



COPY

City of Key West Environmental Engineering Services

RFQ No. 14-004

Due: Wednesday, July 9, 2014

3:30 pm EST



Submitted to:

City Clerk

City of Key West, Florida

3126 Flagler Avenue, Key West, Florida 33040





**ENGINEERING
ENVIRONMENTAL
ECOLOGICAL**

July 9, 2014

City Clerk
City of Key West, Florida
3126 Flagler Avenue
Key West, Florida 33040

Subject: City of Key West Environmental Engineering Services RFQ No. 14-004
E Sciences Proposal Number 2-0906-P00

E Sciences, Incorporated (E Sciences) is pleased to express our interest in providing Environmental and Coastal Engineering Services to the City of Key West (City). E Sciences' staff is very experienced at providing the type of services requested by the City. We will be attentive to the City's anticipated needs. Through our vast experience in working in Key West and the Florida Keys and for municipalities, we understand the challenges of standing up to the scrutiny of many competing interests and striving to reach a balance. We are committed to providing quality environmental engineering services to the City as a preferential client. Please consider the following benefits offered by our team:

Keys Experience

E Sciences has vast experience working in the Keys and in particular in Key West. We recently completed landscape services for the City Hall project and are currently providing environmental and permitting support services for improvements to Truman Park. We have maintained an environmental engineering contract with Islamorada for over ten years. Our proposed project manager conducted the wastewater alternatives analysis for the Islamorada to Key Largo planning and has been conducting Phase I and II ESAs in Key West since the early 1990s.

Specialized Environmental Engineering Expertise

Our staff are experts in the fields of environmental engineering that will be performed under this contract. Our proposed project manager, Ms. Nadia Locke, served as an Expert Witness for Barry University for the first challenge under the State's contaminated site cleanup rule and is the President Elect for the Florida Brownfields Association. She served on the ASTM International (ASTM) Committees for developing standards for Sustainability (E60) and Environmental Assessment, Risk Management and Corrective Action (E50). She is supported by a team of experts within our firm and our team partner firms.



E Sciences, INCORPORATED
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Municipal Experience

E Sciences maintains multiple prime contracts with other cities in South Florida including Islamorada, Miami Beach, Fort Lauderdale, and North Miami. As a result, we understand the type of services that cities typically require and how to work with a city to get projects completed. We have also worked as a subconsultant on the City of Key West City Hall project.



Local and Readily Available Resources

We have partnered with local environmental and engineering firms who will be readily available to respond expeditiously at the City's request. Our relatively small size allows us to be nimble and responsive so that we can facilitate this type of quick response. We have long standing working relationships with both of these firms and are adept at managing contracts with multiple subconsultants.

Complementary Services/Certifications

While we have expertise in the services specifically requested in the RFQ, we are also well-versed in other environmental fields. We have LEED accredited professionals who understand and can assist the City with sustainability initiatives. E Sciences' staff have assisted

other municipal clients in obtaining solid information to assist in planning and adaptation strategies for climate change. We have certified arborists who are providing tree surveys, urban forestry canopy analyses and management plans for many South Florida cities including the Village of Palmetto Bay, Lake Worth and Coconut Creek.

Environmental, Ecological and Engineering Consulting Focus

Our staff is dedicated to the profession of engineering and science as it relates to environmental projects. We are experts in bridging the gap between the science and engineering of environmental consulting and planning, construction, public interests and funding. In this submittal you will see a well-rounded team of professionals who are not only experienced in the services requested, but provide a holistic and integrated approach to assisting the City achieve its goals.

We view this contract as an important opportunity to begin a successful relationship with the City, and we request your earnest consideration for selection on this contract.

Sincerely,

E SCIENCES, INCORPORATED

Nadia G. Locke, P.E.
Associate / Project Manager

Patricia L. Gertenbach, P.G.
Senior Associate

Tab 1

Company Profile



Tab 1 Company Profile

E Sciences is an engineering, environmental, and ecological consulting firm with offices in Fort Lauderdale, Miami, Orlando and DeLand. The firm provides professional consulting services throughout Florida and the southeastern United States. The firm opened its doors on August 29, 2000 bringing together a team of professional and technical staff members with a long history of successful projects throughout the southeast. Our driving fundamental philosophy is one of responsive consulting expertise that creates value for our clients. We believe it is imperative to provide our clients with the highest standard of quality and reliable services regardless of the project size. Whether the project is a small single-service contract or a large-scale multidisciplinary effort, we apply the same professional and technical expertise. We truly believe customer service is our top priority. Our firm's first agency client, the Florida Department of Transportation (FDOT), and our first municipal client, Islamorada continue to be some of our most valued clients. The FDOT has renewed E Sciences' initial contract four times, and subsequently awarded our firm multiple contracts throughout Florida. We can state with confidence that our clients recognize the superior consulting value we provide and validate this with repeat patronage.

E Sciences is classified as a small business under the federal guidelines for engineering and environmental consultants. Currently we provide professional environmental, engineering and ecological consulting services under continuing services contracts for multiple counties, municipalities, and agencies throughout the Florida. E Sciences has been providing services under the following municipal continuing service and project contracts:

- City of Marathon Professional Engineering Services
- Village of Islamorada Consulting Engineering Services (Ongoing Since 2003)
- City of Homestead Architectural-Engineering Services
- City of Miami Beach Continuing Environmental and Coastal Engineering Services
- City of North Miami Beach Continuing Professional Services (Second term)
- City of Fort Lauderdale General Environmental Engineering (Second Term)
- City of Daytona Beach Sea Turtle Lighting Survey
- City of Daytona Beach Brownfields Grant Assessment and Remediation Services
- City of Pompano Beach Community Redevelopment Agency (CRA) Environmental Engineering Services
- City of Pompano Beach National Environmental Policy Act (NEPA) and Compliance Review
- City of Miami Brownfield Grant Job Training Program
- City of Orlando Stormwater Design and Engineering
- City of Melbourne Stormwater Quality Master Plan
- City of Oviedo Environmental Consulting Services (Second Term)
- City of Coconut Creek Tree Inventory
- City of Lake Worth Tree Inventory and Management Plan
- Village of Palmetto Bay Tree Inventory

E Sciences also maintains contracts with several state and regional organizations:

- South Florida Water Management District (SFWMD)
- Florida Department of Environmental Protection (FDEP)
- FDOT Districts One, Four, and Five
- Treasure Coast Regional Planning Council
- East Central Florida Regional Planning Council

Working with City staff is more than a job or a single project, it is a commitment to the community and a willingness to provide more than expected. We believe it is important to not only be an outstanding consultant, but to be a partner. As your partner, we are committed to keeping City staff informed on changing regulatory issues and how they may affect policy and the ability to manage this one of a kind island community environment. The Florida Keys have a rare and fragile environment, as well as a rich and unique history, both of which require sustainable solutions through innovative planning and design. E Sciences' prime philosophy is one that promotes quality development through sustainable design. We recognize the importance of being stewards of the land in order to preserve these precious resources for future generations.

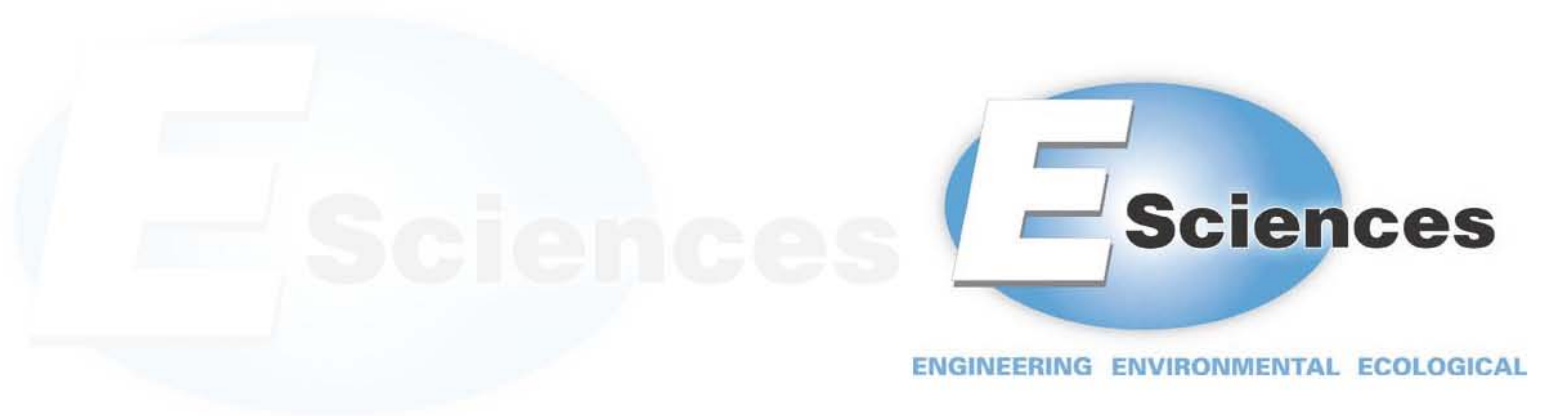
E Sciences is not a mega multi-disciplinary firm, but rather, a specialized consultant dealing in all aspects of environmental engineering and ecological services. We do not have layers of bureaucracy through which you need to maneuver – our staff are responsive and accessible. On the other hand, we understand that at times our clients may need more expertise than we offer in house. In these cases we extend ourselves as the prime consultant bringing the necessary sub-consulting services under our contract, thereby giving our clients the same contract manager and point of contact. Whether it's a large contamination remediation project or a small Phase I Environmental Site Assessment (ESA), we give each project the same attention to detail. Our team has the ability to respond quickly and cost effectively to projects of varying size. Between our local consultants in Key West and our offices in Miami and Fort Lauderdale we are readily available and can respond quickly to any County request.

We have assembled what we believe to be the best consultant team to provide the services requested in the RFQ. A strong advantage to our team is that we have worked together for many years because we truly utilize our local consultants, taking advantage of their institutional knowledge and keeping local dollars local. Our proven leadership and management capabilities allow us to direct team members that are in different geographic locales in a seamless and efficient manner. From the Overseas Heritage Trail to the City Hall project in Key West, our team members have had successful and positive experiences working in the Florida Keys.



Tab 2

Experience and Technical Competence



Tab 2 Experience and Technical Competence

E Sciences provides a full range of environmental engineering services to assist municipalities with identifying and managing environmental risks. Our strategies focus on using solid technical approaches to assess the existing conditions, anticipating future potential risks, understanding the City's long term goals and developing a plan to provide the right level of protection and regulatory compliance, while considering cost and schedule constraints.

We have extensive experience investigating surface and subsurface environments, and are very familiar with geological, hydrological and hydrogeological systems in Monroe County. Our environmental staff and that of our team includes registered professional engineers and geologists, and degreed scientists whose expertise provide a comprehensive combined set of skills that will support the City's goals through and even beyond the planning, design and construction phases of projects. Our team has the experience and expertise to provide all aspects of full-scale engineering, design, permit preparation, bidding, contract and specification documents development, and assistance with contractor selection. During implementation, we have the expertise and experience to provide construction administration, owner representation and permit modifications as the needs arise during rehabilitation/retrofit or new construction.

Real Estate Development Support Services

We understand that real estate development support services can cover a variety of environmental and engineering services. These can range from conducting Phase I and II ESAs for due diligence, permitting, risk management, and assisting with site design and construction when redeveloping contaminated properties, as well as asbestos and lead based paint surveys. Real estate development services may also include contamination assessment and remediation design. The E Sciences Team provides all of these services for cities on a regular basis. You will see from our resumes and project descriptions that we have a team that is readily available to serve the City in all of these areas.



E Sciences staff have been conducting due diligence services for clients since before ASTM standards were developed for conducting Phase I and II ESAs. These seasoned professionals are meaningfully involved in each due diligence project to ensure that sufficient information is compiled and reviewed. When our proposed project manager was a staff engineer, she would interview Mr. Thomas Hambright at the Florida History section of the library as one of her key historical resources on Phase I ESAs. One time he showed her a photo from an old magazine that showed her site as a Gulf gasoline station and the recognized environmental condition was revealed. Having history and experience with Key West and conducting environmental research can be a critical element in real estate development support services. Our recent work on the new City Hall illustrates our understanding of local unique considerations that other ESA firms may not typically consider, such as the importance of the project within the context of its surroundings, i.e., tree canopy and cultural resources.

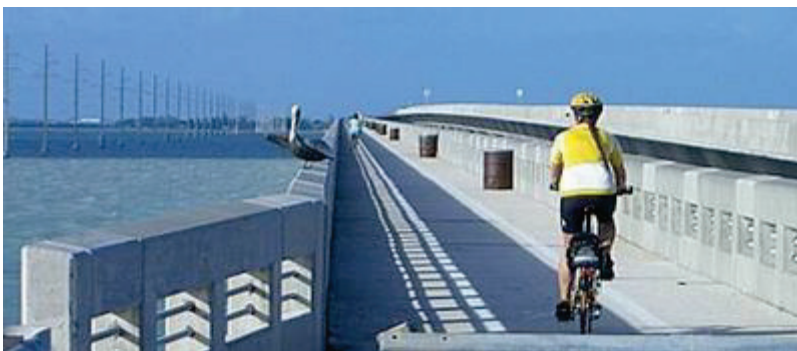
Our experience in performing Phase I and II ESAs includes a variety of property types, including redevelopment, residential and multi-family properties, shopping centers, and many types of commercial and industrial business operations. Phase I assessments are intended to identify any obvious evidence of environmental concern on a site and provide a preliminary evaluation of risks and liabilities associated with the condition. Based on the results of the Phase I ESA, we assess if there are either no known or limited liabilities associated with a subject site, or conclude that potential environmental risks were present and recommend further investigations as part of a Phase II ESA program.

We are often requested to conduct technical reviews of reports prepared by other environmental consultants. Our site assessments are performed in accordance with applicable ASTM Standards.

Another service we provide to several cities as part of redevelopment or improvement projects is conducting environmental reviews to comply with the National Environmental Policy Act (NEPA) when a project is receiving federal funding. Examples of this include Local Agency Program (LAP) projects funded through the FDOT (sidewalks, bus shelters, bridge rehabilitations, bike paths, etc.) and neighborhood improvement projects funded by the U.S. Department of Housing and Urban Development (landscaping, drainage improvements, pavers/crosswalks, etc.).

We have assisted several cities with designing and managing contamination risks as part of the bidding, design and construction processes. Examples of this included preparing “environmental notes” for bid packages for infrastructure improvements or site redevelopment in contaminated areas; assisting with site layout to avoid conflicts with drainage or other features that may exacerbate contamination or increase site development costs; and response to contamination issues identified during construction.

Another large part of our core business is providing environmental permitting services. We have conducted many environmental permitting projects for neighborhood improvement projects, bridgework, roadways, utilities and new construction. E Sciences' staff have prepared hundreds of permit application packages. During permit preparation we assess environmental resources in an efficient and cost-effective manner by combining desktop research with site surveys. Our scientists and engineers are all adept using GIS, and begin each assessment using web-based tools to produce maps that result in focused, efficient site surveys. We have extensive experience conducting such research in the Keys, including benthic and upland surveys, habitat mapping, mitigation assessments, seagrass mapping and monitoring, and stormwater management design. Our scientists have experience with many of the issues that may need to be addressed in the course of this contract including, sea turtle monitoring on beaches during sea turtle nesting season, specifications for Florida Fish and Wildlife Conservation Commission-approved sea turtle friendly lighting, Florida Keys National Marine Sanctuary permits, hardwood hammock protection, and turbidity monitoring/manatee observations during construction.



We are well known by and have excellent working relationships with the permitting agencies, and regularly facilitate agency meetings, such as pre-application meetings. An example of our recognized permitting expertise is our contract with FDEP to perform general permitting oversight in support of the development of the Florida Keys Overseas Heritage Trail, a 106-mile recreational paved trail leading from

Key Largo to Key West, utilizing 23 of the historic Flagler Railroad Bridges. This project involved numerous segments being designed by different engineering firms. E Sciences' role was to develop a Permit Plan to provide guidance to all of the various entities to streamline and unify the permitting process. As part of this project, specific duties included researching and cataloguing records of threatened and endangered species and wetlands along the Trail alignment, coordinating design and permitting activities for multiple engineering firms designing segments of the Trail, and creating a guidance plan for the environmental permitting and development of the Trail.

We have complemented our team with **Terramar Environmental Services, Inc. (Terramar)** who has vast expertise and experience conducting permitting within the Keys and for the City. They have conducted coral assessment, permitting and relocation for the Mallory Pier and White Street Piers in Key West; and consultations for the Key Deer

and Key Largo woodrat and cotton mouse as well as Lower Keys marsh rabbit and silver rice rat for the Florida Keys Overseas Heritage Trail. Additionally, Terramar conducted seagrass restoration project construction compliance monitoring within the Boca Chica lagoon project. With their additional local knowledge and excellent reputation with the agencies, our team provides the City with an unparalleled team of permitting expertise.

We have assisted numerous cities with the administrative and technical process of hiring and managing contractors for rehabilitation and new construction. Our contract with Islamorada presents several good examples of this. We developed the Request for Proposal (RFP) and managed the contractor selection process for the design build project for the North Plantation Key wastewater treatment collection system and plant. We conducted all of the contract administration including managing the negotiation of the contract terms with the awarded contractor, reviewing all pay items, negotiating change orders and conducting construction engineering inspections. As follow on work to this, we developed the RFP and facilitated the selection of Islamorada's first wastewater treatment facility operator. In this process, we managed all of the permits, permit modifications, regulatory coordination and public involvement as well.

We have also complemented our team with **Perez Engineering & Development, Inc. (Perez)** who will be available to assist with engineering and specification development, construction engineering inspections and on-site representation as needed. Their knowledge of Key West can also assist in the selection of contractors for construction projects. The City has first-hand knowledge of Perez's excellent work. They have been providing professional engineering services from their Key West office for 14 years. They assisted the City with the accelerated sanitary sewer rehabilitation project as well as numerous stormwater projects. Perez has held Professional Engineering Consulting and General Stormwater and Wastewater Engineer contracts with the City and a General Engineering Services contract with the Key West Housing Authority. The intimate knowledge of the City and its administrative processes that Perez brings to the team will provide a great benefit of continuity and efficiency to the City under this contract. We have a long standing relationship with Perez since winning our first contract as a team for the City of Key West in 2001.

Contamination Site Investigation and Remediation

Contaminated site investigations and remediation can include evaluating historical site information, hydrogeological and engineering evaluations, feasibility and cost benefit analyses for various remedial options, design, permitting and installation of remediation systems with oversight, and resident project representation. When contamination is identified, we can develop an innovative and cost-effective method to manage or remediate the contamination. E Sciences' geologists, scientists and engineers are well-versed in a variety of approaches to managing and remediating contaminated properties. Our understanding of contaminant fate and transport issues and the nature of various contaminants helps us to evaluate and select the appropriate remedial solutions for our clients, taking into account the potential liabilities, the lowest-possible costs and the shortest time to closure. E Sciences has extensive experience investigating surface and subsurface environments, and is very familiar with geological and hydrogeological systems in the Keys.



FDEP is currently in the process of revising several initiatives that are changing the face of contamination management in Florida. The impetus for these initiatives is to begin to address the concerns of the regulated community in areas where the current (or historical) rules do not fairly or adequately address complex issues related to background or anthropogenic conditions, institutional limitations, actual contaminant toxicity, and limitations of testing methodologies. We are involved in these emerging technologies and the development of these new policies, rules and guidance documents through our engagement in the Florida Brownfields Association. Our participation in these initiatives means that we have an in depth understanding of these issues and FDEP's allowances for developing alternative solutions to

dealing with contaminated properties. This allows us to bring new and practical ideas and approaches to solving contamination issues. In several, instances we have successfully applied the principles and concepts during and soon after development on regulated sites.

