City of New Braunfels

SOLICITATION, OFFER AND AWARD

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

Solicitation No. 12-030 **Decaying Vegetation Removal**	☐ Invitation for Bid (IFB) ☒ Request for Proposal (RFP)		Date Issued: September 7, 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 24, 2012
Proposals received after the time and date set for submission will be returned unopened.

For Information Call: Mary Quinones (NO collect calls, Telegraphic, Email, On-Line or Fax offers accepted)	Phone No.: (830) 221-4389 Email mquinones@nbtexas.org	Fax No.: (830) 608-2112

5% Proposal Bond Required:	☐ YES	☒ NO	(If YES, See Para 4(d) of Terms and Conditions)
100% Performance Bond Required:	☐ YES	☒ NO	(If YES, See Para 4(d) of Terms and Conditions)

OFFER (Must be fully completed by offeror)

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

Pre-Proposal Conference on September 18, 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.

Submit Signed Offers in Triplicate Original		**Proposer E-Mail Address:** bfairchild@swca.com	
Name And Address of Offeror: SWCA Environmental Consultants 7255 Langtry, Suite 1000 Houston, Texas 77040		Name and Title of Person Authorized to Sign Offer (Type or Print): Brian Fairchild, Principal	
Signature: [signature]	Date: 9/21/12	Phone No.: 713.934.9900	Fax No.: 713.934.9906

Name, Address and Telephone No. of Person authorized to conduct negotiations on behalf of Offeror. (Applies to Request for Proposal only)	Brian Fairchild, Principal 7255 Langtry, Suite 1000, Houston, Texas 77040 713.934.9900

AWARD (To be Completed by CITY)

Contract # NB13-006	Awarded as to item(s): All Items	Contract Amount: *See Below
Vendor Code #: 0005357		Delivery Date or Term of Contract: December 31, 2013

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

*Contract price is $174,400 Plus on-call deployment of aerators at a not to exceed price of $4,000 per day.

This contract issued pursuant to award made by City Council. Date: November 12, 2012 Agenda Item No.: 4H

Important: Award may be made on this form or by other authorized official written notice.

[signature]
Michael Morrison
City Manager

12-8-12
DATE

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Houston Office
7255 Langtry, Suite 100
Houston, Texas 77040
Tel 713.934.9900 Fax 713.934.9906
www.swca.com

September 24, 2012

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

RE: Proposal in Response to Solicitation Number 12-030, Decaying Vegetation Removal

Dear Evaluation Committee Members:

SWCA Environmental Consultants (SWCA) is pleased to submit its proposal to assist the City of New Braunfels in maintaining acceptable dissolved oxygen (DO) levels through aeration and management of decaying vegetation.

For over three decades, SWCA has provided comprehensive environmental planning, regulatory compliance, and natural and cultural resource management services to businesses and government clients across the United States. We are an employee-owned firm of scientists, planners, and technical specialists. We combine scientific expertise with sound technical skills to provide solutions to a full spectrum of environmental projects.

We work to understand the full life cycle of your project, from its early inception to completion. In the face of rapid environmental, economic, and societal changes, SWCA provides a comprehensive approach to the challenges you face. We offer a focused suite of environmental consulting services combined with regional knowledge, professionalism, customer-orientation, and high-quality service. We're proud of the accomplishments of our staff, but our knowledge, skills, and achievements would mean little if we couldn't build long-term, trusting relationships with our clients. With a high percentage of our work stemming from referrals and repeat business, it's clear that clients are confident in our ability to guide their projects to successful completion.

SWCA has more than 20 locations, including offices in Austin, San Antonio, Houston, and Dallas. With such a large number of geographically diverse offices, we're able to rapidly pool resources in order to serve our clients.

SWCA understands the importance of this work and we are excited for the opportunity to work with the City. If you have questions regarding the content of the proposal, please feel free to contact me. I can be reached at (713) 934-9900 or bfairchild@swca.com. Thank you for considering SWCA for this important work.

Sincerely,

for Brian Fairchild
Principal

CONTENTS

1.0 EXECUTIVE SUMMARY

In accordance with RFP#12-030, SWCA Environmental Consultants (SWCA) proposes to the City of New Braunfels (City) a series of practicable measures for monitoring and maintenance of dissolved oxygen (DO) in the Comal River with the intent to support the ongoing viability of endangered species. In this proposal, SWCA will provide all instrumentation required to monitor DO, temperature, pH, conductivity, and turbidity on a continual basis using telemetry systems familiar to the City as well as install aeration systems with the intent to elevate depressed benthic DO. In the event that aeration is ineffective, SWCA will perform decaying vegetation removal work to decrease the oxygen demand in the water column. SWCA will take all precautions necessary to minimize or avoid incidental take of the endangered species endemic to the river and springs.

SWCA has the qualified staff and responsive attitude needed to provide environmental consulting support that meets the high standards required for this project. The following proposal illustrates SWCA's desire, depth of experience, and expertise to provide these services along with examples of technical work that documents our record of performance.

Our services are focused exclusively on environmental consulting. This translates into quick project response times, highly accurate data and analysis, and reliable, cost-effective solutions. An overriding emphasis on the needs of our clients, developed over 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), San Antonio Historic Preservation Office (HPO), and 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 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.

2.0 DEGREE OF COMPLIANCE

Based on SWCA's understanding of the RFP, this proposal is in full compliance with the provided specifications, without exceptions. Optional services have been included with associated costs as

separate line items which should not be included in the bid for services required by the RFP A detailed description of the scope of work is provided below.

