providers in Collier County track the number of people served in different ways so the data was not comparable. However, among the twelve actual providers surveyed the annual total served ranged from 1,000 – 7,000 for a total of 47,161 served collectively. While this includes some out-of-county students it is likely that a high number of students are receiving EE.
- Questions that focused on the total number of staff and the number dedicated to EE were unable to be analyzed because of the range of methods used to staff programs, variation in the duration and types of programs provided, the types of organizations involved, and the structure of education departments/teams.
- EE programs had diverse funding sources including government-provided, grants, donations, and memberships. Some providers specifically conducted fund-raising activities to support EE programs. Some government programs relied on a “Friends Group” to help raise money.
- While a few comments indicated that distance had been an obstacle, the overall trend does not clearly demonstrate that distance is the primary limiting factor to school participation in field-based EE programs. This is a question that should be included in the follow-up NA research.
- Collier County Public Schools Science Department has organized local providers to offer a system of field trips available to all 2nd, 3rd, 4th, 5th, and 6th graders and also high school marine science students. If other factors are not prohibitive there may be a niche for programs that focus on middle or high school students.
- The majority of teacher training taking place in Collier County is associated with the CCPS Field Trip Specialist Program since most providers require the teacher to participate in training prior to attendance. A few notable exceptions are the Conservancy of SWFL’s STEM Institute in cooperation with FGCU which is a week long summer program, the Naples Botanical Garden’s School Garden Program which provides a few hours of teacher training prior to the use of a school garden. This is a question that should be included in the follow-up NA research.
- Only one actual provider in Collier County is focused on estuarine, coastal, or ocean topics and two other providers included estuarine ecosystems as part of their curriculum while there is one that teaches these subjects to adults.
- Only two actual providers offer boat trips as part of their programs.

- Approximately half of the actual providers conduct evaluations on each student group and most of them are using pre and post-test instruments. The other half were not using an evaluation instrument, and some of those are relying on anecdotal evidence and responses from teachers and students as a measure of success.
- Of the 12 actual providers, nine stated that they had written curriculum while two did not, and two did not respond. One provider had written curriculum for one of their programs, but not for all of them. This is a fair amount of documentation for EE programs.
- Most providers said they use their website, the CCPS website, and word of mouth as their primary marketing strategies. A clear theme was that teachers tend to be "repeat attenders."
- Volunteers are commonly used in EE programs, but not universally used and some reported challenges associated with the use of volunteers.
- Many of the providers expect teachers to assist in teaching or leading the field trip program, but several expounded on the importance of teaching teachers along with the kids.
- Providers communicate with teachers through email and by providing specific information on their website, through packets, checklists, and other tools.
- Providers thought the main reasons that teachers attended their program was the value of the program in terms of fun or learning outcomes, but they also cited that teachers were repeat attenders and that teacher turnover reduced attendance.
- Providers thought that the main reasons that teachers did not attend their programs were because they were busy and have many pressures on them, including problems with buses and substitutes, because chaperones were difficult to find, and because providers lacked resources to accommodate additional groups.
- Challenges faced by teachers and providers included the following:
 - Teachers are busy, have a lack of spare time and therefore it's hard to get them to complete tasks for providers
 - Teachers sometimes lack EE knowledge and are not comfortable in the outdoors, which can have an impact on field trips,
 - Teaching positions sometimes have a lot of turnover and the inconsistency of teachers within their job position can affect EE providers
 - Teachers will return year after year on a field trip, which provides a rich, long-term experience for all involved
 - The amount of effort and enthusiasm of teachers is perceived by providers as important for a successful EE field trip experience,
 - Testing and technology are additional challenges.

Works Cited

- Clairy, Cynthia Marie (2013). Environmental Literacy Knowledge: Content Analysis of Non-Formal Environmental Education in Southwest Florida
- Collier County Public Schools (2015). Retrieved on March 18, 2015:
<http://www.collierschools.com/about/fastfacts.aspx>
- ERIC development team (2000). Place-Based Curriculum and Instruction: Outdoor and Environmental Education Approaches. ERIC Digest. Retrieved January 4, 2015:
<http://files.eric.ed.gov/fulltext/ED448012.pdf>
- Ford, Phyllis (March, 1986) Outdoor Education: Definition and Philosophy. Retrieved December 10, 2014: <http://eric.ed.gov/?id=ED267941>
- National Oceanic and Atmospheric Administration (2008). *K-12 Estuarine Education Program (KEEP) Framework*
- Nature Based Education (2015) What is Nature Based Education? Retrieved November 3, 2011: <http://naturebasededucation.org/>
- Private School Review (2015) Retrieved on May 22, 2015.
http://www.privateschoolreview.com/county_private_schools/stateid/FL/county/12021
- Smith, M. K. (2001). 'What is non-formal education?' *the encyclopedia of informal education*. Retrieved: December 10, 2014: <http://infed.org/mobi/what-is-non-formal-education/>.
- United States Census Bureau: State and County QuickFacts. Collier County, Florida. Retrieved March 18, 2015: <http://quickfacts.census.gov/qfd/state/12/12021.html>.
- United States Environmental Protection Agency. (February 4, 2015) Environmental Education (EE). Retrieved: February 18, 2015: <http://www2.epa.gov/education>.

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 has been identified as a potential provider of these programs.

This research will be publicly available and is important to help environmental educators by identifying best practices, service gaps, and opportunities. The project is funded by a NOAA Bay Watershed, Education and Training program grant awarded to the Friends of Rookery Bay and the Rookery Bay National Estuarine Research Reserve (RBNERR).

I've already searched your organizations' website and copied information from it to draft a profile of your organization, which is attached to this email. In addition, I've attached a list of questions to show you the information we are gathering and a list of other providers that we will also be contacting.

I would like the opportunity to speak with you to correct or validate the information in the profile and to have you answer the outstanding questions from the survey. Please call me on my cell phone at 239-682-3518 or respond to this email with a good time to talk to you on the phone for about [insert time here] 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 informal environmental education providers, especially those with a focus on estuaries and/or the coastal environment, serving kindergarten through college students and teachers in Collier County,
- Increase understanding of RBNERR's program value and market niche,
- Apply information gained to support program improvements and new program development throughout Collier County.

Tabitha Whalen Stadler
GeoBlue Coastal Management Solutions
tabitha@geobluecoastal.com, 239-682-3518

APPENDIX B: PROVIDER PROFILES

Audubon of the Western Everglades

1020 8th Avenue South, Suite 2, Naples, FL 34102

www.collieraudubon.org

Contact: Lori Beall, Membership Coordinator, audubonwe@live.com, 239-643-7822

Affiliation: Local non-profit, non-NOAA

Funding and Size: Funded by memberships, grants, donations. Run by 2.5 staff and a volunteer Board of Directors.

About/Mission: One of our primary efforts is maintaining an awareness of local, regional, and state environmental and conservation issues. Accordingly, our mission, in partnership with Audubon of Florida and National Audubon Society, is to promote an understanding of and interest in wildlife and the environment that supports it, and to further the cause of conservation of all of our natural resources. One of 43 local Florida chapters dedicated to preserving the quality of life in our respective communities.

Types of Educational Programs

K-College Programs and Related Information:

- Funding for (not direct delivery of) Elementary Education field trip that is hands-on and experiential. Support from Audubon of the Western Everglades helps 2nd and 5th grade classes from Collier County Elementary Schools participate in Audubon's Corkscrew Swamp Sanctuary. Books about insects are sent from Corkscrew to each participating elementary school two weeks prior to a field trip. Books about Florida ecology and wildlife travel to 5th grade classrooms for two weeks and are followed by a "Wild Florida Adventure" field trip to the Sanctuary. The focus is on wildlife as well as hydrology and conservation.
- Funding for (not direct delivery of) Elementary Education field trip that is hands-on and experiential. Audubon of the Western Everglades provides a grant to help fund The Panther Posse at Florida Gulf Coast University. The Panther Posse is one segment in FGCU's Wings of Hope program. It is an environmental education program where each semester, university students teach 4th and 5th grade elementary school students in Collier and Lee County about the Florida Panther, panther habitat, and about water conservation.
- Offer field trips to elementary school age students and their families on Saturday that depart from schools, providing buses to take them to birding sites with a focus on enjoying the outdoors and enticing them to join the young birder program.

Other Programs of Interest:

- Public lecture series November-April Programs are in the Kapnick Center at the Naples Botanical Garden at 7-9pm unless otherwise noted (members free, non-members \$5). Seating is limited.
- Field trips are open to anyone interested in birding, wildlife watching, and exploring Florida's natural areas. Mostly Saturday. Some have fees and limited numbers, but need to call to find out.
- Audubon Young Birders Club is geared to children ages 6-18 years old (any child under 6 should be accompanied by an adult. Annual \$15 membership fee. Saturday morning field trips from Sept. to April.
- Collier and Lee Shorebird stewardship program, volunteer bird monitoring May through August.
- Provide funding every fiscal year, ending in June, with applications due around April/May and organizations can request support.
- Blue Bird rescue team project that has been dormant for a few years where they establish a nesting trail by putting up boxes. In the past had 12 public and private schools participating and students would monitor the boxes and report what they found. Blue Birds are not endangered, but are beautiful and therefore charismatic.
- They focus on multi-generational learning

Topics: Birds, panthers, invasive species, human impact on the environment including through development, sea level rise, and climate change affecting bird migration

Marketing and Communications:

- Newsletter, the Audugram
- Oldest conservation organization in Collier County
- Eventbrite for registration

Big Cypress Basin (BCB) South Florida Water Management District (SFWMD)

2660 Horseshoe Drive North, Naples, FL 34104

<http://my.sfwmd.gov/portal/page/portal/xweb%20about%20us/big%20cypress%20service%20center>

Contact: Lisa Koehler, Administrator/Intergovernmental Representative,
lkoehler@sfwmd.gov, 239-263-7615 ext. 7603

Affiliation: State government, sub-district of SFWMD whose headquarters are in West Palm Beach, non-NOAA

Funding and Size: State funding plus local tax

About/Mission: To manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply.

Types of Educational Programs

K-college programs from SFWMD, and not specific to BCB:

- Public lands where field study programs are available for teachers and students and environmental education opportunities can be found for anyone just curious to learn more. CREW is the local site.
- Teacher training modules include The Great Water Odyssey, which is an online, interactive curriculum for elementary school third-, fourth- and fifth-grade students. The Great Water Odyssey is a creative, hands-on way to teach students about reading, science, language arts, geography, history, math and conserving water. Give students the chance to explore the world, travel through time and meet new friends while protecting one of Florida's most valuable natural resources – water!
- The Great Water Odyssey teacher training can be taken online at <http://www.ces.fau.edu/education/teachers/gwo/>. It is coordinated by the Florida Center for Environmental Studies at Florida Atlantic University (no mention of a fee or credits) and only available to the 16 county SFWMD area. Correlated to Sunshine State Standards and meets Florida's Reading Initiative Standards with the goal of a sustainable future through water conservation and waterwise landscaping. Prior to 2009, this program was run directly by the District, but was passed to FAU at that time.
- Lots of free materials, from activity books to DVDs, for students of all ages so you can learn about water supply, ecosystem restoration projects and how you can play a part in preserving our shared water resources. Now available as a printable PDF document, Everglades: An American Treasure, was developed to

help students explore the biotic and abiotic systems that weave together to form our American treasure, the Everglades.

- Prior to 2011, the District had Outreach and Intergovernmental Representatives working throughout their 16-county jurisdiction, developing partnerships with local governments and community groups and creating a better understanding of local water resource issues through outreach and education activities. These positions are no longer common.

K-College specific to BCB:

- Part of the District's legacy programs is to provide funding to the CREW Land and Water Trust to offer educational programs and recreational opportunities at the Corkscrew Regional Ecosystem Watershed (CREW). This includes the 7,000-acre Corkscrew Marsh which is the headwaters for the Corkscrew Regional Ecosystem Watershed (CREW). The entire watershed, more than 26,400 acres in all, spans both Lee and Collier counties and provides natural flood protection, water purification and critical aquifer recharge. Wildlife sightings are frequent as the watershed also serves as important habitat for animal species such as the endangered Florida panther, snail kite and wood stork. Other birds, particularly woodpeckers, red-shouldered hawks and a variety of warblers, are always plentiful.
- The whole district pretty much eliminated outreach after 2011 as part of the economic downturn. Specific examples include the change from distributing costly printed materials to posting them online and the teacher training became an online training instead of in-person training. Formerly, outreach representatives went to schools and home owners associations and festivals, but now staff may speak 1-2 times per year if their schedule allows it.

Other Programs of Interest:

- Extensive water conservation education tools for homeowners and businesses
- A very small amount of funding is provided for outreach on Naples Bay and water quality and a water symposium

Topics: Water conservation, ecosystems, habitats, endangered species

Program Curriculum and Evaluation:

- None

Marketing and Communications:

- Extensive website, with a lot to download and explore

Big Cypress National Preserve

33100 Tamiami Trail East, Ochopee, FL 34141

www.nps.gov/bicy/index.htm

Contact: Lisa Andrews, Outreach and Education Coordinator, lisa_andrews@nps.gov,
239-695-1164

Affiliation: Federal government (National Park Service), non-NOAA

Funding and Size: Federal, not much of a Friends organization since they are more focused on the east coast (South Florida National Parks Trust, Florida National Parks Association, South Florida Community Partners), donations and grants for funding. Approximately 80-100 staff total, only one dedicated to environmental education, but 4 seasonal staff, 4 volunteers and 2 interns are added in the winter season to handle the school groups.

About/Mission: To assure the preservation, conservation and protection of the natural, scenic, hydrologic, floral and faunal and recreational values of the Big Cypress Watershed.

Types of Educational Programs

K-College Programs and Related Information:

- Big Cypress National Preserve, in cooperation with the Collier County School District, conducts the Swamp, Water and Me Program (SWAMP). This curriculum based program provides an opportunity for sixth grade students within the county to explore and learn about the Big Cypress Swamp, a major portion of their backyard.
 - The Swamp Water and Me Program (S.W.A.M.P) is an Environmental Education Program for the 6th grade science classes in the Collier County School District. The program focuses on the Big Cypress Watershed, its major habitats, flora, fauna, while highlighting the Florida panther and American alligator. S.W.A.M.P. is a four part program which includes a teacher and student guide, a mandatory teacher workshop, a pre-site visit by a ranger to the classroom and a field trip to the Preserve (10am - 2:30pm). A variety of hands-on, inquiry-based activities are performed by the students during their field trip. This includes tracking a panther radio transmitter using radio telemetry, collecting data by performing water quality, soil and weather testing, and vegetation and animal identification.
 - The goals of the program are thus:

- To provide students with hands on, interdisciplinary, and curriculum based field experience that aligns to Florida Sunshine State Standards.
- To give students a clearer understanding of their connection and responsibilities to the natural world so that they may become better informed citizens, community leaders, and stewards of the fragile and unique environment of South Florida.
- The teacher must have attended the teacher workshop. Teachers cannot send their class with another teacher. All teachers will be expected to assist in leading a group on the field trip so this is the time to learn and ask questions!
- A ranger will visit the classroom before each field trip. The visit will include discussion on: What is the National Park Service, What is the Big Cypress National Preserve, and when it was established w/PPT on habitats in Big Cypress National Preserve including Cypress Strand, Hardwood Hammock, Pineland, Prairie, Mangrove estuary, Wildlife in the Preserve, how to track a panther, students from previous year doing activities, Discuss upcoming field trip, Fears about field trip, Safety, What to and not to wear/bring, rules and regulations of the Preserve.
- In the backpacks you will find the materials your students need to successfully collect data at their field site in Big Cypress National Preserve. You will be provided with a backpack to take to your classroom to complete the Pre-Site Lessons and Labs with your students. It is essential that your students are familiar with the contents of the backpack in terms of both the procedure for use of the instruments and what information can be discovered by the correct use of the instrument in the field. The Pre-Site Lessons and Labs provide all of the information you'll need to help your students to gain the knowledge and experience necessary to be successful with the field site data collection and experimentation on the day of the field trip. Extensive write-up for the pre-site lesson and labs. Very scientific and inquiry-based
- Post-Site Classroom Enrichment, Data Analysis, and Assessment section
- The SWAMP volunteers wear the same uniforms that the parks people do with SWAMP embroidered on it.
- There's SWAMP YouTube video instruction
- SWAMP has a comprehensive teachers guide at :
<http://www.nps.gov/bicy/forteachers/loader.cfm?csModule=security/getfile&PageID=228387>
- Within the teacher's guide is acknowledgement of funding from innovative partnership between the National Park Service, Exxon Corporation, the National Park Foundation (NPF), and the National Science Teachers Association (NSTA). The Parks as Resources for Knowledge in Science (P.A.R.K.S.) program was created to encourage collaboration in science education between National Parks, schools and local communities. The framework of the P.A.R.K.S. program builds on NSTA's "Building a Presence for Science" initiative, which aims to improve science education

by helping implement the National Science Education Standards. The \$25,000 grant awarded to 32 parks will fund a partnership between Big Cypress National Preserve and the Collier County School District that will implement an environmental education/outreach program that utilizes the American alligator and the Florida panther to highlight the importance of habitats to plants and animals in the South Florida ecosystem and enhance the awareness of endangered species.