As an example, in preparation for bidding the redevelopment of the City of West Palm Beach's former city hall project, the City requested that we conduct a Phase I and II ESA and an asbestos survey. We identified benzo(a)pyrene above regulatory standards in the soil at the property. Using the provisions of a 2013 FDEP guidance document we were able to save the City approximately \$1M in cleanup costs. This was accomplished by developing a soil management plan to be used during construction in lieu of a typical scenario of a remedial action plan specifying soil excavation and disposal to "remediate" the property. In order to achieve this, we presented a technical basis that there was not a point source discharge on the Site and therefore a discharge of contaminants did not occur and that the property did not create a public health hazard. We also assisted the City in preparing documentation to support the bidding documents.

If active remediation is required, we can certainly design a remediation approach that will suit the site conditions and schedule/cost constraints. We have recently implemented a very large chlorinated solvent cleanup project that included a strategy of source removal, followed by in situ chemical oxidation. This was a very large project that involved dewatering the surficial aquifer to 30 feet using over 120 wellpoints, excavation of approximately 11,000 square feet of solvent impacted soils and application of 12,000 gallons of sodium permanganate solution, a chemical oxidant amendment, to the backfill material to reduce the surficial aquifer contaminant concentrations.

We have extensive experience working in urban environments with logistical constraints for equipment, and on projects in marine environments and/or with shallow groundwater conditions, such as would be expected in the City.

Underground Storage Tank Site Services

Storage tank site services may include hydrogeological investigations, monitoring well design and installation oversight, UST removal and replacement oversight, tank closure assessments, contamination assessments, and remedial system design, installation, permitting and management. We will work closely with our partner, **Cherokee Enterprises, Inc. (CEI)** to address the specialized storage tank needs of the City. E Sciences enjoys a long-term, close working relationship with CEI. These projects mainly entailed environmental and fueling construction projects in Southeast Florida. Example projects on which we have worked closely together include the excavation and disposal of petroleum contaminated soils associated with a fueling project for Broward County. Currently, we are working



on a design-build project associated with the design, permitting, and construction of a petroleum fueling facility and on a major fueling installation project involving petroleum contaminants in Broward County, whereby CEI oversaw the construction and E Sciences performed soil and groundwater sampling. Because CEI conducts both environmental assessment/remediation consulting services as well as construction of remediation and storage tank systems, their quality and professionalism is like no other contractor. CEI has experience working in the Keys. They completed a fuel pump house and fill stand replacement project on the Naval Air Station on Boca Chica and they work regularly in the Keys on FDOT's Contamination Assessment and Remediation Contract.

Should the City require preparation or updating of Spill Prevention Control and Countermeasure (SPCC) plans, E Sciences would provide these services in-house as we did for the City of Miami Beach. E Sciences prepared SPCC Plans for 12 facilities throughout Miami Beach. These facilities included pump stations, fire stations, public works yard, Miami Beach Golf Club and the Convention Center. Working together as a team, we will ensure that the City maintains compliance with applicable rules and regulations.

Coastal Engineering Services

E Sciences is pleased to have selected **Coastal Systems International (CSI)** to assist us with coastal engineering services. While E Sciences can provide all of the scientific expertise related to benthic surveys, habitat assessment, mitigation and monitoring, CSI has extensive experience providing coastal engineering and permitting services for public and private projects in Monroe County. These projects include beaches, marinas, piers, bulkheads, and environmental resource mapping. E Sciences and CSI have a long-standing working relationship and are currently partnered on the coral reef relocation monitoring for the Port of Miami dredging project.

CSI's waterfront experience in Key West includes the coastal engineering analysis and marine structures design for two piers at the Wyndham Reach Resort and the Casa Marina Resort. These recreational piers were designed for coastal engineering loads due to their exposure to open waters. These piers performed well during the hurricanes in 2004-2005 that impacted the Key West area. Also, CSI provided post-hurricane assessment services for Sunset Key and prepared designs for emergency shore revetment repairs.

Additionally, CSI has evaluated the coastal processes and marine environments throughout the Florida Keys for beach and navigation projects, and has an in depth understanding of the marine environment in the Keys. Specifically, the company has developed a regional numerical wave and hydrodynamic model for the area, which provides unprecedented regional and local current and wave information. A brief list of representative local project experience is provided below:

- Coastal Management Studies at Long Key, Bahia Honda, Fort Zachary Taylor, and Curry Hammock State Parks – these services included aerial photography, GIS analysis, and shoreline studies at these four parks to establish prioritized coastal and shore protection projects. Prepared and processed funding applications through the Florida DEP for several of these projects.
- Fort Zachary Taylor State Park – design and environmental permitting of breakwaters and terminal groin for shore protection. Maintenance repairs designed and permitted in 2001. Performed beach profile surveys and subsequently designed and permitted beach nourishment with construction completed in December, 2007. Currently processing environmental permits for the improvements, the breakwaters, and groin.
- Bahia Honda State Park – conducted coastal revetment, surveying, site assessment, and prepared schematic designs of alternative shoreline stabilization alternatives. Coastal engineering report prepared with construction cost estimates.



Industrial Hygiene Services

EBS Engineering, Inc. (EBS) will assist E Sciences with industrial hygiene services on this contract. Industrial hygiene services may include consultation for ensuring compliance with health and safety rules/regulations, as well as conducting asbestos and lead based paint surveys, abatement or management. Our project manager and the President of EBS have a long standing relationship that extends back to 1990. EBS' staff are qualified, well-trained and accredited by responsible agencies such as U.S. Environmental Protection Agency (EPA), States and Technical Organizations, and annually acquire the continuing education to keep abreast of the state-of-art information and technologies in the their specialties. These proven professionals are available and will participate actively in every project to ensure the highest quality. EBS experience in performing industrial hygiene services including indoor air quality, environmental health and safety compliance, asbestos, lead-based paint, mold, radon, etc. cover a wide variety of project types, such as public facilities, utilities, institutions, commercial and industrial business operations. Industrial hygiene is performed generally to address known or unknown environmental hazards or complaints by building occupants, to safeguard environmental health and safety, or to improve public health as a whole. EBS can perform risk and hazards assessments of existing conditions, and recommend the necessary correction actions to bring the property into compliance and meet the applicable safety standards. EBS' industrial hygiene services are conducted in accordance with applicable Standards such as American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), ASTM International, Indoor Air Quality Association, American Conference of Industrial Hygienists, and the EPA.

EBS' scientists, inspectors, indoor air specialists, industrial hygienists and mold assessors have vast experience related to mold and moisture assessment, lead-based paint inspection, asbestos survey, indoor air quality investigation and accumulated dust sampling for common allergens. Each project is approached with a scientific methodology to anticipate, recognize, evaluate, communicate and control stressors in the workplace which may result in injury, illness and impairment, or affect the wellness of the building occupants. These stressors are divided into the categories of biological, chemical, physical, ergonomic and psychosocial.

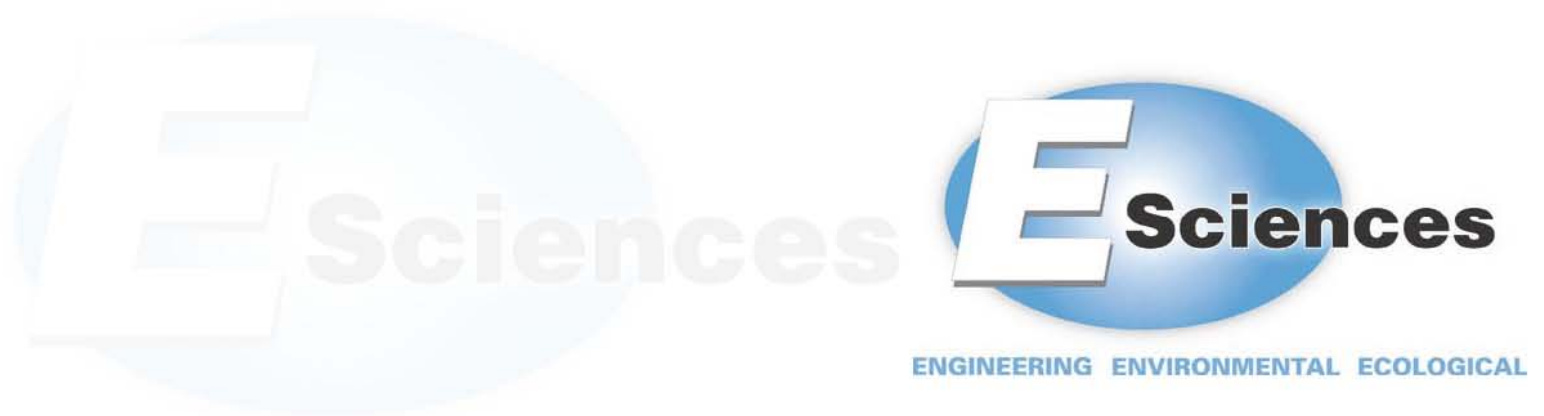


Resident Project Representation

E Sciences recognizes that the City requires that professional and knowledgeable staff be available at all times to respond to the City's needs. We have selected two local firms that will be accessible and available to the City at any time: Perez and Terramar. The professionals from both of these firms know the City intimately and are committed to providing quick response and on-site representation as necessary. We would envision that under circumstances that require same day response, we will send a representative of one of the firms to the City or the project location, as appropriate. Ms. Nadia Locke, the E Sciences project manager will also be available by telephone. We will collectively work with the City through this process quickly to determine the City's needs, the nature of the project and the skill set of the staff needed to expedite the project. The E Sciences project manager will bring the best-suited professional team to the project. E Sciences is a small firm of professional staff with the expertise and experience of a larger firm. Our size allows us to be able to respond quickly and without bureaucracy. Our decisions are made in our offices and our project manager has the authority to commit resources as necessary at a moment's notice if demanded by the project. Therefore, we are confident that this arrangement with our local

subconsultants will allow the E Sciences team to be available on-site and respond expeditiously at your request as we rapidly assemble our response to the City's needs.

Qualifications, Capacity of Staff and Location



Tab 3 Professional Qualifications, Capacity of Staff and Location

E Sciences has assembled a team of professionals who have the expertise to provide the skills and experience necessary to assist the City in reaching its goals. The following includes professional highlights illustrating the quality and depth of experience of our key staff. Additional information on E Sciences' personnel can be found in the resumes included in at this end of this section.

Professional Qualifications and Capacity of Key Staff

Nadia Locke, PE, Project Manager

Education: B.S. Materials Science and Engineering, University of Florida, 1988

Professional Licenses / Certifications: Professional Engineer: FL-58676; Certified FDEP Stormwater, Erosion and Sedimentation Control Inspector and Instructor; NAUI / PADI Advanced Open Water Diver, LEED AP Neighborhood Development, OSHA 40 Hour Hazardous Waste Operations and Emergency Response; OSHA 8-Hour Site Supervisor

Years of Experience: 26

Capacity to Serve the City: 50%

Location: Fort Lauderdale

Ms. Locke has been providing environmental and engineering consulting services for over 26 years in South Florida. She is based in our Fort Lauderdale office. During her career, she has worked in many facets of environmental consulting including environmental audits, site assessments and remediation, stormwater and sanitary sewer consulting, environmental permitting, climate change impact evaluation, grant assistance, mitigation design, and community involvement. Ms. Locke has provided expert witness and litigation support for the FDOT, Miami-Dade Aviation Department, Barry University and private entities. She also serves as E Sciences' Corporate Quality Assurance Officer.

Municipal Environmental Project Management Experience

Ms. Locke has demonstrated that her years of experience managing contracts, projects and staff have proven to be successful on other contracts. Her attention to each project's specific needs, and budgetary and schedule constraints have been part of the reason for E Sciences' success on many municipal contracts. She is focused on exceeding her client's needs and as such, delivers our services honestly and openly. Regular communications with City staff assist in ensuring that our project scope will satisfy the City's needs. When she finds that services are not necessary and the project reveals opportunities to deliver a project under budget, she proudly incorporates those concepts into the project, with the support of the firm. Ms. Locke manages similar environmental and engineering consulting services contracts for the following entities:

- City of Miami Beach Environmental/Coastal Engineering Services Contract
- City of North Miami Beach Continuing Environmental Engineering Services Contract (awarded twice)
- City of Fort Lauderdale Continuing Contract for General Environmental Engineering Services (awarded twice)
- Treasure Coast Regional Planning Council Brownfields Assessment and Remediation Services (awarded twice)
- Pompano Beach CRA Continuing Environmental Engineering

Ms. Locke still has plenty of capacity to provide a high level of service on this city's contract as well. She is supported by a talented group of staff and subconsultants who can efficiently execute the projects leaving her to dedicate her time to providing the higher level client service and project management.

In addition to these contracts, she has managed numerous other environmental projects for municipalities including the Islamorada, Village of Islands, the Cities of Miami, Deerfield Beach, Oakland Park, Lauderdale Lakes, Margate, Hollywood, and Hallandale, as well as governmental agencies including Miami-Dade County Public Schools, Miami-Dade County (Manager's Office, Aviation Department and Office of Community and Economic Development), Port Everglades, Broward County (Mass Transit, Real Estate Division, Aviation Department, and Water & Wastewater Division) and the FDEP.

Local Experience

Ms. Locke has been working in the Florida Keys for over 20 years. Projects that she completed include an asbestos survey at the Truman Annex, multiple Phase I and II ESAs in Key West, a confidential arsenic study in Monroe County, and the wastewater treatment alternatives analysis and development of a Request for Proposal for hiring the wastewater operator for Islamorada. She continues to provide on-going support to Islamorada by reviewing stormwater management plans for future site development.

Recognized Industry Expert

Ms. Locke is highly qualified to serve the City as Contract Manager. Beyond her knowledge and experience with the scope of services, Ms. Locke's 26 years of working in South Florida have resulted in her involvement in numerous high profile projects in South Florida including the following:

- Key Largo-Islamorada Wastewater Feasibility Study
- Truman Annex Asbestos Survey
- Homestead Air Reserve Base Site Assessment and Risk Assessment
- American Airlines Arena Site Assessment and Remediation Oversight
- Charles Deering Estate Lead Paint and Asbestos Removal
- Vizcaya Asbestos Removal and Canal Restoration
- Miami International Airport Assessment and Remediation and Cost Estimates for All Environmental Airport Projects
- Wingate Landfill Superfund Site-Remediation Closure Cost Estimates



Ms. Locke is a Board Member of the South Florida Smart Growth Partnership, President Elect of the Florida Brownfields Association (FBA) and was Co-Chair for the FBA's 2013 annual conference.

As a testament to Ms. Locke's reputation as an expert, we note that she has provided litigation support regarding environmental issues related to site assessment and remediation as well as environmental permitting. She has served in this capacity for the FDOT, Miami-Dade County Aviation Department, Barry University and private/public interest firms. Ms. Locke provided litigation support for an extremely contentious site assessment and remediation project on the West Coast of Florida. This project was the impetus for the changes to the Florida Statutes requiring off-site notification of contamination. She is a leader in evolving environmental issues and regulations, and regularly presents at annual statewide conferences such as the FBA Annual Conference, Florida Chamber Growth Management Conference and the Florida Bar's Environmental Law and Land Use Section Annual Conference. She served on the ASTM International Committees for developing standards for Sustainability (E60) and Environmental Assessment, Risk Management and Corrective Action (E50).

Progressive Concepts

Ms. Locke's technical expertise of stormwater and contamination challenges combined with urban redevelopment and then blended with her savvy of community partnerships, smart growth principles and excellent communications skills provide her municipal clients with a seasoned contract manager with a big picture understanding of the issues they are facing. Ms. Locke uses this combination of concepts to reach and strive for solutions beyond the project at hand. This has proven to be effective in venues such as stakeholder and public information meetings and negotiations of technical concepts on environmental projects with agencies such as FDEP and the South Florida Water Management District.

Patricia L. Gertenbach, PG, Quality Assurance Manager

Education: B.S., Geology, West Georgia College, 1991, Magna Cum Laude

Professional Licenses / Certifications: Professional Geologist Florida No. 2037, Georgia No. PG001444; PADI – Advanced Open Water Diver; Certified FDEP Stormwater, Erosion and Sedimentation Control Inspector and Instructor, LEED Green Associate, OSHA 40 Hour Hazardous Waste Operations and Emergency Response, OSHA 8-Hour Site Supervisor

Years of Experience: 22

Capacity to Serve the City: 25%

Location: Fort Lauderdale

Ms. Gertenbach, along with Ms. Locke, opened E Sciences' Fort Lauderdale office in 2002. Although she is an associate of the firm, Ms. Gertenbach spends the vast majority of her time on the technical and management aspects of projects. Her professional experience began by conducting site assessment/remediation projects that included hydrogeological investigations, monitoring well design and installation oversight, and conducting environmental assessments, sampling, analysis and monitoring for Department of Defense facilities, including several army ammunition plants and air force bases. Since then, her portfolio of projects and clients have given her the opportunity to diversify her knowledge into wetlands, water quality, environmental permitting and National Pollutant Discharge Elimination System (NPDES) stormwater program management in addition to assessment and remediation. Ms. Gertenbach is also well-versed in providing environmental documentation for LAP and other projects [ex: FDOT, Federal Emergency Management Agency (FEMA)] in accordance with NEPA.

Ms. Gertenbach is knowledgeable of the Keys and Key West both professionally (as you will see from her resume) and personally, having been coming to Key West since the 1970s. She is familiar with the unique flora, fauna, marine community, geology and physical environment of Key West. Ms. Gertenbach has managed and/or provided technical support and oversight on Keys projects of all sizes including: the Monroe County Canal Inventory and Assessment, which included creating a GIS layer of all the canals in the Keys; providing permitting, NEPA and environmental support to the FDEP for the design and construction of the Florida Keys Overseas Heritage Trail; and analyzing limestone rocks for Mote Marine. She is currently providing Quality Assurance / Quality Control (QA/QC) on E Sciences' work (as a subcontractor) for the Truman Annex project. Ms. Gertenbach has extensive experience in the work elements of this contract including permitting, contamination assessments and remediation, real estate development support services, and underground storage tank support services. Throughout her career, Ms. Gertenbach has focused customer service and providing quality driven, technically sound solutions that meet the client's needs in an efficient and cost effective manner.

Ms. Gertenbach's knowledge of NEPA and FDOT was utilized on several E Sciences projects for the City of Fort Lauderdale and the Pompano Beach CRA: Level II testing for Sistrunk Boulevard, NEPA re-evaluation and Contamination Screening Evaluation Report update for NW 7th Avenue and 9th Avenue Connector, Martin Luther King Boulevard Educational Corridor and asbestos surveys for three low level bridge replacements. Because these projects are partially funded by the Federal Highway Administration (FHWA) through the FDOT, Ms. Gertenbach provided

insight into FDOT's perspective to assist the City/CRA in satisfying the environmental commitments necessary to achieve funding.

As the Quality Assurance (QA) Manager for this contract, Ms. Gertenbach brings extensive knowledge of Key West and managerial and technical experience all the components of the scope of services for this contract. She approaches her responsibility by keeping abreast of projects, but at a distance. This allows her to quickly be available and up to speed should an issue arise on which her help is sought, and to provide the final review of deliverables in an efficient and cost effective manner. Her reviews are built into all projects at the onset so the project stays on schedule without compromising quality control. She has collaborated with each of E Sciences' team members and will ensure consistency and quality control on deliverables produced both by E Sciences and by or with our team members. Ms. Gertenbach is recognized in her field for her attention to detail, pragmatism, technical expertise, teamwork, and above all, client service.

Justin Freedman, Senior Scientist

Education: M.S., Marine Biology, Nova Southeastern University Oceanographic Center; B.A., Biology, Tufts University

Professional Licenses / Certifications: Certified Arborist, FL 5488A; Tree Risk Assessment Qualification (ISA); FDEP Certified Erosion and Sediment Control Inspector and Instructor; Certified Manatee Observer; PADI Advanced Open Water, Enriched Air Certified Diver; Certified Landscape Inspector; Certified Green Industries Best Management Practices Instructor; Certified in Advanced Maintenance of Traffic

Years of Experience: 11

Capacity to Serve the City: 35%

Location: Miami

Mr. Freedman is an experienced environmental professional serving public and private clients throughout the State of Florida. He is based out of our Miami office. He specializes in environmental review of transportation and other infrastructure related projects through all phases of the project (planning, design, permitting, construction and post-construction monitoring). Mr. Freedman has extensive experience providing NEPA review during the planning phases of projects and has prepared NEPA reviews for more than 70 FDOT and LAP projects. For design projects, he works closely with design engineers to help avoid impacts to regulated resources such as wetlands, protected species, benthic resources and trees. He also provides a variety of post-design services, including mitigation monitoring, permit compliance and NPDES inspections.

