



**SOLICITATION, OFFER  
AND AWARD**

City of New Braunfels  
Purchasing  
424 S. Castell Avenue  
New Braunfels, Texas 78130

Solicitation No. 12-029 Non-Native Animal Control	<input type="checkbox"/> Invitation for Bid (IFB)	Date Issued:
	<input checked="" type="checkbox"/> Request for Proposal (RFP)	August 22, 2012

**SOLICITATION Page 1 of 25 Pages**

Proposers must submit sealed proposals in triplicate signed original and one CD for furnishing the services identified in the Schedule. Proposals will be received at the office of the City Secretary at the address shown above until: 10:00 a.m. on September 12, 2012. Proposals received after the time and date set for submission will be returned unopened.

For Information Call: Mary Quinones <small>(NO collect calls, Telegraphic, Email, On-Line or Fax offers accepted)</small>	Phone No.: (830) 221-4389 Email mquinones@nbtexas.org	Fax No.: (830) 608-2112
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5% Proposal Bond Required:	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	(If YES, See Para 4(d) of Terms and Conditions)
100% Performance Bond Required:	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	(If YES, See Para 4(d) of Terms and Conditions)

**OFFER (Must be fully completed by offeror)**

Offeror's State of Residence: TX (See Para. 6(f) of Terms and Conditions)

Pre-Proposal Conference on September 5, 2012 at 9:00 am. in Parks Admin Office. 100 Golf Course Rd. New Braunfels. TX 78130.

Prompt Payment Terms: \_\_\_% Discount if paid within \_\_\_ days.

In compliance with the above, the undersigned offers and agrees to furnish any or all items or services awarded at the prices stipulated for each item delivered At the designated point(s) and within the time specified herein. Award shall include all solicitation documents and attachments.

FOR INFORMATION, CONTACT THE PERSON ABOVE.

MANUALLY SIGN ALL COPIES SUBMITTED. SIGNATURE IS MANDATORY.

<input checked="" type="checkbox"/> Submit Signed Offers in Triplicate Original		Proposer E-Mail Address:	
Name SWCA Environmental Consultants And 6200 UTSA Blvd. Address Suite 102 of Offeror San Antonio, TX 78249	Name and Title of Person Authorized to Sign Offer (Type or Print): Gary L. Galbraith Principal	Signature: <i>Amy K. Sall</i>	Date: 9/11/2012
	Phone No.: 512-476-0891	Fax No.: 512-476-0893	

Name, Address and Telephone No. of Person authorized to conduct negotiations on behalf of Offeror. (Applies to Request for Proposal only)	Gary Galbraith 4407 Monterey Oaks Blvd., Suite 110 Austin, TX 78749 512-476-0891
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**AWARD (To be Completed by CITY)**

Contract # NB13-010	Awarded as to item(s): ALL	Contract Amount: \$90,173
Vendor Code #: 0005357		Delivery Date or Term of Contract: September 1, 2013

Remarks: This contract incorporates the RFP, attachments and contractor's response.

This contract issued pursuant to award made by City Council. Date: December 10, 2012 Agenda Item No.: 4C

<small>Important: Award may be made on this form or by other authorized official written notice.</small>		12-10-12
	Michael Morrison City Manager	DATE



ENVIRONMENTAL CONSULTANTS  
Sound Science. Creative Solutions.

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7255 Langtry, Suite 100  
Houston, TX 77040  
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www.swca.com

September 12, 2012

City of New Braunfels  
Attn: Ms. Mary Quinones  
424 S. Castell Avenue  
New Braunfels, TX 78130  
830-221-4389

**RE: Non-Native Animal Control  
Submittal of Proposal/Cost Estimate  
Invasive Species Monitoring and Maintenance Plan**

Dear Ms. Quinones:

Thank you for allowing SWCA Environmental Consultants (SWCA) the opportunity to submit this proposal and cost estimate to provide environmental consulting services to the City of New Braunfels (CONB).

Per your Request for Proposal (RFP) dated August 22, 2012, CONB requests a proposal for removal of four non-native species in Landa Lake-New Braunfels, Texas (project area). The CONB, in accordance with the Edwards Aquifer Recovery Implementation Program, is responsible for certain objectives outlined in the Edwards Aquifer Habitat Conservation Plan (HCP). The CONB is seeking qualified firms for the planning, implementation, and reporting of overall efficiency and success of those methods.