- S.W.A.M.P has received generous donations for equipment, supplies, staffing, and transportation from: South Florida Water Management District – Big Cypress Basin, Collier County Public School District, South Florida National Parks Trust, and Friends of the Big Cypress Swamp.
- Website has resources for teachers to lead their own trips or go on ranger-guided tours. “Wildlife and wild lands holds adventure for your students, whether you're able to visit in person, or not. Find lesson plans, plan your fieldtrip and more as you use Big Cypress as your classroom. Look to the national preserve for your own professional development needs. Contact the Environmental Education Office at 239-695-1164 or by e-mail.”
- Curriculum materials (online) 6th to 10th grade and correlated to state standards at <http://www.nps.gov/bicy/forteachers/classrooms/curriculummaterials.htm>
- Teacher professional development that is an NPS program, called locally the Big Cypress Teacher-Ranger-Teacher Program. “Imagine spending your summer hiking through the swamp, exploring hammocks, or canoeing in search of bald eagles, alligators, and manatees! Leave your classroom behind to do all this and more as a Big Cypress National Preserve Teacher-Ranger-Teacher. Teachers selected as a Teacher-Ranger-Teacher spend six weeks working side-by-side with park rangers performing various duties such as developing and presenting interpretive programs for the general public, staffing the visitor center desk, reviewing existing or developing new curriculum-based education materials, or undertaking special projects.” The Teacher-Ranger-Teacher program provides a stipend and professional development credits. (don't know what type of credits)

BENEFITS To Teacher-Rangers

- Enhance their curriculum in multiple content areas
- Create personal connection with national parks
- Gain access to a wide array of teaching resources and tools
- Obtain new knowledge and skills by working with national preserve staff

To Students

- Provide an opportunity to connect to their nation's heritage in new and creative ways
- Learn about the possibilities for volunteering and paid employment with the National Park Service
- Receive new tools and resources for exploring natural and cultural history through national parks

To Big Cypress National Preserve

- Opportunity to reach new or under-served audiences through innovative, engaging programs
- Build a network of enthusiastic, knowledgeable educators who are able to teach their students and colleagues about the significance of national parks and heritage conservation
- Enrich the national preserve visitor experience through the programming and visitor service offered by the teacher-ranger
- Have college groups from around the country and they come year after year.

Other Programs of Interest:

- The Education department also handles outreach for organized groups for 7,000 people annually.
- Daily programs Nov. to April, all free - 10 minute talks, longer walks, 1-2 hour swamp walks
- Citizen science section for volunteers to conduct research (showed 8th graders in the photo)
- Online kids games
- Tamiami Trail Triathlon is done on your own and participants bike the 15-mile-loop road from the Shark Valley Visitor Center; hike a 3-mile-loop trail from the Oasis Visitor Center; and, canoe or kayak a 3.5-mile-route from the Gulf Coast Visitor Center in Everglades City.
- No summer camps, but they will help with other providers camps when asked
- Night-time stargazing program for the public and in the process of becoming a Dark Sky Site

Topics: Watershed, ecosystems (cypress strands, pinelands, prairies, hardwood hammocks and mangrove forests), threatened and endangered species of plants and animals including the Florida panther.

Marketing and Communications

- Big Cypress National Preserve is a National Park! It is one of over 390 National Parks in our country
- Big Cypress YouTube page
- Word of mouth

Program Curriculum and Evaluation:

Has written curriculum, correlated to Florida State Standards and conducted teacher evaluations for 15 years, but no longer a focus. However, a new evaluation was developed for the pre-site-visit at the schools.

City of Marco Island
50 Bald Eagle Drive, Marco Island, FL 34145
<http://www.cityofmarcoisland.com/>

Contact: Nancy Richie, Environmental Specialist, nrichie@cityofmaracoisland.com,
239-389-5003

Affiliation: Local government, non-NOAA

Funding and Size: Local government taxes

About/Mission: Marco Island, located at the southernmost tip of mainland Florida's west coast. Known as the "Paradise Coast" along with Naples & the Everglades, Marco Island is the largest inhabited isle of the "Ten Thousand Islands."

K-College Programs and Related Information: None

Other Programs of Interest: No environmental education programs in the parks and recreation department or any other department searched on the website.

Topics: None

Marketing and Communications:

Outstanding Questions:

- Overall size of the organization?
- How many work on environmental education?
- Any programs for K-college? If so, tell me about them.

Golisano Children's Museum of Naples (C'mon)

15080 Livingston Rd, Naples FL 34109
<http://www.cmon.org/>

Contact: Beth Housewert, Director of Learning and Plan, bhousewert@cmon.org, 239-514-0084

Affiliation: Local non-profit, non-NOAA

Funding and Size: Memberships, donations, admission fees

About/Mission: The Golisano Children's Museum of Naples (C'mon) is Southwest Florida's first museum devoted for children and families to learn through play. With hands-on exhibit galleries, the accessible museum invites visitors of all ages to journey through the swamps of the Everglades, weave through a maze, climb a two-story banyan tree, or experiment with the water play station. Children can become a weather forecaster, a farmer, a chef, a fisherman, an artist, an architect or a veterinarian; explore the cold of an igloo, the whoosh of the wind, the sound of the sea, the effects of water and the colors of the rainbow. Throughout the day special activities encourage our guests to get involved, try something new and be energized.

Types of Educational Programs

K-College Programs and Related Information:

- Pre-K through Fifth grade field trips to their site. Field trips are available Tuesday through Friday in 2014 and Monday, Tuesday, Thursday and Friday in 2015, with the exception of designated blackout dates. C'mon's daily field trip maximum is 6 classes of up to 22 students in each class, for a maximum total of 132 students/day. Field trip reservations are available for formal public and private school groups teaching pre-k through grade 5. Homeschool groups are eligible to reserve field trips as long as they have a minimum of 10 children in the same grade. Scouts, youth groups, afterschool programs, and summer camps may qualify for discounted rates offered for group visits. They have a one-page group trip guide and chaperone guide. Group trips are \$9/child. One chaperone (over the age of 18) per six children is free and required. Additional chaperones may attend at a cost of \$9/person if booked 72 hours in advance (\$10/ person if purchased the morning of your visit). Group trips are available for groups of 10 or more children and must be reserved with full payment at least two weeks in advance. Cancellations must be 30 days in advance. Onsite food available
 - The program typically includes 20 minutes in the 2 exploration rooms (located in 2 classrooms, 2nd floor), 1 hour, 20 minutes to explore the exhibits (including outdoor play time), 20 minute program in the Art Gallery with a C'mon art gallery guide, Lunch time Not all exhibits are STEM, nature or outdoors related.

- C'mon also offers a formal tour and field trip orientation for teachers and chaperones. This monthly gathering is held the first Tuesday of the month from 4-5pm. Registration is recommended.
- The Golisano Children's Museum of Naples has a variety of classes available for families looking to supplement their curriculum. These hands-on programs foster curiosity and discovery in support of what students are learning at home. All programs require pre-registration. There were four programs listed for K-2 and grades 3-5 all with STEM application including *its Electric, Engineering Making Stuff Better, Wonderful Wildlife, and Microscopic to Mighty*.
- Exhibits include *Journey Through the Everglades, Mother Nature's House* (about seasons), *At the Beach* (about nature, beach animals and fishing)

Other Programs of Interest:

- Is a Center with admission of Children under one: FREE, Children ages 1+: \$10.00, Adults/Seniors: \$10.00, closed Monday
- Summer Camp, kindergarten through 4th grade for \$270 members, \$300 non-members.
- Water moves in amazing ways all throughout the state of Florida. Join the Water Ventures team as they visit us with their mobile learning lab that travels throughout the state teaching us about watersheds, conservation and being good stewards of our most important resource, WATER!
- Daily program for little learners for ages 2-5 years old at 1:15 Tuesday through Friday.

Topics: STEM, nature, water, beach nature, seasons

Marketing and Communications:

- website
- Email newsletter
- Facebook

Collier County/IFAS Extension

14700 Immokalee Road, Naples, FL 34120-1468
<http://collier.ifas.ufl.edu/>

Contact: Bryan Fluech, Extension Director and Sea Grant Agent, bfluech@ufl.edu, 239-438-5594 (cell)

Affiliation: Local/county government, state university, partial NOAA

Funding: Federal funding comes to Sea Grant through NOAA and to Extension through the Science and Education Administration of the US Department of Agriculture. There is also a Collier County 4-H Foundation, and one in every county, that is a non-profit support group. There are 11 staff in the Extension Office with 1.5 dedicated to outreach.

About/Mission: “We help people find practical solutions to problems specific to living in Florida. In 1914 Congress established the Extension Service to provide a means for disseminating and implementing research-based information from land-grant universities. The University of Florida, a land-grant university, is part of the transfer of knowledge to the people of Florida. This "transfer of knowledge" is facilitated by faculty that are located in each of Florida's 67 counties. We also have 18 research centers across the state, in addition to the campus in Gainesville. This partnership between counties and the university is the heart of the Extension Service mission and enables the university to extend its knowledge base to each community. The mission of extending and "putting to work" research-based information for the people of Florida has not changed, however the information and delivery methods have enormously improved. The driving force for these information delivery methods are the needs of citizens in each county. County extension faculty develop educational programs based on priority issues determined by their urban and commercial customers or citizens. These priority issues form the basis for major educational programs that are conducted statewide. Information is delivered by satellite courses, computer software, seminars, video presentations, world wide web, or by traditional workshop and print medium. Our clients participate in classes statewide and implement new information in their businesses, homes and communities.”

Programs by Category (many address youth education):

Sea Grant

- Sea Grant's mission is to enhance the practical use and conservation of the state's marine and coastal resources to create a sustainable environment and economy. It accomplishes these goals through research, extension, education and communications.
- Responsibilities include developing comprehensive marine and natural resource educational programs that focuses on marine recreational and commercial fisheries, seafood safety and sustainability, and marine science and environmental education. Clientele include the recreational and commercial fishing sector, marine and coastal resource users, marine management

agencies, public and private organizations, youth groups and educational institutions, and presentations on a variety of marine and coastal subjects upon request.

- Programs including Marine fisheries management workshops (professionals), Great Goliath Grouper Count (monitoring, not education), Florida seafood webinars (professionals and the public), Monofilament Recovery and Recycling Program (public), Seafood safety and sustainability workshops (public), Artificial reef clean ups (stewardship activity)
- Sea Grant agent teachers the Florida Master Naturalist Program in cooperation with Rookery Bay Reserve. Potentially for teachers.
- A webpage for educators that includes marine education resources and education organizations worth joining at <http://collier.ifas.ufl.edu/seagrant/educators>. The whole site has a lot of publications, but none for teachers or that are curriculum.
- Most current education focuses on adults who are professionals or from the public. Formerly offered some youth programs such as fishing clinics and has turned those over to Collier County Parks and Recreation.

4-H and Agriculture:

- Most 4-H programs are after school and are not outdoor, environmental field trips. Locally there are Hooked on Fishing not on Drugs (for 3rd, 4th, 5th grade and one middle school group), junior master gardener, robotics (elementary), junior entrepreneur with hydroponics (high school), and bee-keeping. These are intended to support the Collier County public school in their STEM initiatives, but are considered enrichment programs and not part of the formal curriculum. Programs typically are either on-going clubs meeting all year, or a mini-series of six programs over a few months, or the occasional single event. Many take place after school and are requested by schools, parents or teachers on a voluntary basis.
- Teacher training is not formal and is meant to show them how to use the curriculum that was developed by UF and others.
- 4-H School Enrichment programs are Extension-coordinated learning activities planned in cooperation with public and private schools. These programs are supplements to the on-going school curriculum.
- Florida 4-H is the place where there's fun in learning and learning in fun! 4-H is an informal, practical educational program for youth 5-18. It uses a learn-by-doing approach to enable youth to develop the knowledge, attitudes, and skills they need to become competent, caring, and contributing citizens of the world. This mission is accomplished by using the knowledge and resources of the Florida Extension Service, the University of Florida, and the involvement of caring adults.
- Used to be a "Know your county government" program for high school students to go and see what gets done within the county.
- There are 4-H community, project and special interest clubs. Current clubs cover a range of topics including Corkscrew Swampers, Robotics Club and many on agricultural related topics such as horses, poultry, etc. There was one mention of

a Marine Ecology Day offered by one of the clubs. They are run by community volunteers overseen by an Extension staff member. These members, under the direction of trained volunteer leaders, plan their own programs, elect officers, take part in community service activities, and engage in a variety of 4-H project work. The major factor in common among members is geographical proximity or a shared topical interest.

- 4-H summer camps may focus on the environment
- 4-H National Science day focused on the kids building stomp rockets and shooting them off, including engineering skills
- Ag-ventures is a field trip to Robert's Ranch for 1st and 2nd graders in Immokalee with a series of stations related to agriculture and natural resources.
- (not hosted directly by the Collier County extension) Annual Youth Field Day / Expo! Our goal is to excite students about agriculture and science, reveal future opportunities in those fields, and foster a love of learning which will promote agriculture and good stewardship in this and future generations. Each June we host this field day for students ages 8 – 18 years using a class structure where students have time at seven educational stations. The event, held at the Range Cattle REC, 3401 Experiment Station, Ona, FL, will be open from 8:00 a.m. – 1:00 p.m. for students, parents, and other adults. There will be various community & industry educational booths will be available to visit from 8:00 a.m. to 9:00 a.m. and during lunch. These booths will be informative and educational with demonstrations, visuals, hands-on activities, and experts ready to share their vast knowledge with inquisitive minds. Students will travel in set groups on a rotational schedule, to each of the seven educational stations. Students will learn about feeding beef cattle, growing pasture grass, the role of money in agriculture, Florida wildlife, poisonous plants, keeping cattle healthy, and beef cattle reproduction.
- (not hosted directly by the Collier County extension) Ag-DISCOVERY Summer Program for Teens, June 8-21, 2014 hosted by FAMU College of Agriculture and Food Sciences Cooperative Extension Program. (Not local)

Urban Horticulture (for adult professionals or the public)

- Annual SW Florida Yard and Garden Show, Saturday and Sunday in October at the University of Florida IFAS Extension Collier County Office, 30 vendors offering an extraordinary collection of plants and garden related items, hands-on demonstrations, tours held in the Extension Gardens, and free seminars. Plus you're invited to tour the beautiful gardens and orchard, activities for your kids, \$3.00 for adults; children 12 and under are free.
- Master Gardener Program is a volunteer work force whose activities center on the Extension Service office for the first 20 volunteer service hours. The remaining service hours are spent in a wide variety of activities, which are related to some aspect of gardening and contribute to community education and service. Many Master Gardeners continue their association with the office by answering telephones during Plant Clinic hours, mailing out brochures in response to requests, developing demonstration gardens, or working with 4-H leaders and

youth of Collier County. Master Gardeners can also participate in the Florida Yards and Neighborhoods program as Yard Advisors.