2.1 BACKGROUND

The Comal River is part of the Middle Guadalupe River watershed, which is classified by the U.S. Geological Survey as Hydrologic Unit #12100202. A variety of endangered species are endemic to the watershed. The Comal River in particular is home to at least five federally listed endangered species, namely fountain darter (*Etheostoma fonticola*), Texas blind salamander (*Typhlomolge rathbuni*), Comal Springs riffle beetle (*Heterelmis comalensis*), Peck's Cave amphipod (*Stygobromus pecki*), and Comal Springs dryopid (*Stygoparnus comalensis*). An additional species of concern is the Comal Springs population of Texas salamander (*Euycea neotenes*), which represents a distinct genetic history from other conspecifics.

These species are dependent on springs that discharge from the Edwards Aquifer and the continued high water quality of the river for their survival. Spring-fed streams in arid regions, such as the Texas Hill Country, naturally vary in discharge quantity based on rainfall, aquifer recharge, and other abiotic factors. Discharge quantity influences flow rates which, in turn, affects water chemistry and habitat suitability for species in these systems. The isolation of these communities causes the populations to diverge from one another but also reduces their genetic plasticity. As such, changes in flow regimes, water chemistry, and introduction of exotic species further endanger these already vulnerable species.

One of the more pressing concerns for the biota of the Comal River is the dissolved oxygen content of the water column. Periods of high die-off by algae and aquatic vegetation as well as inputs of allochthonous (originating outside of the system) organic material may cause depressed dissolved oxygen levels, especially during high temperature periods. The City has requested proposals with the intent to maintain acceptable dissolved oxygen levels in Landa Lake to reduce stress and mortality of fountain darters and other at risk species. This proposal addresses the specifications of RFP 12-030 including dissolved oxygen monitoring, installation and system checking of aeration systems, and the removal dead vegetation mats. Additionally, SWCA proposes optional measures that may be of value to the City.

2.2 PROPOSED TASKS

2.2.1 Task 1 – Work Plan Development

SWCA will work with the City and its designees to develop a work plan for the mitigation of oxygen in the Comal River. This will involve meeting with City employees to discuss project goals, reviewing literature pertinent to the project, a preliminary site assessment, and documenting the plan for installing and operating water monitoring stations and aerators.

2.2.2 Task 2 – Water Quality Monitoring

SWCA will establish a water quality monitoring station for measuring DO, temperature, pH, conductivity, and turbidity on a continual basis that includes a Eureka Environmental Engineering's Manta 2 multiparameter sonde transmitting data to remote stations using an Eagle Eye telemetry system. Remote work stations will be able to access these data using a secure internet connection. The telemetry system will provide user-defined graphs of the data and alerts in the events that defined triggering events are met.

After installing, we will test the monitoring station, perform any necessary calibrations, and deploy the sonde for continual monitoring. Before sampling is initiated, the precise location of the monitoring and

telemetry stations will be identified using a Trimble ProXH (or equivalent) global positioning system (GPS). The location of the monitoring station and telemetry unit will be provided to the City.

Although diel water chemistry patterns are often measured just beneath the surface or at mid-depth of the water column, we propose the sonde be deployed such that the probes are positioned just above the stream bed. This will provide data indicative of the benthic water chemistry that is pertinent to the species of concern and provides the added benefit of reducing the structures on which floating vegetation mats may potentially collect.

SWCA will establish diel baseline DO patterns using at least two weeks of data collected during April and May, 2013 to coincide with increased temperatures and limited vegetation conditions. It is expected that DO will demonstrate a generally inverse relationship with water temperature that will fluctuate based on photosynthesis and respiration, resulting in depressed measurements at dawn and peak concentrations near midday. We will use the baseline patterns to detect deviations and trends toward low DO (≤4.0mg/L). City employees will monitor DO, temperature, pH, conductivity, and turbidity for deviations from standard conditions. Should a deviation be detected, the City will contact SWCA to initiate aeration and vegetation control measures to mitigate for unfavorably high respiration to photosynthesis ratios (see Tasks 2 and 3). Low DO events may trigger grab sample testing of ammonia and hydrogen sulfide.

SWCA will provide monthly recalibration of the probes to ensure the continued accuracy of the measured parameters. Calibration will be performed on-site using certified standards following the manufacturer's recommendations. Calibration and probe replacement records will be maintained for the duration of the project and will be provided to the City at their request.

2.2.3 Task 3 – Aerator Installation and Deployment

SWCA will install all necessary infrastructure and test the operational capacities of two solar powered aeration systems (Keeton Industries Solaer® Model SB-4B, or equivalent) as specified by the manufacturer. Placement of each of the compressors and control systems will be at the discretion of the City. Our team will attach the compressors to submerged, moveable diffusers through a manifold that will be placed near the stream bank with the assumption that the City will provide sufficient trenches for connecting the compressor to the manifold. Air lines connecting the manifold to the diffusers will be submerged, self-weighted tubing that will be unobtrusive. The two aeration systems will be sufficient to aerate up to 10 acres of the riverbed, based on configuration and flow regime.

After installing the aerators, SWCA will verify that the system is fully functional and performing within specification by performing a test deployment. This will be done in conjunction with deploying the water monitoring station and will consist of a two week study. Prior to the two-week baseline study of water chemistry, we will activate the aerators and measure DO under typical aeration regimes. After correcting for climatological conditions, these data will be compared to subsequently tested water quality parameters to determine the effects of the aerators. After the pilot study is completed, our team will retrieve the diffusers and air lines for storage in a secured facility provided by the City.