We are known in the industry for selecting study designs and techniques that are suited to the specific resource management objective or regulatory need of the client, while also taking into account time and budget constraints. This requires well-defined objectives and experienced project managers who are creative, efficient, and who can communicate effectively with city officials, designers, and regulators. The basis for SWCA's success consists of repeat business, national credibility, scientific excellence, and high-quality project management. SWCA's diverse staff has the knowledge and experience to implement and successfully complete all the objectives outlined within the RFP.



If you have any questions or require any additional information, please call (210-877-2847) or email ([cwesterman@swca.com](mailto:cwesterman@swca.com)). Thank you for the potential opportunity to assist with this project.

Sincerely,

A handwritten signature in black ink that reads "Christine Westerman". The signature is written in a cursive style and is located below the word "Sincerely,".

Christine Westerman  
Office Lead-San Antonio

## EXECUTIVE SUMMARY

According to the Request for Proposal dated August 22, 2012, the City of New Braunfels is seeking qualified firms to provide studies and environmental documentation in accordance with the Edwards Aquifer Habitat Conservation Plan (HCP) recommendations. The SWCA Team (SWCA) has the qualified staff and responsive attitude needed to provide environmental consulting support meeting the highest standards for these projects. The following proposal illustrates SWCA's desire, depth of experience, and expertise to provide these services with technical studies to support them.

SWCA is an employee-owned company of cultural and natural resource scientists and planners. Our professionals specialize in environmental and cultural resource permitting, compliance, and management. The company was founded in 1981 by Dr. Steven W. Carothers, and was incorporated in 1984 as SWCA, Inc. Headquartered in Phoenix, Arizona, SWCA has offices throughout the United States and its territories as well as the Pacific Islands. SWCA is an Engineering News-Record Top 200 Environmental Firm and has been consistently ranked among the top 20 firms in environmental science revenue. We have an established record of providing sound science and creative solutions for private and public sector clients nationwide.

SWCA began working in San Antonio over 20 years ago and was soon providing wetlands and endangered species services to several private and public clients. In January 2001, SWCA opened its San Antonio office to better serve our local clients. The San Antonio office has been particularly successful in assisting clients with local issues related to jurisdictional waters, endangered songbirds, karst invertebrates, cultural resource studies, and Edwards Aquifer Recharge Zone regulations. In Texas, SWCA also maintains offices in Austin, San Antonio, Houston, and Arlington. Currently our Texas offices support a combined staff of over 100 scientists including archaeologists, biologists, and geologists.

Our services are focused exclusively on environmental consulting. This translates into quick project response times, highly credible data and analysis, and reliable, cost-effective solutions. An overriding emphasis on the needs of our clients, developed over nearly three decades of successful project performance, is ingrained in SWCA's business philosophy and day-to-day practices—ensuring our clients the time and confidence to focus on what they do best.

SWCA has developed strong working relationships with federal, state, and local regulatory agencies, including the U.S. Army Corps of Engineers (USACE), Fort Worth District; the Texas Historical Commission (THC) and San Antonio Historic Preservation Office (HPO); the U.S. Fish and Wildlife Service (USFWS); and has performed projects for numerous state, county, and municipal agencies. We are known in the industry for selecting study designs and techniques that are suited to the specific resource management objective or regulatory need of the client, while also taking into account time and budget constraints. This requires well-defined objectives and experienced project managers who are creative, efficient, and who can communicate effectively

with project owners and designers. The basis for SWCA's success consists of repeat business, national credibility, scientific excellence, reasonable cost, and high-quality project management.

SWCA's technical staff includes individuals with diverse expertise in natural and cultural resource disciplines and environmental planning. Natural resource expertise includes such areas as the National Environmental Policy Act (NEPA), Clean Water Act (CWA), and Endangered Species Act (ESA), as well as aquatic and biological resources.

SWCA has key staff working within our Texas offices that have experience with endangered species, invasive species removal, and mammal trapping, which are detailed throughout the remainder of the proposal. Our first-hand knowledge of the project area, applicable endangered species regulations, and past experience removing non-native species will prove to be a beneficial combination for the City of New Braunfels.