- The County's University Extension Service Florida Yards and Neighborhoods Program advises thousands of people with information, instruction and advice from specially-trained Master Gardeners and horticulture staff. The Extension Service can show you ways to design and maintain a yard that uses less water, fertilizer and pesticides. Also have workshops for homeowners and the public.
- Educational Garden Workshop Series held at Unity of Naples Church, 2000 Unity Way, Naples, FL 34112 and costs \$25.00 for the complete series or \$7.00 per lecture. Series runs January through March from 10:00 a.m. - 11:30 a.m. and Pre-registration is not required.
- The Southwest Florida Garden Learning Center (commonly known as the Extension Office Gardens) is an exciting outdoor display of gardens which have been developed to provide our community with hands-on gardening opportunities. The garden includes Butterfly Garden, 4H Children's Garden, Vegetable & Recycle Garden, Naida's Native Plant Garden, Master Gardener Color Garden, Purple Martin Colony, Citrus Garden & Perennial Peanut Demonstration Areal John & Aliese Price Foundation Garden of the Senses

Family Nutrition Program (not relevant)

Commercial Horticulture (not relevant)

Topics: Marine education through Sea Grant includes marine recreational and commercial fisheries, seafood safety and sustainability, and marine science and environmental education. Through 4-H and horticultural programs is on agriculture, animal husbandry, gardening, Florida Friendly plants, Best Management Practices in horticulture.

Marketing and Communications:

- People find Extension so valuable, that we are the largest adult education and youth development organization in the world.
- "putting to work" research-based information
- Develop educational programs based on priority issues determined by their urban and commercial customers or citizens.
- Out-of-date Sea Grant Extension blog <http://collierseagrant.blogspot.com/>
- Urban Horticulture Program, Green Gazette Newsletter, every other month, (Produced mostly by a volunteer)
- Direct email for the commercial horticulture program (from Dr. Caldwell)
- YouTube videos in several areas
- Flickr account for Sea Grant in Action
- Several newsletters and flyers for different programs
- 4-h does some Facebook
- Word of mouth
- Networking with teachers and in trainings and during structured interactions at meetings and professional groups, associations

Collier County Parks and Recreation Department

15000 Livingston Road, Naples, FL 34109

<http://www.colliergov.net/index.aspx?page=3209>

Contact: Nancy Olson, Region Manager, Beach and Water,
nancyolson@colliergov.net, 239-252-4000

Affiliation: Local/county government, non-NOAA

Funding and Size: Local taxes/impact fees, program fees, Collier County Tourist Development Council and grants

About/Mission: To enrich the quality of life for the community and visitors and to protect the natural resources of Collier County. They are accredited by the Commission for Accreditation of Park and Recreation Agencies (CAPRA) with 139 accredited in the nation and 23 in Florida.

Types of Educational Programs

K-College Programs and Related Information:

- If a teacher requests a field trip to their sites they will try to accommodate them
- Other providers use their parks, including the Conservancy uses Tigertail Beach as a learning laboratory
- We work with Florida Gulf Coast University at Barefoot Beach through their colloquium program doing long term bio-monitoring
- (no longer offered) Interpretive Programs in Schools - Interpretive park staff presents hundreds of interpretive programs to thousands of area public and private school children, home-schoolers, retirement communities, and University students. These programs are part of our departments NACO award winning "Park Ranger To Go" menu of natural history programs. During 08/09 400 Park Ranger "To Go" Programs were presented to 11,532 participants.
- (no longer offered) Homeschool Programs: Sports, nature and educational programs for home schooled children. Ages: 4 – 15. However, none were listed in the 2013 program guide.

Other Programs of Interest:

- The science fair is held at North Collier Regional Park
- Summer fishing camp, teaching to fish and ethical fishing and they do a half day charter with the kids. Includes freshwater and saltwater and they fish all over the area and learn about sustainability.
- Rangers do compliance through education like when you tell someone that we don't allow glass on the beach and give them the reason why that is environmental education in sound bites. We have one primary interpretive park ranger.
- After school and pre-school programs provided, including Voluntary Pre-Kindergarten programs

- Ranger Trips - Collier County Park Rangers, as part of their regular duties, provide to the public a variety of on-site interpretive programs including canoe trips through the estuary, beach walks, sea turtle natural history, and the life of the gopher tortoise.
- Barefoot Beach Preserve Park Nature Walk on Wheels Free Designed for visitors with special needs. The Nature Walk on Wheels is an escorted tour on a 5 passenger golf cart through the Barefoot Beach Preserve. Oct 04-Dec 20 • Fri • 10:00am-11:00am
- Parks Rangers offer a number of programs at the Barefoot Beach Preserve Park including lectures and interpretive programs. Park Rangers educate the public about the importance of the environment and wildlife in Southwest Florida. Subjects include a guided walk through the preserve, where visitors learn about the many habitats in the preserve as well as flora and fauna. Rangers also provide a free recreation guide where they take visitors to look at the natural history of the Loggerhead Sea Turtle, some of which reside at the preserve.
- The Friends of Tigertail Beach websites says they “conduct special bird walks, shell talks and events such as “Discover Tigertail,” and special projects for the community to enhance education and appreciation for this city treasure. The Friends have donated time and resources to construct an osprey platform, establish a butterfly garden, and erect plant identification signs throughout the park.”
- Conservation Collier does guided walks at Pepper Ranch plus they have the Sunflower Festival. They also offer guided walks about the plants and have a youth hunting program through the Florida Fish and Wildlife Conservation Commission.
- Junior Angler’s Club is Free - Join a Park Ranger and learn to fish. We supply the rods, reels, and bait. Meets the first and third Tuesday of the month for September and October. No program in November or December. No registration required. Tuesday, 5 :00pm-6:00pm at Freedom Park.
- Many holiday special events
- Beach monitoring for sea turtles
- Volunteer program

Topics: Calusa Indians, native plants and animals of the everglades, birding, beach combing, dolphins, gopher tortoises and estuaries, but only because there is one at Barefoot Beach

Marketing and Communications:

- Extensive, downloadable program guide of all programs and events at the parks

Collier-Seminole State Park

20200 E. Tamiami Trail, Naples, FL 34114

<http://www.floridastateparks.org/collierseminole/default.cfm>

Contact: Darren Flickinger, Park Service Specialist, darren.flickinger@dep.state.fl.us, 239-394-3397

Affiliation: State park, non-NOAA

Funding and Size: State funding, entrance fees, Friends of Collier-Seminole State Park, with ten full-time staff

About/Mission: Experience the natural beauty and wildlife of the Everglades, as well as a forest of tropical trees at Collier-Seminole State Park. The 7,271-acre park lies partly within the great mangrove swamp of southern Florida, one of the largest mangrove swamps in the world. Collier-Seminole also contains one of the three original stands of the rare royal palm in Florida. The park is the site of a National Historic Mechanical Engineering Landmark, the last existing Bay City Walking Dredge.

Types of Educational Programs

K-College Programs and Related Information:

- Will host 1-2 school groups per year upon request and have done a Leave No Trace scavenger hunt where you use one clue to find the next clue and a game, a race, nature hike, and quiz questions for around three hours.
- Occasional college group that are more volunteers instead of interpretive learning (service learning). They remove invasive species and we teach them along the way. For example they will come for an alternative spring break for a week and camp for free and they help at the park removing invasive species, and learning about methods of removal.

Other Programs of Interest:

- A self-guided tour through the nature center has many exhibits of the plants and wildlife that can be seen here.
- Weekly ranger programs during the season, every Saturday night about 7:30 p.m. from January through March. Topics vary including Collier Critters, Florida panther, Walking Dredge, Flowers, Florida Panther, Sabal Palm, etc.
- Volunteer program

Topics: Collier Critters, Florida panther, Walking Dredge, Flowers, Florida Panther, Sabal Palm

Conservancy of Southwest Florida

1495 Smith Preserve Way, Naples, FL 34102
<http://www.conservancy.org/outreach>

Contact: Rachel Forbes, School Programs Coordinator, RachelF@conservancy.org,
239-262-0304 ext. 288

Affiliation: Local non-profit organization, nature center/environmental education center, non-NOAA

Funding and Size: Program fees, memberships, donations, grants, with 0-60 staff overall and 7 environmental educators

About/Mission: To protect Southwest Florida's unique natural environment and quality of life...now and forever. We envision a region where our land, water and wildlife are protected, our citizens are informed and our leaders make decisions with the health, wellness and sustainability of our region in mind. We seek to increase our knowledge of the natural world through continued scientific research and to increase our impact through collaboration with our partners. We work to protect a high quality of life for both our current residents and generations to come.

Types of Educational Programs

K-College Programs and Related Information:

- In-school Programs: Conservancy of Southwest Florida environmental education experts can come to your school or other location to share Southwest Florida's unique natural treasures. Our STEM-based (science, technology, engineering, and mathematics) programs are individualized to provide age-appropriate activities and meet Next Generation Sunshine State Standards. Up to three classes can participate in any one of these programs.
 - Pre K -1st grade *Wonders of Reptiles* with live animals. \$99 for any Pre-K - Grade 1 program at your location. Up to three classes can participate in one program!
 - Pre K -1st grade Puppet Show Outreach Series with Alligator, Turtle, Raccoon and Owl are the stars of this series of educational programs. Join them for the full series of shows and discover the secrets of what wildlife eat in the *Natural Cafe*, how they find food, water and shelter, why they are important to our environment and how we can protect them in programs called *Caring for Critters*, *Water, Water Everywhere* and *Where's Wildlife*. \$199 for any Grade 2-12 program at your location. Up to three classes can participate in one program!
 - 2nd through 12th grade *Bird is the Word*. Learn avian adaptations for survival and meet some of Southwest Florida's diverse birdlife. Discover what is being done to protect these amazing birds and how you can help. \$199 for any Grade 2-12 program at your location. Up to three classes can participate in one program!

- 2nd through 12th grade *CSI: Critter Scene Investigation*. Become an animal investigator as you track some mysterious animals in this hands-on program to discover the identity of the suspects—one clue at a time. Using inquiry- uncover clues left behind several Southwest Florida species in their unique habitats and determine what we need to do to protect them. \$199.
- 2nd through 12th grade *Nails and Scales*. Uncover hidden adaptations found in Florida's reptiles, and their place in our environment. Learn what the Conservancy has discovered through our field conservation and biological work on sea turtles, alligators and more. \$199.
- 2nd through 12th grade *Predator and Prey*. Florida is home to many large predators. Learn about food webs, and how each species holds an important role in an ecosystem. Learn about the Conservancy's research on endangered species such as the Florida Panther. Have fun exploring where these animals live, what they need to survive, and what you can do to help them. \$199
- 2nd through 12th *The Life Aquatic*. Students discover the water cycle and Southwest Florida's different wet ecosystems. Learn about how underground aquifers are connected with atmospheric thunderstorms and how we are part of this system. In this interactive program, students will create a coastal watershed habitat, and identify human-impacts. \$199
- Save money with our complete and comprehensive Learning Adventure programs! Let us come to your class with an outreach program. Then bring your class to our Nature Center for a fully immersive experience, certain to bring smiles and increase content-retention! Includes overall \$20 discount per class on the price structure.
- Field Trip to the Nature Center: Find adventure at the Conservancy Nature Center, including live animal encounters! The Learning Lab features the latest technology to engage your students in STEM activities. Narrated electric boat tours on the Gordon River are a highlight. Perhaps you'll spot a manatee or two! The Conservancy Nature Center can accommodate up to three classes per day for field trips; this includes up to 20 people, including chaperones. Each field trip lasts up to three hours and includes a lunch break at our outdoor picnic area within your three-hour rotation schedule. \$99 per class (up to 20 people including chaperones). 10am to 1pm. Registration form is a menu where they can choose the age, trip, etc. on a drop down menu.
 - Guided Nature Center Experience (Adapted to Grades K - 12)
 - Aquatic Ecosystems (Adapted to Grades 4 - 12)
 - Endangered Species Studies (Adapted to Grades 4 - 12)
 - Pre-trip guidance includes:
 - Please provide each student with a name tag
 - Please arrive 10-15 minutes before your tour is scheduled to begin
 - A lunch break at our outdoor picnic area is included within the three-hour rotation schedule- please bring lunches
 - Your group visit includes a tour led by trained naturalists; and a narrated electric boat ride

- Upon arrival, a naturalist will meet your group in the welcome gazebo
- Provide naturalist with completed boat release forms for all individuals participating in boat tours
- For student groups, one chaperone per 10 students is required on the trip
- Please make sure your chaperones are prepared to:
 - Assist the docent by managing participant behavior
 - Ensure that children are listening and participating
 - Keep children on task
 - Stay with the group at all times as they move around the Nature Center
- Homeschooled students can now experience Science, Technology, Engineering, and Math in a fun and engaging environment! Conservancy of Southwest Florida Homeschool Programs are available for groups of 10 or more students, with their adult facilitators. Choose one program option, or come back to experience both! Homeschool Programs are adapted for age and grade-level content.
 - Endangered Species Studies (Adapted to Grades 2-12) Become an endangered species scientist at our 21 acre Nature Center and Labs. Use telemetry technology to track panthers in our hardwood hammock habitat and explore a gopher tortoise preserve. Collect samples to study at our STEM Institute Laboratory in this hands-on research experience and learn what can be done to protect endangered species. Monday, January 12, 2015, 10AM-1PM.
 - Guided Nature Center Experience (Grades K-12) Field Trip tours of region's premier Nature Center include new and exciting experiences. Join our guides and encounter native animals and exhibits in the Dalton Discovery Center. Then head over to the von Arx Wildlife Hospital for a peek at some of our patients, how they came to our wildlife hospital, and tips on how you can help. Guided boat tours are always a group favorite. Please bring a picnic lunch and share time with other homeschool families. Monday, March 16, 2015, 10AM-1PM
 - Homeschool program fees are: Members: \$10 (One adult, one child), Non-Members: \$20 (One adult, one child), Each Additional Child (all ages): \$10, Each Additional Adult: \$10
- Conservancy of Southwest Florida STEM Institute connects real-world environmental research with inquiry-based instruction. This program utilizes state-of-the-art technology in an immersive natural setting, merging STEM-based curricula with core instruction. The STEM Institute consists of K-12 Field Trip programs, STEM Smart high school program, and week-long STEM teacher workshops in the summer.