Mr. Freedman provides a wide range of municipal environmental consulting services and has provided plan reviews, landscape inspection, environmental assessments, expert witness, permitting, ordinance development, street tree inventory, canopy assessments, carbon sequestration analysis and wildlife permitting services to municipalities throughout South Florida. He has also conducted numerous studies related to climate change and sea level rise and was involved with the preparation of the Broward County Climate Change Action Plan. Mr. Freedman is an advanced diver with extensive experience conducting benthic resource surveys and is the President Elect of the Florida Urban Forestry Council.

Mr. Freedman has extensive consulting experience in the Florida Keys and understands the various types of habitats and protected resources present. His recent experience includes conducting an arborist assessment for the City of Key West's new City Hall, monitoring coral relocation success on the pilings of various bridges, conducting benthic resources surveys throughout the Keys, providing permitting services for a pedestrian path and bridge in the upper Keys, assessing cleanup efforts associated with fallen debris from bridge construction within coral/seagrass areas and conducting permit compliance monitoring for construction projects adjacent to tropical hardwood hammock and mangrove areas.

Maria Paituvi, PE, Project Engineer

Education: B.S., Environmental Engineering Sciences, University of Florida, 2005

Professional Licenses / Certifications: Florida Professional Engineer; License No. 73008; OSHA 40 Hour Hazardous Waste Operations and Emergency Response; Certified FDEP Stormwater, Erosion and Sedimentation Control Inspector No. 27077; OSHA 8-Hour Site Supervisor

Years of Experience: 8

Capacity to Serve the City: 50%

Location: Fort Lauderdale

Ms. Paituvi has over eight years of experience in environmental consulting in South Florida. Her technical experience includes environmental assessment and remediation of contaminated sites, as well as industrial wastewater permitting. Ms. Paituvi has actively collaborated on site investigations, environmental assessments, and remedial action planning and design. She specializes in assessing and managing contaminated site risks as part of redevelopment projects and works with property owners to minimize the impact that contamination has on design and construction. Ms. Paituvi is also very well versed in implementation of remedial actions that are cost effective and minimally disruptive to communities and routine site activities. She has been very successful in working with regulatory agencies to obtain site closures by managing risks instead of implementing costly remediation. Ms. Paituvi is also experienced in regulatory compliance and preparing SPCC plans. As part of her project management involvement, she is responsible for cost estimating and tracking, task scheduling and timely completion of project events. From the various and numerous projects completed, she has gained practical experience in environmental field investigation, monitoring and sampling tasks, construction planning and oversight, remediation system installation and operation, and regulatory compliance. Ms. Paituvi regularly works with several of our municipal clients including the Village of Islands, Islamorada, and the Cities of Miami Beach, North Miami Beach and Fort Lauderdale, and the Pompano Beach CRA. As part of her project management involvement, she is responsible for cost estimating and tracking, task scheduling and timely completion of project events. She manages several projects under E Sciences master services agreement with Islamorada.

Geoffrey Trent VanAllen, EI, Staff Engineer

Education: B.S., Civil Engineering, Florida Atlantic University, 2009

Professional Licenses / Certifications: Engineer in Training, Florida License No. 1100013901; Certified Residential Contractor, Florida License Number CRC1330302; 40-Hour HAZWOPER Training Certification, with 8-Hour Refresher and Respirator Fit Test; UF TREEO Course - Introduction to DEP SOPs for Sampling and Calibration & Verification of Field-Testing Meters

Years of Experience: 5

Capacity to Serve the City: 60%

Location: Fort Lauderdale

Mr. VanAllen has over five years of experience in the environmental regulatory and consulting industry in South Florida. His technical experience includes site assessment and remediation of contaminated sites, conducting Phase I and II ESAs, preparing industrial wastewater permit applications, and inspecting permitted facilities to ensure compliance with local and state environmental regulations. He has also been working on E Sciences' FDOT District Four NPDES contract providing stormwater inspections and drainage evaluations, and the City of Melbourne's Stormwater Quality Master Plan. Mr. VanAllen conducts stormwater reviews on behalf of Islamorada. He is responsible for collecting soil and groundwater samples; conducting environmental field investigations; evaluating facilities' environmental compliance; completing reports, tables, and figures; and reporting on various groundwater and soil quality issues. Mr. VanAllen conducted monitoring at the Turkey Point Power Plant to ensure construction compliance with environmental

permit conditions. Prior to joining E Sciences, Mr. VanAllen was a compliance inspector for Miami-Dade County's Department of Environmental Resources Management (now known as Department of Regulatory and Economic Resources). He has performed numerous Phase I and II ESAs, conducted historical reviews, provided installation oversight and sample collection on numerous wells, and has worked on remediation implementation such as source removals, bioremediation and remediation through chemical reduction.

E Sciences' key staff are supported by an E Sciences staff of over 40 engineers, scientists and planners, and our subconsultants who are also available to serve the City. Thirteen of these staff members are located in the Miami and Fort Lauderdale Offices. Resumes of these key individuals and other select E Sciences staff members are included at the end of this section.

The following key individuals supplement our team as subconsultants.

Allen E. Perez, P.E., President

Perez Engineering & Development, Inc.

Education: B.S., Civil Engineering, University of South Florida, 1992

Professional Licenses / Certifications: Florida Professional Engineer License No. 51468

Years of Experience: 20+

Capacity to Serve the City: 25%

Location: Key West

Mr. Perez has more than 20 years of experience in engineering and project management. His experience includes the management and technical preparation of master plans, construction documents, permit submittals, and construction services for a wide variety of development activity. Mr. Perez has been providing professional engineering services, from his Key West office, for projects throughout the Florida Keys for 14 years. He has assisted the City with many projects under Perez's contracts for providing general stormwater and wastewater engineering services and professional engineering consulting services. He has also provided services to Monroe County through his General Airport Consultant contract and agreement for Architectural/Engineering Services for small projects.

Phillip A. Frank, Ph.D., Vice President

Terramar Environmental Services, Inc.

Education: Ph.D. Wildlife Ecology, University of Florida, Gainesville, 1996; M.S. Zoology, University of South Florida, Tampa, 1990; B.S. Biology, Indiana University, Bloomington, 1984

Years of Experience: 22

Capacity to Serve the City: 25%

Location: Sugarloaf Key

Dr. Frank is the Vice President for field operations for Terramar and has been providing environmental services in the Keys for over 20 years. He is considered an expert in the field of wildlife ecology with an emphasis of habitat delineation, threatened and endangered species occurrence and protected resource identification. Dr. Frank conducts coral assessment and relocation projects, wetland mitigation and restoration projects and habitat mapping throughout the Keys. He is well versed in environmental permitting and is well-respected by the regulatory agencies. Dr. Frank has been published in technical publications on wildlife ecology more than two dozen times. Several of those publications have been related to Key deer and other local species such as the Lower Keys marsh rabbits and the Largo woodrat.

**Rowena Garcia, President and Principal Scientist
Terramar Environmental Services, Inc.**

Education: M.S. Marine Biology, Nova Southeastern University, 1996; B.S. Marine Biology, University of San Carlos, 1988

Years of Experience: 22

Capacity to Serve the City: 25%

Location: Sugarloaf Key

Ms. Garcia has been working in the Florida Keys since 1992 when she was located in the Marathon Field Office of the FDEP where she conducted development review of projects in marine, wetland and terrestrial habitats in the Keys. She was also engaged in reviewing and evaluating environmental impacts for development projects in the Keys for consistency with regulatory agency permitting requirements and state and local comprehensive plans. As a consultant she conducts permitting, wetland delineation, land use consultations and marine surveys.

**Benjamin S. Essien, P.E., Principal Engineer
EBS Engineering, Inc.**

Education: BS, Mechanical Engineering, University of Benin, Benin City, Nigeria 1980

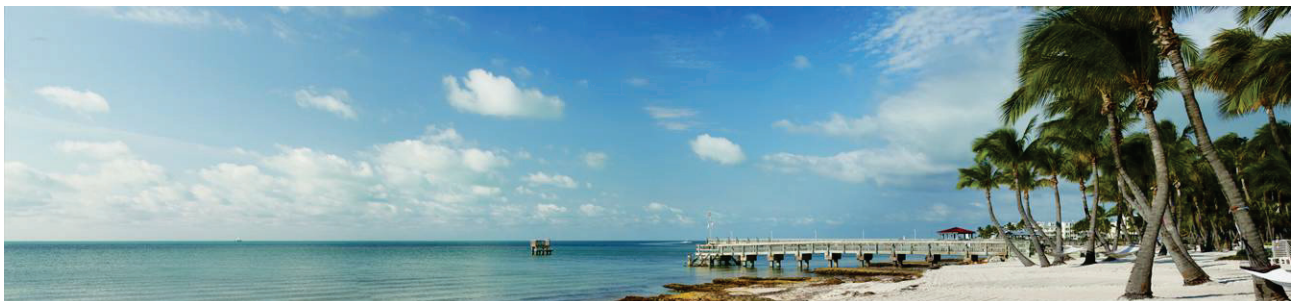
Professional Licenses / Certifications: Florida Professional Engineer; License No. 47176; Florida Licensed Asbestos Consultant License No. EA0000079 , EPA Asbestos Building Inspector & Management Planner; EPA Asbestos Contractor/Supervisor; EPA Lead-based Paint Risk Assessor & Inspector; AHERA Asbestos Project Designer; EPA Radon Measurement Specialist; Florida Licensed Mold Assessor License No. MRSA115; OSHA 40 Hour Hazardous Waste Operations and Emergency Response; OSHA 8-Hour Site Supervisor

Years of Experience: 31

Capacity to Serve the City: 50%

Location: Miami

Mr. Essien, a registered Professional Engineer in the State of Florida, has over 31 years of experience of engineering design, project management, environmental consulting and construction. He has served as project manager and/or principal-in-charge for numerous projects including design, construction and inspection of major industrial and public facilities. He is a licensed Florida asbestos consultant, certified lead-based paint risk assessor and radon measurement specialist with extensive experience in handling all asbestos, lead-based paint, radon and other indoor air quality testing/consulting issues and remediation. He has a wealth of experience in conducting industrial hygiene services in South Florida. He has conducted numerous asbestos surveys and abatements in high profile and complex locations such as the Miami International Airport. Mr. Essien has managed similar contracts for cities (such as the City of Miami) where he and EBS have conducted industrial hygiene related work as well as Phase I and Phase II ESAs and other contamination related services.



Timothy K. Blankenship, P.E. Coastal/Waterfront Engineer
Coastal Systems International

Education: M.S, Coastal Engineering, Old Dominion University, Norfolk, Virginia, 1994; B.S., Civil Engineering, Old Dominion University, Norfolk, Virginia, 1992

Professional Licenses / Certifications: Florida Professional Engineer; License No. 55910

Years of Experience: 15

Capacity to Serve the City: 20%

Location: Miami

Mr. Blankenship has over 15 years of experience in the civil and coastal engineering fields. His broad range of experience includes projects involving waterfront facility assessment and rehabilitation design; bridge engineering projects involving structural assessment, structural design and hydraulic analysis/design; land development projects including drainage design and environmental permitting; and construction phase services for several civil projects.

Mr. Blankenship is experienced in all facets of coastal engineering including the planning, design and monitoring of shore protection projects. Projects have included beach nourishment and coastal structures such as jetties, breakwaters and groynes. He has conducted numerical modeling studies of coastal processes along shorelines as well as for the design of marinas and harbors. He has also planned and conducted field investigations consisting of hydrographic surveys, oceanographic data collection, and underwater inspections.

Mr. Blankenship's Keys-specific experience includes shoreline improvement feasibility studies (with hydrographic surveys and aerial photogrammetric mapping) for Curry Hammock, Long Key, Bahia Honda, and Ft. Zachary Taylor State Parks; sand evaluation study for beach nourishment included in the 1988 FDEP Strategic Management Plan for the Florida Keys; coastal engineering design and permitting for breakwaters, jetties and beach fill for shoreline protection at Fort Zachary Taylor State Park; coastal and structural design of the beach pier at Reach Resort in Key West; and an engineering assessment/surveys and emergency environmental permitting for shoreline stabilization and marine structures after hurricane damage for Sunset Key in Key West.

Alex E. Sanchez, P.E. Senior Project Manager
Cherokee Enterprises, Inc.

Education: B.S., Environmental Engineering, University of Florida

Professional Licenses / Certifications: Florida Professional Engineer; License No. 54637; LP Gas Installer "A" Florida License No. 29026; Pollutant Storage Systems Contractor, Florida License No. PCC056813; General Contractor, Florida License No. CGC1505536; Underground & Excavation Contractor License No. CUC1224968

Years of Experience: 18

Capacity to Serve the City: 50%

Location: Miami Lakes

Mr. Sanchez has 18 years of experience in design, construction and construction management with a focus in fuel systems and civil/heavy construction. He is responsible for construction operations at CEI. Mr. Sanchez is a Professional Engineer, certified LP Gas Installer "A", Pollutant Storage System Contractor, General Contractor, Underground & Excavation Contractor in the State of Florida and a Public Utilities Fuel Distribution Contractor in the State of North Carolina. His qualifications and experience allow him to perform the repair, modification, removal or installation of virtually all types of underground and aboveground fuel (liquid and gaseous) systems, and other utilities.

Mr. Sanchez has a proven track record of management of Design and Construction projects. He has considerable experience working on projects for municipalities and the federal government, as well as other Public and Private Entities, such as Coca Cola, Verizon, and Cordis. In addition, Mr. Sanchez has an exceptional ability to provide solutions and meet high demands on difficult and sensitive federal contracts.

Some additional areas of Mr. Sanchez' expertise include fueling equipment specification, pumping systems design and installation, tank removals, tank closures, tank testing, regulatory agency liaisons, oil/water separator systems maintenance and installation, wash water recycle systems repair and modification, civil site work, drainage installation, water and sewer line installation, petroleum contamination remediation; and contamination assessment reports.

Detailed information on our subconsultant's staff is included in their resumes at the end of this section.

Information about our Partners

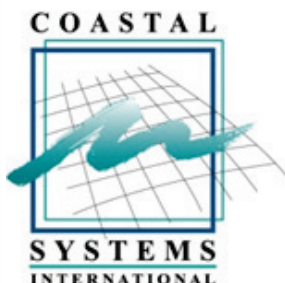
Perez Engineering & Development, Inc. provides professional civil engineering services in the public, industrial, military, and private sectors. Based in Key West, Florida, their staff has a proven record in successfully managing and completing complex multi-discipline projects throughout Florida and the Caribbean. The firm's approach to project planning and management controls both capital costs and engineering fees, and demonstrates an ability to meet both schedule and budget requirements. The firm's experience includes the management and technical preparation of master plans, construction documents, permit submittals, and construction services for a wide variety of development activity. Perez Engineering and Development has been providing professional engineering services from their Key West office since 1999.



As part of the E Sciences team, Perez Engineering & Development, Inc. will be providing additional local knowledge, and responsive on-site project representation. E Sciences and Perez have collaborated on Keys projects for many years.

Terramar Environmental Services, Inc. is an environmental consulting firm located on Sugarloaf Key. Terramar specializes in wildlife and endangered species conflict resolution, terrestrial and marine habitat restoration, and public/private conservation policy and land use planning. Terramar conducts all of the ecological services related to environmental permitting. Terramar is a Minority-owned Florida corporation, and is licensed and insured in Monroe County.

As part of the E Sciences team, Terramar will provide ecological and permitting support services as well as additional local knowledge and responsive on-site project representation. E Sciences and Terramar personnel have worked together on Keys projects, on different but complimentary teams, for many years.



Coastal Systems International, Inc. (Coastal Systems) has an established reputation for planning effective strategies and delivering complex projects in coastal, marine and other waterfront environments. For over 20 years, Coastal Systems has helped clients realize their vision by engineering and securing environmental permits for cost-effective solutions relative to mooring fields, marinas, beaches, coastal structures, environmental/ecosystem enhancement and restoration, streetscapes, public parks and open spaces, and other specialized projects. Our firm specializes in the design of engineered waterfront environments.

Coastal Systems has also provided public clients with recommendations for planning and design standards in marine and waterfront areas to allow appropriate consideration for area-specific issues such as mooring field site selection, endangered species protection, riparian rights, navigational safety, and flood and coastal storm vulnerability. They have amassed significant experience in completing projects with unique designs, complicated environmental permitting frameworks, and on those requiring construction under challenging conditions. Marine structures are engineered with a balance of longevity, function, and value with a focus on creative design alternatives analysis, open client communication to confirm priorities, application of experience-based engineering practices, and quality control.

Coastal Systems has also worked with many public clients to enhance access to waterfront areas and the public experience in these special environments. These include shoreline stabilization and beautification projects using structural and vegetated design solutions, pedestrian trails and transportation connections, public piers and viewing platforms and kayak launch areas. Special considerations are given to preservation of natural, historic, and cultural resources when appropriate, as well as providing amenities for a variety of user groups such as water-based site approaches for mariners, users with disabilities, youth, and senior citizens.

As part of the E Sciences team, Coastal Systems will be providing comprehensive coastal engineering, design, surveying and permitting support services. They will also provide services related to contract specifications, preparing bid and proposal documents, assisting the City with technical review and ranking to attain qualified contractors, construction administration and owner representation services on coastal-related projects including docks, marinas, seawalls, bridges, erosion control and beach design/re-nourishment. E Sciences and CSI personnel have collaborated professionally for many years and are currently working together on a project for the Port of Miami.

EBS was founded in 1994 to provide high quality and cost effective engineering and environmental services to benefit clients with time and budget-driven projects. EBS is a growing minority engineering firm with certification as Minority and Disadvantaged Business Enterprise. EBS' staff is comprised of experienced and qualified professionals who have the full understanding of current federal, state and local laws and regulations, in their individual specialties. They bring a specific wealth of knowledge of industrial hygiene services and the required licensure to provide these services. Since their inception, they have successfully completed over 500 projects ranging in size/value from a few thousand dollars to over \$2,000,000. They have also successfully completed some of the most challenging and complex environmental projects in the state of Florida. They maintain a high record of repeat business from clients over the years that serve as a testament to their high performance standards, technical excellence and professionalism. As part of the E Sciences team, EBS will be providing industrial hygiene services. E Sciences and EBS have teamed together and personnel in both our firms have worked together for many years. In fact, Ms. Locke, our proposed project manager, and Mr. Essien, of EBS, shared an office when they were Staff Engineers (many years ago).

EBS ENGINEERING, INC.



CEI is a privately held company, focused on providing world class service and solutions to their clients' environmental issues. The firm is 100% minority-owned, and is certified as a Small Disadvantaged Business under the U.S. Small Business Administration guidelines.

CEI is a fully licensed environmental engineering/geology and contracting firm with 45 employees, consisting of engineers (including professional engineers), professional geologists, field technicians, construction supervisors, construction managers and administrative and support staff.

CEI fills the gap in the environmental engineering and construction services market as a company that provides its clients the best value for every dollar spent on pollutant storage system, civil/heavy construction, environmental remediation, facilities management and compliance, and construction management and support. CEI has the design-build capability in the bulk fueling and hydrant piping system field.

As part of the E Sciences team, CEI will be providing storage tank and remediation construction services. E Sciences and CEI have worked together on a variety of projects. We are currently working together on a project for Broward County Office of Environmental Services where we are conducting a storage tank pipe/sump upgrade and source removal. CEI is conducting the construction and E Sciences is performing the testing, oversight, and reporting.

E Sciences will also subcontract laboratories, drillers, surveyors, etc. as necessary to fulfill the project needs.