If monitoring activities detect DO concentrations trending toward ≤4.0mg/L, SWCA will deploy the diffusers and air lines as necessary to elevate oxygen levels to an acceptable level as indicated by the monitoring station. This will include deploying the diffusers in a geometric pattern that optimizes benthic DO measurements. Additional air lines will be purchased to allow the aerators to be moved to positions that provide optimum benefit to the endangered species. When needed, aerators will preferentially be used during late night and early morning hours, when dissolved oxygen tends to be lowest. However, if

DO remains depressed, aerators may be used intermittently during daylight hours until the trend is reversed.

During deployment of the aerators, SWCA will minimize impacts to endangered species. When placing aerators and air lines, snorkelers and/or scuba divers will fan nearby vegetation to temporarily displace any resident endangered species. Care will be taken to avoid unnecessarily disturbing the substrate of the river. To avoid the incidental take of endangered species, no substrate will be disturbed within 150 meters of the spring outfalls. If submerged rocks outside of this area must be moved, team members will inspect each rock to ensure that none of the target species are harmed. If large-scale operations are necessary to place the aerators, sweep net or seining efforts will be used to remove target species from the area. Any vegetation removed by these efforts will be examined and target species will be returned to the areas from which they were removed. If necessary, aerator lines will be secured to the substrate using cobblestones within the riverbed.

2.2.4 Task 4 – Vegetation and Litter Removal

During the summer (May through September 2013), City staff will make at least monthly observations throughout Landa Park to identify areas of accumulating dead vegetative matter and litter. At the direction of the City, SWCA will deploy a work crew to remove floating mats of decaying vegetation.

Because of the sensitivity of the Comal River ecosystem, SWCA has chosen to employ potentially more labor-intensive manual management schemes to reduce vegetation buildup. Chemical treatments (e.g. copper sulfate, Sonar), biological controls (e.g. triploid grass carp), and benthic vacuuming may be effective and efficient but will not provide specific treatment for the vegetation mats, may cause disproportionate harm to native vegetation, and may put the endangered vertebrates at unnecessary risk.

Therefore, floating vegetation control efforts will be performed in two stages. In the initial phase, a floating rake will be dragged across the areas of concern to remove any surface material and floating debris. The raked material will be examined for the presence of species of concern before being disposed of properly. SWCA will separate natural organic matter from litter prior to disposal according to the City's direction. After the surface materials are cleared and removed from the work area, the second stage will include using manual trimming devices to clip floating vegetation just below the water surface, which will allow floating debris to move downstream freely and promote growth. In both stages, the team will work from downstream to upstream to ensure that trimmed materials do not accumulate as large flotillas that further exacerbate oxygen demand. After completing each day's vegetation removals, the crew will ensure that no significant vegetation has accumulated in slack-water areas in the river.

If removal of floating mats of vegetation and aeration prove inadequate to maintain DO levels greater than 4.0mg/L, SWCA will remove dead submerged vegetation from locations identified by City staff. To avoid the incidental take of fountain darters and other endangered species, our work crew will remove dead or dying rooted vegetation by manually uprooting them, while being careful to not impact the root systems of nearby plants. During vegetation removal events, we will preferentially target exotic and invasive plant species for removal. Removed vegetation will be bagged before being brought to the surface and will be disposed of at the City's direction.

When removing floating or submerged decaying vegetation, SWCA will take all practicable measures to ensure that the species of concern and their habitats are protected. Floating mats will be swept to startle any fishes prior to commencing work. Likewise, prior to removal of rooted vegetation, workers will sweep the vegetation. All removed vegetation will be examined to ensure that no native species are included as

by-catch. Any native species will be extricated from the vegetation and returned to appropriate habitat within the river.

2.2.5 Task 5 – Monitoring and Reporting

SWCA will provide monthly summaries to provide the City with estimates of project success. These reports will detail the status of the overall project, estimated percent completion of the various tasks, and will indicate any areas of concern. These reports will be addressed to the Watershed Manager.

2.3 Site-Specific Considerations

Prior to performing any work on the project, SWCA will perform a site assessment using information provided by the City and remotely sensed data to inform the work team of past and existing conditions, which will help to indicate management goals. This assessment will be performed with input from the City and its designees to ensure that all project plans are in line with the goal of the project. In the event that there are disputes in the project plan, we will work to resolve these in a manner than maintains the integrity of the project.

SWCA is sensitive to the site's use as a municipal park. Therefore, we will take all practicable steps to avoid working between the hours of 11:00 a.m. and 6:00 p.m. on work days (Monday through Thursday) between Memorial Day and Labor Day. Outside of the peak season, we assume a typical work week but will avoid working on municipal holidays whenever possible. We understand that these stipulations may directly impinge on typical work schedules and has incorporated this assumption in the quoted bid prices.

SWCA will work with the City and its designees to maintain the aesthetics of the park and will, therefore, work with the City on all installations to minimize visual and functional alterations.

SWCA proposes using the municipal golf course as the primary staging area for the field work. This provides a centralized, secured public access location that can be made available on a flexible schedule. If additional staging sites are deemed necessary, these will be coordinated with the City and, if necessary, private landowners.

Although no take of endangered species is anticipated, SWCA will ensure that all team members carry valid state and federal collection permits and will record and report any take that occurs. We will work in conjunction with U.S. Fish and Wildlife Service and Texas Parks and Wildlife to keep them abreast of all operations and reduce impacts on the native community of the Comal River system.

SWCA will obtain any construction permits that are necessary for the project.

To avoid the unintentional introduction of exotic species, all equipment used for this project will be used only within the Comal River or will be sterilized thoroughly prior to use for this project.