Other Programs of Interest:

- Winter Camp, December 29 & 30, 9 AM - 4 Pm, Two eco-adventures for children grades 2-5, one day \$60/member, \$95 non-members, two days \$110/members, \$155 non-members
 - Epic Everglades - Join us as we venture into the Epic Everglades! Explore this one of a kind ecosystem, home to amazing alligators, beautiful birds, and many more animals! Learn about invasive species like the Burmese python and discover how scientists track down these invaders! See the impacts of invasive species on Florida's native wildlife and how you can help protect our Epic Everglades.
 - Wondrous Wildlife - What could be more exciting than venturing outside to explore southwest Florida's endangered species. See if you can spot the beautiful birds, slithering snakes, and magnificent manatees! Learn about the dangers these animals face, and what we can do to help. Do you know what to do if you spot injured wildlife such as a manatee? You will know by the end of this camp!
- Adult programs: Environment on the Go - Let us bring our traveling toolbox of environmental education to your group. Whether it's the next "lunch and learn" employee get-together, homeowners' association meeting, civic club gathering or any social encounter, our assortment of adult outreach education programs entertain and educate about the natural treasures in our own backyard. \$199 per program.
 - Alien Invaders-Discover which non-native plants, insects, mammals, reptiles, fish, amphibians and birds now call Florida home – and the threats they pose to their native Florida neighbors. From pythons, to parrots, Florida has it all. Features a live exotic animal.
 - Secrets of Sea Turtles - Florida's coastal waters are home to five species of endangered and threatened sea turtles. We'll explore the Conservancy's Sea Turtle Monitoring and Protection Program - one of the longest standing sea turtle research projects in the country.
 - Raptor Rapture-Florida is home to many rare and beautiful birds of prey. From burrowing owls to bald eagles, discover the fascinating world of raptors, the threats they face, and what you can do to help protect them. Features a live bird of prey.
 - Wildlife Tales - Rescue, rehabilitate and release. Learn more about the critical role the von Arx Wildlife Hospital plays in protecting our native creatures.
 - Panthers in Peril - Catch a rare glimpse into the realm of these amazing animals, explore the threats they face, and discover what you can do to make a difference for the Florida panther.
- The Story: Conservancy of Southwest Florida is a FREE program presented by Conservancy of Southwest Florida volunteer representatives. It all started in 1964 when a group of concerned citizens united to prevent the "Road to Nowhere" to protect Rookery Bay. Now, thanks to generous supporters, Conservancy of Southwest Florida is focused on protecting our water, land and wildlife. Discover the environmental issues that are threatening our future and how you can help.

- Nature Center - The 21-acre nature experience is a celebration of all our natural treasures in the region – our water, land, wildlife and future. The Conservancy Nature Center is also listed as Site #69 on the Great Florida Birding Trail. Here you will learn about the importance of our resources, understand the role the Conservancy of Southwest Florida plays in protecting those treasures and get inspired to take action. Hours: Monday – Saturday 9:30 AM - 4:30 PM Admission: Members FREE - Click here to join \$12.95 Adults \$8.95 - Children 3 to 12 Free for children under three. Nature Center programs on the website include a film, animal rehab center visit and:
 - On-the-water:
 - Self-guided Kayak rentals - Launch from the Allyn Family Lagoon and enjoy a two-hour kayak trip exploring a pristine mangrove estuary. Paddle down the Gordon River and discover the hidden treasures of this brackish water habitat, which provides a perfect sanctuary for many native Florida species. Single kayak costs \$20 members, \$30 non-members and tandem kayak costs \$30 members and \$45 non-members
 - Guided kayak tour at 9:30am, Monday through Saturday-Enjoy a 1.5-hour tour of the Gordon River led by a trained Conservancy naturalist. Paddle through a maze of mangroves and learn how you can help to protect our local waterways. Guided tours are by appointment only and there is a two person minimum/10 person maximum. Single kayak costs \$50 members, \$60 non-members and tandem kayak costs \$60 members and \$70 non-members.
 - Electric boat tours depart hourly 10am – 1pm, All aboard from the Allyn Family Dock! Take a leisurely, informative and fun 45-minute cruise along the beautiful Gordon River. Our trained guides will point out the natural beauty surrounding the Conservancy Nature Center and you may even spot a manatee or two! This is a perfect way for families, nature lovers and boaters to enjoy a unique experience on the water. Electric boat tours are frequently cited as visitors' favorite part of the Nature Center experience! Passenger capacity is limited. Due to insurance purposes, children must be older than two years of age. All children must be accompanied by an adult. Subject to weather, wind and tides. Scheduled field trip participants receive first boarding priority.
- Special programs – Evenings at the Conservancy, 6:30pm \$10 admission for presentations on science, nature and policy.
- Join us twice a month for our Lil' Explorers Pre-K programs. Explore nature and discover amazing animals through multi-sensory, interactive activities, stories, and animal themed crafts in our Young Naturalist Classroom. Free with regular admission.
- Many other ecotours – Good Fortune II, Mangroves and More, Sea Turtles, free nature walks at Briggs boardwalk, Tigertail Beach and Clam Pass led by volunteers, fossil digs, fossil safari weekend, Sweet Liberty catamaran is on their website, too.

Topics: STEM, wildlife (reptiles, birds of prey, alligators, raccoons, sea turtles), endangered species, invasive species, aquatic life, pythons, wet ecosystems, human impact on the environment

Marketing and Communications:

- Marketing department
- Facebook
- Tweets

Corkscrew Swamp Sanctuary & Blair Audubon Center

375 Sanctuary Road West, Naples, FL 34120
<http://corkscrew.audubon.org/>

Contact: Debbie Lotter, Education Coordinator, dlotter@audubn.org, 239-348-9151

Affiliation: Local non-profit, Nature Center, non-NOAA

Funding and Size: Donations and program fees with 20 staff and one dedicated to youth education

About/Mission: To conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity.

Types of Educational Programs

K-College Programs and Related Information:

- Elementary Curriculum Programs designed for 2nd and 5th grade were developed under the guidelines of Collier County's Teacher Specialist program. CCPS District Science Coordinators, teachers and conservation organizations across the county collaborated to develop grade specific field programs for 2nd-6th grade to make environmental education more meaningful for area elementary students.
- Initiated in 2001, the Teacher Specialist Program was designed to enlist teachers to implement classroom lessons, help lead their students through field activities at participating sites, complete post visit lessons and evaluate student success. Each year 1500 students and approximately 75 teachers participate in 2nd and 5th grade programs at Corkscrew. Corkscrew Staff works in direct partnership with participating Partner Educators to prepare them to serve as field Educators at Corkscrew. This not only ensured that existing programs would be sustained and that new audiences could be accommodated, but also created a strong Audubon presence and relation with visiting Educators while positively influencing their relationships with students. Partner Educators receive on-site trainings, attend workshops and participate in field trials to enhance teaching methods. Under the guidance of Corkscrew staff and volunteers, teachers have garnered self-confidence in presenting lessons in our outdoor classroom. These enriched teaching methods have resulted in increased benefits to students. Mutually, Corkscrew naturalists are able to observe and learn from formal classroom educators to broaden knowledge of teaching techniques and effective content delivery.
- Partner Educators receive the following benefits: Eligibility for School Sponsor funding for 2nd or 5th grade programs, Corkscrew membership: Free admission

for cardholder and one guest, 30% Discount in the Corkscrew Nature Store, Recognition in Annual Education Reports, Member discounts for Discover Corkscrew Public Programs

- 2nd Grade Insect Adventure -Capitalizing on children's inherent curiosity about insects and other residents of the micro-world, the Insect Adventure is designed to teach about insects while enabling students to look at their environment with a holistic view. Important concepts such as habitat, interdependence and adaptation are reinforced throughout the program and students have the opportunity to employ several steps in the scientific method as they become junior entomologists. Students, led by Audubon naturalists and trained 2nd grade Partner Educators, walk a specially constructed trail through a pine upland area that includes learning stations spaced along the walk where they perform experiments designed to coincide with subjects studied in the classroom. Participants also travel a portion of the boardwalk where they apply classroom and activity station knowledge to the larger Corkscrew ecosystem. Participating teachers must attend on-site workshops to be eligible to receive Sponsor funding. At the training, teachers receive Educator manuals, materials for their students, discuss strategies to implement the unit, identify how they will prepare students for the field trip, review all field trip activities and are provided examples of how to continue the trip with post visit activities in the classroom.
- 5th Grade Adventure - Southwest Florida offers an outdoor classroom with unique environmental regions. The 5th Grade Wild Florida Adventure program provides students and teachers an opportunity to take advantage of that classroom and to use the environment as a platform for learning. Habitat, adaptations, hydro periods, endangered species, natural and human disturbance, sustainability and conservation issues are topics of study weaved through the 5th grade curriculum. Water and its presence or absence in our ecosystem is the main unifying theme of the program. Students, led by Audubon naturalists and trained Partner Educators, travel through the Sanctuary on a raised boardwalk in search of all things wild. After an initial introduction, small learning groups venture through the pine upland forest, wet prairie, and finally into the bald cypress swamp with its lettuce lakes and wildlife. Students conduct research projects on birds, plants, reptiles, and mammals and are introduced to Corkscrew's innovative natural wastewater treatment facility, the Living Machine. Participating teachers must attend on-site workshops to be eligible to receive Sponsor funding. At the training, teachers receive Educator manuals, materials for their students, discuss strategies to implement the

unit, identify how they will prepare students for the field trip, review all field trip activities and are provided examples of how to continue the trip with post trip activities in the classroom.

- Boardwalk Adventure-Corkscrew Swamp Sanctuary is an unmatched outdoor classroom. Our 2.25 mile boardwalk with a private C.L.A.S.S. section, lends the opportunity for participants of all ages to explore pristine habitats and engage in informative seminars and presentations. Students study and explore upland pine forests, open wet prairie and marsh wetlands and the largest contiguous stand of virgin bald cypress in North America. On site restoration and land management projects provide an opportunity for students to get on the ground experience and observe critical habitat restoration in action. Guided boardwalk programs can be tailored to specific age groups and topics of study.
- The Sanctuary is a key field site and also host to 2,500 FGCU University Colloquium students annually. The interdisciplinary course required for all undergraduate students is taught by representatives from various colleges and adjunct Professors from the community with Corkscrew serving as a key field study site for the program. Colloquium is a core requirement for all undergraduate students and focuses on global perspectives, sustainability, native Florida habitats and systems, environmental economics, urban development, watershed and critical conservation issues. FGCU Professors and Student Naturalists lead field trips, dividing classes to enable students to travel the boardwalk in small learning groups. Students also complete required service learning hours by engaging them in land management, restoration and science. As of 2009, buses transport entire Colloquium classes, reducing the carbon footprint. The course goals are:
 - To provide a sense of place and an understanding of the unique ecological features of the Southwest Florida environment
 - To assist in achieving the Florida Gulf Coast University learning goal of developing "an ecological perspective" and in teaching the related outcomes that the student will "know the issues related to economic, social, and ecological sustainability, analyze and evaluate ecological issues locally and globally, participate in collaborative projects requiring awareness and/or analysis of ecological and environmental issues;"
 - To provide experiences to assist in moving toward achieving the eight other FGCU learning goals and their related outcomes (a list of the nine FGCU Student Learning Goals and Outcomes is attached);
 - To enable a working understanding of sustainability, of environmental education, and of ecological literacy.
- Annual education report can be found at www.corkscrew.audubon.org/sites/default/files/documents/2013_education_report_0.pdf

- School Sponsorship Program -The generosity of private individuals, foundations and businesses ensures financial support for Corkscrew's high quality conservation education program. Initiated in 2005, Founding Sponsors connected with specific schools and classrooms to support outdoor learning opportunities and underwrite admission fees for area students. Today, Sponsors endorse a variety of activities within the Education Department at Corkscrew Swamp Sanctuary. Contributions support elementary students and teachers for Curriculum Programs which include field trip activities, Sanctuary admission, program supplies and classroom instruction. Teachers and University Professors are provided professional development opportunities under our Partner Educator program and receive year-long support. Donations underwrite coordination of programs and workshops for Corkscrew staff, Volunteers and Partner Educators who present field lessons. Sponsors receive recognition in our annual report, student and teacher feedback and an invitation to join a field program.

Other Programs of Interest:

- FGCU undergraduate geology students examined soil properties of cypress/wet prairie/pine flatwood ecotones. Ohio State and FGCU graduate students conducted studies of wetland carbon sequestration and methane emission within the Sanctuary. University of Florida students studied the growth characteristics of sabal palmettos.
- Corkscrew Swamp Sanctuary is one of the participating organizations in the training of Florida Master Naturalists. Training sessions are offered at different times during the year. In 2014 we are offering a Wetlands Habitat Module scheduled to begin on October 2. Pre-registration is required, and the class is limited to 14 students.
- Guided walks daily, seminars 9am-noon on Saturdays, after hours it stays open until 9pm on one Friday a month in season,

Topics: Birds, wildlife, insects, ecosystems, pine upland forest, wet prairie, cypress swamp, orchids, endangered species, land management, sustainability, conservation

Marketing and Communications:

- Website
- Checks school websites at the beginning of the school year

CREW Land and Water Trust

23998 Corkscrew Road, Estero, FL 33928
<http://www.crewtrust.org/>

Contact: Deb Dorsett Hanson, Environmental Education Specialist,
education@crewtrust.org

Affiliation: Local non-profit, non-NOAA

Funding and Size: Donations, memberships

About/Mission: The CREW Land and Water Trust is a private, non-profit conservation organization dedicated to the preservation and stewardship of the water resources and natural communities in and around the Corkscrew Regional Ecosystem Watershed (CREW). We do that by coordinating the land acquisition, land management, and public use of this 60,000-acre watershed in partnership with the South Florida Water Management District (which owns and manages the land) and the Florida Fish & Wildlife Conservation Commission (which monitors wildlife, hunting, and provides law enforcement on CREW). CREW is the largest intact watershed in southwest Florida, straddling Lee and Collier Counties. CREW's majestic 5,000-acre sawgrass marsh is the headwaters for the entire watershed – which includes the National Audubon Society's famous Corkscrew Swamp Sanctuary – located south of the marsh.

Types of Educational Programs

K-College Programs and Related Information:

- The CREW Trust welcomes all school groups to explore the CREW Trails with us, and engage in focused environmental education activities that help children learn to love and understand the natural world. We work directly with Collier and Lee County schools as well as many home school groups and private schools in southwest Florida. Students will hike, explore, learn about plants and animals, test water quality, collect data on ecosystem parameters, dip-net, journal, learn about prescribed fires, and more. Each trip is custom designed the group and grade level. **The CREW Trust offers the following field trips for K – 12 students:**
 - Walk Through a Watershed Trip (designed with and for Collier County 3rd grade classes)
 - Watershed and Wildlife Walk – adapted for all ages, K-12
 - Middle School – LIFE program (in conjunction with the FL Department of Environmental Protection)
 - High School Watershed Trips – Biodiversity, Wetland Ecology, Fire Ecology, or the Legacy Trip
 - Home school/Specialty Trips – we'll design for your needs
- The CREW Trust is proud of its excellent working relationships with local universities and professors that enable us to engage students in field

experiences, research projects, and civic engagement/service-learning opportunities on the CREW lands. We assist instructors with their own field trips as well as design custom field trips for any college class, using your learning goals and concepts to guide the activities and locations of the field experiences. FGCU and Ava Maria and University of Florida/IFAS

Other Programs of Interest:

- Guided walks at Bird Rookery Swamp and Cypress Dome Trails, Wednesday's at 9am.

Topics: Watersheds, biodiversity, wetland ecology, fire ecology

Marketing and Communications:

- WGPU Public Media produce two 30-minute documentaries about CREW and several short videos.
- Blog
- Flickr
- Beyond the Trail: Podcasts with CREW people about CREW. In 2013, Florida Gulf Coast University professor and CREW Trustee, Billy Gunnels began producing a series of podcasts to highlight various people's perspectives about CREW and their interactions with the land within the watershed. Each podcast is an on-site interview with someone who has walked, worked, or wondered about CREW over the years... each perspective is unique and storied.