Location

E Sciences will provide environmental engineering consulting services from the following locations:

Miami

111 NE 1st Street, Suite 906
Miami, Florida 33132
Tel. (786) 517-2632

Fort Lauderdale

224 SE 9th Street
Fort Lauderdale, Florida 33316
Tel. (954) 484-8500

Orlando

34 East Pine Street
Orlando, Florida 32801
Tel. (407) 481-9006





Ms. Locke has been providing professional environmental and engineering consulting services for over 26 years. During her career, she has worked in many facets of environmental consulting including environmental audits, contamination assessment and remediation, stormwater design, sanitary sewer planning, environmental permitting, climate change impact evaluation, grant assistance, Brownfields, community involvement, and training. Ms. Locke has provided litigation support for the Florida Department of Transportation (FDOT), Miami-Dade Aviation Department, Barry University and private entities. She also serves as E Sciences' Corporate Quality Assurance Officer.

Ms. Locke previously managed an environmental department for a large engineering firm in Miami-Dade County for over six years. She is a former President of the South Florida Association of Environmental Professionals and served as a commission-appointee to the Broward County Brownfields Redevelopment Task Force and the City of Fort Lauderdale Community Advisory Board. Ms. Locke is a Board Member for the Smart Growth Partnership and is their liaison to the Broward County Metropolitan Planning Organization. She is also the current President-Elect for the Florida Brownfields Association and served as Co-Chair for the FBA's 16th annual conference.

Project Experience

General Environmental Engineering Services, City of Miami Beach, Miami-Dade County, Florida — Ms. Locke provides on-going services to the Support the City of Miami Beach under E Sciences' general environmental engineering contract. Under this contract, Ms. Locke recently completed a citywide sea level rise evaluation. She was also the engineer of record for Spill Prevention Control and Countermeasure Plans (SPCCs) for twelve facilities throughout Miami Beach, and for engineering controls being negotiated with Miami-Dade County for regulatory closure of a contaminated solid waste facility.

Continuing Contract for Environmental Engineering Services, City of Pompano Beach Pompano Beach Community Redevelopment Agency (CRA), Broward County, Florida — Ms. Locke is the contract manager for E Sciences' continuing services contract with the Pompano Beach CRA. Through this contract, E Sciences has conducted Phase I and II Environmental Site Assessments for several parcels in preparation for the CRA's redevelopment planning. Ms. Locke has worked with the CRA to consider options on how to safely manage construction on a solid waste disposal site and is preparing has prepared environmental documentation to satisfy National Environmental Policy (NEPA) requirements on a federally funded Local Agency Program (LAP) project. E Sciences also evaluated the suitability of three vacant, CRA-owned parcels for use as community garden for the local school. The community garden will be used to teach children about agriculture and healthy food choices. Vegetables grown on these lots will be used to provide fresh vegetables for families and children in the community. Under this contract E Sciences prepared environmental information and documentation to satisfy Health Resources and Services Administration grant application requirements. The project was conducted to support the potential redevelopment of CRA parcels with a much needed community health care facility. The documentation was required for the grant applicant to comply with the NEPA

Expert Witness, Barry University School of Law, Manatee County, Florida — Ms. Locke provided expert witness services in support of an administrative hearing for a complex case. The site is a chlorinated solvent impacted area that has affected the drinking water supply and several hydrogeologic strata in an Environmental Justice community. Ms. Locke testified and provided opinions as to the adequacy of assessment activities to characterize the extent and nature of contamination and the exposure pathways. Services included development of the strategy for the technical challenge, deposition, expert testimony and rebuttal.

Sistrunk Boulevard Streetscape and Enhancement, City of Fort Lauderdale CRA, Broward County, Florida — Originally slated as a stimulus project where funds were being disbursed through FDOT, Ms. Locke conducted a "Level 2" assessment of a 1.25-mile corridor streetscape enhancement project located in the heart of the City of Fort Lauderdale CRA. Testing included

Education

B.S. Materials Science and Engineering,
University of Florida, 1988

Professional Licenses / Certifications

Professional Engineer: FL-58676

LEED AP Neighborhood Development

Certified FDEP Stormwater, Erosion and
Sedimentation Control Inspector and
Instructor

OSHA 40 Hour HAZWOPER / 8 Hour Site
Supervisor

NAUI/PADI Advanced Open Water Diver

Years of Experience

26

Maintenance of Traffic, private utility location and collection of 36 soil and groundwater samples for laboratory analysis. Data was compiled and reported, and environmental notes/bid specification language was developed for bidding purposes. Ms. Locke also engaged the CRA in avoidance and minimization considerations and assisted the CRA with managing risks associated with environmental issues during construction.

General Environmental Engineering Services, City of North Miami Beach, Miami-Dade County, Florida — Ms. Locke provides on-going environmental support to the City of North Miami Beach under E Sciences' general environmental engineering services contract. She was the engineer of record for the City's largest environmental cleanup project, Taylor Park, and has conducted several Phase I Environmental Site Assessments (ESAs) for the City. Ms. Locke held community meetings and has presented at CRA and City Council meetings. She is currently leading E Sciences in the development of a stormwater master plan for the City.

Taylor Park, City of North Miami Beach, Miami-Dade County, Florida — Taylor Park has been slated for redevelopment since 1999, when the Florida Department of Environmental Protection (FDEP) had their Brownfields contractor conduct a Brownfields Assessment of the site. The assessment revealed metals and petroleum in the soil and metals in the groundwater. In 2005, assessment activities revealed the presence of buried solid waste on most of the 21.8-acre property. Since that time, environmental issues have continued to restrict and complicate redevelopment efforts for the property. The property is currently occupied by an inactive ball field, an operating daycare facility, vacant land and a lake. Ms. Locke was the engineer of record and project manager for the assessment and conceptual remediation design for the property. The remediation planning was closely coordinated with the community desires, the City's needs and the park master planners to ensure a solution to remedy the environmental issues in conjunction with all of the stakeholder needs. She represented the City in two meetings with residents and other public meetings.

Continuing Contract for General Environmental Engineering Services, City of Fort Lauderdale, Broward County, Florida — Ms. Locke is the contract manager for this continuing services contract for general environmental engineering consulting services for the City of Fort Lauderdale. Services conducted to date include emergency response to address contamination issues discovered during construction of a fire station; Phase I and II ESAs; development of an opinion of post landfill closure costs; endangered species surveys; burrowing owl permitting and relocation; benthic (seagrass) surveys; and indoor air quality / asbestos surveys. Some services have been provided to assist in ensuring environmental compliance with NEPA projects being funded through the US Department of Housing and Urban Development and FDOT.

Environmental Engineering Services, Islamorada, Village of Islands, Monroe County, Florida — For many years, Ms. Locke has provided a range of environmental engineering services for the Village. This has included conducting reviews of designs of stormwater management systems for proposed development projects for compliance with local codes and state regulations; developed a Request for Proposal for the Village to hire their first wastewater facility operator and facilitated the advertisement and selection process. She is currently working with the Village to update and modernize their Technical Stormwater Review Manual.

Wastewater Treatment Alternatives Analysis, Islamorada, Village of Islands, Monroe County, Florida — Ms. Locke prepared a feasibility study and cost comparison to assist Islamorada in deciding whether to treat wastewater on-island or send all or a portion of it to a consolidated plant being constructed in Key Largo for treatment. This study involved a conceptual design and preliminary estimates of capital and operational costs for four on-site wastewater treatment plants as well as a conveyance system to Key Largo's plant. Costs for the various scenarios were compiled and summarized to provide five alternatives for consideration. The findings indicated that the 20-year forecasted O&M cost savings attributed to treatment at a consolidated facility were off-set by capital costs associated with transmission to Key Largo yielding overall costs differentials of less than 5 percent. Additional considerations included construction and hook-up phasing, legal issues, environmental considerations, aesthetics, limited land availability, and legal issues. Ms. Locke presented the findings to and sought input from the public through the Water Quality Improvement Committee and the Village Council on multiple occasions.

Florida Keys Overseas Heritage Trail, Class of Action Determination, Monroe County, Florida — E Sciences provided environmental support to the FDEP Office of Greenways and Trails for the construction of a 106-mile pedestrian bicycle path, built in phases, from Key Largo to Key West. Ms. Locke provided technical review for class of action determination and permitting plan documents developed by E Sciences personnel for the Florida Keys Overseas Heritage Trail.

Arsenic Assessment, Florida Keys Property, Confidential Client, Monroe County, Florida — Ms. Locke was hired as a third party independent to assist in resolution of a responsible party dispute over a contaminated property in the Florida Keys. Ms. Locke conducted testing and provided analytical results to support her client's position that they were not the responsible party for assessment and remediation of the contaminated site.

NW 7th and 9th Avenue Interconnector, City of Fort Lauderdale, Broward County, Florida — Ms. Locke was the project manager for an updated contamination screening and re-evaluation report to satisfy the FDOT and the Federal Highway Administration to obtain funding for this roadway improvement and neighborhood enhancement project. This project is in the heart of the City of Fort Lauderdale's CRA.

Environmental Review and Permitting for Local Agency Program Project for NW 36th Avenue Pedestrian Enhancement Project, Pompano Beach, Florida — Ms. Locke is the senior technical reviewer for conducting an environmental screening memo and environmental permitting for the this FDOT-funded bicycle and pedestrian enhancement project. As part of the review, E Sciences is preparing the environmental notes to be included in the constructability.

Environmental Review for LAP Project for Martin Luther King, Jr. Avenue, Pompano Beach, Florida — Ms. Locke was the project manager for conducting an environmental screening memo for the this FDOT-funded roadway improvement project for the City of Pompano Beach. This project is part of a roadway improvement for a corridor that extends beyond the City's boundaries and is known as the Education Corridor. As part of the review, E Sciences prepared the environmental notes to be included in the constructability plans.

Tank Closure and Assessment, Fort Lauderdale Concrete Batch Plant, Tarmac America — Tarmac America contracted E Sciences to conduct underground storage tank (UST) closure oversight and assessment activities in accordance with regulatory guidelines and requirements. Ms. Locke was the engineer of record for the closure assessment and documentation provided to FDEP. The site was given closure regarding the tank and source removal. E Sciences also successfully made the case that the potential groundwater impacts were linked to historical records and that the site should be incorporated in the state-funded pre-approval cleanup program.

Marina Property, M.A.B.E. Properties, Martin County, Florida — Ms. Locke has provided expert consulting services in support of a dispute between a marina and an adjacent commercial and residential property owner. Ms. Locke's position was centered around an allegation that the adjacent marina property had caused contamination on the commercial/residential property. E Sciences, under court order, entered both properties to collect soil, surface water and sediment samples to develop a comparison of the magnitude of contamination on both sites. Current observations, historical documentation and assessment activities confirmed the marina to be the cause of the contamination.

Private Brownfield Redevelopment, City of Fort Pierce, St. Lucie County, Florida — This project was the first designated Brownfield site in the City of Fort Pierce. This historical dry cleaner was identified during a Phase I ESA for a real estate transaction. Due to the fact that the FDEP "started the clock" for the assessment due date back when the Phase II ESA was conducted, the time frame for submittal of the initial site assessment was shortened by three months. Technologies employed included ColorTech screening, modified active gas assessment techniques, on-site laboratory analysis, direct push drilling and microwells. An interim source removal was conducted to facilitate and accelerate the groundwater remediation. Ms. Locke negotiated an alternative cleanup target level for soils and is currently completing a pilot study using two different technologies for remediating groundwater. Ms. Locke prepared a remedial action plan that incorporated the results of the pilot study and has largely implemented the remediation. Ms. Locke supported the Brownfields designation process by presenting at a neighborhood public meeting and representing the owner at the City Commission meeting when the site was designated.

Broward County Mass Transit Copans Road Facility, Broward County, Florida — Ms. Locke provided environmental oversight and reporting on this project, which is the largest UST system upgrade project in the State of Florida. The project included upgrade of a fueling system with 13 USTs and a combined total volume of 392,000 gallons. The upgrade also included replacement of hundreds of feet of used oil piping within the bus maintenance building. Ms. Locke also negotiated \$50,000 reimbursement funding for the project under the State of Florida's Limited Source Removal Initiative. Prior to the upgrade, the scope included conducting a baseline assessment of the groundwater contaminant concentrations and support the bidding process for the design build project. The baseline assessment was designed to provide justification for state funding for residual petroleum impacts around the USTs and to aid in planning the management of impacted soil and groundwater during the UST replacement. While working on the baseline assessment, a fuel delivery resulted in an off-site diesel fuel discharge. Ms. Locke provided the county with guidance on how to abate the source, reduce potential third party liability, and assisted with negotiating an off-site access agreement. Ms. Locke then conducted a limited contamination assessment to satisfy the regulatory requirements. She continues to work with the FDEP to seek conditional closure for contamination issues identified during the tank upgrade.

Treasure Coast Regional Planning Council Brownfields Assessment and Remediation Services, Florida — Ms. Locke is the contract manager for E Sciences' contract with the Treasure Coast Regional Planning Council (TCRPC) for conducting assessment and remediation services as part of an Environmental Protection Agency (EPA) Brownfield Assessment Grant. This contract focuses on assessment and remediation of Brownfields. Projects Ms. Locke has completed include Phase I ESAs for Ballet Florida and the Seaboard Train Station, both located within the City of West Palm Beach's CRA. Ms. Locke has also completed a Phase I and II ESAs, a full site assessment and soil management plan for the former West Palm Beach City Hall.

Broward County Mass Transit Ravenswood Facility, Broward County, Florida — Ms. Locke was the engineer of record for an extensive soil and groundwater assessment conducted at this site to accompany a State Rehabilitation Funding Allocation (SRFA) application submitted to the FDEP proposing a funding allocation between the County and State. During source removal activities being administered under the Petroleum Preapproval Program, an ineligible discharge of petroleum product was observed seeping into the excavation. The FDEP ordered BCMT to conduct a site assessment and provided an opportunity to negotiate a SRFA agreement. The source of the discharge appeared to be the stormwater drainage system near the bus maintenance and bus wash areas. In order to conduct a proper assessment, a thorough understanding of the underground utilities was the first step. Using geophysical techniques (electromagnetic survey, ground penetrating radar), Sunshine One Call utility locating service, dye tests, historic plans reviews, regulatory file review and interviews with past employees, E Sciences developed a detailed map that showed the connectivity between the various oil water separators, holding tanks, stormwater systems, floor drains and the bus wash. A comprehensive sampling regime was necessary to properly assess the site due to the numerous suspect source areas and because the suspected product was waste oil. More than 50 soil samples and 18 groundwater samples were analyzed for various potential contaminants of concern. Fluorescent lighting to evaluate the presence of heavy petroleum was used as a field screening tool to complement the organic vapor analyzer readings to assist in the selection of soil samples for laboratory analysis. Areas with elevated total recoverable petroleum hydrocarbons (TRPH) were evaluated using fractionation in order to more accurately define soils exceeding cleanup target levels (CTLs) and alternative leachability CTLs were developed using the FDEP Technical Report: *Development of Cleanup Target Levels for Chapter 62-777*. Other complicating factors included the need to permit drilling in the FDOT/CSX right of way, resolve outstanding utility easement property issues and coordinate with a concurrent stormwater drainage design/permitting project.

Las Olas Riverhouse Environmental Violation Penalty Negotiation, Broward County, Florida — Ms. Locke facilitated penalty negotiation assessed by Broward County associated with discharges of turbid dewatering effluent from a construction site into Fort Lauderdale's New River, as well as implementation of corrective actions for future construction. Review of technical, regulatory and policy information, coupled with a benthic survey of the area were the basis of the project. The benthic survey of that area and two control study areas in the New River revealed no discernable changes to the benthic communities as a result of the turbid discharges. Ms. Locke introduced innovative technologies and training to key construction personnel to prepare the owner to manage their discharges responsibly and within regulatory compliance for future dewatering activities. With this information, Ms. Locke negotiated a reduced penalty, without a formal hearing, and educated Broward County in the use of alternative technologies to offer to other contractors who had future projects that may impact the New River.

North Regional Wastewater Treatment Plant Storage Tank Damage Evaluation and Contamination Assessment, City of Pompano Beach, Broward County, Florida— The Broward County Office of Environmental Services contracted with E Sciences to assist them with a cause of leak study, source removal activities to abate further impacts, and a site assessment for a leaking 10,000 gallon petroleum UST at the North Regional Wastewater Treatment Plant. Ms. Locke managed this project where a UST had been damaged during overflow. The tank is part of a tank farm that services the plant's emergency generators. An internal tank inspection revealed the cause of the discharge to be filling the fiberglass tank under pressure. A Site Assessment Report was prepared in two months.

Florida Department of Transportation Petroleum Preapproval Program Site Assessment and Remediation, Estate of Richard E. Thoni, Multiple Sites throughout Florida — E Sciences was designated as the contractor for multiple sites that are being administered through the FDEP Petroleum Preapproval Program. These properties are former Thoni gasoline stations that are currently vacant properties that were slated for sale or redevelopment. Ms. Locke expedited the assessment and cleanup activities to facilitate sale and redevelopment. She also assisted with the sale of the properties, such as remediation cost estimation planning and supporting the real estate personnel in communicating the environmental status of these properties to potential buyers/developers. Remediation activities are focused on implementing the most cost effective methods while expediting cleanup so that these underutilized properties may be sold and redeveloped. Remediation technologies for these projects include remediation by oxygen release compound, air sparging and soil vapor extraction.

Bonnie's Ravenswood Marina Site and Sediment Assessments and Corrective Action Plan, City of Dania Beach, Broward County, Florida — In response to a Consent Order with the FDEP, Ms. Locke provided technical oversight of contamination assessment and development of a dredging plan for this marina, located on the Dania Cut-off Canal. This project included sampling and analysis of soil, groundwater and sediment. Sediment samples exceeded Sediment Quality Assessment Guidelines and required dredging.

Select Presentations

- Water Symposium South Florida Association of Environmental Professionals (2013) *Integrating Engineering and Environmental Strategies to Mitigate for, and adapt to, Climate Change Impacts to Coastal Urban Communities*
- Florida Bar Environmental Law and Land Use Section (2011), *Situational Ethics: Can the Circumstance Affect the Ethical Responsibilities of Environmental Attorneys and Professionals?*
- South Florida Brownfields Partnership (2011), *Incorporating Contamination Considerations into Planning and Redevelopment*
- Florida Brownfields Association Conference (2010), *Brownfields and Green Development-Incorporating Green Concepts into Remediation and Redevelopment*
- Florida Brownfields Association Conference (2009), *Federal and State Partnerships*
- Florida Brownfields Association Conference-Brownfields on the Beach, *Pathway to Redevelopment: Stepping into the Future (2008) Additional Economic Opportunities for Brownfield Sites*
- South Florida Association of Environmental Professionals' Clean and Green! Pollution Prevention, Assessment, and Remediation Conference (2008) *Contamination Assessments*
- Attorney's Real Estate Council (2007), *All Appropriate Inquiry, the "New" Standard*
- Florida Chamber Growth Management Course (2005), *Orlando, Negotiating Civil Penalties*
- Commercial Real Estate Women (2003), Presentation to Girl Scouts on *Environmental Engineering as a Career Choice for Women*
- Sixth Annual DERM Environmental Essentials (1999), Miami, *How to Get the Most From Your Environmental Consultant*
- 1997 *Due Diligence at Dawn, The Devil is in the Details* Fort Lauderdale, Panel Discussion



In her over 22 years as an environmental consultant, Ms. Gertenbach has always striven to provide excellent quality and value to her clients. She began her career as a staff geologist for a worldwide firm working on US Fish and Wildlife (USFWS) and Department of Defense sites throughout the United States and Puerto Rico, performing assessments involving a wide range of contaminants, installing hundreds of wells, assisting in geotechnical investigations, conducting water quality studies and hydrogeological investigations, and leading multiple teams of scientists and engineers in multi-year investigations. She expanded her expertise to include permitting, and benthic and wildlife surveys. She has designed, installed, developed and sampled of hundreds of groundwater monitoring wells; conducted numerous contamination assessments (Phase I and II) including for properties that consider both ecological and human health risks; has provided removal/installation, oversight and report preparation for underground storage tank (UST)/aboveground storage tank (AST) sites; performed extensive environmental assessment sampling, analysis, monitoring and disposal and documentation of contaminated and/or hazardous substances; provided extensive interpretation, communication and recommendations to staff and clients of assessment results; and prepared, reviewed, and/or provided

QA/QC of numerous ecological, environmental and water quality documents. Since moving to South Florida 17 years ago, she has concentrated on water quality, transportation, permitting and environmental projects for public clients throughout southeast Florida, from Monroe County to the Treasure Coast, including numerous projects throughout the Keys and in Key West.