SWCA's knowledge and experience in Landa Lake is further enhanced due to our sponsorship of the Central Florida Freshwater Turtle Research Group (CFFTRG). CFFTRG is a collaborative and volunteer oriented effort comprised of people from the Peninsula College, Freed-Hardemann University, Western Washington University, Florida Department of Environmental Protection (FDEP), Florida fish and Wildlife Conservation Commission (FWC), Wekiva River Wild and Scenic Committee, Busch Gardens, Turtle Survival Alliance (TSA), and Animal Kingdom. CFFTRG has been conducting freshwater turtle research in Florida springs since 1999. In that time, we have also helped the parks and the Florida Department of Environmental Protection (FDEP) remove exotic species and have maintained an exotics fish removal permit for the state of Florida for the past 10 years (state permit # FNE-2012-14). CFFTRG has conducted freshwater turtle research at Comal Springs since April 2012, with surveys also conducted in June and additional surveys scheduled for October 2012. CFFTRG is currently headed by SWCA's Eric Munscher, M.S. Other key SWCA personnel who have participated in CFFTRG sampling at Landa Park include Stephen Ross, Chris Collins, Marc Hess, and Christine Westerman.

## DEGREE OF COMPLIANCE

### *Task 1: Project Design*

Invasive species removal and subsequent monitoring will be conducted using the most cost effective and successful methods currently found in use and within literary sources. Exotic fish will be removed by the use of fyke net, Hawaiian sling, and/or hand capture. The giant ram's horn snail will be removed by hand as it is observed. Counts during sampling efforts of this species will be taken throughout the project length to determine if the population is decreasing naturally, stable, or increasing and consideration will be given to determine whether there is a need for further removal efforts. Nutria will be trapped and removed from the project site.

## *Task 2: Implementation of Methods*

Beginning October 5<sup>th</sup>-7<sup>th</sup>, the CFFTRG will start monitoring invasive fish by-catch as part of the previously planned turtle population study. The CFFTRG will identify areas of high invasive density and usage; as well as record exotic fish by-catch, as they conduct the turtle population survey. This information can be beneficial in forming the removal process in March 2013.

Once the program is approved by the City of New Braunfels, SWCA will implement removal methods for non-native species control the first week of March 2013. The removal efforts will be based on an 8-hour field day. Evaluation of removal efforts will be detailed in monthly reports and a final report by September 1, 2013.

***Suckermouth catfish (*Hypostomus plecostomus*) / Sailfin Armored Catfish (*Pterygoplichthys spp.*) removal methodology:*** As discussed above, the CFFTRG has been conducting freshwater turtle research in Florida springs since 1999, and have removed exotic fish species for Florida parks and FDEP, including the vermiculated sailfin catfish (*Pterygoplichthys disjunctivus*) and the blue tilapia (*Oreochromis aureus*). Using the parks approved removal methods (hand capture and Hawaiian slings for the catfish and Hawaiian sling and fyke net for the tilapia) (Nico et al. 2012) over the past 13 years, our group has demonstrated successful removal of these species, including over 2,000 sailfin catfish and several hundred blue tilapia. Since the removal efforts started in 1999 Blue Springs State Park employees, utilizing the same methodology have removed over 8,500 sailfin catfish (Nico et al. 2012; Megan Keserauskis Blue Springs Biology personal communication). Wekiwa Springs State Park has been known to remove over 700 catfish in a single day from its waterways by the use of Hawaiian sling.

We propose to snorkel early in the morning and late in the afternoon (high times of fish activity) and spear all non-native fish possible. Primary targets will be large breeding females. Weights to the nearest gram will be taken for each fish. A total biomass removed by sample will be computed. Total length will also be taken as a means to determine over time if removal of adults is having the desired effect (Nico et al. 2012). Capture per unit effort will be calculated per trapping session to try and quantify whether or not removal efforts are showing an impact.

We plan to conduct removal efforts two to three days every month for the duration of the study. We also propose to add voluntary fish removal efforts into the turtle study. Efforts will be made to set traps and spear fish while not capturing turtles. This extra effort would add four more two to three day sampling sessions to the fish removal efforts. It is our belief that with sustained removal pressure of this kind, we can significantly reduce the breeding population of all invasive species targeted. Thirteen years of consistent removal in Florida springs the past two years have

showed significant success. For instance, during our July, 2012 sampling session in Florida, where we would normally remove 70 to 100 catfish, we observed only one.