Outstanding Questions:

- How many staff work at CREW and how many are educators?
- How are you funded and managed?
- Tell me about your K-college programs including the topics covered, approach, are there pre or post materials for teachers, role of teachers or volunteers, who attends and from where, how many per year, what is your evaluation, etc?
- How do you communicate with teachers?
- What challenges do you have in working with teachers and schools?
- What area do you serve?
- What proportion of your school groups are public, private or homeschoolers?
- Do you, or have you, offered teacher training programs?
- How do you use volunteers in your youth programs?
- How do you market your programs?

Delnor-Wiggins Pass State Park

11135 Gulfshore Drive, Naples, FL 34108

<https://www.floridastateparks.org/park/Delnor-Wiggins>

Contact: Lori Heath-Thorn, Volunteer Coordinator, lori.heaththorn@dep.state.fl.us, 239-597-6196

Affiliation: State government, non-NOAA

Funding and Size: State government funding, admission fees, Friends of Delnor-Wiggins

About/Mission: This popular destination boasts one of the most pristine stretch of beach in the world. Every day, this tropical beach paradise beckons visitors to partake in vast peaceful views of the Gulf of Mexico, and experience the many shorebirds and wildlife that gather here every year. Visitors arrive to this park to sunbathe, snorkel the reef, hike, bird-watch, fish, picnic, and search for seashells on a daily basis. There are specific areas designated for anglers to drop their lines in the northern areas of the park for trophy catches. Boaters will also find the launch area into Turkey Bay easily accessible for most vessels, in order to experience the delicate natural estuaries of the Cocohatchee River, leading out to the Gulf of Mexico.

Types of Educational Programs

K-College Programs and Related Information: None

Other Programs of Interest:

- Ranger programs on Thursday morning at 9:30 a.m.
- Guided tours on the beach occur on a regular basis by experienced rangers and volunteers.
- A new annual summer beach day camp is now open to younger visitors with Coach B's Aquatics, and more information can be found at: coachbaquatics.com
- Friends host Delnor-Wiggins Nature Festival on Saturday, November 15, 2014 at Delnor-Wiggins Pass State Park from 10:00am to 3:00pm is an onsite festival.
- Several talks and walks including a Mangrove Walk, Spiders, Beach-combing, Gopher Tortoise Research Talk from FGCU who is doing this research at the park, Native Plants all on Tuesday or Thursday, at 9:30 am or 1pm, mostly for all ages and free with park admission.

Topics: Mangrove Walk, Spiders, Beach-combing, Gopher Tortoise Research

Marketing and Communications:

- Volunteer newsletter

Everglades National Park

<http://www.nps.gov/ever/index.htm>

Contact: Allyson Gantt, Education and Outreach Coordinator, Allyson_gantt@nps.gov 305-242-7860. Spoke with staff member Jennifer Lopez to get the contact information for Allyson Gantt.

Affiliation: Federal, has a non-profit friends group called South Florida National Parks Trust

Funding and Size: Federal funding, admission fees, grants

About/Mission: America's Everglades - The largest subtropical wilderness in the United States - Everglades National Park protects an unparalleled landscape that provides important habitat for numerous rare and endangered species like the manatee, American crocodile, and the elusive Florida panther. An international treasure as well as a World Heritage Site, International Biosphere Reserve, a Wetland of International Importance, and a specially protected area under the Cartagena Treaty. Everglades National Park covers 1.5 million acres of South Florida and spans 3 counties - Monroe, Miami-Dade, and Collier. The Gulf Coast Visitor Center serves as the gateway for exploring the Ten Thousand Islands, a maze of mangrove islands and waterways that extends to Flamingo and Florida Bay accessible only by boat in this region. The visitor center offers educational displays, orientation films, informational brochures, and backcountry permits. Boat tours and canoe rentals are available.

Types of Educational Programs:

K-College Programs and Related Information:

- The National Park Service seeks to instill in all visitors an appreciation for South Florida's natural areas and to cultivate an awareness of the many challenges they face. Everglades National Park sponsors on-site, curriculum-based education programs for **4th, 5th, and 6th grade** classes. As today's students become tomorrow's leaders, we hope that they will be motivated to help solve the problems we face today. These programs are best suited for local schools within reasonable driving distance to the park. Participation in these programs is free of charge and only available by advance reservation. Currently, the park offers four main programs:
- 4th Grade - Shark Valley Day Program -Students and teachers explore the vast Shark Valley Slough on a narrated open-air tram tour. Alligators, wading birds, turtles and fish are just a few of the residents commonly encountered. During the excursion, students learn about and experience first-hand the watershed of the Everglades. Rangers challenge students to think about their own connections to this important watershed. The trip includes a short hike to the observation tower

for a bird's eye view! 58 students plus teachers and chaperones (1 adult per 10 students, not to exceed 64 total)

- 5th & 6th Grade - Royal Palm Day Program (not within Collier County)- Rangers lead students and teachers on exploratory walks through four different habitats: the freshwater slough, sawgrass prairie, pine rocklands, and tropical hardwood hammock. Students have the opportunity to observe alligators, birds, turtles, and fish in their natural habitats. 59 students plus teachers and chaperones (1 adult per 10 students, not to exceed 65 total)
- 5th & 6th Grade - Loop Road Camp Program (This site is in Collier County) Everglades National Park maintains two education centers that offer 3 day / 2 night group camping programs. These programs are available to 5th and 6th grade students of the local community and are offered free of charge to teachers who complete the appropriate teacher workshop. The Loop Road Environmental Education Center is located 12 miles west of Shark Valley on the Old Loop Road, inside Big Cypress National Preserve. This center's facilities consist of an Indian chickee (shelter) with picnic tables and food storage box, five platform tents, barbecue grills, restrooms, campfire circle, pond, nature trails, and a butterfly garden. Study habitats within walking distance include: pinelands, sawgrass marsh, cypress slough, hardwood hammock, and freshwater pond. Activities agreed upon by the teacher and rangers might include: dry / wet hikes, sunrise walks, night walks, campfire programs, Shark Valley tram ride, living history / cultural demonstrations, archeology dig, art / language. Teachers are responsible for arranging transportation to and from the site. Teachers and chaperones are also responsible for bringing and preparing all meals. Students are responsible for bringing their own bedding and camping supplies. Teachers will work alongside a ranger to plan and lead the group activities.
- 5th & 6th Grade - Hidden Lake Camp Program (near Homestead, not in Collier County)Hidden Lake is located 15 miles from Homestead, 4 miles from the park's main visitor center. The campsite is on the shore of a three-acre freshwater lake. The center's facilities include a shelter with picnic tables and food storage cabinet, five platform tents, barbecue grill, restrooms, and a campfire circle. Study habitats within walking distance include: freshwater slough, sawgrass marsh, hardwood hammock, borrow pit lake, and pinelands. Activities agreed upon by the teacher and rangers might include: habitat hikes, canoeing, freshwater lake study, night walks, campfire programs, sunrise walks, art/language exercises, and discussion of park issues. Teachers are responsible for arranging transportation to and from the site. Teachers and chaperones are also responsible for bringing and preparing all meals. Students are responsible for bringing their own bedding and camping supplies.

- Plan a Field Trip webpage:
<http://www.nps.gov/ever/forteachers/planafielddtrip.htm> Local 4th, 5th, and 6th grade students can participate in one of our curriculum-based ranger-guided programs.
- All participating teachers are required to attend training workshops before bringing their classes to the park. Workshops give teachers valuable background information and resources for bringing the Everglades into the classroom. The ranger-led program serves as one component of a complete Everglades curriculum. Our workshops familiarize new teachers with program opportunities, logistics, and safety considerations. Additionally, workshops set the stage for pre-visit and post-visit classroom activities that allow teachers to provide their students with much more than simply a trip to the park. While not guaranteed, continuing education credit is usually available. Workshops are typically scheduled on Miami-Dade County teacher work days.
- Additional in-school teacher workshops may occur, check searchable database <http://www.nps.gov/ever/forteachers/index.htm>
- For Teachers webpage
<http://www.nps.gov/ever/forteachers/curriculummaterials.htm> Curriculum Library for K-8 plus more extensive searchable curriculum at <http://www.nps.gov/ever/forteachers/classrooms/curriculummaterials.htm> which includes climate change education.
- Special request ranger-guided programs - we are pleased to offer "Special Request" ranger-led programs to educational and non-educational groups. While we will do our best to meet demand, these programs are limited. We cannot guarantee that every request will be met. Also, due to weather conditions, these special request programs are best conducted from November to May. If you are an experienced teacher, or have enjoyed a Special Request program in the past, consider leading your own field trip. Activities may include a ranger-guided trail hike, a wet walk, or a talk, and can be tailored to your group's age level. Essentially, you can "Build Your Own Visit." Click on the Special Program Request Form to view possible options and submit your request. Due to high demand, requests must be submitted **at least four weeks in advance** of program date. There is no charge for these programs, but keep in mind there is an entrance fee to the park. Educational or scientific institutions are encouraged to apply for an entrance waiver fee. Having an entrance fee waiver should not be mistaken for having confirmation of a Special Request program. Teachers, chaperones, or group leaders should be prepared to lead part of their group themselves if participant numbers exceed a ranger: student ratio of 1:25. Anyone planning a field trip should prepare their students before-hand. We have various field trip planning guides. Even if you are not part of a formal ranger-led program, these publications offer group leaders helpful ideas for pre-site/on-site activities, information and field trip logistics

Other Programs of Interest:

- <http://www.nps.gov/ever/photosmultimedia/videomap.htm> for “video visits” where you click on a map and see videos of stuff to do in the park.
- Kids pages, Web Rangers, Junior Rangers

Topics: Everglades ecosystems, endangered animals and plants, water, habitats within walking distance include: pinelands, sawgrass marsh, cypress slough, hardwood hammock, and freshwater pond, living history / cultural demonstrations, archeology dig, art / language.

Marketing and Communications: website

Fakahatchee Strand Preserve State Park

137 Coast Line Drive, Copeland, FL 34137

<http://www.floridastateparks.org/fakahatcheestrand/>

<http://orchidswamp.org/> is the Friends of Fakahatchee website

Contact: Mike Owen, Biologist, mike.owen@dep.state.fl.us, 239-821-3594

Affiliation: State government, non-NOAA

Funding and Size: State funding, Friends of Fakahatchee, with five staff

About/Mission: Welcome to the Fakahatchee Strand Preserve State Park, "the Amazon of North America." The Fakahatchee Strand is a linear swamp forest, approximately twenty miles long by five miles wide and oriented from north to south. It has been sculpted by the movement of water for thousands of years and clean fresh water is the key to its existence. Beneath a protective canopy of bald cypress trees flows a slow moving, shallow river or slough that is warmer than the ambient temperature in the winter and cooler in the summer. The buffering effect of the slough and the deeper lakes that punctuate it shield the forest interior from extreme cold temperatures and this fosters a high level of rare and endangered tropical plant species.

Friends of Fakahatchee Mission: Dedicated to financial and volunteer support to preserve the unique ecology and cultural heritage of Fakahatchee Strand Preserve State Park and educate the public about its importance.

Types of Educational Programs:

K-College Programs and Related Information:

- A few delivered annually upon request, such as a homeschool teacher on the east coast that does 1-2 programs per year and a program for an Everglades City school although they have skipped a year. These may include transect work, looking at what we find such as rabbit scat, apple snails, affects after a burn, and use of a GPS to record our distance. Used schools groups to collect data when possible.
- There are about five college groups that come every year or every other year (University of Miami, St. Pete College). University of Buffalo has come every year in January since 1994 on a field trip.
- Teaches Florida Master Naturalist

Other Programs of Interest:

- Contact the Preserve Office for upcoming activities like guided swamp walks and canoe trips. Trips linked from the Friends website to Eventbrite, most are \$25 per person except the cruise which is \$80, and include:
 - Fakahatchee Ghost Rider Tram Tour

- Fakahatchee Tram Tour and Swamp Walk
- Fakahatchee Boardwalk After Dark
- Moonlit Tram Tour
- Biologist Led Fakahatchee Swamp Walk
- Fakahatchee Island Coastal Cruise (says Everglades National Park)
- Ranger Programs – Friends of Fakahatchee guided swamp walk, November to March. Join park staff and volunteer naturalists on a ½ day journey. There are eligibility requirements such as ability to walk in water up to 4 feet deep, etc. These are offered about once a week in season from
- Run Everglades Ultra –Running course on various trail throughout the park.
- Will do PowerPoint presentations at events upon request

Topics: Orchids, swamps, rare plants and animals, prescribed burns

Marketing and Communications:

- Website is the primary, but their Friends groups does some additional outreach using flyers and other methods
- Largest unit in the Florida parks service at 80,000 acres.

Florida Wildlife Federation (FWF) – Naples Office

2590 Golden Gate Parkway, Suite 105, Naples, FL 34105

<http://www.fwfonline.org/Regions/Southwest-Office.aspx#.VODDhGt0wdU>

Contact: Nancy Payton, nancypayton@fwfonline.org, 239-643-4111

Affiliation: Statewide non-profit, non-NOAA

Funding and Size: Memberships, donations

About/Mission: The Florida Wildlife Federation is a private, statewide, non-profit citizens' conservation education organization composed of thousands of concerned Floridians and other citizens from all walks of life who have a common interest in preserving, managing, and improving Florida's fish, wildlife, soil, water, and plant life. As the State Affiliate of the National Wildlife Federation, FWF has been improving Florida's wildlife since 1936. The "Goal" of the Federation is to be the leader in promoting, through education and political action, the conservation, restoration, sound management, and wise and ethical use of Florida's natural resources, to the end that present and future Floridians may live, work and pursue traditional outdoor activities in an outstanding natural environment. The mission includes:

- That the welfare of fish and wildlife is inseparable from other living things, including humans.
- That wildlife is an indicator of environmental quality --and if properly managed can be a source of inspiration and recreation. But, wildlife cannot survive where wetlands are drained, waters polluted, or habitat otherwise degraded or destroyed.
- Ethical hunting and fishing, and the proper recreational use of our natural resources, inspires citizens to protect our environment.
- That our life-supporting environment can only be protected through continued awareness, understanding, and action brought about by Federation members and concerned citizens.
- That life and beauty, prosperity and progress depend on how wisely we use the gifts of clean air, rich soil, pure water, mineral wealth, and abundant plant and animal life.

Types of Educational Programs

K-College Programs and Related Information:

- FWF Scholarship Fund at the University of Florida, Department of Wildlife Ecology & Conservation - The Florida Wildlife Federation established an endowed scholarship fund at the University of Florida Foundation in 2004. The Scholarship Program was initiated by Tim O'Brien, the Federation's first Eagle Club member (\$1,000 member), who hoped to motivate other Federation members and University of Florida/WEC alumni to donate to the scholarship endowment fund. The intent is to build the fund to \$100,000. Currently the fund is about two-thirds of the way to this goal through the generous donations of many members and supporters. The scholarships are merit-based and focus on students pursuing a career in fish and wildlife conservation, research, or related fields. The scholarships are awarded each year in April.
- The local office supports Wings of Hope at FGCU and their education component by funding buses to take Collier County students for CREW hikes, purchase remote sensing cameras for panthers, and purchase classroom materials. Have supported them for years at around several thousand dollars so kids can experience wild areas and panther habitats and it's free

Other Programs of Interest:

- Photo contest, wildlife habitat creation for homeowners, Florida Greenstar program is a certificate for homeowners that are living green.