Project Experience

Big Coppitt Stormwater/Xeriscape Engineering Services, Monroe County, Florida — As project manager, Ms. Gertenbach provided Monroe County supplemental design for this FDOT road-widening project that was going to impact an existing bike path. Monroe County wanted to use the opportunity to correct design flaws in the path that had become apparent over the years. However, due to budget constraints, FDOT was not able to design the path with the upgrades that the County identified, such as reducing the width of the path and incorporating meanders. E Sciences and Perez Engineering coordinated with the FDOT design engineers throughout the design process, revising the bike path and landscaping as changes were made to the stormwater design. Monroe County's desired upgrades were successfully incorporated into the plans, and were included in the final construction.

Key West CES, Transmission System Construction Oversight, Lower Keys, Florida — Ms. Gertenbach provided permit compliance monitoring, project management and technical support to CES during construction of an electrical transmission system that traversed wetlands, mangrove fringe and seagrass beds in the Lower Keys. Tasks included collaboration with the USACE and FDEP; construction oversight and documentation that included monitoring of wetland impact areas prior to, during, and following construction; working with construction crews to reduce wetland impacts at construction and staging areas; ensuring all permit conditions were met; identifying exotic vegetation for maintenance crews; and producing monitoring reports for FDEP. No violation occurred though the project entailed extensive construction in sensitive communities.

Miscellaneous Permitting, FDOT District Six, Florida — As project manager, Ms. Gertenbach provided permit preparation and associated support for various projects and permit applications including Department of Regulatory and Economic Resources (DERM) Class I and Class IV permits, environmental resource permits, benthic surveys, manatee observations, wetland delineations, preliminary wetlands and environmental assessments of potential greenways, and development of a permit tracking system.

Education

B.S., Geology, West Georgia College, 1991,
Magna Cum Laude

Professional Licenses / Certifications

Professional Geologist:

FL-2037, GA-1444

LEED Green Associate

PADI – Advanced Open Water Diver

OSHA 40 Hour HAZWOPER/8-Hour Site
Supervisor

Certified FDEP Stormwater, Erosion &
Sedimentation Control Inspector #3262 and
Instructor #120

Years of Experience

22

Geologic Analysis for Beach Nourishment, Collier County, Florida — Ms. Gertenbach performed a geologic analysis of the sand used for a beach nourishment project in Collier County. Her report was used by the County's consultant to evaluate if the materials used met the project criteria.

Miami-Dade County Public Schools (DCPS), Miami-Dade County, Florida — Ms. Gertenbach provided project management and technical support to DCPS Capital Improvements group on various issues related primarily to construction of new schools, but also additions to existing schools. Projects included Phase I and II Environmental Site Assessments (ESAs); wetlands delineations; threatened and endangered species surveys including coordination with USFWS and DERM regarding federally protected plant and animal species; archaeological assessments; prepared permit applications and obtained dredge and fill permits from county, state and federal agencies; tree permits from county agency; Federal Aviation Administration (FAA) permits for cranes and communication towers in flight zones; negotiations with permitting agencies regarding endangered lands, with county parks department for collaborative use of adjacent park property for ball fields, and with nearby defense department facilities (Army, Air Force, Coast Guard) regarding communication towers; underground utility surveys; and geotechnical investigations.

Resource Conservation and Recovery Act (RCRA)/ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Assessments, Various Locations — Ms. Gertenbach performed and managed numerous assessments for federal agencies throughout the United States for large-scale projects involving multiple task orders and sites. Experience includes monitoring well system design, installation oversight and development; hydrogeological investigations and aquifer analyses; supervision of multiple teams and subcontractors, sometimes at facilities of over 10,000 acres with multiple sites; weekly meetings/updates with clients (including on multi-year projects); public outreach meetings; development and implementation of health and safety plans and QA/QC plans; sample collection of a variety of parameters [ex: metals, pesticides/herbicides, explosives, nutrients, volatile organic carbons (VOCs), solvents, polychlorinated biphenyls (PCBs), nitrates/nitrites and sulfates] from a variety of media (soil, sediments, surface water, groundwater); macro-invertebrate surveys; wildlife assessments (species counts, effects of various contaminants on indicator species); GIS database development; and report preparation.

Sea Level Rise Study, City of Miami Beach, Miami-Dade County, Florida — E Sciences was contracted by the City of Miami Beach to monitor groundwater elevations and salinity at six monitoring stations. The groundwater elevations were compared to tidal conditions to evaluate the correlation between fluctuations in mean tide and mean high tide. This information was used to anticipate the effects of sea level rise on the City's infrastructure. Ms. Gertenbach provided quality assurance and technical support.

Indian Key Fill Bike Trail, Islamorada, Florida — As project manager for this project, Ms. Gertenbach provided management and technical support for a Stormwater Demonstration Project/bicycle path upgrade for Islamorada. Services included construction engineering inspections and assistance with negotiations with SFWMD to obtain permit modification for changes in design mid-stream; and developing a fast-track mitigation plan for contractor to minimize impacts to adjacent wetlands.

General Environmental Coordination & Support for Florida Keys Overseas Heritage Trail, Monroe County, Florida — As project manager, Ms. Gertenbach provided environmental coordination and technical support to FDEP for permits, mitigation, and coordination with SFWMD, FDOT and local municipalities involved with the construction of the 106-mile pedestrian-bicycle path to be completed from Key Largo to Key West utilizing 23 of the historic Flagler Railroad Bridges. Coordination included providing NEPA documentation to FDOT for each for each segment.

Land Acquisition Risk Assessment Services, Florida — As project manager, Ms. Gertenbach provided risk assessment services to the South Florida Water Management District (SFWMD) in support of land acquisition for Comprehensive Everglades Restoration Plan (CERP). Included supervision of UST/AST removals/replacements and assessments, site history reviews, Phase I and II ESAs, and remediation. Because the parcels being assessed would be used for restoration projects, the assessments included ecological as well as human health considerations. Sites included illegal dumps, agricultural land, and privately held parcels.

Monroe County Residential Canal Inventory and Assessment, Monroe County, Florida — As project manager, Ms. Gertenbach lead a team that developed a comprehensive GIS database of residential canals in Monroe County, which required creating hundreds of polygons and developing a list of attributes to be used to assess water quality and treatment options for canals. The database was used to categorize canals by parameters such as size, depth, configuration, distance from open water, orientation, and land use. The team collected data from, and collaborated with, numerous agencies, municipalities, homeowners and other stakeholders. The categorization was used to recommend various treatment technologies, from simple weed gates to advanced wastewater treatment.

Geologic Analysis for Mote Marine, Summerland Key, Florida — Ms. Gertenbach analyzed limestone samples in support of a federal permit application being submitted by Mote Marine in Summerland Key to use Aquacultured Live Rock for growing corals. Her report provided the geologic verification that the limestone being used for the coral aquaculture site was mined from the Ft. Thompson geologic formation and was distinctly different from limestone found in the Florida Keys.

Seawall Repairs Fleet Management, City of Miami Beach, Miami-Dade County, Florida — Ms. Gertenbach provided quality assurance review of protocol and survey plan of approximately 200 linear feet of seawall prior to repairs at the city's fleet management facility. The survey was conducted using video transects to identify and size coral species attached to the wall to satisfy permitting requirements.

Seminole Tribe Biodiesel Facility SPCC Plan, Broward County, Florida — As a subcontractor, E Sciences provided environmental engineering technical support in preparation of a proposed new, innovative biodiesel facility to be constructed and managed by the Seminole Tribe of Florida. E Sciences reviewed the new regulations for development of a Spill Prevention, Control and Countermeasure (SPCC) Plan in accordance with 40 CFR 112, and the biodiesel plant's preliminary drawings, and provided guidance on applicability and data gaps for successful completion of the SPCC Plan. Ms. Gertenbach provided quality assurance and project management.

Canal Conveyance Capacity Program Survey - As Project Manager, Ms. Gertenbach provided subcontractor oversight for a Canal Conveyance Capacity Program (CCCP) survey conducted on SFWMD South Region canals. The objective of the survey was to perform a visual reconnaissance of over 100 miles of canals to characterize the condition of the banks, levees and associated culverts, and document areas of erosion, shoaling and/or bank instability, bank line encroachment into the SFWMD right-of-way, subsidence, or evidence of seepage.

Little Mud, Big Mud and Blind Creeks Biological Assessment, FDOT District Four, St. Lucie County, Florida — Project manager for a fast-track Endangered Species Biological Assessment/Essential Fish Habitat (ESBA/EFH) Assessment for an FDOT bridge reconstruction project in St. Lucie County. Three bridges on SR A1A, the only north-south road on the barrier island, were heavily damaged during by three back to back hurricanes in 2004. Temporary bridge repairs were made, but new/permanent bridges were needed, and the designs for the new bridges, including the environmental documentation, were accomplished under an accelerated schedule. Services included field identification of protected and managed species and their habitat. Species observed included manatees, seagrasses, and numerous fish and bird species. Findings were compiled in an assessment report in accordance with PD&E study guidelines and Section 7 consultation guidance. Agency coordination included FDOT, National Marine Fisheries Service, the Florida Fish and Wildlife Conservation Commission and the USFWS. All field work, reports and agency concurrence were accomplished in less than six months. The ESBA/EFH Assessment report was accepted by the agencies with no RAI.



Mr. Freedman is an experienced environmental professional serving public and private clients throughout the State of Florida. He is based out of our Miami office. He specializes in environmental review of transportation and other infrastructure related projects through all phases of the project (planning, design, permitting, construction and post-construction monitoring). Mr. Freedman has extensive experience providing NEPA review during the planning phases of projects and has prepared NEPA reviews for more than 70 FDOT and Local Agency Program projects. For design projects, Mr. Freedman works closely with design engineers to help avoid impacts to regulated resources such as wetlands, protected species, benthic resources and trees. He also provides a variety of post-design services, including mitigation monitoring and permit compliance and NPDES inspections.

Mr. Freedman provides a wide range of municipal environmental consulting services and has provided plan review, landscape inspection, environmental assessments, expert witness, permitting, ordinance development, street tree inventory, canopy assessments, carbon sequestration analysis and wildlife permitting services to municipalities throughout south Florida. He has also conducted numerous studies related to climate change and sea level rise and was involved with the preparation of the Broward County Climate Change Action Plan. Mr. Freedman is an advanced diver with extensive experience conducting benthic resource surveys and is the President Elect of the Florida Urban Forestry Council.

Mr. Freedman has extensive consulting experience in the Florida Keys and has understands the various types of habitats and protected resources present. His recent experience includes conducting an arborist assessment for the City of Key West's new City Hall, monitoring coral relocation success on the pilings of various bridges, conducting benthic resources surveys throughout the Keys, providing permitting services for a pedestrian path and bridge in the upper Keys, assessing cleanup efforts associated with fallen debris from bridge construction within coral/seagrass areas and conducting permit compliance monitoring for construction projects adjacent to tropical hardwood hammock and mangrove areas.

Project Experience

City of Key West City Hall Arborist Assessment — The City of Key West is relocating its City Hall facilities to the site of the former Glynn Archer Elementary School at 1300 White Street. In support of landscape and architectural design efforts, Mr. Freedman conducted an assessment of the approximately 65 trees at the site. The purpose was to assess the health and condition of the trees at the site, and to provide recommendations for preservation, transplantation and/or removal and replacement associated with the new design and in accordance with the City's municipal code.

Florida Keys Bridge Inspections, FDOT District Six, Monroe County, Florida — Following bridge reconstruction on three SR 5 bridges, construction debris was observed within sensitive benthic resource areas. This project involved SCUBA diving and inspecting the cleanup efforts of the contractor to remove the debris from the bridge construction. Mr. Freedman assessed three bridges, documented remaining fallen debris, and provided recommendations completing the cleanup.

Monroe County Pedestrian Path, Monroe County, Florida — Mr. Freedman provided permitting support services to Monroe County for a pedestrian path in Key Largo. This project included the design and permitting for the path, which ran adjacent to areas of tropical hardwood hammock, and a pedestrian bridge over Marvin D. Adam's Waterway. During the design phase for this project, Mr. Freedman mapped trees along the corridor and worked with designers to avoid impacting valuable trees, including trees constituting natural areas adjacent to the roadway and individual landscape trees that were likely to provide shade for pedestrians. Where possible, he provided notes to instruct where roots and limbs could be trimmed back to provide access. He also conducted a benthic resources survey within the proposed bridge footprint over the Marvin D. Adam's Waterway. Using SCUBA and a team of divers and structural engineers, Mr. Freedman documented resources for use in acquiring project permits.

Education

M.S., Marine Biology, Nova Southeastern University Oceanographic Center

B.A., Biology, Tufts University

Professional Licenses / Certifications

Certified Arborist, FL 5488A

Tree Risk Assessment Qualification (ISA)

FDEP Certified Erosion and Sediment Control Inspector and Instructor

Certified Manatee Observer

PADI Advanced Open Water, Enriched Air Certified Diver

Certified Landscape Inspector

Certified Green Industries Best Management Practices Instructor

Certified in Advanced Maintenance of Traffic

Years of Experience

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Benthic Resources Survey and Permitting for Conduit under Bear Cut, Miami-Dade County, Florida — Mr. Freedman provided environmental assessment and permitting support for the installation of approximately 2,550 linear feet of conduit located along the ocean side of the Bear Cut Bridge of the Rickenbacker Causeway in Miami-Dade County, Florida. E Sciences conducted a wetland delineation, seagrass survey, benthic habitat survey and delineated extents of mangroves within the project area. E Sciences subsequently worked with the design engineers to develop construction methodologies to minimize resource impacts and thereby minimize permitting requirements. Due to close coordination with agency regulators and design engineers, the project will qualify for a Standard General Environmental Resources Permit from the FDEP. Additionally since the project will avoid impacts to mangroves Miami-Dade County authorization will not be required for the project, saving valuable time and money for the project.

Canopy Analysis, City of Miami Beach, Miami-Dade County, Florida — Mr. Freedman served as the project manager for this canopy analysis project for the City of Miami Beach. Using i-Tree Canopy, he and his team estimated the canopy coverage for the City's urban forest, as well as percentage of available space remaining within the City for additional tree planting. Mr. Freedman developed a one-page brochure for public education documenting the information from the study. The brochure documents the potential environmental service benefit that would be provided if City rights of way were planted out with trees.

Samson Oceanfront Park Coastal Construction Control Line Permitting, Sunny Isles, Florida — The City of Sunny Isles wishes to improve its Samson Oceanfront Park and engaged RJ Behar & Company to design the improvements. E Sciences was brought onto the team to provide the Coastal Construction Control Line permitting for the project. Work included conducting vegetative analysis and mapping for the site and preparing permit applications. Mr. Freedman serves as project manager for this project.

Dune Enhancement and lighting Design and Permitting, City of Dania Beach, Broward County, Florida — For this project, Mr. Freedman designed and permitted enhancements to dunes along Dania Beach's signature beach. This project was initiated due to public safety concerns and became controversial as the project included the removal of a stand of seagrape trees. Mr. Freedman worked closely with FDEP permitting agency staff and sea turtle experts from the FWC, and coordinated with a number of environmental advocacy groups that initially voiced opposition for the project. Through meetings and presentations, he demonstrated the environmental and public safety value of the project and received consensus among the stakeholders. Work for this project included reviewing and making recommendations to make lighting at the beach more sea turtle friendly, designing lighting shields, designing dune landscaping, preparing a sea turtle protection ordinance, construction oversight and post-construction monitoring.

Sea Turtle Protection Lighting Analysis and Ordinance Development, City of Dania Beach, Broward County, Florida — For this project, Mr. Freedman assessed beachfront lighting for general condition and sea turtle friendliness (compliance with Section 62B-55, FAC) and provided recommendations to the City to bring lighting into compliance. He also worked with the City Attorney to develop the City's Sea Turtle Protection Ordinance.

Vizcaya Museum and Gardens, Design, Permitting and Construction Administration, Miami-Dade County, Florida — This project involved a multi-disciplinary landscape architecture and environmental restoration plan for the waterways and tidal pool within the museum's property, which balanced ecological function with creative landscape aesthetics, recreational functions and values, and improvements to water quality, and planting designs based on historic flora inventories, including mangroves, native hardwood hammock and coastal scrub species. Mr. Freedman served as the project manager for the construction administration portion of this project, including evaluating contractor qualifications and conducting compliance inspections.

Jupiter Fishing Pier, FDOT District Four, Palm Beach County, Florida — Mr. Freedman provided permitting support for a bridge dismantling project for FDOT. The old bridge, which was being used as a fishing pier, was deemed unsafe and needed to be removed. He assessed and mapped seagrass for use during permitting and coordinated functional value assessments with the permitting agencies. Mr. Freedman developed the barge staging area plan and provided the contractor with guidance on avoidance of seagrass. Because the fishing pier lay adjacent to existing seagrass beds, he demonstrated that its removal would likely result in new seagrass colonization and assisted FDOT in receiving credit for seagrass restoration.



Ms. Paituvi has over eight years of experience in environmental consulting in South Florida. Her technical experience includes environmental assessment and remediation of contaminated sites, as well as industrial wastewater permitting. Ms. Paituvi has actively collaborated on site investigation and environmental assessments, remedial action planning and design. She is experienced in data validation, interpretation and reporting, as well as regulatory compliance. As part of her project management involvement, she is responsible for cost estimating and tracking, task scheduling and timely completion of project events. From the various and numerous projects completed, she has gained practical experience in environmental field investigation, monitoring and sampling tasks, construction planning and oversight, remediation system installation and operation, and regulatory compliance.

Project Experience

City of Miami Beach Environmental Engineering Continuing Services, Miami Beach, Miami-Dade County, Florida — Miami Beach Golf Course Maintenance Facility (Green Waste Facility). The site, located within the Miami Beach Golf Course, was previously used for solid waste landfilling. The City of Miami Beach implemented a material screening plan to remove the buried solid waste. The recovered screened material (RSM) was used to construct a berm around the former landfilled area. Miami Dade Department of Environmental Resource Management [(DERM), currently known as Regulatory and Economic Resources (RER) Department) required the City to demonstrate that there is a minimum of two feet of clean fill or other engineering control in place covering areas of solid waste in or around the berm in order pursue regulatory closure. Ms. Paituvi is the project engineer and collaborates in providing environmental services to the City of Miami Beach. Upon review of the soil data collected by E Sciences, the City of Miami Beach elected to implement an engineering control (EC) to achieve conditional site closure. She has prepared an engineering control design and coordinated regulatory meetings to seek approval of this closure approach. Ms. Paituvi prepared a review of historical resources in order to identify the areas of concern to be addressed by the proposed EC. Ms. Paituvi is overseeing the construction activities in order to verify the proper installation of the cover and handling of the contaminated soil. E Sciences will submit as-built drawing and cross-sections documenting the constructed condition of the berm to RER.

General Environmental Engineering Services, City of North Miami Beach, Miami-Dade County, Florida — Taylor Park The property is an old abandoned dump site that is slated by the City of North Miami Beach for redevelopment as a park. This project was riddled with complex issues, as it is was operated as a solid waste dump and was occupied by a ball field and an operational daycare facility. Ms. Paituvi collaborated on site assessment activities and documentation, including monitoring well installation, soil and groundwater sampling and conducted landfill gas monitoring in-situ and inside the on-site building structures. She also participated extensively in the preparation of a Remedial Technology Evaluation for this site, which considered the feasibility and cost efficiency of source removal, pump and treat, hydrologic barriers and the installation of geotechnical surface layer.

Phase I Environmental Site Assessment, Multiple Sites and Locations, Florida — The completion of a Phase I Environmental Site Assessment (ESA) requires a thorough historic site and vicinity land use research. The goal of the Phase I assessment is to identify potential sources of environmental contamination that constitute recognized environmental conditions (REC). Ms. Paituvi has completed the review of regulatory information and historical data and conducted visual inspections of the subject sites and surrounding areas in order to complete a comprehensive evaluation of potential RECs. Ms. Paituvi has prepared multiple Phase I ESAs for particular project sites in accordance with the American Society of Testing and Materials.