**Nutria (*Myocastor coypus*) removal methodology:** Nutria will be removed from the park by the use of Havahart live traps. Traps would be placed in areas of high nutria activity (evident by slides, scat, and other observations). This increases efficiency of target animal capture and reduces the likelihood of non-target animals entering the traps. Traps will be baited with sweet potatoes, carrots, corn, or other preferred foods and coated with zinc phosphate (the only toxicant that is registered for controlling nutria). Traps will be set in the evening during lower periods of park activity and checked early the following morning. Carcasses of killed nutria need to be dealt with immediately either by deep burial or by burning. Minimization measures will be implemented to avoid unnecessary public exposure to trapped or deceased animals.

**Tilapia (*Oreochromis aureus*) removal methodology:** Since we started our freshwater turtle research at Comal Springs this past April, the CFFTRG has observed hundreds of exotic fish. During this past June's sampling session, we deployed our first fyke net into Comal Springs to aid in catching turtles. The trap succeeded in catching approximately 20 turtles and 70 tilapia. These fish were eviscerated and removed from the park. We have three fyke nets at our disposal to use each time we sample at Landa Park. We believe with applied pressure from spear fishing and the use of fyke nets we could remove a large portion of the breeding population for each genus.

**Giant ramshorn snail (*Marisa cornuarietis*) removal methodology:** During removal efforts focused on other non-native species, SWCA will remove all giant ramshorn snails encountered in the project area. Due to their location in Landa Lake, precautionary measures will be utilized to ensure that all listed species will not be impacted during the removal of these snails. Snails will be captured by hand and disposed of off-site.

**Measures to avoid take of endangered species:** The methods that we have used for the past 13 years are extremely successful in removing target invasive species. Due to the nature (karst species) of most of the endangered species listed in Comal Springs and the removal methodologies described above, we believe it highly unlikely that we will negatively impact any of the listed species. The traps that we use have 2 ½ inch mesh which is easily large enough for the listed fountain darter (*Etheostoma fonticola*) to escape through. Snorkelers will be instructed to stay away from shallow, slackwater habitats that may have fountain darters present. The use of 7 to 9 foot long Hawaiian slings should have no negative effects on any listed species. It is SWCA's professional opinion that the methodology listed above may affect but is not likely to adversely affect any listed species in Landa Lake.

**Monitoring of invasive species:** The CFFTRG (SWCA-sponsored) plans to conduct the freshwater turtle population study at Comal Springs for a minimum of 10 years. The turtle research occurs one weekend seasonally and could double as a means to monitor exotic species presence. We currently encounter hundreds of exotic fish while we sample for turtles and remove them as bycatch from our traps. After removal efforts start, we will be able to ascertain by removal count each trip if our efforts are having the desired effect. If numbers do not decrease, further removal efforts can be recommended.

**Disposal of non-native species:** As per Texas Parks and Wildlife Departments policies all exotic fish once removed from the waterway will be eviscerated and removed off site. Nutria carcasses will be removed from site and either buried deeply or burned due to the presence of poison within the body cavity.

**Permitting:** SWCA will acquire all needed research permits for this project, including permits regarding the removal of non-native species from state waterways (through Texas Parks and Wildlife Department) as well as permits in regards to federally threatened and endangered species. SWCA currently has three Texas Parks and Wildlife Department Scientific Permits (SPR-1209-409, SPR-0911-319, and SPR-1010-160). Any of these permits can be amended to fit the projects needs (for example, accidental death of native fish species). While we do not anticipate any possible contact with any of the listed species besides the fountain darter, we will acquire all necessary permits that pertain to their "handling". SWCA currently has staff permitted to "handle" the fountain darter (Native Endangered & Threatened SP. Recovery - E & T Wildlife Permit # TE800611-2). We do not anticipate that the methods described above for the removal of the non-native species will have any negative impacts on any of the listed species in the area, however, incidental take can happen and all required permits and/or permit amendments will be obtained in accordance with U.S. Fish and Wildlife Service regulations.