2.4 Safety Considerations

The primary goal of our Environmental Health and Safety (EHS) Program is to promote working conditions and work practices that will ensure all employees a safe and healthful work environment. SWCA's EHS Program was significantly revised in the second quarter of 2008 in recognition of the importance of lowering health and safety risks for our employees and demonstrating our commitment to safety and the success of our clients' businesses. The success of our program is reflected in a significant reduction in our National Council on Compensation Insurance's E-Mod rating (EMR) from 1.17 to 1.00 (effective July 26, 2012) and can be verified by our current client base.

Safety is a responsibility that all SWCA employees take seriously and, as such, we have developed a safety program that is designed to prevent safety incidents. It is also designed to ensure a positive outcome in the event that a safety incident occurs. Our field employees have completed targeted safety courses in first aid, CPR, material safety data sheet use, proper lifting, fire extinguishers, general field safety, defensive driving, and snake bite prevention. Our field crews review and sign off daily on a site-specific job hazard analysis, which identifies potential hazards associated with the project and identifies controls to mitigate these hazards to an acceptable risk level. Crews also participate in daily car-side safety chats.

SWCA will take all practical steps to prevent injury on this project. All work crews will consist of at least two employees at all times. When needed, diver and/or snorkelers will work in tandem with at least one additional crew member on the shoreline. Any divers working on the project will be scuba certified. Employees will take all necessary precautions to protect themselves from any biohazards that may be present in floating and submerged vegetation. Workers will not use private property without the written consent of landowners.

2.5 Optional Services

2.5.1 Installation of Additional Monitoring Stations

The RFP specifies the installation of a single water monitoring station. Although this may suffice to determine the efficacy of the aeration system immediately upstream of the probe, it may not provide the data necessary to measure improvement over upstream conditions or the extent to which downstream water quality is influenced. Therefore, SWCA would work with the City to determine additional monitoring station locations and install these to provide additional water quality data to aid in making watershed management decisions.

2.5.2 Total Nitrogen and Phosphorus Testing

Although DO and the other water quality parameters included in the RFP are certainly the most critical information for managing aquatic vertebrates, the die-off of excess vegetation is likely caused by excessive nutrient loads in the system. Although these may be addressed through a best management practice (BMP) approach, it is first necessary to determine which nutrients are excessive and where the sources of these nutrients. Therefore, SWCA proposes systematic and storm water response grab sampling efforts for the analysis of nitrogen (nitrite, nitrate, ammonia, and ammonium) and phosphorus (orthophosphate and total phosphorus) compounds. These data will help to identify sources of nutrient inputs which can then guide vegetation management and nutrient management.

2.5.3 Removal of Nuisance Lotic Vegetation and Algae

Native vegetation would benefit from the removal of exotic lotic vegetation and filamentous algae from the Comal River. SWCA proposes working with the City to remove significant portions of the exotic plants as part of the decaying vegetation work. This management technique could be performed in concert with removal of dead rooted vegetation and would increase stream velocity, improve clarity, and decrease competition for native vegetation. Removing filamentous algae will have similar benefits to the stream and will also reduce food sources for non-native snail populations.

2.5.4 Shoreline Restoration

The riparian buffer vegetation along the eastern bank of the Comal River has been highly reduced, especially in the areas adjacent to Pecan Island and the golf course. Restoration of this vegetation will provide management benefits to the stream by decreasing potential nutrient and contaminant runoff.

Additionally, reducing impingent light will decrease water temperatures, increase competition for sunlight, and reduce potential photosynthetic output, which will decrease the total available organic carbon in the system. SWCA proposes to work with the City to plan vegetation restoration in this area that would meet these goals with the intent to reduce the need for future vegetation removal events.

2.5.5 Water Chemistry Trend Analysis

SWCA proposes to perform trend analyses on the water chemistry parameters measured in the study to provide data reduction that may decrease the number of parameters or the frequency with which they must be measured. Regression analyses will be used to correlate variables measured at the monitoring station as well as climatic variables to isolate variables that provide the most value in predicting conditions within the river. Data can be plotted against management activities to determine proximate and ultimate effects on water quality. SWCA would work with the City to determine what parameters will be of most value and the frequency with which those should be measured in future field work.

3.0 PROPOSAL PRICING

We have provided detailed budget cost estimates for the tasks identified in the RFP. These cost estimates have been developed using SWCA's standard rate schedule which is provided in Appendix B.

3.1 DETAILED BUDGET

3.1.1 Work Plan Development

SWCA expects that the initial site visit and meeting with the City will require one full work day. Following the meeting, we will perform a brief literature study with the goal of optimizing the project for the Comal River and its endangered species. Based on information from the meeting, the literature search, and subsequent conversations with individuals working on other restoration activities, we will finalize the work plan for the project.

The cost to conduct these services will not exceed $16,500.

3.1.2 Installation of Water Monitoring Stations and Aerators

After completing the work plan, SWCA will perform all necessary work to install a streambed monitoring system for measurement of dissolved oxygen, conductivity, temperature, and pH. The Manta 2 multiparameter sonde will transmit data to remote stations using an Eagle Eye telemetry system, which will be accessible through a secure internet connection.

After installing, SWCA will test the monitoring station, perform any necessary calibrations, and deploy the sonde for continual monitoring. Monthly calibration trips will ensure the accuracy and precision of the readings.

The cost to conduct these services will not exceed $78,900.

3.1.3 Installation of Aerators

SWCA will install all necessary infrastructure and test the operational capacities of two solar powered aeration systems (Keeton Industries Solaer® Model SB-4B, or equivalent) as specified by the manufacturer. This will include several days of construction in conjunction with installation of the water monitoring system. After the system is found to be operational, the aerators will be stored in preparation of use.

The cost to conduct these services will not exceed $72,500. The cost of on-call deployment of aerators will not exceed $4,000 per day that SWCA is on-site.