NW 7th Avenue and 9th Avenue Connector Corridor, Fort Lauderdale, Broward County, Florida — This project was conducted to assist the City of Fort Lauderdale CRA in the construction planning and design of the new corridor. Ms. Paituvi conducted research of properties along the proposed corridor construction in order to determine the risk rating associated with suspected or existing contamination impacts at each property assessed. For this purpose, she researched local and state

Education

B.S., Environmental Engineering Sciences,
University of Florida, 2005

Professional Licenses / Certifications

Florida Professional Engineer
License No. 73008

OSHA 40 Hour Hazardous Waste
Operations and Emergency Response

Certified FDEP Stormwater, Erosion and
Sedimentation Control Inspector No. 27077

Years of Experience

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regulatory records, current and historic property use and property proximity to the corridor. Ms. Paituvi prepared a deliverable presenting the findings of this evaluation including graphic representation of the site locations and associated risk ratings. The risk rating associated with the proposed construction was selected in accordance with Chapter 22 (Contamination Assessment Impacts) of the FDOT Project Development & Environment (PD&E) Manual. Ms. Paituvi assisted in the development of a sampling and analysis plan for the completion of a Level II Assessment of selected sites. She was actively involved in data evaluation, report preparation and project coordination as well as client communications.

Greynolds Park Renovations, Preliminary Evaluation Report, North Miami Beach, Florida —This park is currently owned by Miami-Dade County and is used as a recreational park housing a variety of amenities, including a man-made lagoon and bird rookery. The intended hydrologic function of the park was based on historic tidal influences on the man-made lagoon and rookery. Anthropogenic and weather events have resulted in reduced water quality and aesthetics as well as degraded foraging and breeding habitat for birds which discouraged recreational use of the park. Stagnant water and flooding are also hydrological impairments at the park. Ms. Paituvi conducted a historical aerial photograph review and a site visit in order to evaluate the current hydrological park conditions. She collaborated in preparing recommendations regarding restoration to return the ecosystem to a more naturally productive state by improving the hydrological conditions at the park. Ms. Paituvi is currently preparing construction and design plans for the implementation of excavation and dredging in order to improve the hydrologic function of the system.

Former West Palm Beach City Hall, Phase I and Phase II Environmental Site Assessments (ESAs) —The City of West Palm Beach relocated to a new location leaving the former location as a prime redevelopment spot in downtown. The City obtained grant funding from the Treasure Coast Regional Planning Council (TCRPC) Brownfields Coalition Grant to conduct site assessment and asbestos surveying activities. Historic land uses included gasoline stations, railroad tracks, cleaners, ice manufacturing and automotive repair facilities identified during a Phase I ESA. Ms. Paituvi developed and implemented a Phase II ESA sampling scope to evaluate the potential presence of soil and groundwater contamination at this site. Based on the results of the Phase II ESA, it was soil contamination was identified at the site. Using a “weight of evidence” approach, E Sciences demonstrated to the FDEP that contamination at the site was a results of urban setting and not site-related. Ms. Paituvi prepared a Soil Management Plan (SMP) to be implemented during development activities at the site as an alternative to remediation. FDEP has approved of the SMP and no further assessment or remediation is required at the site at this time.

Tank Closure and Assessment, Fort Lauderdale Concrete Batch Plant, Tarmac America — Tarmac America contracted E Sciences to conduct underground storage tank (UST) closure oversight and assessment activities in accordance with regulatory guidelines and requirements. Ms. Paituvi documented tank removal activities and collected the necessary field samples in order to evaluate the presence of groundwater and soil contamination at the site. Based on field observation, source removal of impacted soil was conducted during tank removal activities. She prepared a Tank Closure Assessment and Source Removal Report, which included a historical review of the site. The potential groundwater impacts were linked to historical records which indicated that the site was incorporated in the state-funded pre-approval cleanup program. The site was given closure regarding the tank and source removal.

Broward County Mass Transit Copans Road Facility, UST, Oversight and Reporting, Broward County, Florida — This project started as a UST system upgrade project for 13 USTs with a combined total volume of 392,000 gallons of petroleum product. Ms. Paituvi was part of the E Sciences team that completed tank assessment and source removal activities. She participated in the coordination and completion of field activities and contractor communication. Ms. Paituvi conducted data evaluation and the preparation of a Tank Closure Assessment Report and Source Removal Report that have received regulatory approval. She also collaborated in pursuing FDEP funding under the Limited Source Removal Initiative Program and compliance with the program.

Site Assessment at the Broward County Mass Transit Copans Road Facility, Broward County, Florida — Based on the findings documented during tank removal and source removal efforts conducted at the Site, Broward County Environmental Protection and Growth Management Department (EPGMD) required that a site assessment be conducted at the site. Ms. Paituvi assisted lead the development and implementation of a site assessment plan designed to confirm, characterize and

delineate the extent of soil and groundwater contamination at the site in compliance with FDEP Chapter 62-770, Florida Administrative Code (FAC). She coordinated project activities, conducted data evaluation and prepared a Site Assessment Report (SAR) documenting findings and conclusions. In addition to the site assessment associated with petroleum contamination discovered during tank closure activities, E Sciences performed a limited evaluation of dieldrin contamination at the site. Dieldrin concentrations were detected above regulatory standards during tank upgrade construction activities. Ms. Paituvi prepared a groundwater and soil sampling plan, coordinated project activities, conducted data evaluation and prepared a Dieldrin Contamination Evaluation Report submitted to EPGMD. Ms. Paituvi prepared No Further Action with Conditions (NFAC) proposal to attain regulatory closure for both contamination cases. FDEP has conceptually concurred with the NFAC approach.

Former Thoni Gas Station, Lake City, Columbia County, Florida — Ms. Paituvi prepared a RAP proposing the implementation of a Dual Phase Extraction (DPE) system. The DPE consisted of simultaneous soil vapor extraction and pump-and-treat applications using a single sealed recovery well. This approach included the innovative installation of a large diameter well to increase the effective influence of the system to reach offsite contamination otherwise not accessible for remediation.

South Pack House AST Assessment, Tarmac America, Miami-Dade County, Florida — E Sciences was brought in after an above-ground tank removal was conducted and a closure report submitted to Miami Dade DERM at this sand/limestone aggregate processing facility in the Miami Lake Belt area. Two requests for additional information were issued by DERM in response to the testing conducted during removal of an aboveground storage tank (AST) farm. Contaminants of concern included petroleum and arsenic. Ms. Paituvi conducted additional soil removal and sampling activities and prepared response documentation in order to achieve closure at the site. DERM has granted NFAC closure at the site by implementing institutional controls. The client later elected to conduct source removal activities at the site in order to obtain NFA status. Ms. Paituvi prepared a Source Removal Plan that has received regulatory approval and is awaiting implementation.

Private Brownfield Project/Former Dry Cleaner/Coral Square Shopping Center, St. Lucie County, Florida — This project was designated as a Brownfield by the City of Fort Pierce. This historical dry cleaner was identified during a Phase I ESA for a real estate transaction. Assessment technologies employed included ColorTech screening, modified active gas assessment techniques, on-site laboratory analysis, direct push drilling and installation of microwells. Ms. Paituvi participated on sampling activities, data management, report preparation and project coordination for this project. She collaborated in preparing the Pilot Study Report summarizing activities conducted at the site, including the evaluation of the results in order to design a full scale remediation plan for the site. Ms. Paituvi was involved in the development of a Remedial Action Plan (RAP) approved by the FDEP.

Broward County Waste Water Operation Division Master Pump Station 460, St. Lucie County, Florida — E Sciences was engaged by Broward County to evaluate the extent of soil impacts associated with a discharge discovered within the tank farm at this facility. Ms. Paituvi coordinated soil and groundwater sampling activities and documented the finding in a Site Assessment Report Addendum. Source removal was selected as the remedial strategy. Ms. Paituvi managed the implementation of source removal and associated assessment activities, which included monitoring well installation, soil and groundwater sampling. Ms. Paituvi prepared a Source Removal Report which obtained regulatory approval. Upon completion of confirmatory groundwater sampling activities, the site has received regulatory closure.

Environmental Engineering Services, Islamorada, Village of Islands, Monroe County, Florida — E Sciences has been providing a range of environmental engineering services to the Islamorada, Village of Islands for over 10 years. Services include conducting reviews of designs of stormwater management systems for proposed development projects for compliance with local codes and state regulations, development and administration of advertising, selecting and contracting with their wastewater operator, conducting a wastewater treatment alternatives analysis and participation in numerous public meetings. Ms. Paituvi performs stormwater management system reviews for development and land improvement projects for the Village. Ms. Paituvi is currently working with the Village to revise and update their Stormwater Design Criteria Technical Manual to meet the Village's.



Mr. VanAllen has over five years of experience in the environmental regulatory and consulting industry in South Florida. His technical experience includes environmental assessment and remediation of contaminated sites, conducting Phase I and II Environmental Site Assessments (ESA), preparing industrial wastewater permit applications, inspecting permitted facilities to ensure that local and state environmental regulations are adhered to and providing support for the Florida Department of Transportation (FDOT) District Four NPDES Program. He is responsible for collecting soil and groundwater samples; conducting environmental field investigations; evaluating facilities environmental compliance; completing reports, tables, and figures; and reporting on various groundwater and soil quality issues.

Project Experience

Spill Prevention Control and Countermeasure (SPCC) Plans, City of Miami Beach, Miami-Dade County, Florida — E Sciences was contracted by the City of Miami Beach to complete SPCC plans for 12 city facilities. Mr. VanAllen was responsible for conducting site visits at each of the facilities, reviewing as-built drawings and surveys, interviewing site managers and other key site personnel, reviewing records of previous spills, evaluating topography and surface water flow regimes, evaluating areas of obvious discharge potential and spill sources, identifying environmentally sensitive areas and potential receptors if a spill were to occur, documenting security measures to prevent unauthorized access to tanks, developing a list of emergency response personnel, reviewing the City's existing spill response measures, reviewing records of tank integrity and pressure tests, reviewing the City's personnel training records, and reviewing other pertinent records pertaining to the requirements as described in 40 CFR 112. Mr. VanAllen completed the SPCC Plans for the 12 city facilities, created photo logs, and generated figures using ArcGIS.

Limerock and Boulder Pile Sampling for Arsenic at Sunshine Rock Mine, Miami-Dade County, Florida — E Sciences was contracted to conduct arsenic testing of limerock and boulders piles at the Sunshine Rock Mine. Mr. VanAllen collected twenty composite samples of stockpiled material. His duties included assisting in the development of a work plan and collecting soil samples.

Green Waste Facility Evaluation, City of Miami Beach, Miami-Dade County, Florida — E Sciences was contracted by the City of Miami Beach to provide guidance on whether the upper two feet of surficial soil on a bermed area met Miami-Dade County's Clean Soil Criteria. Mr. VanAllen led a team that collected 18 soil samples from the upper two feet of surficial soil. He conducted data evaluation and documented the findings and conclusions in a report.

Pennsoco Truck Wash Rack and Storage, Tarmac America, City of Medley, Miami-Dade County, Florida — E Sciences was contracted after source removal and assessment activities had been conducted and documented at the site. Historical assessment activities were conducted based on the historical use of the site for vehicle washing and storage of waste drums. Contaminants of concern identified at the site included petroleum contaminants, chromium and arsenic. Additionally, buried drums were discovered at the site during excavation activities. DERM issued regulatory comments requesting that a geophysical survey, Phase I ESA and additional soil assessment be conducted at the site. Mr. VanAllen conducted soil sampling and data evaluation for the delineation of the soil impacts at the site. Additionally he performed groundwater sampling activities at the site in order to confirm the absence of groundwater contamination.

Pennsoco 124-Acre Parcel Phase I and II ESA, City of Medley, Miami-Dade County, Florida — E Sciences conducted a Phase I ESA at this property for Butters Acquisition, LLC; which was planning on purchasing the property from Tarmac. E Sciences conducted Phase II ESA activities at the site based on the Phase I ESA findings. Mr. VanAllen was responsible for coordinating field activities; collecting soil and groundwater samples; and preparing the Phase II ESA report, analytical tables, and figures.

Education

B.S., Civil Engineering,
Florida Atlantic University, 2009

M.S., Environmental Engineering, Florida
Atlantic University, (anticipated 2014)

Professional Licenses / Certifications

Engineer in Training, Florida License No.
1100013901

Certified Residential Contractor, Florida
License Number CRC1330302

40-Hour HAZWOPER Training Certification,
with 8-Hour Refresher and Respirator Fit
Test

UF TREEO Course - Introduction to DEP
SOPs for Sampling and Calibration &
Verification of Field-Testing Meters

Years of Experience

5

Ginny Bakes Phase I and II Environmental Site Assessment, City of Miami, Miami-Dade County, Florida —E Sciences is providing environmental services to support Ginny Bakes in the purchase and evaluation of the subject property. Mr. VanAllen assisted with the Phase I ESA which revealed that contamination had been discovered at the site during the previous environmental assessment. The Phase II ESA included soil and groundwater sampling to evaluate the potential presence of contamination. Mr. VanAllen was also responsible for coordinating project activities, conducting site reconnaissance visit, collecting soil and groundwater samples, completing photolog and figures, and assisting in the completion of the combined Phase I/II ESA report.

Turbidity Monitoring, Rickenbacker Causeway Bear Cut Bridge, City of Key Biscayne, Miami-Dade County, Florida — E Sciences was contracted by Ebsary Foundation Company to conduct turbidity monitoring services on the Rickenbacker Causeway Bear Cut Bridge during the removal of fishing catwalks. Mr. VanAllen was responsible for conducting the turbidity monitoring; creating and completing field forms, logs and figures; and instructing Ebsary staff on how to properly complete turbidity monitoring events.

Broward Piling Groundwater Monitoring, City of Pompano Beach, Broward County, Florida — E Sciences was contracted by EarthTouch, Inc. to conduct groundwater monitoring and reporting. The scope of services was based on previous assessment activities which revealed groundwater contamination at the Site. Mr. VanAllen oversaw the installation of augured monitoring wells, collected groundwater samples, and completed quarterly reports for the property. He successfully demonstrated that there was no contamination at the Site and the property was granted a Site Rehabilitation Completion Order (SRCO).

Broward County Mass Transit Copans Road Facility Site Assessment, Fort Lauderdale, Florida — Based on the findings documented during tank removal and source removal efforts conducted at this site, Broward County Environmental Protection and Growth Management Department (EPGMD) required that a site assessment be performed. Mr. VanAllen conducted soil and groundwater sampling activities in order to complete a site assessment associated with petroleum and dieldrin impacts discovered at the site. He actively participated in data review, preparation of site figures and site assessment documentation for submittal to FDEP.

Community Gardens Sampling and Analysis, City of Pompano Beach CRA, Broward County, Florida — E Sciences was contracted to conduct soil testing to evaluate soil quality in anticipation of establishing a community garden. Soil samples were collected based on Incremental Sampling Methodology. Soil samples were collected on a grid pattern using a manually advanced auger and samples were collected from a depth interval of 0 to 12 inches below land surface. Based on Incremental Sampling Methodology the soil samples were composited prior to submitting to the laboratory for analysis. Soil analytical results revealed that regulatory standards for leachability were exceeded at the site for VOH constituents; therefore, CRA requested that additional groundwater sampling and analysis be conducted at the Site. Mr. VanAllen was responsible for assisting in the development of a work plan to implement the Incremental Sampling Methodology, and collecting and compositing soil samples that were analyzed for priority pollutants.

Phase I Environmental Site Assessments and Phase I Environmental Site Assessment Updates, Multiple Sites and Locations, Florida and Georgia — Mr. VanAllen has completed multiple Phase I ESAs and Phase I ESA Updates on various properties across Florida and Georgia to assist clients in their potential real estate transactions. Mr. VanAllen was responsible for conducting the Phase I ESA and Phase I ESA Update research, site visits and preparing the Phase I ESA and Phase I ESA Update reports. Phase I research included collecting and reviewing city directory listings; reviewing regulatory records collected from public databases, such as FDEP's Oculus and Miami-Dade County Permitting, Environment & Regulatory Affairs' (PERA) emPOWER; and downloading and reviewing historic aerial photographs.

Broward County Water and Wastewater Division Master Pump Station #406, Coral Springs, Florida — E Sciences conducted site assessment activities after a petroleum discharge was reported during pump upgrade activities at this site. Broward County elected to conduct source removal activities at the site in order to remove any potential residual contamination within the tank farm. Mr. VanAllen conducted soil and groundwater sampling activities and prepared site assessment documentation. He also provided oversight of source removal activities, and conducted confirmation groundwater sampling activities.

Delray RMC Supplemental Sampling, City of Delray Beach, Broward County, Florida — E Sciences was contracted by Tarmac to conduct groundwater monitoring and reporting. Previous tank closure assessment activities at the site revealed groundwater contamination in the near vicinity of the historical UST at the site. Mr. VanAllen oversaw the installation of a monitoring well, collected groundwater samples, and completed a Groundwater Monitoring Report. He also successfully demonstrated that the contamination had attenuated at the site and the property was granted a SRCO.

Phase II Environmental Site Assessment, 8 Hammondville Sites, City of Pompano Beach CRA, Broward County, Florida — E Sciences conducted a Phase I ESA at this property to assist the Pompano Beach CRA in the planning for redevelopment. The Phase I ESA revealed the presence of recognized environmental conditions (REC) associated with the historical presence of a fueling station and drycleaner facility in the vicinity of the site. Based on the Phase I ESA findings, Mr. VanAllen coordinated and conducted field activities, which included a geophysical survey, soil screening, groundwater sampling and the excavation of test pits.

Florida Petroleum Reprocessors Site, City of Fort Lauderdale, Broward County, Florida — E Sciences, as a subconsultant to Golder Associates, Inc., is conducting remediation and groundwater monitoring for this project located near the Fort Lauderdale-Hollywood International Airport. Mr. VanAllen is responsible for collecting groundwater samples from 38 separate groundwater monitoring wells over multiple sampling events.

Housing and Urban Development Environmental Review for Multiple Neighborhood Improvement Projects, Fort Lauderdale, Florida — E Sciences was contracted to conduct an environmental evaluation of several neighborhoods to satisfy US Department of Housing and Urban Development financial support for the construction of proposed projects. Mr. VanAllen assisted in the environmental review by conducting a review of potential environmental issues to satisfy the National Environmental Policy Act (NEPA).

Surface Water Management License Renewals, Broward County, Florida — E Sciences has provided consulting services for renewal of existing surface water management licenses for several facilities in Broward County. Mr. VanAllen is responsible for reviewing the original license submittal, conducting site visits to evaluate if the surface water management system is in compliance with the licensed as-built plans and drainage calculations, and preparing the regulatory request for renewal of the existing license under supervision of the assigned Professional Engineer. He has participated in several successful Broward County Surface Water Management License Renewals.

Phase I & II Environmental Site Assessment, 1875 North Miami Beach, City of North Miami Beach, Miami-Dade County, Florida — A Phase I ESA was conducted at this property, which the North Miami Beach CRA was planning to purchase and redevelop for commercial and residential use. Mr. VanAllen conducted the Phase I ESA research, site visit and prepared the Phase I ESA report. The Phase I ESA revealed the potential presence of contamination associated with the historical use of two dry cleaning facilities at the site and documented historical contamination from a gas station formerly located at the site. The Phase II ESA included soil screening, soil and groundwater sampling activities at specific locations to confirm the presence or absence of contamination at the site. Mr. VanAllen coordinated project activities, evaluated data and prepared Phase I and II ESA report, which included findings and conclusions.

Phase II Environmental Site Assessment, Belle 2 Commerce Property, Pompano Beach CRA, Broward County, Florida — E Sciences conducted a Phase I ESA at this property in order to assist the Pompano Beach CRA in their potential purchase of the site. The Phase I ESA revealed the potential presence of contamination associated with the historic presence of a fueling station onsite. Mr. VanAllen duties for the Phase II ESA included overseeing a geophysical survey, soil screening, soil and groundwater sampling, and collecting a sample from the UST which was discovered on-site during assessment activities. Mr. VanAllen prepared the Phase II ESA report, which included findings and conclusions.