### *Task 3: Final Reporting*

SWCA will submit monthly reports that will detail the work accomplished to date, remaining tasks, results and findings of removal efforts. Reports will be descriptive including sections on methodology, results, and interpretations of data, recommendations, and photographic logs. An initial report that will detail the proposed work plan will be submitted to the CONB by March 1, 2013. Monthly reports will follow until August 2013. A final report detailing the overall project, with data being collected from March 2013 to August 2013, will be submitted by September, 2013. This final report will detail the removal efforts and give baseline population statistics on exotic species populations, including to how many have been removed. This final report will also detail our suggestions in regards to monitoring these invasive species for future removal efforts.



A biomonitoring plan will be implemented at the beginning of 2014. This plan will include frequency and methodology to monitor all non-native animal species of concern. Since the CFFTRG (SWCA-sponsored) will be conducting a long-term (> 10 years) turtle population study at the site, we suggest that the research group can act as a monitoring program for the CONB and if the need arises, conduct exotic species removal as they continue with their turtle population research.

**COST**



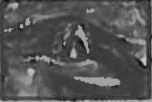





SWCA's cost estimate by task is provided in Table 1 below. SWCA will conduct authorized tasks described in this proposal on a fixed-fee at percent complete basis.

<b>Task</b>	<b>Description</b>	<b>Cost</b>
1	Project design report	\$28,788
2	Implementation of methods	\$42,464
3	Final report	\$18,921
<b>Total</b>		<b>\$90,173</b>

**DESCRIPTIVE LITERATURE**


Provided below is an example of a brochure that was created by the CFFTRG. The brochure highlights various aspects of the study, including removal of some of the same invasive species found in Landa Lake.

### Freshwater Turtles of Central Florida

	Florida Pinhead Cooter <i>Pseudemys peninsularis</i>
	Spiny-tailed Cooter <i>Pseudemys ornata</i>
	Florida Redbelly Cooter <i>Pseudemys rubra</i>
	Common Musk Turtle or Starling <i>Desmognathus alternatus</i>
	Loggerhead Musk Turtle <i>Desmognathus alternatus</i>
	Florida Spotted Turtle <i>Apalone spinifer</i>
	Florida Striped Turtle <i>Apalone spinifer</i>
	Florida Cooter Turtle <i>Deirochelys reticularis</i>


#### What Can You Do?

- **Report Suspicious Activities**  
Taking turtles from the Parks is illegal, and can threaten population health. Report any suspected activity to Park officials.
- **Conserve Natural Resources**  
Water is a precious resource, and a wetland. We must all do our part to conserve and preserve such resources so that they are available to the future.
- **Donate Time or Money**  
Parks rely on annual funding not only to expand their programs, but to continue those already in place. Research done by many groups is often paid for by the members involved. Even small donations of time or money add up!
- **Educate Yourself, Speak Out, & Get Creative!**  
Understanding the basics of good science can help you become a better informed citizen. Share what you know with others, and get together with friends and neighbors to find new ways to pitch in!




**Population & Range Study**

**Central Florida Freshwater Turtle Research Group**



**Wekiwa Springs State Park**  
**Rock Springs Run State Preserve**  
**Eneo Springs State Park**  
**De Leon Springs State Park**  
**Manatee Springs State Park**  
**Panama Springs State Park**  
**Panocock Springs State Park**

**Central Florida Freshwater Turtle Research Group**



**Executive Director & Photographer**  
Email: [centralflorida@swca.com](mailto:centralflorida@swca.com)

**Organization Email:**  
[CentralFloridaTurtleResearch@gmail.com](mailto:CentralFloridaTurtleResearch@gmail.com)

**Website:**  
[www.cfdt.com/turtle\\_research\\_group/index.html](http://www.cfdt.com/turtle_research_group/index.html)

**Facebook Group:**  
Central Florida Freshwater Turtle Study

### Who we are

The Central Florida Freshwater Turtle Study was begun in 1989 by Dr. John Battistoni (Florida Institute of Technology) and Dr. John Hays (Florida College) as a field research experience for their students. The original study was designed to monitor the population of aquatic turtles living in Wetlands Springs and Rock Springs Run.