3.1.4 Vegetation Removal

Vegetation removal costs include the expenses associated with deploying the work crew to complete the above-described steps. Due to the nature of this task, the City will be billed on a daily rate.

The cost to conduct these services will not exceed $4,000 per day that vegetation removal is necessary.

3.1.5 Monitoring and Reporting

SWCA will provide a monthly report detailing monitoring, calibration, and vegetation removal activities.

The cost to conduct these services will not exceed $6,500.

3.2 Options

SWCA will negotiate optional items at the discretion of the City.

4.0 DESCRIPTIVE LITERATURE

4.1 Contractor Qualification Statement

SWCA has key staff working within our Texas offices that have experience with water chemistry monitoring, biological surveys, and sample collection in Central Texas' cobble-bottomed limestone stream systems.

Calibration, maintenance, and installation of the monitoring system will be performed by researchers with over ten years of experience in operation of water chemistry systems. Familiarity with aeration systems such as those in Lake Waco and the Bosque River will help guide installation and operation of the system in the Comal River.

SWCA's scientific staff brings to bear a wide variety of water monitoring experiences including, but not limited to:

1) Sonde and probe-based in-situ sampling and analysis;
2) Seine, kick net, and drift net biological sampling and identification;
3) Routine and storm water grab sample collection for laboratory analysis;
4) Laboratory analysis of nutrients, organic, elemental, and microbiological constituents;
5) Aquatic vegetation surveying and identification;
6) Discrete and integrated water sampling;
7) Phytoplankton, zooplankton, and algal sampling;
8) Benthic invertebrate sampling; and
9) Benthic dredging

Results of these data collection and reduction techniques have been reported to local, state, and federal agencies including Texas Commission on Environmental Quality (TCEQ), Harris County, Harris County

Flood Control District, the Brazos River Authority, the Environmental Protection Agency (EPA), and the Department of Defense.

Although SWCA often acts as a sole contractor, the company also has experience working as a lead contractor and as a sub-contractor in the past. SWCA welcomes the opportunity to work with other agencies and has the proper corporate culture to ensure that the client's needs and the scientific validity of the project are not compromised. SWCA will work with any other entities operating within the watershed (e.g. City of New Braunfels, the Edwards Aquifer Authority, Texas State University, other contractors, university researchers) to maintain the integrity of the watershed.

SWCA provides experience in endangered species, ecological restoration, habitat mitigation, land management, invasive species control, and installation of solar powered equipment. Restoration experiences have included projects that have focused on re-establishing aquatic and riparian vegetation as well as the management of undesirable plant species. SWCA's first-hand knowledge of the project area, experience with the applicable endangered species regulations, and experience in removal of non-native species will prove to be a beneficial combination for the City.

4.1.1 Assessment Team Description

SWCA's Houston office will lead the project, drawing from staff within the Texas offices. As such, the contact information for the team is:

Address: SWCA Environmental Consultants
7255 Langtry, Suite 100
Houston, Texas 77040

Phone: 713-934-9900
Fax: 713-934-9906

Richard Howard (rhoward@swca.com) will serve as the project manager for SWCA. Mr. Howard has extensive experience in water quality monitoring and water analysis including numerous municipal projects involving wetland construction, water chemistry analyses, field monitoring for a wide array of constituents, and shoreline habitat assessments. Mr. Howard has performed field work on biological studies throughout central Texas including several limestone streambed systems.

Key SWCA staff members that will be involved in the field work on this project include Stephen Ross, Eric Munscher, Laura Ware, Patrick McKnight, Michael Farris, and Chris Collins. Resumes for key team members are included in Appendix D. Mr. Ross, Mr. Munscher, Ms. Ware, Mr. McKnight, and Mr. Collins have first-hand experience working in aquatic ecosystem monitoring through wetland, river, and vegetation restoration projects. In particular, Mr. Ross, Mr. Munscher, and Mr. Collins have worked in the Comal River and Landa Lake through the continuing study of native turtle populations. Ms. Ware and Mr. Farris are trained SCUBA divers who may provide support for operations on the project.

4.1.2 Relevant Experience

SWCA draws experience from a vast and diverse background of scientific field work and research to provide our clients with sound science and creative solutions. We have performed stream and wetland restoration projects throughout the United States and many of these have been within Texas. Within these projects, we often install and maintain data loggers for long term deployment.

Additionally, we have staff experienced in the calibration, use, and maintenance of sondes and their probes. Staff members have extensive experience in gathering and interpreting water chemistry data,

collection of fishes and other aquatic vertebrates, and identifying and quantifying aquatic vegetation. We are well versed in federal and state regulations pertinent to endangered species and have numerous scientist trained to effectively and efficiently work with these species to maintain their health.

With wetland delineation as a major work area, we are particularly suited to identify, quantify, and preserve vegetation. Furthermore, we are familiar with the Comal River through our ongoing turtle studies and Comal County through our work on the Regional Habitat Restoration Plan. Our team of scientists will work to provide services that maintain biological functions within this unique environment while attaining appropriate water quality monitoring and functional aeration capabilities. In Section 5.1, we have provided a list of particularly relevant projects and the clients with whom we have worked. Although SWCA typically acts as a prime contractor, we also have a demonstrated track record of working with other contractors and agencies to meet a common goal.

4.2 PROPOSED SCHEDULE

SWCA will begin work immediately after receiving notice to proceed from the City. Considering the contract for the project will not be awarded until January of 2013, it is expected that work plan development will be completed by the end of February and all necessary permits will be obtained by the beginning of March. Monitoring and aeration equipment will be ordered and delivered no later than March and installation will begin immediately after receipt by the City. Installation of the equipment should take less than one month total, including operations testing. Monitoring of Landa Lake will officially begin in May and will continue through September. Monthly calibration visits will be reported through monthly status updates.