Scott Evanson, P.G. is involved in the technical oversight and management of a wide range of geological and environmental projects. With over 32 years of experience, Mr. Evanson has performed or reviewed Phase I Environmental Site Assessments (ESAs) on hundreds of commercial, agricultural and preservation tracts located primarily in the southeastern United States. He has also performed and reviewed hundreds of Phase II ESAs of commercial and industrial facilities. Tasks associated with these assessments include ground-penetrating radar, subsurface characterization, monitoring well installation, soil and groundwater sampling, grain size analysis and interpretation of chemical analysis. Many of these assessments resulted in regulatory involvement, preparation of Site Assessment Reports and implementation of Remedial Actions that ultimately led to site closure.

Mr. Evanson has managed and conducted due diligence projects for several large resort properties where acquisition and eventual additions were under consideration. Tasks included geotechnical engineering, Phase I and Phase II ESAs, building condition surveys, natural resource evaluations, asbestos/lead based paint/mold surveys and utility evaluations. In addition, he has managed National Environmental Policy Act (NEPA) evaluations of raw land and existing facilities in numerous States for a national builder of private detention facilities. Tasks included archeological assessments, wetland and threatened and endangered species evaluations, Phase I / II Assessments, evaluation of demographic information and documentation of potential community impacts related to the proposed action.

Project Experience

Orange County Environmental Site Assessment and Remediation Contract — Mr. Evanson serves as a task manager, technical reviewer and alternant project management for this term contract. Administrative services conducted have involved contract management, including responsibility for disadvantaged business utilization and reporting, and billing. Mr. Evanson's technical role involved management of field activities and report development. Mr. Evanson has provided oversight of projects involving in-situ chemical injection (ISCO), source removal, landfill monitoring, and documentation of existing engineering controls for inclusion in engineering and institutional control packages for closure with conditions requests to the FDEP.

City of Orlando Environmental Services — Mr. Evanson served as technical reviewer alternant project manager for a recently completed term contract. Services provided under this contract consisted of Phase I ESAs, asbestos surveys and abatement, and review of documents related to the Orlando Manufactured Gas Plant.

Atlantic Housing Partners LLLC — As the senior geologist and project manager for the Atlantic Housing Partners projects, Mr. Evanson has provided oversight on numerous Phase I and II ESAs, landfill gas and groundwater monitoring at a Brownfield Site At one property, Rolling Green, in Sarasota, Florida, services consisted of site assessment and interim source removal, both of which were tentatively approved by the FDEP under and expedited schedule in order to meet U.S. Housing and Urban Development (HUD) requirements.

Seminole County Environmental Services Contract — Mr. Evanson currently services as technical reviewer and environmental project manager for the Seminole County Contract. Under this contract Mr. Evanson has overseen Phase I and Phase II ESA's, as well as site assessment services.

Due Diligence Portfolio, Walgreens, Florida and Puerto Rico — Mr. Evanson conducted and reviewed the environmental due diligence for Walgreens in Florida and Puerto Rico. Tasks included Phase I / II ESAs and remedial efforts as required for all new sites. In addition, Mr. Evanson was the local contact for the environmental compliance issues related to film processing units and emergency generator tanks. Tasks also included storage tank permitting for Key West and Key Largo Walgreens stores.

Education

M.B.A., Business Administration, Eastern New Mexico University, 1987

B.S., Geology, Kansas University, 1981

Professional Licenses / Certifications

Florida Professional Geologist # 1459

Certified Energy Auditor, Association of Energy Engineers #1686

OSHA 40 Hour HAZWOPER / 8 Hour Site Supervisor

Years of Experience

32

FDEP Petroleum Clean-up, Various Sites, Various Locations — Mr. Evanson currently provides project management and technical oversight under the pre-approval program for free product removal activities that are on-going at the former Isuzu site in Orlando, assessment and RAP implementation for a site in Seminole County and assessment at a facility in Palatka, Florida. Prior experience includes management of tank removal, site assessment and remediation activities at two sites at the Sanford Airport. These projects included the removal of Underground Storage Tank (USTs), dewatering, excavation and disposal or landfarming of contaminated soil. During the backfilling operations, oxygen release compound (ORC) and microbes were introduced to clean fill that was placed below the water table. The groundwater treatment provided by this effort resulted in relatively short natural attenuation monitoring programs prior to site closures

Opinion of Remediation Costs, Miami-Dade Aviation Department (MDAD) — For several years, Mr. Evanson provided technical oversight for the development of an Opinion of Remediation Costs for over 100 consent order-related and several non-consent order environmental liabilities at the Miami International Airport. The Opinions of Cost were developed based on a review of the available information related to each environmental liability. This project generated (annually and semi-annually) a document that consistently supported an “A” bond rating. Comparison costs were developed using a risk-based corrective action approach as well as default cleanup standards.

Geo Group, Inc., NEPA Evaluations — As a builder/operator of private detention facilities, Geo Group Inc. is required to comply with NEPA for facilities scheduled to house federal inmates. Mr. Evanson has managed NEPA evaluations for undeveloped land, prior to the construction of new detention facilities and for the conversion of existing detention facilities to federal facilities. These projects typically involve documenting the proposed projects with relation to NEPA criteria and preparing required reports for the US Customs and Enforcement (ICE), Department of Homeland Security and U.S. Marshals Service, as appropriate. Coordination of multiple subcontractors was required for each of these projects.

Due Diligence Consulting, Site Assessment and Interim Source Removal, Rolling Green, Sarasota, Florida, Atlantic Housing Partners LLLC — As the senior geologist and project manager for the Atlantic Housing Partners projects, Mr. Evanson has provided oversight on numerous Phase I and II ESAs, as well as several Site Assessments. The Rolling Green project consisted of a Phase I and Phase II ESA, followed by a Site Assessment Report and Interim Source Removal consisting of the excavation and disposal of contaminated soils.

Due Diligence Assessments: *Fairfield Glade Resort, Tennessee, Bluebeards Beach Club, St Thomas, U.S. Virgin Islands and Shawnee Village Resort, East Stroudsburg, Pennsylvania, Fairfield Resorts/Wyndham Vacation Resorts* — Mr. Evanson took part in and managed the due diligence effort conducted by the owner prior to planned expansions at the Tennessee and U.S. Virgin Islands resorts, and for the purchaser of the Pennsylvania resort. Tasks included Phase I and Phase II ESAs, asbestos and lead paint surveys, mold evaluations, land surveys and geotechnical explorations. Several subcontractors were utilized in these projects that were conducted on a fast track completion schedule.

Due Diligence and Tank Tightness Testing, Stratton Mountain Resort, National Retail Properties, Inc., Vermont — Mr. Evanson conducted Phase I and Phase II ESAs and managed tank tightness tests of the 13 fuel oil tanks located at this resort property. He also managed subcontractors and staff during site activities, coordinated efforts with regulatory personnel, and was responsible for final report generation.



Mr. Voelker is a project scientist with over 17 years of experience specializing in natural resource assessments and permitting, as well certified arborist services. Mr. Voelker provides numerous native habitat design and other environmental services to clients, including: wetland delineation, wetland function evaluation, wetland mitigation design, wetland impact permitting, upland habitat assessments, coastal habitat assessments and permitting, marine and estuarine habitat assessments and permitting, protected wildlife assessments and permitting, GPS data collection and GIS mapping.

Mr. Voelker is a certified arborist and provides the following consulting services to both public and private sector clients: tree species identification and inventories, tree surveys and canopy mapping, destroyed/damaged tree assessments, tree value estimates, tree grading, tree species selection for planting, mangrove trimming oversight and tree permitting.

Previous Experience

West Lake Park II, Cities of Hollywood and Dania Beach, Broward County, Florida — This project involved the permitting and design of enhancements for the second phase of this 1,500-acre estuarine wetland.

Services included: paving and drainage improvements for the nature center and associated parking lot, design of three sewage pump stations, water distribution system design, sanitary sewage collection and transmission system design, off-site force main, traffic engineering, surveying, water quality data analysis, hypothesis development and review, sediment analysis, fishery analysis, rip-rap design, benthic macro-invertebrate identification, seagrass survey, mitigation credit determination, and permitting with the USACE, FDEP, SFWMD, and Broward County Environmental Protection Department. The seagrass survey was conducted using scuba diving and digital global positioning satellite equipment and included transect/quadrant measurements of seagrass density, abundance, and frequency of occurrence. Additional specific services included mangrove trimming oversight, soil disposal coordination and administration, regulated water management, environmental creation area e-permit compliance, mangrove wetland construction administration, saltmarsh and tidal upland habitat restoration and planting (over 63,000 plants) review and administration, scientific monitoring for biological habitat function and permit compliance, wetland maintenance review and administration, construction grading and creation of habitat review and administration, rip rap and marine wetland protection construction review and administration, environmental protection / monitoring, protected species (wildlife and plants) observation and compliance / avoidance during construction, seagrass monitoring during construction and SWPP.

City of Fort Lauderdale Executive (FXE) Airport Parcels B, C & D Permitting, Broward County, Florida — Mr. Voelker assisted FXE with environmental permitting associated with development and wetlands mitigation within three FXE outparcels. Permitting activities included wetland impact assessments and functional evaluations, upland habitat assessments and preparation of tree removal permits, preparation of mitigation construction bid documents, and contractor coordination and construction oversight of habitat restoration projects.

Dewatering Permit with SFWMD, FDOT District Four, Fort Lauderdale, Florida — This project included resolving permitting issues raised during the ERP process, as well as compliance as it relates to short-term dewatering permits that are typically pulled by the contractor. The SFWMD staff required addressing potential dewatering needs during the permitting process. However, since that typically is up to the methodology of the contractor, the FDOT typically cannot provide the means and methods. In addition, violations that occur – even though due to contractor operations – result in the FDOT receiving the notice of violation as the owner and permittee. Mr. Voelker worked with the FDOT and the SFWMD to establish a solution to address these permitting issues. By obtaining a master dewatering permit for each county that establishes the permitting criteria for the typical jobs anticipated in the five-year work program, the ERP comments will be addressed – just the issued permit needs to

Education

M.S., Coastal Zone Management, Marine Biology, Nova Southeastern University, 2000

B.S., Environmental Studies, State University of New York, 1996

Professional Licenses / Certifications

Certified Landscape Inspector

Professional Wetland Scientist

Certified Arborist FL-5378A

Tree Risk Assessment Qualification (ISA)

PADI Certified Rescue Diver

Certified FDEP Stormwater Erosion and Sedimentation Control Inspector #29437

Years of Experience

17

be referenced so there will not be a delay in the ERP review as it relates to the potential dewatering. From the violation perspective, FDOT can provide the issued permit along with the other issued permits to the contractor at the time of letting and require contractor compliance or require them to obtain modifications for any deviations. Project staff conducted the pre-application and scoping meetings for the action plan, solutions and processing of the master dewatering permits for each of the four counties in FDOT District Four.

Section 24 Impoundment Project, Village of Wellington, Palm Beach County, Florida — This 365-acre multi-use project includes provisions for wetland creation, flood attenuation, and stormwater retention for the Village of Wellington. This project includes over 200 acres of forested and herbaceous wetlands, elevated boardwalks and pedestrian and equestrian trails, as well as a 60' tall observation tower. Mr. Voelker performed wetland delineation through the use of aerial interpretation and GPS field delineation. He also performed a mitigation analysis by assessing the existing wetlands using the UMAM to determine the requirement for the proposed wetland impacts. The firm then prepared environmental permit applications for SFWMD and USACE. Construction plans developed for this project include wetland and upland planting design, park amenity feature plans, and final construction documents. Landscape architecture and environmental services are being provided by the firm.

Palm Beach County Water Utilities Department FPL Pipeline, City of West Palm Beach, Palm Beach County, Florida — Mr. Voelker provided wetland jurisdictional determination, environmental permitting and mitigation analysis for this 18-mile long Palm Beach County FPL reclaimed water line to run from Jog Road just north of Okeechobee Boulevard west to the Rinker rock mining operation. Environmental services included wetland delineation, mitigation analysis, threatened and endangered species assessment, gopher tortoise assessment, permitting, and relocation, woodstork biomass analysis, snail kite survey, environmental permitting and monitoring.

SFWMD Miscellaneous Environmental Engineering Support Services to Comprehensive Everglades Restoration Project (CERP) Contract, Broward and Miami-Dade Counties, Florida — Through a three-year contract, Mr. Voelker assisted in providing miscellaneous environmental consulting support services to the SFWMD for the CERP project including wildlife surveys and identification, wetlands evaluations, GIS/remote sensing, NEPA compliance assistance, wetland jurisdictional analysis, environmental permitting and threatened and endangered species services. Additional services included civil engineering, structural engineering, water resources engineering, mechanical, geotechnical and environmental engineering, architectural, land surveying, electrical engineering, landscape architecture, emergency management and engineering economic studies.

SFWMD C-4 Basin Flood Mitigation Project, Miami-Dade County, Florida — The C-4 Basin Flood Mitigation project involved the use of existing wetlands as an emergency detention basin. The project is to provide relief to flood-prone areas of the Cities of Sweetwater, West Miami and other unincorporated areas by intercepting surface waters coming from areas west of the basin and delaying their conveyance east of the project until after the flood danger passes. At that time, water routed to the basin would be released and conveyed East, via the C-4 Canal. Services provided included: establishment of the wetland jurisdictional lines, verification of those jurisdictional lines with applicable regulatory agencies, provided environmental resource permitting support, prepared a Wetland Impact Report, assessed secondary wetland impacts associated with operation of the basin, development of a wetland monitoring plan, collection of baseline wetland data, pre and post-WRAP analyses, and hydrologic influences. A wetland monitoring plan to assess secondary impacts over five years was also developed.

SFWMD Biscayne Bay Coastal Wetlands GIS, Miami-Dade County, Florida — This 45,000-acre project is generally located between US 1 and Biscayne Bay in southeast Miami-Dade County. The purpose of this project was to create an updated, generalized National Wetlands Inventory (NWI) map of the Biscayne Bay Coastal Wetlands (BBCW) project area for planning purposes. Through a combination of aerial photograph interpretation and field verifications, the 1990 NWI map was updated using Arcview GIS to reflect changes that have occurred (i.e. wetland loss, change in vegetative cover) since 1990.

Allen E. Perez, P.E.

President



Education

Bachelor of Science in Civil Engineering
University of South Florida, 1992

Master of Science in Civil Engineering
University of South Florida, 1995

Years of Experience

20+

Years of Experience at Perez Engineering

11

Registration/License

Professional Engineer: Florida #51468

Mr. Perez has more than eighteen (18) years of experience sanitary sewer systems, storm water systems, potable water systems, roadway design, and general civil engineering services. His experience includes the management and technical preparation of master plans, construction documents, permit submittals, and construction services for a wide variety of development activity. Mr. Perez has been providing professional engineering services, from his Key West office, for projects throughout the Florida Keys for over eleven (11) years.

Gerald Adams/College Road Sidewalk Enhancement – FDOT/City of Key West LAP Project (FM 425851-1). This project is part of the Safe Routes to School Program and includes new sidewalks on both sides of the street, stormwater improvement, wetland mitigation, and Environmental Resource Permitting. Design of this project began in July 2010 and the project is currently in the permitting phase. The Corradino Group, Inc. is the prime consultant for this project. Mr. Perez is the design team's local representative who is responsible for coordination with the City of Key West. Mr. Perez is also responsible for the drainage improvements and Environmental Resource Permitting through SFWMD.

Glynn Archer Drive/14th Street Roadway Construction – FDOT/City of Key West LAP Project (FM 420042-1-52-01). This project includes roadway reconstruction, stormwater improvements, new sidewalks, bike lanes, and on-street parking. Design of this project began in June 2010 and the project is currently in the final design phase. The Corradino Group, Inc. is the prime consultant for this project. Mr. Perez is the design team's local representative who is responsible for coordination with the City of Key West. Mr. Perez is also responsible for the design of the stormwater management system, and utility coordination/relocates for the entire project.

Allen E. Perez, P.E.

President



Atlantic Blvd. Enhancements – FDOT/City of Key West LAP Project. The objective of this project is to enhance vehicular, bicycle, and pedestrian access and includes roadway improvements, shared use path improvements, drainage improvements, and on-street parking. Design of this project began in March 2010 and the project is currently under construction. The Corradino Group, Inc. is the prime consultant for this project. Mr. Perez is the design team's local representative who is responsible for coordination with the City of Key West. Mr. Perez is also responsible for the design of the stormwater management system, and utility coordination/relocates for the entire project.

United Street Milling & Paving – FDOT/City of Key West LAP Project (FM 426183-1). This project includes roadway repairs, roadway milling, resurfacing, and new ADA compliant sidewalk improvements. Design of this project began in May 2009, awarded for construction in April 2010 and construction of the project was complete by November 2010. Perez Engineering & Development, Inc. is the prime consultant for this project. Mr. Perez was responsible for coordination with the City of Key West. Mr. Perez was also the project manager who was in responsible charge of the project engineers.

Flagler Avenue Improvements – FDOT/City of Key West LAP Project (FM 4213-78-1 & 4213-78-2). This project included roadway reconstruction, minor realignment, stormwater facilities, sidewalks, and on-street parking. Design of this project began in November 2008, awarded for construction in May 2009 and construction of the project is complete. Perez Engineering & Development, Inc. is the prime consultant for this project. Mr. Perez was responsible for coordination with the City of Key West. Mr. Perez was also the project manager who was in responsible charge of the project engineers.



Philip A. Frank

Senior Environmental Scientist

Areas of Participation / Responsibility

Threatened and Endangered Species Surveys and Impact Assessment, Endangered Species Biological Assessments (ESBA), USFWS/NMFS Biological Opinions, Section 7 Consultations, Wetland Impact Assessment and UMAM Analysis, Marine/Benthic Resource Assessments, Coral Relocation Plans, Terrestrial, Wetland and Marine Restoration Planning, Mitigation Plans, Mitigation Monitoring and Assessment, Invasive Exotic Species Control, Resource management Plans, Governmental Affairs and Agency Coordination.

Years of Experience

25 Years of Experience

With Terramar Environmental Services: 6 Years

Office Location

1241 Crane Boulevard, Sugarloaf Key, FL 33042

Education

Ph.D. University of Florida, Wildlife Ecology and Conservation

M.S. University of South Florida, Zoology

B.S. Indiana University, Biology

Percent Availability

50% Keys-wide

Overview

Dr. Frank has over 25 years of experience in environmental conservation with agencies at both the State and Federal Level. He spent over 13 years with the USFWS and FWC in the Florida Keys. Dr. Frank was a Project Manager with the FWS and FWC for numerous threatened and endangered species conservation and recovery projects in the Florida Keys. He has a unique and respected ability to relocate corals off of bridges (i.e. Bahia Honda Bridge) and has established an excellent relationship with the Florida Keys National Marine Sanctuary. He has overseen the design and construction of numerous mitigation projects in the Keys for FDOT. His experience with listed species in the Florida Keys includes the Key Largo wood rat, Key Largo cotton mouse, Key deer, Lower Keys marsh rabbit and silver rice rat.

Professional Experience

Vice-president, Terramar Environmental Services, inc. 2004 – 2010. Serves as Vice President for Terramar Environmental Services, inc., a private consulting firm specializing in wildlife and endangered species conflict resolution, terrestrial and marine habitat restoration, public/private conservation policy and land use planning.

Senior Environmental Manager, Consulting, Engineering and Science, Inc. 2005-2010. Serve as Senior Environmental Manager for Consulting, Engineering and Science, Inc. (CES). Responsible for project management for CES's Florida Keys environmental consulting operations throughout the Keys. Conduct environmental assessments, endangered species biological assessments, design and implement habitat mitigation and restoration projects, and coordinate projects with appropriate regulatory agencies.

Project Leader, U.S. Fish and Wildlife Service, 2002-2005. Served as Project Leader for the Florida Keys National Wildlife Refuges. Responsible for the administration of four National Wildlife Refuges in the Florida Keys that encompass a total of 400,000 acres of lands and waters. Supervised a staff of 18 managerial, technical, law enforcement, maintenance, and administrative personnel with an annual budget of approximately \$1.3 million dollars. Provided leadership for the Florida Keys National Wildlife Refuges on a wide variety of issues including wildlife management, endangered species recovery, habitat management including prescribed fire, and land acquisition.