Currently headed by John Murchio, MS (a former student of Dr. Hays now employed by SWCA Environmental Consultants), the research now includes turtle populations in Wetlands Springs, Rock Springs Run, Silver Springs, and De Leon Springs in the St. John's River basin and Mission Springs, Blending Springs, and Peacock Springs in the Suwannee River basin. A diverse group of professional scientists, educators, college students, and volunteers come from all over the country to monitor their turtles under the authority of state park employees.

### Why we care

Turtles are an integral part of the spring ecosystem, eating plants, insects, snails, and fish, as well as crustaceans. Turtles are the food for other animals in the food web, including catfish, birds, and fish. Because of their many roles, the presence of a healthy turtle population is critical to maintaining a healthy spring ecosystem. Turtles are often indicators used to measure the health of the springs we study by watching the turtle population for unusual changes.

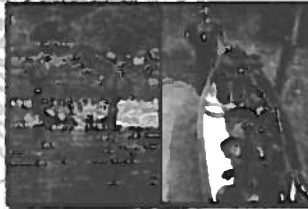


Turtles are long-lived, and because of this it is difficult to judge the health of a population by the presence of turtles alone. It is important to know both the number of individuals as well as the age composition of the population to determine whether the population is declining, increasing, or holding steady.

### What we do

The aim of these studies is to determine baseline for population health and stage of freshwater turtles in the areas of study, as well as to monitor the presence and spread of invasive species.

Researchers collect turtles by hand while wading through the spring area, while another researcher follows with a canoe to collect the turtles. At times, the canoe has been used to collect turtles with nets!

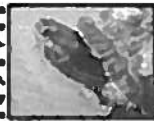


After they are collected, measurements are taken of each turtle. Turtles are marked so that they can be individually identified. After the data has been collected, the turtles are released back into the spring. The data helps determine the size, health, and age of a population.

In 2003, an additional study began in Wetlands Springs to determine the natural range of Labyrinthine Blind Turtles and Spinynecks along the run of the spring. For this study, the run is divided into 100 meter sections and the runs of turtles are recorded, so that the movements of the turtles from section to section and year to year can be analyzed.

### Invasive Species

An invasive species is a species that is not native to the area. These species can grow a number of ways to either animals, plants, or humans. They can compete with native species for food or shelter, spread parasites or diseases, or prey on native species. They can also make changes to the habitat in ways that are destructive.



Sometimes when you remove an animal or something to put in their pen, they release them outside, which is illegal. Many invasive species are introduced in this way. If you are unable to care for a pet, it is best to find a new home or bring it to a shelter that is open to the wild.



Our research group has agreed to remove invasive species that are caught in the course of our research. In this way, we hope to help slow the spread of these destructive, pesky species.

Springs in Central Florida have specific problem species, just a few of which include:

- Red Eared Slider (*Trachemys scripta elegans*)
- Common Golden Catfish (*Pseudogyrinocheilus aoirocheilus*)
- Blue Tilapia (*Oreochromis mossambicus*)
- Cuban Tree Frog (*Dendrobates aurifer*)
- Brown Anole (*Anolis sagrei*)
- Hyacinth (*Eichhornia crassipes*)



**CONTRACTOR BACKGROUND INFORMATION**

*Previous Work Experience*

**Wekiwa Springs State Park, Exotic Fish Species Removal**

Start Date	Field Dates	Completion Date
March 1999	1999-2012	On-going

Over the course of 1999–2012, The Central Florida Freshwater Turtle Research Group (CFFTRG), which

SWCA Environmental Consultants, sponsors has provided a long-term freshwater turtle population study at seven state parks in Florida. During the time that the turtle population study has been conducted, the research group has also conducted exotic species removal concerning numerous species of fish including the vermiculated sailfin catfish (*Pterygoplichthys disjunctivus*), blue tilapia (*Oreochromis aureus*), Asian grass carp (*Ctenopharyngodon idella*), brown hoplo catfish (*Hoplosternum thoracatum*), and the pacu (*Piaractus brachypomus*). Through the past 13 years we have removed approximately 2,000 fish from Wekiwa Springs State Park. Exotic fish removed are all eviscerated and buried on site at the state park. This work is conducted under the Florida Fish and Wildlife permit # FNE-2012-14.