5.0 CONTRACTOR BACKGROUND INFORMATION

5.1 RECENT PROJECTS

29-Acre WHA Vegetation Survey; Houston, Harris County, Texas

Project Owner: Beck Geodetix
SWCA Client: Beck Geodetix
Primary Contact: Bryan Carlile, **Phone:** 713.467.0299
Dates of Service Contract: February 23, 2012 – April 9, 2012
Project Budget: $1,750
Summary of Services Provided:
SWCA conducted a vegetation survey on a 29-acre property located adjacent to West Houston Airport in Harris County. SWCA noted the different vegetation communities, their associated species, and determined the absence/presence of Texas prairie dawn, a federally listed endangered species.

Greens Bayou Wetland Mitigation Bank Vegetation Management Plan; Harris County, Texas

Project Owner: Harris County Flood Control District
SWCA Client: Lake Management Services, LP
Primary Contact: Mac McCune, **Phone:** 281.240.6444
Dates of Service Contract: July 9, 2007 – August 27, 2009
Project Budget: $26,466
Summary of Services Provided:
SWCA worked with Lake Management Services to develop a preliminary vegetation management plan designed to enhance the habitat at the Greens Bayou Wetlands Mitigation Bank. To this end,

SWCA mapped and quantified areas that contained invasive and/or non-native species and the dominance of these species within the identified areas. SWCA then provided control recommendations for eliminating the invasive and non-native species, as well as for controlling aggressive native species to maximize the habitat present.

Lake Houston Water Quality Sampling; Lake Houston, Harris County, Texas

Project Owner: Houston Area Water Corporation
SWCA Client: MWH
Primary Contact: Tom Visosky, **Phone:** 713.403.1600
Dates of Service Contract: December 9, 2005 – January 31, 2006
Project Budget: $50,700
Summary of Services Provided:
SWCA provided water quality and aquatic biology services to the Northeast Water Purification Plant located on Lake Houston in Harris County, Texas. SWCA investigated the turnover of the lake and potential water quality issues that have been affecting potable water supply taste and odors. SWCA identified organisms that could contribute to this problem and provided recommendations for treatment.

Mississippi HUB Expansion Project - Amendment to FERC Certificate; Covington County, Mississippi

Project Owner: Mississippi HUB, LLC
SWCA Client: Mustang Engineering, Inc.
Primary Contact: Robert Stowers, **Phone:** 713.215.8000
Dates of Service Contract: May 14, 2008 – March 9, 2009
Project Budget: $467,540
Summary of Services Provided:
Mustang Engineering retained SWCA to complete wetland and waters delineation and evaluation, threatened and endangered species habitat evaluations, a detailed survey for the federally threatened gopher tortoise, fisheries, vegetation and wildlife evaluations, cultural resources studies, land use/land cover mapping, noise quality studies, and air quality studies and permitting in support of Mississippi HUB's Amendment to the February 2007 FERC Certificate for the project. In addition to completing detailed technical studies, SWCA completed: Resource Report 2 - Water Use and Quality; Resource Report 3 - Fisheries, Vegetation and Wildlife; Resource Report 4 - Cultural Resources; and Resource Report 9 - Air and Noise Quality. SWCA aided in project team interface with the FERC and other federal and state regulatory agencies, as well as aided in conducting public site visits and public informational meetings for the project. SWCA also completed an applicant-prepared NEPA Environmental Assessment (EA) for the project.

Pinnacle 2008 Periphyton Monitoring; Big Horn County, Montana

Project Owner: Pinnacle Gas Resources, Inc.
SWCA Client: Pinnacle Gas Resources, Inc.
Primary Contact: Brian Deurloo, **Phone:** 307.742.2175
Dates of Service Contract: June 3, 2008 – September 23, 2009
Project Budget: $8,000
Summary of Services Provided:
The Emit Water Discharge Technology (Emit) treatment facility of the Coal Creek Federal Project (CCFP) is permitted through the Montana Department of Environmental Quality's (MDEQ) Montana pollutant discharge elimination system (MPDES). The CCFP is operated by Pinnacle Gas Resources, Inc. (Pinnacle). Pinnacle's MPDES permit requires yearly compliance monitoring of Chlorophyll a (Chl a) concentrations

and assessment of the periphyton (attached algae) assemblage. Chl a and periphyton are used by MDEQ and the U.S. Environmental Protection Agency (EPA) as indicators of impaired water bodies (MDEQ 2005; Barbour et al. 1999). SWCA Environmental Consultants (SWCA) was contracted by Pinnacle to perform the Chl a and periphyton monitoring for 2008. SWCA's report contained the 2008 Chl a and periphyton monitoring results, as well as comparisons to the previous three years' results. Monitoring results indicated compliance with Pinnacle's MPDES permit in 2005, 2006, 2007, and in 2008. In 2008, Pinnacle did not dewater its coal bed natural gas (CBNG) wells in the area, therefore, no treated CBNG product water was discharged into the Tongue River. The 2008 Chl a and periphyton monitoring results document local Tongue River water quality with no CBNG discharge and compliance with MPDES water quality requirements.

Sub B WQF 2010 1st & 2nd Qtr Monitoring; Harris County, Texas

Project Owner: Harris County Flood Control District
SWCA Client: Harris County Flood Control District
Primary Contact: Michele Wilkins, **Phone: 713.684.4063**
Dates of Service Contract: May 25, 2010 – April 5, 2011
Project Budget: $57,226
Summary of Services Provided:
SWCA performed quarterly monitoring-focusing on vegetation, hydrology, and soil-for first and second quarters 2010 on the Subdivision B Water Quality Facility.