Topics: Conservation advocacy, panthers, clean water, Gulf restoration, Everglades, native wildlife habitat

Marketing and Communications:

- Facebook
- Website

Florida SouthWestern State College, Collier Campus

7007 Lely Cultural Pkwy., Naples, FL 34113-8977

<http://www.fsw.edu/collier>

Contact: Tina Ottman, Biology Professor, Christina.Ottman@fsw.edu, 239-732-3700

Affiliation: State college/academia, non-NOAA

Funding and Size: State funding, tuition, and fees

About/Mission: Celebrating over 50 years of excellence, Edison State College is Southwest Florida's largest, most accessible and ranked nationally as one of the most affordable institutions of higher education. Serving more than 24,000 students per year regionally, nationally, and internationally, students are also active in a wide variety of clubs and programs that cater to their interests. Nationally, Edison State is ranked 45th among associate degree producers and 26th for its prestigious associate producing Nursing program. The Collier County Campus opened in March of 1992. The beautiful campus, which includes four, state-of-the-art, energy- and environmentally-efficient buildings, is located on an 80-acre site near State Road 951 and Rattlesnake Hammock Road, in south Naples within Lely Resort.

Types of Educational Programs

K-College Programs and Related Information: None in environmental education. Biology program takes students on field trips with other providers.

Other Programs of Interest:

- Florida SouthWestern State College's School of Education provides a rigorous learning environment ensuring teacher candidates will achieve their greatest potential through Principles of Excellence. Building on a strong pedagogical, ethical and socially conscious foundation that fosters creativity and innovation. Florida SouthWestern State College's School of Education produces graduates equipped to contribute to the diverse community of life-long learners in Southwest Florida.
 - They offer a BS in Middle Grade Science Education is designed to prepare individuals to teach life and physical science in grades 5-9 with content courses that cover general ecology, scientific processes, and physical and biological sciences. Students will complete field experience, teach lessons through the practicum courses, and complete a full-time teaching internship in their final semester.
 - BS in Secondary Biology Education is designed to prepare individuals to teach biology grades 6-12 (middle and high school) with content courses in teaching students with English as a second language, students with exceptionalities, reading competency, classroom management, assessment, and integrated approaches to teaching methodologies at the

middle and high school levels. Students will observe teachers in the field, teach lessons through the practicum courses, and complete a full-time teaching internship in their final semester.

- Member of the National Science Teachers Association
- Partner in the Southwest Florida Reading Festival
- Florida Southwestern State College School of Education has developed a Professional Learning Academy designed to provide high quality, focused professional development learning opportunities. These learning opportunities will be designed so that they provide educators with up-to-date, research-based programs that will immediately have an impact on teaching, student learning and the educational interests of area school districts, the college and community. These courses will also meet state re-certification guidelines and requirements.
- GreenFest Expo, from 10 a.m.-3 p.m., on Saturday, March 22, 2014 at the Collier Campus. The annual GreenFest Expo brings together local businesses and organizations to share environmentally friendly products and services with the community. This is hosted by the Environmental Studies Club.
- Organic rooftop garden was started by Edison State College Chemistry Professor Dr. Lisa McGarity and her organic chemistry students. Each year, the class builds its own garden, picking which plants, fruits, and vegetables they'd like to grow.
- Environmental studies club (Led by Kirk Otto) and the biology club (led by Tina Ottman). The biology club is more career-based with field trips to science places and lab experiments, while the environmental studies club is more outdoors, but they combine students routinely since there are not a lot of students involved.

Topics: education, science

Marketing and Communications:

- website

Naples Preserve and City of Naples

1690 Tamiami Trail North, Naples, FL 34102

<http://www.naplesgov.com/index.aspx?nid=590>

Contact: Becky Spear, preserve@naplesgov.com, 239-261-4290

Affiliation: Municipal agency/department (City of Naples), Nature centers/environmental education centers

Funding and Size: Local government taxes. There is one part-time staff person at the Preserve.

About/Mission: The Naples Preserve is located on 9 1/2 acres at the corner of U.S. 41 and Fleischmann Boulevard. The site protects two unique Florida Upland Habitats: Pine Flatwoods and Oak-Rosemary Scrubs. Explore the 0.4 self-guided nature walk as it curves through the shaded woods. Then, sit, rest, and take in the surroundings while sitting on one of our many benches. The Preserve offers you one of your best opportunities in Southwest Florida to see gopher tortoises in their natural habitat, along with native wildflowers, trees, birds, butterflies, rabbits, and more. The peak months for viewing wildflowers and butterflies are between August and September.

K-College Programs and Related Information:

- 2nd graders walk over from Lake Park Elementary for a field trip in the spring. A book is read to them about saving natural areas and how easy to destroy them when out of balance they go out to look at the garden and have worksheets and then walk on the boardwalk.
- Will do field trips on request and have homeschoolers sometimes.
- The FGCU Colloquium classes learn about restoring the dry scrub and about fire, and ecosystems, research and monitoring of gopher tortoises and catch one a weigh and measure it.

Other Programs of Interest:

- The Hedges Family Eco-Center is your one-stop resource for information about the natural areas and the local history museums of Collier County. Our knowledgeable volunteer staff are more than willing to answer any questions you might have about sightseeing advice, brochures, and local maps. While you are here, enjoy one our scheduled environmental programs or just relax with a book in our natural history resource library. You will enjoy what the Preserve and Eco-Center have to offer!
- Free Nature Walk on the fully accessible boardwalk that is open daily during daylight hours.

Special Family Events, and "For Kids Only" Activities - Listed below.

A Geocaching and a Letterboxing Site

- The Nature Talk Series **is** held inside of The Hedges Family Eco-Center and are free to the public on Saturday's at 10 a.m. Oct. –Dec. Topics include birds, butterflies, (Becky Speer)
- Out & About Eco-Tours must register for trips at Fleischmann Park (239-213-3020) one week in advance. All tours depart from the Community Center at Fleischmann Park, 1600 Fleischmann Blvd. and go to the Partners of the Naples Preserve such as Local Parks, Preserves, Museums and Sanctuaries. Each tour is informative and exciting and offers you the chance to meet other local residents and visitors with similar interests. Preserve Ambassadors will escort each tour. Cost varies per trip. Detailed brochure available by calling the Preserve or Fleischmann Park.
- Vounteer program called Ambassadors program
- Master Naturalist Program taught by Naturalist Wendell Vaught. Please call 261-4290 for specific programs and upcoming dates.
- Holiday spirit open house
- Community service volunteers for restoration
- They support the summer camp programs which go on field trips to sites around the area
- The City of Naples appears to have a few other environmental programs including the Naples energy program, <http://npowernaples.com/> which includes outreach for homeowners. There are several webpages on Naples Bay, but none related to environmental education.

Topics: Birds, butterflies, conservation, nature

Marketing and Communications:

- Flyer for programs
- City website and information channels
- Prints a booklet that goes to schools
- Word of mouth

Naples Botanical Garden

4820 Bayshore Drive, Naples FL 34112

<http://www.naplesgarden.org/gardens.shtml>

Contact: Britt Patterson-Weber, Youth Programs Manager, bpatterson-weber@naplesgarden.org, 239-325-1356

Affiliation: Museum/zoo/aquarium, environmental center, local non-profit, non-NOAA

Funding and Size: Memberships, donations, grants, admission and program fees

About/Mission: Naples Botanical Garden is creating a world class paradise that combines delightful cultivated tropical gardens with beautifully restored natural habitats. The Garden connects people and plants through display, education, conservation and science. It is a community gathering place and an exceptional venue for exploring our natural world as well as enjoying special events, traveling exhibitions and performances. In 1993, a group of eight Naples residents founded the Garden with nothing more than the dream of creating a world-class botanical garden. In 2000, a gift from the Kapnick Family enabled the purchase of an extraordinary 170-acre site with seven different habitats just south of Old Naples. An existing strip mall and parking lot were transformed into a garden experience to introduce the community to what was to come. In June 2008, the Garden closed to general visitors to begin our ultimate transformation into our existing "Gardens with Latitude" which includes six cultivated gardens, 2.5 miles of walking trails, and 90-acres of restored native preserve.

Types of Educational Programs

K-College Programs and Related Information: Website shows SSS by each program.

- School field trip programs are self-guided/Guided. School groups include 10 or more children from homeschools, public, private, and faith-based PreK-12 grade schools. \$5 per student. Minimum of 10 students to be considered a "group." One free chaperone is given for every 5 students and chaperones required: PreK – 5th grade: 1 chaperone per 5 students. 6th grade – 12th grade: 1 chaperone per 10 students. Additional adults are \$7 per person. Additional adults must purchase tickets individually when group checks in. Payment is due in full on the day of your field trip. The Garden is ADA accessible. Openings and availability for field trip time slots fill quickly, especially in April and May. Please plan ahead and schedule your trip early. ALL field trip visits must be scheduled at least 2 weeks in advance. To help us coordinate your program, be sure to choose the 3 best dates for your field trip when you make your reservation request. If you have more than 3 classes (or 60 students), we can accommodate them on different days. Just fill out a separate reservation form for each group. You will be notified by phone or email as soon as your response is processed. If you do not hear from us within a week of sending your request, please email us. A confirmation

packet with Garden policies and field trip procedures and invoice will be emailed when your reservation is confirmed. Be sure to review this material carefully and contact us with any questions. Your field trip is not confirmed until you receive the confirmation packet.

- The Collier County school trip program is the 4th grade budding botanist which covers plant science standards. Teachers do training before they come and do field trip in October and November when they are learning about this same stuff in school. Students rotate through four stations covering flower dissection and seed carrier curriculum that is led by the teachers and the garden can provide many different examples of how seeds are dispersed and flower reproduction and pollination. Teacher training is one morning in the middle of September on a Saturday and includes a teacher packet that school district developed with the Garden.
- Pre – Kindergarten – Kindergarten - Mini Smith Children's Garden Experience
The Pre-Kindergarten-Kindergarten program is an abbreviated Smith Children's Garden Experience tour especially for little ones. The program begins with a story and is followed by guided exploration of the Wild Florida Trail and the Pfeffer-Beach Butterfly House. This program lasts 30-40 minutes.
- Kindergarten – 5th grade - Smith Children's Garden Experience
The Vicky C. and David Byron Smith Children's Garden is an enclosed garden featuring the Pfeffer-Beach Butterfly House, which is home to a variety of native butterflies; an horticultural area filled with flowers, herbs, and vegetables; and the Wild Florida Trail, showcasing mini-replicas of ecosystems that are unique to our region. In this program, children will explore southwest Florida habitats, learn about gardening, and enjoy a guided butterfly program.
- 3rd grade – 5th grade – Brazil The Brazilian Garden is a tribute to Brazilian artist, designer, botanist and conservationist Roberto Burle Marx, who has been called “a poet who had chosen to use nature as a means of self-expression.” In this program, students will learn about the connection between science and art – from nature serving as the subject for artistic masterpieces to nature being the source of various pigments and dyes. Along the way, students will also learn about the unusual plants of Brazil and participate in a fun and educational expressive art project.
- 3rd grade – 5th grade - Caribbean/Asia Southeast Asia and the Caribbean might be on opposite sides of the globe, but they have more in common than one might think. For example, both are comprised of numerous islands and archipelagos, which presents certain challenges to the people who calls those islands home. Today, students will put on their thinking caps, imagine what it's like to live on an island, and find out how they can use the plants around them to survive. Students will also learn about the interconnected stories of the plants that were traded between the Caribbean and Asia.
- 3rd grade – 5th grade - Butterfly Science Butterflies offer a window into the natural world and are an excellent starting point for learning about plant-animal relationships, carrying capacity, and more. Through a series of field and lab experiences, and equipped with field journals, students in this program will hone

their observation skills and learn about the butterfly life cycle, butterflies' role as pollinators, butterfly habitat needs, and butterfly diversity. Can only accommodate up to 3 classes per trip – 2 classes are preferred. Please allow 2 hours for the completion of this program. This program works best when it is preceded by studies about butterflies.

- K – 12th grade - Self-guided Tour Using a map of the gardens, teachers and chaperones can lead students through the Gardens of your choice which include the: Brazilian Garden, Kapnick Caribbean Garden, Marcia and L. Bates Lea Asian Garden, Karen and Robert Scott Florida Garden, Vicky C. and David Byron Smith Uplands Preserve, and the Dotty and Nick Beckwith North Wetlands Preserve; the Smith Children's Garden and Pfeffer-Beach Butterfly House are not included in this option. This option allows teachers to customize the tour to suit their needs and to have a more flexible schedule. The Self-Guided Tour is led by your teachers and chaperones, but Garden Docents are generally available throughout the Garden to answer any questions you might have. We recommend that children bring a notebook or journal for the Self-Guided Tour, and are given an assignment that is related to the lessons you are teaching in your class.
- Collier greens school garden network - School gardens offer many benefits to teachers and students. As outdoor classrooms providing alternative learning, school gardens increase educational equity, giving both children of all opportunities to excel. Gardens give children access to the outdoors and a connection to nature and are linked to improved academic achievement. Naples Botanical Garden's *Collier Greens* program is a network that supports local school and community gardens. Collier Greens offers professional development opportunities; fosters dialog among school garden professionals; assists with garden development; and provides technical garden support, curriculum resources, and other materials from workshops. In the fall of 2002, Naples Botanical Garden partnered with Avalon Elementary, Windstar Audubon Committee, and the East Naples community on the beginning stages of the Global Garden. The purpose of the program was to improve student performance while also encouraging family and community involvement, which over the last nine years it has accomplished and expanded upon.

Other Programs of Interest:

- This is a place-based site with hours open to the public of 9 am to 5 pm daily (8 am to 5 pm on Tuesdays) and admission: Adults \$14.95, Children \$9.95, FREE for Members
- Lifelong learning programs such as guided walking tours, art and gardening workshops
- Summer Camp - Give your kids the chance to embrace their inner adventurer this coming summer at Naples Botanical Garden's summer camp! Kids will have the opportunity to connect with the natural world through art, science, exploration and play. It is the perfect camp for budding scientists, explorers, horticulturists, and chefs.
- Docent program

- Numerous public and family programs – Tai Chi, master gardener, jazz in the garden, dogs in the garden walk, prepare your landscape for hurricanes and more.
- Greenscape Alliance, Audubon Society and Native Plant Society meet there.

Topics: Gardening, sustainability, nature, science, outdoors, plants, butterflies, horticulture, art, culture

Marketing and Communications:

- Website
- Blog
- Naples Botanical Garden Magazine
- Social media
- Trip advisor

Naples Zoo at Caribbean Gardens

1590 Goodlette-Frank Road Naples FL 34102
<http://napleszoo.com/home.htm>

Contact: Kayla Sherwood, 239-262-5409

Affiliation: Museums/zoos/aquariums, local non-profit, non-NOAA

Funding and Size: Memberships, donations, admission fees

About/Mission: Inside a historic botanical garden and nationally accredited zoo! The Naples Zoo at Caribbean Gardens seeks to delight you with the natural world to inspire the conservation of our planet's wild areas and their wondrous inhabitants. As you enjoy the Zoo and historic garden, we want you to understand that all of us have great power to change the future for people and animals by what we purchase, how we live, and whom we support. Accredited by the Association of Zoos and Aquariums.