Contacts: Amy Conyers (Assistant Park Manager) 407-884-2008  
Graham Williams (District 3 Biologist) 407-474-2926  
1800 Wekiwa Circle Apopka, Florida 32712. 407-884-2008

**Blue Springs State Park, Exotic Fish Removal**

In 2007, the CFFTRG started a similar freshwater turtle population survey at Blue Spring State Park. Along with the turtle work, we also assisted the park in their

Start Date	Field Dates	Completion Date
October 2007	October 2007 July 2012	Ongoing

exotic fish removal project. Since the onset of their removal project in 2002, Blue Spring State Park employees in collaboration with Stetson University and the CFFTRG have removed approximately 8,500 vermiculated sailfin catfish. The CFFTRG has also removed several hundred tilapia over the past 6 years by the use of a modified steel tipped gig. Exotic fish removed are donated to Stetson University for research in growth, development, and reproduction. This work is conducted under the Florida Fish and Wildlife permit # FNE-2012-14.

Contact: Megan Keseraukis (Park Biologist) 386-775-3663  
2100 W. French Ave. Orange City, Florida 32763

**Big Talbot Island State Park. Diamondback Terrapin Predator Removal Study**

Start Date	Field Dates	Completion Date
February 2005	February 2005 to November 2005	November 1, 2005

Eric C. Munscher, currently ecologist for SWCA's Houston office and Director of the CFFTRG, performed a nest monitoring and predator removal study on

a nesting beach of Carolina diamondback terrapins in 2005. He removed 29 raccoons from February to November. Raccoons were trapped daily from 7 February until 25 April 2005, and after that time until 22 September 2005 only when raccoon activity was detected. Raccoon presence and movements was monitored on a daily basis at 14 track stations located primarily in the wooded areas, and elsewhere on the beach where we observed tracks. Traps were set at areas with high raccoon activity such as on raccoon trails, adjacent to trails under shrubs (usually wax myrtle, *Morella cerifera*); at the base of Southern red cedar (*Juniper silicicola*), or near communal scat logs. We used a combination of nine single-door Tomahawk # 108 and Havahart # 1079 live-traps (both 81.3 cm × 30.5 cm × 25.4 cm; Tomahawk Live Trap Co., Tomahawk, Wisconsin, USA and Woodstream Havahart Co., Steamboat Rock, Iowa, USA). We sedated captured raccoons on site with an intramuscular injection of ketamine hydrochloride (10 mg/kg) while raccoons were still in the trap, and then euthanized them with Euthasol (1 ml/4.5 kg; Bigler and Hoff 1974; Seal and Kreeger 1987). Dead raccoons that we removed from the island were used in diet, age, and parasite studies (Munscher 2007).

Contact: Dr. Joseph Butler (Professor) 904-620-2831  
1 UNF Dr. Jacksonville, FL 32224

**Landa Park Drive Bridge Replacement Biological Assessment, Comal County, Texas**

Start Date	Field Dates	Completion Date
2003	June 2003	2005

SWCA prepared a Biological Assessment (BA) to evaluate the potential impacts of a proposed bridge replacement project in

Landa Park, Comal County, Texas, on federally listed endangered aquatic species. For the BA, SWCA conducted a habitat assessment for the fountain darter (*Etheostoma fonticola*) of the bridge replacement area. The BA determined that the project may affect, but was not likely to adversely affect, the endangered fountain darter, a fish species endemic to Comal and San Marcos Springs, and provided mitigation measures to minimize negative impacts to the fountain darter. Based on this evaluation, the U.S. Fish and Wildlife Service issued a biological opinion allowing the bridge replacement project to proceed.

Contact: Mary Kelly (Project Manager AECOM, Inc.) 210-296-2000  
6800 Park Ten Blvd. Suite 180 San Antonio, TX

**Comprehensive Endangered Species Services – La Cantera Development Company**

Start Date	Field Dates	Completion Date	
October 2001	October 2001-to present	On-going	SWCA has conducted full service monitoring and management of endangered species preserves and conservation easements for the La Cantera Development Company since 2001. SWCA scientists helped identify potential conservation areas by performing karst invertebrate habitat surveys, biota collections and hydrogeologic evaluations, resulting in protection of 10 caves as mitigation for a Section 10(a) incidental take permit for the construction of the Shops at La Cantera retail development. SWCA designed and implemented karst maintenance and monitoring plans (KMMPs) for preserves incorporating surface and subsurface drainage considerations, fencing, and troglodone foraging area delineations. SWCA is also performing ongoing monitoring including environmental conditions in the caves, cave biota collections, exotic invasive species control, vegetation community characterizations, and mammal populations. An annual report of monitoring and maintenance activities is submitted to the United States Fish and Wildlife Service.