Transitional Forest 2011 Monitoring; Harris County, Texas

Project Owner: Harris County Flood Control District
SWCA Client: Harris County Flood Control District
Primary Contact: Michele Wilkins, **Phone: 713.684.4063**
Dates of Service Contract: February 15, 2011 – September 11, 2012
Project Budget: $57,300
Summary of Services Provided:
SWCA performed quarterly monitoring and year-end reporting for the Subdivision B Water Quality Facility of the Greens Bayou Wetlands Mitigation Bank. Monitoring was focused on vegetation, soils, and hydrology and also included water quality sampling as well as avian surveys.

Comal County Regional Habitat Conservation Plan and Environmental Impact Statement; Comal County, Texas

Project Owner: Comal County Engineer's Office
SWCA Client: Comal County Engineer's Office
Primary Contact: Thomas Hornseth , **Phone: 830.608.2090**
Dates of Service Contract: March 26, 2007 – On going
Project Budget: $ 441,000
Summary of Services Provided:
SWCA, working with Smith, Robertson, Elliott, Glen, Klein & Bell, LLP, will prepare a Regional Habitat Conservation Plan and Environmental Impact Statement for incidental take of the endangered golden-cheeked warbler and black-capped vireo for Comal County, Texas.

Williamson County Regional Habitat Conservation Plan/Environmental Impact Statement; Williamson County, Texas

Project Owner: Williamson County Conservation Foundation
SWCA Client: Williamson County Conservation Foundation
Primary Contact: Gary Boyd , **Phone: 512.943.1921**

Dates of Service Contract: November 29, 2005 – October 28, 2008
Project Budget: Issued on individual task orders.
Summary of Services Provided:
SWCA was contracted by the Williamson County Conservation Foundation to prepare a Regional Habitat Conservation Plan (RHCP) and Environmental Impact Statement (EIS) for Williamson County, Texas. The RHCP/EIS was prepared in support of a Section 10(a)(1)(b) permit for incidental take of two endangered songbirds, the golden-cheeked warbler and black-capped vireo, and two endangered karst invertebrates, the Bone Cave harvestman and Coffin Cave mold beetle. An additional 24 species of concern are afforded conservation benefits through implementation of the RHCP. SWCA began work on the RHCP/EIS in November 2005 and the incidental take permit was issued by the U.S. Fish and Wildlife Service on October 21, 2008.

5.2 Financial Stability

As a privately held, employee-owned company, SWCA does not disclose confidential financial information. However, we recognize that some clients may prefer to see evidence of our 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 with 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 Net Revenues grew by 8.8% 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-owned 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.

For additional information on our financial status, please contact Michael Lanin (Director of Finance, SWCA) by calling 602-274-3831.

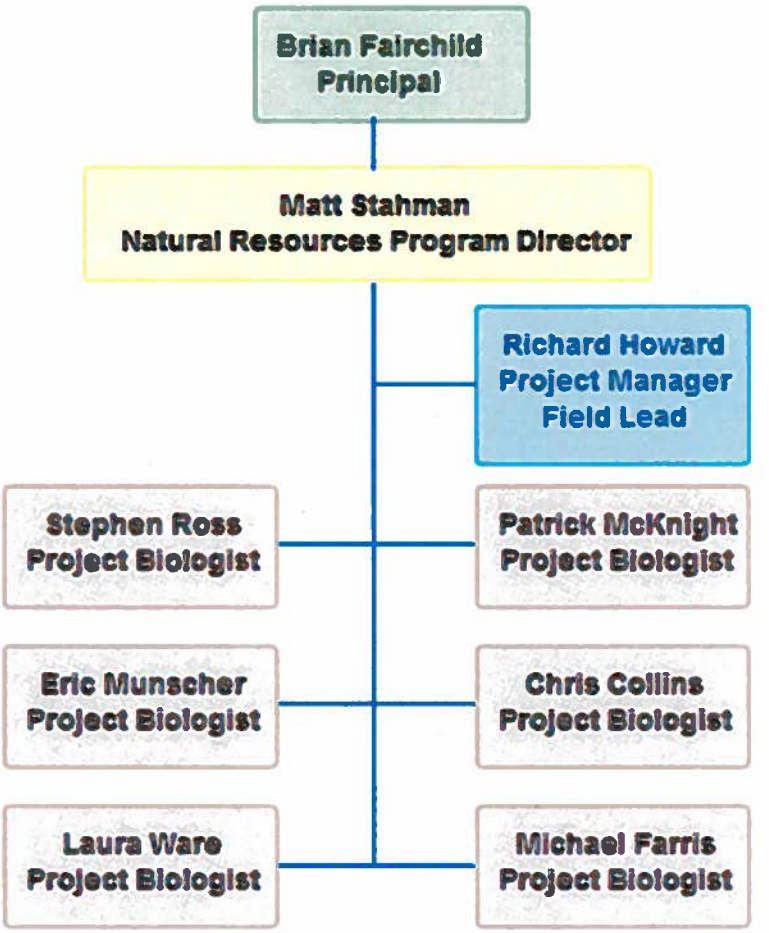
5.3 Performance Guarantee

SWCA has completed well over 15,000 projects over the last three decades and nearly 4,000 of these have been conducted in State of Texas. As a consulting firm, SWCA does not provide performance bonds, however our demonstrated financial stability (described above) and our continued expansion and addition of offices in Texas demonstrates our long-standing commitment to our client base. The integrity with which we conduct business is apparent in every project, publication, and interaction of which we are a part. We strive for professional excellence and social responsibility in all work. We realize that no organization exists in a vacuum. We know the impact our work has on our clients and our communities, and we take pride in the contributions we make. SWCA continues to exceed client expectations for the quality, timeliness, and practical creativity of the solutions we provide.