Types of Educational Programs

K-College Programs and Related Information:

- Young Explorers program, rates include all daily Zoo activities and ONE FREE TEACHER admission per class. Group rates require reservations be made at least 72 hours in advance. They can bring lunch or buy lunch onsite. Daily boat trip and shows with the general public.
 - Groups from in Collier County with less than 15 students pay standard rates and then for groups of 15 to 49 pay \$7.00 kids over 3, \$8.95 chaperones, \$10.95 additional adults.
 - Groups from outside Collier County with less than 15 pay standard rates, groups of 16-49 pay \$7.25 kids over 3, \$8.95 chaperones, \$10.95 separate adults. Payment is due prior to entry on tour date.
 - Regular rates are free under 2, ages 3-12 are \$12.95, adults 13-64 are \$19.95, seniors \$18.95

Other Programs of Interest:

- Ten daily programs

Topics: Animals, conservation, habitats, plants

Marketing and Communications:

- E-newsletter
- Website

Outward Bound

910 Jackson Street, Suite 140, Golden, CO 80401

<http://www.outwardbound.org/course/florida-canoeing-for-struggling-young-adults/386/>

Contact: info@outwardbound.org, 866-467-7651

Affiliation: National non-profit, non-NOAA

Funding and Size: Program fees, donations

About/Mission: Outward Bound, founded by educator Kurt Hahn, is a non-profit educational organization and expedition school that serves people of all ages and backgrounds through challenging learning expeditions that inspire self-discovery, both in and out of the classroom. With a national network of regional Schools and hundreds of courses in wilderness settings and urban environments, Outward Bound has helped people discover strength of character, an ability to lead and a desire to serve for over 50 years. Outward Bound delivers programs using unfamiliar settings as a way for students to experience adventure and challenge in a way that helps participants discover that they can do more than they thought possible. Outward Bound helps individuals and teams discover strength of character and an aptitude for leadership needed to serve others in their community and care for the world around them. Today, Outward Bound serves 70,000 students and teachers annually, many of whom receive scholarship support, and has a nationwide community of more than 1 million people.

Types of Educational Programs

K-College Programs and Related Information: None

Other Programs of Interest:

- This Florida canoeing course is designed for struggling youth and their families. These courses help address behaviors such as unhealthy risk-taking, low motivation, defiance, or poor school performance. Courses are presented as metaphors for the transition from childhood to adulthood and help teens connect their desire for more freedom with the reality that they must take on additional responsibility. Throughout the course students will be introduced to the joys and challenges of expeditionary canoe travel, camp craft and group dynamics while traveling in the unique ecosystems of Florida's waterways. This 28-day Florida canoeing course for ages 16 – 20 and 18 - 22 is designed to serve struggling young adults and their families. These courses help address behaviors such as unhealthy risk-taking, low motivation, defiance, or poor school performance. Courses are presented as metaphors for the transition from childhood to adulthood and help young adults connect their desire for more freedom with the reality that they must take on additional responsibility. Throughout the course students will be introduced to the joys and challenges of expeditionary canoe travel, camp craft, and group dynamics while traveling in

the unique ecosystems of Florida's waterways. These new activities, crewmates and environments help to break bad habits and patterns as well as coach students on discovering the next positive step in their lives. \$6595 and offered winter, spring, summer, Fall. This course takes place off the west coast of southern Florida in the Everglades National Park and Ten Thousand Islands National Wildlife Refuge. The Everglades are the largest sub-tropical wilderness in the United States and third-largest national park in the lower 48 states. The aquatic preserve is home to an array of wild creatures and exotic plant life. More than 350 species of birds, 300 species of fresh and saltwater fish, 40 species of mammals and 50 reptiles live within it. Because of this it is one of only three locations in the world to show-up on the following lists, an International Biosphere Reserve, a Wetland of an International Importance and World Heritage Site.

- Also a Ten Thousand Island Canoeing for Veterans course in Everglades National Park.

Topics: Leadership, healthy decision-making

Marketing and Communications:

- Newsletter
- Online chat option
- Website donation form

Pathfinder, Inc.

1310 22nd Avenue South, St. Petersburg, FL 33705
<http://www.pathfinder-ed.org/community/index.php>

Contact: Sherry Bagley, Field Director, sherry.bagley@pathfinder-ed.org, 727-328-0300 ext. 224

Affiliation: Local non-profit, non-NOAA

Funding and Size: Program fees, non-NOAA

About/Mission: The mission is to deliver fun, challenging adventures that help participants learn about themselves, others and their environment. Pathfinder's primary objective is to teach personal, social, and environmental responsibility through activity-based learning. We provide programs for youth and adults with an emphasis on community. Our programs offer new insights in greater problem-solving, healthy decision-making, and responsibility for themselves and others. Working together to identify and achieve common goals, participants gain new skills in resolving conflicts and effective collaboration while developing leadership skills and enhancing communication. Because our curriculum is exciting and hands-on, participants feel energized about learning and have fun in the process. Pathfinder, Inc. is a nonprofit, Florida corporation, established in 1993 and governed by a Board of Directors. Every year, Pathfinder serves over 5,000 participants. We are one of only thirteen outdoor adventure programs accredited by the Association of Experiential Education and we are the only accredited program in Florida.

Types of Educational Programs

K-College Programs and Related Information:

- Offers curriculum for all ages (pre-K through adult) at camp and conference centers in Florida for one to five days, including overnight stays. Teachers and youth group leaders choose from over 40 curriculum choices and build a program that could focus on the environment, but could also focus on leadership, community and character, cultural competency, outdoor adventure or teambuilding. Environmental science-related activities included canoeing, night hikes, star-gazing, ecosystem and water studies, tree climbing, estuary explorer with netting, Funky Forest Finds to discover cool flora and fauna in the woods. Prices range from as little as \$35 per participant for a half day program to \$475 per participant for a four-day/overnight program (including meals and lodging).
- They've served approximately five middle schools in Collier County and their participants tend to be from private schools. Sample curriculum packages:
 - Florida Environment Studies, linking community building and environmental stewardship, all ages
 - Outdoor Challenge and Science/Environmental Enrichment, all ages
 - Ecosystems and Inquiry, grades 4-8

- Water and the Florida Environment, grades 4-8
- Program Goals:
 - Better understand the amazing ecosystems of Florida
 - Develop your capacity to enjoy the natural beauty of Florida, safely and with minimal impact
 - Stretch your teamwork and leadership abilities through shared adventure
 - Better understand the interdependence of all life
 - Understand our impact on the environment, and its impact on us

Other Programs of Interest:

- Pathfinder's Adult Programs are available to corporations, nonprofits, colleges, community organizations, and young adults (18-25). Most clients desire team building programs. We customize each program to meet the needs and goals of your group. Some outcomes we may deliver are: improved cohesion, enhanced communication, and more effective problem solving.

Topics: Leadership, community and character, cultural competency, outdoor adventure, environmental studies and stewardship, estuaries, water, forests, humans impact on the environment

Marketing and Communications:

- Website
- No social marketing in evidence on the website
- There was a form to "Share your story"
- Pre-trip packets, bring-along lists and a 30-day checklist are provided to participating schools

Picayune Strand State Forest

2121 52nd Ave. SE, Naples, FL 34117-2608

<http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Our-Forests/State-Forests/Picayune-Strand-State-Forest>

Contact: Heather Ferrand, heather.ferrand@freshfromflorida.com, 239-690-3500 x104

Affiliation: State of Florida Forest Service, non-NOAA

Funding and Size: State funding

About/Mission: Picayune Strand State Forest is primarily comprised of two major tracts of land, the South Golden Gate Estates Tract and the Belle Meade Tract. The South Golden Gate Estates Tract makes up the majority of the forest. The land that is currently Picayune Strand State Forest was originally logged for cypress trees in the 1940s and 1950s. Then, in the 1960s, a developer purchased over 57,000 acres to create the largest subdivision in America, to be called "Golden Gate Estates." A massive system of canals and roads was built, and thus began the infamous "swampland in Florida" scam. In 1985, a plan was put into place to purchase South Golden Gate Estates using Conservation and Recreation Lands (CARL) funds under the Save Our Everglades program. This was an incredibly large undertaking since it involved acquiring land from 17,000 landowners. In 1998, the federal government gave \$25 million in aid to the state of Florida to help bring the land acquisitions to a completion. Once the land acquisition is completed, hydrological restoration activities will begin in earnest. This will restore the sheet flow of freshwater that is necessary for the continued existence of the ecologically sensitive Ten Thousand Islands and the Rookery Bay National Estuarine Research Reserve.

Types of Educational Programs

K-College Programs and Related Information:

- They go into 1-2 schools per year and talk about prescribed fires and forestry techniques
- Rangers will suit up as Smoky the Bear and go to school programs and man booths at public festivals
- If a school asked they would accommodate them on a field trip but don't have a person whose job duty that is
- There is a teacher training called Fire in Southern Ecosystems (fireinsouthernecosystems.com) that teaches teachers to teach about fire ecology but is not directly offered by them.

Other Programs of Interest:

- Festival in the Woods, January 24, 2015, 10am – 3pm, Guided Hikes, Wildlife Presentations, Guided Bicycle Tours, Children's Activities, Environmental

Exhibitors & Vendors. Free admission, parking and lunch. Off of Sabal Palm Road.

Topics: Forestry techniques, prescribed fires, wildlife, water

Rookery Bay National Estuarine Research Reserve

300 Tower Road, Naples, FL 34114
www.rookerybay.org

Contact: Sarah Falkowski, Education Coordinator, sarah.falkowski@dep.state.fl.us,
239-530-5975

Affiliation: State government, nature centers/environmental center

Funding and Size: State and federal funding, grants, Friends of Rookery Bay

About/Mission: Located at the northern end of the Ten Thousand Islands on the gulf coast of Florida, the Rookery Bay National Estuarine Research Reserve represents one of the few remaining undisturbed mangrove estuaries in North America. The Rookery Bay National Estuarine Research Reserve is managed by the Florida Department of Environmental Protection's Coastal Office in cooperation with the National Oceanic and Atmospheric Administration (NOAA). An amazing world exists within the 110,000 acres of pristine mangrove forest, uplands and protected waters of Rookery Bay. Where rivers and streams meet the sea, a unique habitat is formed. A myriad of wildlife, including 150 species of birds and many threatened and endangered animals, thrive in the estuarine environment and surrounding upland hammocks and scrub found within the Reserve. The mission of the Rookery Bay National Estuarine Research Reserve is to provide a basis for informed stewardship of estuaries in Southwest Florida through research and education.

Types of Educational Programs

K-College Programs and Related Information:

- Estuary Explorers is for fourth grade students and teachers from Collier County Schools and involves a one-day teacher training that translates into a series of classroom investigations. This is followed by a one-day field trip to the Environmental Learning Center with the goals of increased knowledge and awareness of estuaries including why they are important, and things you can do to help protect them.
- Marine Science Programs are for high school marine science students and teachers from Collier County Schools and colleges and it involves a one-day teacher training prior to a one-day on-water field trip to the Rookery Bay Reserve. This includes a boat trip and trawl where classes touch, identify and learn about what was caught and observed during a full-day on the water with a Rookery Bay Educator. This program is designed to educate high school and college students using field-based explorations. Programs are conducted while on board one of several Rookery Bay education vessels and are appropriate for classes such as marine biology, environmental science, oceanography, general

biology, chemistry and more. Teachers are required to complete training and classroom-based investigations prior to trips. Collier County high school teachers should visit Rookery Bay's field trip page on the Collier County Public School website for more information.

- Middle School Marine Science Program is this based on the discontinued LIFE curriculum. The LIFE-Big Cypress Watershed Project brings middle school students out of the classroom to some of the most unique locations in their watershed to learn science by practicing science.
- Girls in Science program - Join Rookery Bay naturalists and scientists for a fun-filled day of science devoted to girls only! Hands-on, fun activities may include estuary critters study, collecting microscopic animals, boat exploration, nature trail hike and more!
- Teacher training was offered in the past where teachers spent a week traveling to sites throughout the watershed. A new Teacher on the Estuary training program is being developed with grant funding.

Other Programs of Interest:

- Professional training for landscapers, ecotour providers, and more
- Daily programs at the Environmental Learning Center - Embark on a journey to learn more about the plants and animals that inhabit this beautiful coastal environment, the issues they face for survival, and how every species contributes to the vitality of this ecosystem. Join our team of naturalists for a closer look at some of the remarkable creatures that inhabit our coastal environment. These DAILY 45-minute programs are offered at 11 am and 2 pm and are included with regular admission.
- Weekly boat and kayak tours offered November through April.

Topics: Estuaries, environmental science, science processes, stewardship, conservation, watershed, nature, human impact on estuaries, animals, barrier island ecology, mud flats, beach ecology

Marketing and Communications:

- Website
- Facebook
- Videos

Sierra Club, Calusa Group (SWFL)

<http://florida.sierraclub.org/calusa/index.html>

Contact: Marcia Cravens, Outings Coordinator, goldandrose@me.com, 239-594-8256

Affiliation: Statewide non-profit, non-NOAA

Funding and Size: Donations, memberships

About/Mission: The Calusa Group of the Sierra Club includes people from a four county area in Southwest Florida: Lee, Collier, Hendry and Glades. We currently have over 1000 members in the southwest Florida area. The Calusa Group takes its name from the Calusa Indians, who are now extinct. The Calusa Indians lived and thrived along the coast of Southwest Florida. They thrived through living in harmony with our Southwest Florida environment. Our Mission -The Sierra Club's Statement of Purpose is: To explore, enjoy and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

Types of Educational Programs

K-College Programs and Related Information: None

Other Programs of Interest:

- Field trip programs with suggested donations
- Sierra Club Green Home is a global blog that keeps you updated on the latest progress in social responsibility, including: featured stories, business & global megatrend insights, green home & style inspiration, profiles & expert advice at <http://www.scgh.com/about-sierra-club-green-home/>

Topics: Environmental advocacy

Marketing and Communications:

- The Pelican monthly newsletter created by volunteers

**Southwest Florida Research & Education Center
University of Florida/IFAS**

2685 State Road 29 North, Immokalee, FL 34142

<http://www.imok.ufl.edu/index.php>

Contact: Calvin Arnold, Center Director, cearnold@ufl.edu, 239-658-3405

Affiliation: Educational institution, State government, non-NOAA

Funding and Staff: State funding

About/Mission: The mission of the Southwest Florida Research and Education Center (SWFREC) is to supply decision-makers with specific knowledge to sustain and enhance agricultural, human, and natural resources through nationally and internationally recognized research, extension, and teaching programs. : The Mission of the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) is to develop knowledge in agricultural, human, and natural resources and to make that knowledge accessible to sustain and enhance the quality of human life. They are primarily a research institution with an agricultural focus with the following program areas: Agricultural Economics, Citrus Horticulture, Entomology, Plant Pathology, Soil & Water Science, Vegetable Horticulture, Water Resources.

Types of Educational Programs

K-College Programs and Related Information:

- Serves as host for graduate students, who stay on campus and conduct their graduate research in cooperation with a University of Florida faculty advisor. Currently SWFREC has graduate students in Entomology, Soil & Water Science, Vegetable Horticulture, and Water Resources Engineering. Potential graduate students can explore all the available disciplines at SWFREC and seek enrollments. Our faculty members also serve on graduate committees of various students as a part of the teaching program at SWFREC.

Other Programs of Interest: None. The majority of their education effort focuses on professionals in the agriculture industry.

Topics: Water resources, watershed management, economics

Marketing and Communications:

- EDIS technical reports

Ten Thousand Islands and Panther National Wildlife Refuge

3860 Tollgate Blvd., Suite 300, Naples, FL 34114

http://www.fws.gov/refuge/florida_panther/

Contact: Jessica Sutt, Refuge Specialist, jessica_sutt@fws.gov, 239-657-8004

Affiliation: Federal government (U.S. Fish and Wildlife Service)

Funding and Size: Federal funding, Friends of the Panther Refuge

About/Mission: Land management activities such as prescribed burning, exotic species management, research and conservation.