Contact: Roger Garcia (Developer) 210-498-4483  
9380 Colonnade Blvd. Suite 600 San Antonio, TX 78230

**Comprehensive Endangered Species Services – Indian Springs Conservation Area**

Start Date	Field Dates	Completion Date	
January 2005	January 2005-to present	On-going	SWCA performs monitoring and management activities for the 332-acre Indian Springs Conservation Area, northern Bexar County. The Conservation Area was developed for the protection of the endangered golden-cheeked warbler ( <i>Setophaga chrysoparia</i> ). Responsibilities include warbler presence-absence surveys, preserve inspections, wildlife game species management, invasive and exotic species surveys and removal, and vegetation community studies. SWCA designed an educational brochure that was handed out to a nearby residential area. The brochure focuses on the natural history of the golden-cheeked warbler and the importance of the Conservation Area to the species. An annual report of monitoring and maintenance activities is submitted to the United States Fish and Wildlife Service.

Contact: Gene Powell (Developer) 210-828-6131  
11 Lynn Batts Ln. Suite 100 San Antonio, TX 78218

**Comprehensive Endangered Species Services – Cibolo Canyon Conservation Area**

Start Date	Field Dates	Completion Date	
April 2006	April 2006- December 2011	December 2011	SWCA performed monitoring and management activities for the 760-acre Cibolo Canyon Conservation Area, northern Bexar County. The

Conservation Area was developed for the protection of the endangered golden-cheeked warbler (*Setophaga chrysoparia*). Responsibilities include warbler presence-absence surveys, preserve inspections, wildlife game species management, invasive and exotic species surveys and removal, and vegetation community studies. SWCA designed an educational brochure that was handed out to a nearby residential area. The brochure focuses on the natural history of the golden-cheeked warbler and the importance of the Conservation Area to the species. An annual report of monitoring and maintenance activities is submitted to the United States Fish and Wildlife Service.

Contact: Barrett Allison (Developer) 512-394-9710  
7200 Twilight Mesa Austin, TX 78737

*Financial Stability*

As a private company SWCA does not disclose its confidential financial information. However, we recognize that some clients may prefer to see evidence of SWCA's financial condition. We therefore offer the following information which we hope helps illustrate the strength of our company:

1. SWCA has remained financially stable since being founded in 1981, and has steadily grown revenues in all but one year (2009).
2. The company's Compound Annual Growth Rate (CAGR) for 2006-2010 was 7.2%; and our Net Revenues grew by 8.8% year-over-year from 2010 to 2011.
3. Our banking relationship with First American Bank is outstanding, and we have maintained this relationship since 1998 when we became an Employee Stock Ownership Program (ESOP) company. We maintain deposit balances in excess of \$5M and have a \$6M line of credit that has no outstanding balance. Our line of credit is, therefore, fully available to use on any project or task that may arise under this contract if the need should arise. Our banking representative is James Walrack and he can be reached at 847-586-2285.

*Pricing/Payment*

The project is anticipated to be a fixed fee contract, billed at percent completes on a monthly basis. Pricing is based on SWCA standard staffing rates. It is understood that the City of New Braunfels is tax exempt. SWCA would be pleased to negotiate a retainer of final payment based upon satisfactory delivery and acceptance of deliverables by the City of New Braunfels.

*Organization Chart*





If you have any questions or require any additional information, please call (713-934-9900) or email (emunscher@swca.com). Thank you for the opportunity to assist with this project.

Sincerely,



**SWCA Environmental Consultants**  
Eric C. Munscher, M.S., ESIII (Scientist)  
Ecologist / Herpetologist  
Principal Investigator of the CFFTRG  
Houston Natural Resources

cc: Brian Fairchild, SWCA (Houston)  
Gary Galbraith, SWCA (Austin)

Attachments: Permits  
Resumes  
Appendix A  
SWCA Rate Schedule