5.4 Organizational Chart

SWCA proposes to complete this work using the key personnel described in the following organization chart. The vitae of these individuals are provided in Appendix D. To ensure that the project is completed

successfully, additional personnel may be required to provide support or oversight as needed. At the completion of the project, we will provide a complete list of all project participants at the request of the City.



5.5 Pricing/Payment Methodology

Although portions of this project are anticipated to be a fixed fee contract, billed at percent completes on a monthly basis, other portions are to be billed in hours. Pricing is based on SWCA standard staffing rates. It is understood that the City 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.

APPENDIX A
PERFORMANCE SURVEY

Appendices
Appendix A - Performance Survey

PAST AND PRESENT PERFORMANCE SURVEY

Company Name: SWCA, Incorporated
Street Address: 3033 North Central Ave., Suite 145
City, State, and ZIP Code: Phoenix, AZ 85012

1. GENERAL BUSINESS INFORMATION

Date Firm Organized/Established: 1981
Company President: John Thomas
Vice President: Ron Borkan
Point of Contact: Richard Howard
Contract Number:
Telephone Number: 713-934-9900
Contract/Subcontract Amount: $174,400
Location: New Braunfels, TX
General Scope of Project:
Aerate and monitor the dissolved oxygen content within the Comal River and Landa Lake, New Braunfels, TX.

Your Role (*Prime [✓], Joint Venture [ ], or Subcontractor [ ]*) and the work your firm performed:
SWCA will implement aeration procedures and will remove decaying vegetation on the river and lake.

Contract Start Date: January 2013
Contract Completion Date: December 2013

Dun & Bradstreet Number: Phoenix - 119149730; Houston - 023136257
Is Company a: Partnership [ ] Separate entity [ ] Division [ ] N/A [✓]

2. CONTRACTS/SUBCONTRACTS COMPLETE OR IN PROGRESS

Complete and submit the information requested below on prime contracts or subcontracts completed or in progress. Government contracts are preferred, but if you have not performed Government contracts, indicate any other contracts completed or in progress.

a. First Contract

Contracting Agency or Company: Pinnacle Gas Resources, Inc.
Point of Contact: Brian Deurloo
Contract Number:
Telephone Number: 307-742-2175
Contract/Subcontract Amount: $8,000
Location: Big Horn County, Montana
General Scope of Project:
Monitoring services to meet the NPDES standards of the client's discharge permit.

Your Role (*Prime [✓], Joint Venture [ ], or Subcontractor [ ]*) and the work your firm performed:
SWCA provided monitoring services for chlorophyll a and periphyton at the point of discharge for a coal bed natural gas facility.

Contract Start Date: June 2008
Contract Completion Date: February 2009

b. Second Contract

Contracting Agency or Company: HNTB Corporation
Point of Contact: Gary Logston
Contract Number:
Telephone Number: 281-233-1384
Contract/Subcontract Amount: $

Location: Waller County, TX

General Scope of Project:
Ecological management plan for a wetland mitigation and native prairie restoration site.

Your Role (*Prime [ ], Joint Venture [ ], or Subcontractor [ ]*) and the work your firm performed:
SWCA developed a baseline habitat document for comparison during the monitoring phases, conducted assessments of the current site conditions, and developed a long-term maintenance program.
Contract Start Date: March 2005
Contract Completion Date: December 2005

c. Third Contract

Contracting Agency or Company: Harris County Flood Control District

Point of Contact: Michelle Wilkins
Contract Number:
Telephone Number: 713-684-4000
Contract/Subcontract Amount: $50,000
Location: Harris County, TX

General Scope of Project:
HCFCD-owned wetland mitigation bank, Harris County, TX.

Your Role (*Prime [ ], Joint Venture [ ], or Subcontractor [ ]*) and the work your firm performed:
SWCA performed quarterly monitoring of vegetation, hydrology, and soils.

RFP 12-029
Contract Start Date: March 2009
Contract Completion Date: April 2010

4. CERTIFICATION OF PAST AND PRESENT PERFORMANCE INFORMATION

Type or Print Information
Name of Survey Preparer: Rae Cohen Phone: 713-934-9900
E-Mail: rcohen@swca.com
Title: Administrative Assistant
Signature: Rae Cohen
Date: September 21, 2012

APPENDIX B
SWCA RATE SCHEDULE

SWCA Rate Schedule

Principals and Project Management Staff			
Project Manager XI	$180	Project Manager VI	$110
Project Manager X	$158	Project Manager V	$100
Project Manager IX	$142	Project Manager IV	$89
Project Manager VIII	$131	Project Manager III	$79
Project Manager VII	$121		

Consulting Services Staff			
Cultural Resources		Scientific	Graphics / Media Production
Environmental Resources		Planning Resources	GIS / CADD Resources
Paleontology		Training / Facilitating	Technical Writing / Editing
Subject Matter Expert	$175 – 250	Specialist V	$100
Specialist XI	$173	Specialist IV	$89
Specialist X	$158	Specialist III	$79
Specialist IX	$142	Specialist II	$68
Specialist VIII	$131	Specialist I	$58
Specialist VII	$121	Technician II	$47
Specialist VI	$110	Technician I	$37

Administrative			
Administrative VI	$89	Administrative IV	$68
Administrative V	$79	Administrative III	$58