- Ten Thousand Islands National Wildlife Refuge (NWR) is located in Collier County on the southwest coast of Florida. Established in 1996, this 35,000 acres refuge protects important mangrove habitats and a rich diversity of native wildlife, including several endangered species. The refuge is part of the largest expanses of mangrove forest in North America. Approximately two thirds of the refuge is mangrove forest, which dominates most tidal fringes and the numerous islands (or keys). The northern third of the refuge consists of brackish marsh and interspersed ponds, and small coastal hammocks of oak, cabbage palms, and tropical hardwoods such as gumbo limbo.
- Panther Refuge - Immediately prior to refuge establishment, the land was owned by the Collier family and was primarily used for private hunting leases and cattle grazing. A few home sites and hunting camps were located on the land. In 1989, the US Fish & Wildlife Service purchased the initial 24,300 acres from the Collier family for \$10.3 million dollars to become the Florida Panther National Wildlife Refuge, under the authority of the Endangered Species Act, to protect the Florida panther and its habitat. The refuge is located in the core of occupied panther territory, and protection of this important area was needed to ensure that not only panthers and their habitat were protected, but also important wildlife corridors that connected adjacent private and public lands. In 1996, the refuge was expanded to 26,400 acres with the addition of more Collier family land through the Arizona-Florida Land Exchange Act of 1988. Today, in addition to the 5-11 Florida panthers that den, hunt and roam the refuge each month, numerous other wildlife also call the refuge home, including black bears, bobcats, white-tailed deer, Big Cypress fox squirrels, alligators and wood storks.

Types of Educational Programs

K-College Programs and Related Information: None currently

- Lost staff in the fall of 2012 that used to offer programs and brought 3rd-6th out to the refuge and also went into schools for K-12th. Never offered college programs or teacher training.

Other Programs of Interest:

- USFWS has an online portal for educators at <http://www.fws.gov/letsgooutside/educators.html>
- Looking to get kids connected to wildlife? Try our free online web series, Conservation Connect, a web-based video series produced by the U.S. Fish and Wildlife Service's National Conservation Training Center (NCTC). Each six to eight minute episode connects youth with the great outdoors with the focus on 1) a unique wildlife species; 2) a conservation career; and 3) technology that conservation professionals use to study and protect wild animals. Conservation Connect targets children ages 9-13, although any age is encouraged to enjoy this sneak peek into the world of nature. Conservation Connect is available to youth groups, schools, homeschoolers, nature centers, and other education-based programs throughout the country. Free teachers' resources can be downloaded with each episode. Formal and non-formal educators are encouraged to watch the first in the series, Conservation Connect Overview. This introductory program demonstrates how the video series can supplement existing environmental education curriculum, citizen science projects, and STEM content (science, technology, engineering, and math). The overview highlights a segment featuring the American Bald Eagle, one of conservation's biggest success stories. https://www.youtube.com/playlist?list=PLZb5DyVcCk97WR6-aGyKUXzW4yS_nUQ2j
- Panther curriculum
http://www.floridapanthernethernet.org/index.php/lessons/#.VGI_uGt0wdU
- Junior Duck Stamp competition and curriculum
<http://www.fws.gov/juniorduck/EducationProgram.htm>
- **Interpretive tours** -In spring, the refuge hosts an open house, where areas that are normally closed from public access are open to a limited audience for buggy tours, swamp hikes, birding tours, and plant ID walks. Occasionally other tours may be offered during the winter depending on staff or volunteer availability. No tours currently posted.

Topics: Panthers, habitats, endangered species

University of Florida Master Naturalist Program

PO Box 110405 – Bldg. 803 McCarty Drive, Gainesville, FL 32611
<http://www.masternaturalist.ifas.ufl.edu/>

Contact: Kate Hellegren, Program Coordinator, khellegren@ufl.edu, 352-392-1837

Affiliation: State University, non-NOAA

Funding and Size: State funding, program fees, donations with four paid staff.

About/Mission: The mission of the Florida Master Naturalist Program (**FMNP**) is to promote awareness, understanding, and respect of Florida's natural world among Florida's citizens and visitors. The Florida Master Naturalist Program is an adult education UF/IFAS Extension program developed by the University of Florida and provided by many Extension offices and participating organizations throughout the state of Florida. FMNP training will benefit persons interested in learning more about Florida's environment or wishing to increase their knowledge for use in education programs as volunteers, employees, ecotourism guides, and others.

Types of Educational Programs

K-College Programs and Related Information:

- The program is taught by certified volunteer experts throughout the state to individuals and groups with three core modules (coastal systems, freshwater systems and upland systems) and four special topic courses. Florida Master Naturalist Program students increase their knowledge of Florida's natural systems, of the plants and animals that depend upon those systems, and of the role of humankind in shaping our past, of determining our future, and as stewards of the land. The objective of the Florida Master Naturalist Program is to prepare persons to share their knowledge with others, to act in a positive manner, to help others feel a greater connection to the land/sea and to help others to develop their own personal environmental ethics. Information on the ecology of Florida's systems is an integral part of the program, but we do not attempt to create experts in botany, herpetology, or any other discipline. Rather, we hope to initiate what is for many a life-long process of learning, of observation, and of sharing with others. Through classroom, field trip, and practical experience, this Module provides instruction on the general ecology, habitats, vegetation types, wildlife, and conservation issues of Coastal Systems in Florida - Coastal Uplands, Estuarine, and Nearshore Marine Environments. The program also addresses society's role in coastal areas, develops naturalist interpretation skills, and discusses environmental ethics. The total training consists of 40 contact hours, the scheduling of which will vary among different Instructors. The only requirements of students are enthusiasm, attendance, and

completion of group final projects. Classroom learning includes four instructional videos and 12 presentations.

- While not directly aimed at teachers or college students, the website highlighted a group of NSU students who became certified and
- A teacher scholarship which is available to certified Florida teachers who are currently employed by a public or private K-12 schools is offered twice per year. Scholarships awarded will cover the entire cost of one FMNP core module or special topics course. Scholarships will be awarded semi-annually on a first-come first serve basis in each of the 8 geographic regions recognized by the program. The number of scholarships awarded in each region each year will be dependent on funding.
 - Audubon of Southwest Florida, through the Charles Foster Conservation Fund, offers \$225 tuition scholarships for teachers and volunteer docents of environmental centers in southwest Florida to attend an FMNP Core Module class (Freshwater Wetlands, Coastal Systems or Upland Habitats). Each scholarship recipient is asked to complete a course-related special project which contributes to the mission of Audubon.
 - Florida Native Plant Society Conradina Chapter. We are pleased to offer an annual scholarship opportunity to Conradina Chapter members to attend a Florida Master Naturalist Program (FMNP) module. New memberships are welcome in order to apply. To qualify, you must be a Conradina chapter member and reside in Brevard County.
- Professional organizations have awarded CEU credit for FMNP classes. However, this determination is up to your organization to decide.

Other Programs of Interest: None

Topics: General ecology, habitats, vegetation types, wildlife, and conservation issues of Coastal Systems in Florida, Coastal Uplands, Estuarine, and Nearshore Marine Environments, society's role in coastal areas, interpretation skills, and environmental ethics.

Marketing and Communications:

- Listserve
- List of volunteer opportunities
- Newsletters by region

Wings of Hope

Florida Gulf Coast University, 10501 FGCU Blvd, South Fort Myers, FL 33965-6565
www.fgcu.edu/CAS/WingsofHope/index.html

Contact: Director Ricky Pires, rpipes@fgcu.edu, 239-777-1108 (cell)

Affiliation: University, non-NOAA

Funding and Size: Grants from local organizations and donations through the FGCU Foundation. Has 7 staff, but the Coordinator is the only full-time position, and there are five work-study students.

About/Mission: The “Wings of Hope” mission is “Building bridges of hope for wildlife, and the natural world with education, science, research, and awareness for college and elementary students and their families.” The program is an integral part of the FGCU Environmental Humanities curriculum and service learning requirement. University students are introduced to native Southwest Florida wildlife, their habitats, and water conservation. They bring this knowledge to students in 4th & 5th grade with science-based environmental education programs. Elementary school students are bussed to FGCU for the program - both public and private schools in Collier and Lee Counties. The “Wings of Hope” program focuses on bringing back a sense of place within our family, community, and the natural world. Working with small groups (one on one) promotes and enhances self-esteem and confidence in the student’s abilities, and assists them in better understanding and respecting our natural world. After the programs are completed, the college and young students continue their mission of environmental awareness by educating their families, friends, and the community with their knowledge.

Types of Educational Programs

K-College Programs and Related Information:

- The Florida Panther Posse is an environmental education project run through the “Wings of Hope” program at Florida Gulf Coast University (FGCU). College Students work one-on-one with Posse students during programs throughout the school year. These experiences build confidence in both college and elementary students, and help all participants to better understand our natural world. The FGCU "Wings of Hope" program busses over 4,000 **4th & 5th graders** from Lee County and Collier County to the FGCU Campus (classroom based), and to CREW throughout the course of the school year. They have never charged students.
 - Pass-it-along - Each elementary school and college student takes the information they learn and educates at least two other people about the panther and its habitat. Each year over 8,000 additional people are educated about important environmental issues in Southwest Florida.

- Pennies for panthers - Helping one cent at a time, this fundraiser purchases infrared motion cameras with pennies collected by Posse students. These images, like the one taken (right) of a Florida Panther, provide researchers with crucial data about panthers, their offspring and other wildlife. Part of the funds also goes to FWC Panther Team to help injured panthers, orphaned kittens and purchase research equipment.
- Popcorn for panthers - Students at participating elementary schools sell popcorn at the schools every Friday during lunch to raise money for the purchase of more infrared motion cameras. This fundraiser assists in the purchase of research equipment, helping injured panthers, and also orphaned kittens by the FWC Panther Team.
- Elementary school and college students continue on their Florida Panther Posse adventure and visit [CREW Land and Water Trust](#). This 60,000-acre watershed spanning Lee and Collier counties provides an excellent learning place for students to continue their awareness of the Florida Panther and its habitat. Discover over five miles of trails at CREW. FGCU college students guide the elementary students through the hiking trails winding through pine flatwoods, marsh vistas, mysterious oak hammocks and pristine popash communities. They learn how to use different scientific instruments and get a chance to be outside in nature.
 - The FGCU "Wings of Hope" Environmental Education Program connects with Collier & Lee County elementary school art teachers to help paint their favorite CREW species on a rock after their 4th & 5th grade students (Florida Panther Posse) hike at CREW. The Program Director, Ricky Pires then takes the rocks to CREW and places them in a designated area near the CREW Tower. The students are encouraged to venture back to CREW with their families to checkout their special rock and educate their families about panther research, wildlife, plants, and habitats they experienced during their CREW Hiking Adventure. The students are guided on the trail by FGCU "Wings of Hope" staff and Environmental Humanities students throughout the FGCU Spring semester.

Other Programs of Interest: None

Topics: Panthers, water conservation, stewardship, wildlife, plants, habitats

Marketing and Communications:

- Website

APPENDIX C: Implications and Recommendations for the Rookery Bay National Estuarine Research Reserve (RBNERR) Education Department

- RBNERR is the only state government affiliated agency in Collier County offering non-formal field-based EE programs. This may be worth highlighting.
- RBNERR is the only NOAA-affiliated program in Collier County offering EE to students. This may be worth highlighting.
- There are currently less EE providers in Collier County than there once were and RBNERR was one of the few EE programs that were expanding.
- RBNERR serves 3,000 students annually which is on the lower end of the scale in terms of total number of students served annually by other EE providers. However, this may not be relevant since different sites track these numbers differently.
- While staffing levels were unable to be analyzed, approaches used in other programs could inform RBNERR. For example, the use of seasonal employees or interns could help with staffing challenges. In addition, staff specialization may prove useful, such as when a single person handles all program registration, thus freeing other educators to focus on programming. These approaches may create efficiencies that could support new program development and expanded program evaluations.
- RBNERR could apply the fundraising models used by other providers such as fundraising for specific education department programs, or for buses, or under-funded groups.
- The distance that teachers will travel is a question that should be included in the follow-up NA research. RBNERR should consider annually tracking the location of participating schools through GIS mapping. This could be supported internally by the Reserve's GIS Specialist.
- Collier County Public Schools Science Department has organized local providers to offer a system of field trips available to all 2nd, 3rd, 4th, 5th, and 6th graders and also high school marine science students. If other factors are not prohibitive there may be a niche for programs that focus on middle or high school students or there may be an opportunity to expand RBNERR's existing niche for serving high school students.
- RBNERR may want to partner with the Conservancy of Southwest Florida and FGCU in their STEM Institute to offer the planned Teachers on the Estuary (TOTE) program since that is the only local site currently offering teacher training beyond what is required for the Field Trip Specialist Program.
- More information should be gathered during the NA about teacher training targeted at Collier County Public School teachers. The extensive list and type of perceived obstacles to participation in teacher training already identified by EE providers

implies future difficulty in gaining teacher participation in the proposed TOTE workshops.

- RBNERR is the only provider in Collier County focused exclusively on estuarine, coastal, or ocean topics and this is an area worth expanding upon both as a market niche and because of the significance of coastal resources in Collier County. This focus could become a stronger part of the marketing language used to promote and explain programs and may also persuade potential funders to provide support.
- RBNERR is one of only two actual providers that offer boat trips as part of their programs. This is an area worth expanding upon both as a market niche and because of the significance of coastal resources in Collier County. Again, this could be a marketing focus, both for teachers and funders.
- Although only half of the actual providers were using evaluations, many compiled an annual report or a donor report. Since RBNERR staff identified evaluation as an area in need of improvement, staff training may be a good approach for promoting this strategy which is important for funders, credibility, and capturing on-going research data. Producing an annual report would also support future marketing efforts.
- Most providers reported that they used their own website, the Collier County Public Schools website, and word of mouth as their primary marketing strategies, which is similar to the RBNERR approach. A clear theme was that teachers tend to be "repeat attenders." Understanding what is unique about these particular teachers would be helpful for future marketing efforts and should be included in the NA. Tracking repeat attendees, following up with those that do not repeat-attend, and recruiting repeat attenders from other programs are likely to be good strategies to maintain and increase the number of trips offered by RBNERR annually.
- Two providers thought that hosting Collier County Public School events or meetings was helpful in marketing their programs. RBNERR should also consider initiating this strategy since the RBNERR Environmental Learning Center is an appropriate facility for these types of meetings.
- There are 27 private schools in Collier County that may be underserved in terms of field-based EE programs. These could be a potential target market for RBNERR.
- Volunteers are commonly used in EE programs, but not universally used and there were some challenges reported that were associated with the use of volunteers. Since RBNERR relies on volunteers and experienced those challenges, it may be worth exploring other staffing models such as seasonal employees or interns.
- RBNERR expects teachers to assist in teaching or leading the field trip program for the fourth grade program, but some EE programs expounded on the importance of teaching teachers along with the kids. RBNERR could benefit from reviewing this approach and assessing whether it is working and if other approaches would be more effective or practical.

- Based on the quality and quantity of information provided to teachers and students in Collier County, RBNERR would benefit from reviewing their packets and updating their existing program-specific information to better communicate with teachers.
- In light of the reasons that providers cited for teachers to attend or not attend, and the various challenges identified, these obstacles should be examined for opportunities to support attendance and address challenges while also discouraging a lack of attendance.