Fish and Wildlife Biologist, U.S. Fish and Wildlife Service, 2000-2002. Responsible for the administration of the Endangered Species Act in the Florida Keys. Responsible for coordinating recovery actions for threatened and endangered species. Design pertinent research and management projects that address endangered species concerns, secure project funding, and coordinate with government agencies, private organizations, and academic institutions to implement recovery actions. Responsible for biological review of development projects that impact threatened and endangered species in the Florida Keys including the coordination of the Habitat Conservation Plan for Big Pine and No Name Keys.

Wildlife Biologist, U.S. Fish and Wildlife Service, National Key Deer Refuge, 1999-2000. Responsible for all aspects of terrestrial wildlife conservation on the National Key Deer Refuge with an emphasis on threatened and endangered species including the endangered Key deer, Lower Keys marsh rabbit, silver rice rat and Key Largo woodrat. Routinely conducted population surveys, habitat assessments, and habitat restoration actions. Collected and analyzed data, wrote summaries and reports, and communicated results to the scientific, regulatory and general public.

Wildlife Ecologist, Florida Fish and Wildlife Conservation Commission, 1992 to 1998. Responsible for all aspects of wildlife conservation efforts, listed species permitting, and development review for the FWC in the Florida Keys. Responsibilities include review and comment of development proposals to local, State and Federal regulatory on the effects of development on wildlife habitat and populations. Provided technical assistance to a wide range of organizations regarding wildlife ecology and conservation in the Florida Keys.



Rowena P. Garcia
Senior Environmental Scientist

Areas of Participation / Responsibility

Wetland Delineation and Permitting, Threatened and Endangered Species Surveys and Impact Assessment, Endangered Species Biological Assessments (ESBA), USFWS/NMFS Biological Opinions, Section 7 Consultations, Wetland Impact Assessment and U MAM Analysis, Marine/Benthic Resource Assessments, Coral Relocation Plans, Terrestrial, Wetland and Marine Restoration Planning, Mitigation Plans, Governmental Affairs and Agency Coordination.

Years of Experience

15 Years of Experience

With Terramar Environmental Services: 9 Years

Office Location

1241 Crane Boulevard, Sugarloaf Key, FL 33042

Education

M.S. Marine Biology, 1996, Nova Southeastern University

B.S. Marine Biology, 1988, University of San Carlos, Philippines

Percent Availability

50% Keys-wide

Overview

Ms. Garcia has over 15 years of experience in environmental regulation and conservation including working for the Florida Department of Environmental Protection (FDEP), Florida Department of Community Affairs (DCA), and Florida Fish and Wildlife Conservation Commission (FWC). Ms. Garcia has extensive experience in all aspects of environmental regulation and permitting throughout the Florida Keys, and is skilled in the identification of wetlands and steps needed to obtain permits to develop in wetlands. Ms. Garcia has extensive experience in transportation projects, and has conducted numerous construction compliance inspections for the Florida Department of Transportation, District 6.

Professional Experience

President and Principal Scientist, Terramar Environmental Services, Sugarloaf Key, Florida. 2002 to Present.

Owns and operates an environmental consulting company that provides a wide variety of environmental consulting services

including marine and benthic surveys, upland vegetation surveys, habitat evaluations, permitting services, and land use consultations. Terramar Environmental Services is a Minority-owned Florida corporation, and is licensed and insured in Monroe County.

Senior Environmental Scientist, Consulting Engineering & Science, Inc. Miami Florida. 2001 - 2004.

Responsible for environmental compliance of several Florida Department of Transportation projects in the Florida Keys. Specific duties include mitigation design, restoration and permit compliance of FDOT projects, including Key Deer Underpass Project on Big Pine Key. Provide wetland jurisdictional determinations, upland habitat analysis, and marine surveys for a variety of agency and private clients.

Wildlife Biologist, Fish and Wildlife Conservation Commission, Office of Environmental Services, Florida Keys Field Office. 1999-2001.

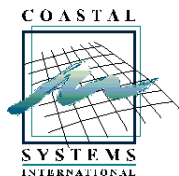
Reviewed development proposals in the Florida Keys for impacts to State listed threatened and endangered species. Coordinated agency review among many agencies in the Florida Keys including Florida Department of Environmental Protection, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Florida Department of Community Affairs, Florida Department of Transportation, and Monroe County.

Development Review Biologist, Department of Community Affairs, Florida Keys Area of Critical State Concern Field Office. 1998-1999.

Responsible for evaluating development proposals in all habitat types in the Florida Keys including Florida Department of Environmental Protection and South Florida Water Management District Environmental Resource Permits for consistency with State and local comprehensive plans.

Environmental Specialist, Department of Environmental Protection, Marathon Field Office. 1992-1998.

Conducted development review of projects in marine, wetland, and terrestrial habitats in the Florida Keys. Evaluated mitigation proposals, restoration projects, and project impacts on State and federally listed species. Prepared Environmental Resource Permit Biological Assessments, made recommendations on project design, and issued permits. Developed skills in complex environmental negotiations with private landowners on projects ranging from individual dock projects to large-scale public utility projects. Negotiated aspects of impact avoidance and minimization, project design, compensatory mitigation plans, and remediation for violations of State wetland protection laws.



EDUCATION

Master of Science, Coastal Engineering,
Old Dominion University, Norfolk, Virginia,
1994

Bachelor of Science, Civil Engineering, Old
Dominion University, Norfolk, Virginia, 1992

LICENSURE

Professional Engineer, FL, VA

PROFESSIONAL AFFILIATIONS

Florida Engineering Society

American Society of Civil Engineers
Past-President, Miami-Dade Branch

American Society of Civil Engineers
Ports and Harbors
Committee – Engineer/Diver
Standard Task Committee

American Society of Civil Engineers
Marinas 2020 Committee

PUBLICATIONS

"Hillsboro/Deerfield Beach Nourishment:
Lessons Learned," T.K. Blankenship, B.
Hanson and L. Neitfield Presented at 2012
FSBPA Conference

"Boat Wake Observations at Jensen Beach,
Florida" Sheremet, A., U. Gravois, M. Tian,
T. K. Blankenship, P.E., Proceedings 2011
Conference on Coastal Engineering
Practice, Coasts, Oceans, Ports and Rivers,
Institute (COPRI), ASCE.

"Dune Management on an Urban Coast,"
T.K. Blankenship, C. Brush and J. Rubin
Presented at 2005 FSBPA Conference

"To Repair or Replace a Bulkhead: That is
the Question," Marina Dockage, 2004

"Artificial Reef Construction: An Engineered
Approach," R. H. Sasso, T.K. Blankenship,
S. Higgins, and K. Banks, Feb. 2004
National Conference in Beach Preservation
Technology

"Mooring Buoys for the Largest Cruise Ship
in the World," J. Juhl, R.H. Sasso, T.K.
Blankenship, and B. Johansen,
Proceedings of Ports 2001 Conference

TIMOTHY K. BLANKENSHIP, P.E.

Coastal/Waterfront Engineer

Mr. Blankenship is responsible for all engineering production including scheduling, resource allocation, and quality management. He coordinates with the other departments within the firm including Environmental, Permitting, Field Operations and Construction.

Mr. Blankenship has over 15 years of experience in the civil and coastal engineering fields. His broad range of experience includes projects involving waterfront facility assessment and rehabilitation design, bridge engineering projects involving structural assessment, structural design and hydraulic analysis/design; land development projects including drainage design and environmental permitting, and construction phase services for several civil projects.

Mr. Blankenship is experienced in all facets of coastal engineering including the planning, design and monitoring of shore protection projects. Projects have included beach nourishment and coastal structures such as jetties, breakwaters and groynes. He has conducted numerical modeling studies of coastal processes along shorelines as well as for the design of marinas and harbors. He has also planned and conducted field investigations consisting of hydrographic surveys, oceanographic data collection, and underwater inspections.

REPRESENTATIVE PROJECT EXPERIENCE

Bayfront Street Ends Improvements, Miami Beach, Florida

CLIENT: City of Miami Beach

Bulkhead design and environmental permitting for street ends at South Shore Drive, 10th Street, 14th Street, Lincoln Road as well as Island View Park. Streetscape design for street ends at South Shore Drive, 10th Street and Lincoln Road.

Beachwalk, Miami Beach, Florida

CLIENT: City of Miami Beach

Civil/coastal engineering design and environmental permitting for the 4,000 foot on grade paver walkway that connects Lummus Park north to 21st Street in the South Beach district of Miami Beach, along with associated amenities and landscaping.

Hollywood Beach Management Strategic Plan, City of Hollywood, Florida

CLIENT: City of Hollywood/Hollywood Beach CRA

Strategic beach management planning services provided to the City of Hollywood and Hollywood Beach CRA for immediate erosional hot spot management and potential longer term solutions for beach stabilization.

Miami-Dade County Morphological Change Study, Miami-Dade County, Florida

**TIMOTHY K.
BLANKENSHIP, P.E.**

CLIENT: Miami-Dade County

Study of volumetric and morphological changes between Bakers Haulover Inlet and Government Cut with detailed analysis on the performance of the 32nd Street Breakwater Project. Establishment of regional GIS database for beach management and update of regional sediment budget with survey data between and 1980 through 2004. Prepared recommendations for further hot-spot stabilization and backpassing beach management County-wide.

DEP State Parks Shoreline Stabilization Studies, Monroe County, Florida

CLIENT: DEP State Parks

Shoreline condition studies at Curry Hammock, Long Key, Bahia Honda, and Ft. Zachary Taylor State Parks. Feasibility for shoreline improvements and GIS work completed along with hydrographic surveys and aerial photogrammetric mapping.

Broward County Beach Restoration Project Mitigation, Florida

CLIENT: Broward County

Design/build construction of 10 acres of artificial reef offshore of Dania and Hollywood Beaches utilizing 66,000 tons of limerock boulder.

Florida Keys Sand Search, Florida Keys

CLIENT: DEP State Parks

Conducted a detailed study of available beach compatible sand for beach construction in the Florida Keys. The study included the review and evaluation of grain size, carbonate content, available quantity, transportation costs, etc. The information was used subsequently to optimize design and minimize construction cost for various beach nourishment projects for the region. This study is referenced in the Florida Department of Environmental Protection Strategic Management Plan issued in 2008 for the Florida Keys.

Hillsboro Inlet Channel Improvements, Broward County Florida

CLIENT: Hillsboro Inlet District

Coastal engineering and environmental permitting for 165,000 cubic yard inlet-dredging project to improve coastal sediment sand bypassing and navigation. Hydrographic and marine resource surveys conducted.

Rickenbacker Causeway Recreation Area, Miami-Dade County, Florida

CLIENT: Miami Dade County Public Works

Design of shoreline stabilization and associated public recreation area improvements along 2.5 miles of shoreline of Rickenbacker Causeway across Biscayne Bay. Marine resource and hydrographic surveys completed, and coastal engineering analysis conducted to assess design wave conditions, sediment transport and optimum shoreline stabilization methods. Design elements included landscaping, invasive species removal with native species restoration, parking improvements, stormwater management and vendor kiosks for waterfront activities.

**TIMOTHY K.
BLANKENSHIP, P.E.**

Village of Key Biscayne Beach Renourishment, Miami-Dade County, Florida

CLIENT: Village of Key Biscayne

Coastal Systems is providing engineering, design, permitting and monitoring consulting services to the Village of Key Biscayne related to beach renourishment. Design, permitting and construction administration for a renourishment of the Village's 1.1 mile beach. Restoration of seagrass consulting services are also being provided related to impacts of the dredge pipeline in a former renourishment event. Developed the seagrass restoration plan and managing a sub-consultant conducting the seagrass restoration work.

Boot Key and Faro Blanco Marinas, Marathon, Florida

CLIENT: Spottswood Companies

Design of permitting of 90 slip marina redevelopment at Boot Key and 82 slip redevelopment at Faro Blanco. Processed permits through Florida DEP and U.S. Army Corps of engineers for both marinas for docks, bulkheads, and maintenance dredging.

DEP State Parks Shoreline Stabilization Studies, Monroe County, Florida

CLIENT: DEP State Parks

Shoreline condition studies at Curry Hammock, Long Key, Bahia Honda, and Ft. Zachary Taylor State Parks. Feasibility for shoreline improvements and GIS work completed along with hydrographic surveys and aerial photogrammetric mapping.

Fort Zachary Taylor State Park, Key West, Florida

CLIENT: DEP State Parks

Coastal engineering design and environmental permitting for breakwaters, jetties, and beach fill project for shoreline protection at park.

Mariners Club Phase II, Key Largo, Florida

CLIENT: EarthMark Companies

Assessment and hydrographic survey of marina and shore protection. Coastal engineering analysis for upland development.

Maranu Luxe Bungalow Spa & Resort, Key Largo, Florida

CLIENT: EarthMark Companies

Assessment and hydrographic survey of marina and shore protection. Coastal engineering analysis for upland development.

Reach Resort Pier, Key West, Florida

CLIENT: Wyndham Casa Marina Limited Partners

Coastal and structural design of beach pier at resort with wood trellis and gazebo to match Key West Historical architecture. Curved boardwalk designed to provide ADA access. Obtained environmental DEP permits and provided construction administration.

Southernmost on the Beach Hotel Seawall, Key West, Florida

CLIENT: Atlantic Shores Resort, LLC

**TIMOTHY K.
BLANKENSHIP, P.E.**

Above/below water assessment of seawall construction, and prepare engineering report with recommendation.

Sunset Key, Key West, Florida

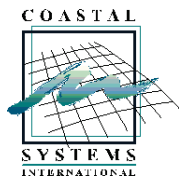
CLIENT: Sunset Key

Engineering assessment and surveys of shoreline stabilization after hurricane, and design of armor stone revetment repairs. Emergency environmental permitting for shoreline improvements, for marine structures repairs on main island including floating docks, bulkheads and wave barrier.

Wyndham Casa Marina Resort Pier, Key West, Florida

CLIENT: Wyndham Resorts

Coastal and structural design of swimming pier and fishing pier with boat slips and gazebo. Secured environmental permits and provided construction administration.



EDUCATION

Bachelors of Science, Agricultural Operations Management, Specialization: Bioprocess Management, University of Florida, Gainesville, Florida, 1992

Master of Science, Marine Biology and Coastal Zone Management, Oceanographic Center, NOVA Southeastern University, Dania Beach, Florida, Coursework Completed, 2000
Pending Capstone Review

PROFESSIONAL AFFILIATIONS AND CERTIFICATIONS

FAEP, Florida Association of Environmental Professionals

Broward County Marine Advisory Committee – Appointed Member

City of Pompano Beach Marine Advisory Board – Appointed Member

COE Jacksonville District Leadership Development Program

COE Coastal Project Planning

COE Regulatory IIA Procedural Issues

COE Regulatory IIB Decision Making

COE Regulatory IV Wetland Delineation

SFWM Environmental Resource Permitting

FDEP Wetlands Training

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response Visible Emissions EPA Reference Method 9, 40 CFR Part 60, Appendix A

USCG Auxiliary Boating Skills and Seamanship

Advanced Scuba Diver: CMAS 2 Star & NAUI

Dive Accident Management & Oxygen Administration

SPEAKING ENGAGEMENTS

Joint Coastal Permitting - Marine Shoreline Development & Permitting Conference - Law Seminars International - December 3, 2008

Beach Permitting in Florida - Florida Coastal Law Conference - Continuing Legal Education - June 26, 2008

Marina Permitting in South Florida - Florida Coastal Law Conference - Continuing Legal Education - June 26, 2008

PENNY CUTT

Environmental Permitting Regional Manager

Prior to joining Coastal Systems in July 2007, Ms. Cutt had over 13 years of experience in the field of environmental monitoring, assessment, planning and regulatory permitting, at the local, State and Federal levels. She is able to quickly evaluate complex scientific information and communicate it to lay leaders for decision-making purposes. Ms. Cutt has a proven track record negotiating complex technical issues, particularly with regard to aquatic and coastal ecosystems, with a variety of interest groups.

Ms. Cutt very effectively and equitably applies scientific, regulatory and economic judgment when evaluating complex scientific and technical information and issues. She also effectively manages workflow and product delivery, accurately identifies key issues and project needs to achieve environmentally sustainable ecosystem solutions.

Ms. Cutt currently manages the work production of 3 project managers at Coastal Systems on beach, marina and other open water projects. Prior to joining the Firm, she served as the Team Leader of the Palm Beach Gardens Team with the Corps of Engineers regulatory program and as a project manager on large complex projects for 5 years. She led and trained staff and negotiated complex permit and technical issues on large complex projects. Ms. Cutt managed preparation of the Federal SEIS on the Phipps Ocean Beach nourishment project for the Town of Palm Beach, resulting in active participation on an interagency group working to resolve the differences in State and federal mitigation requirements for marine resource impacts, the Island Gardens mega yacht Marina in the Port of Miami, the Miami Harbor ship berthing slip deepening with ocean disposal of dredged material and negotiated a programmatic ESA consultation approach with the National Marine Fisheries Service for Johnson's seagrass and docks. She also served as the Corps of Engineers national steering committee member for the US Coral Reef Task Force and as Federal navigator for the Southeast Florida Coral Reef Initiative.

Ms. Cutt worked for one and a half years with the South Florida Water Management District Compliance and Enforcement Section, investigating, evaluating and resolving unauthorized construction activities under Florida law in wetlands of south Florida.

Ms. Cutt worked for 7 years in a variety of positions in Miami-Dade County starting in storage tank permitting and compliance, then moving to Miami River compliance and enforcement and ultimately to the Coastal Resources Section, where she evaluated complex coastal permit applications. She conducted field evaluations of marine resources, negotiated permit terms and conditions and prepared packages for County Commission approval.

PENNY CUTT

Panel Judge for Final Presentations -
Advanced Marina Management Course -
International Marina Institute - December
14, 2007

Marina Permitting in South Florida - Lunch
& Learn Speaker for Marine Affairs
Department - University of Miami
Rosenstiel School of Marina and
Atmospheric Science - April 18, 2008

Marina Permitting in South Florida - South
Florida Chapter, Florida Association of
Environmental Professionals - Honorary
Luncheon Speaker - January 16, 2008

Streamlining the Regulatory Process -
Luncheon Discussion with Corps & DEP -
Florida Engineering Society's Annual
Meeting - July 2006

Army Update of Activities on behalf of the
Assistant Secretary of the Army for Civil
Works - Coral Reef Task Force Meeting -
November 2005

Water, Wetlands, & the ESA Cumulative
Impacts - Florida Land Use Law -
Continuing Legal Education - May 2005

Federal Wetlands Permitting - Growth
Management and Environmental Permitting
Short Course - Florida Chamber of
Commerce - March 2005

Dinner Key Managed Mooring Field, Miami, Florida**CLIENT:** City of Miami

Design and environmental permitting of a 225 slip managed mooring field. Conducted hydrographic surveys, jet probes and marine resource surveys. Prepared construction plans and specifications and provided construction administration services including underwater inspections.

Flagstone Island Gardens, Megayacht Marina, Miami-Dade County, Florida**CLIENT:** Flagstone Group

Serves as the Coastal Systems marine resource mitigation specialist evaluating potential opportunities to modify the permitted seagrass and hardbottom mitigation to reduce cost while continuing to fully offsetting marine resource impacts. The mitigation will be conducted in Biscayne Bay north of the Project site and involves filling dredge holes to accommodate seagrass growth and hardbottom faunal recruitment.

Hillsboro/Deerfield Beach Restoration, Broward County, Florida**CLIENT:** Town of Hillsboro Beach

Assisted with the environmental permitting, funding applications and biological monitoring for 375,000 beach fill project. Responsible for conducting marine and coastal surveys including marine resource investigations, pipeline corridor surveys, hardbottom mapping, *Acropora* sp. and in-water sea turtle surveys, and year-long shorebird monitoring.

Hillsboro Inlet Artificial Reef, Broward County, Florida**CLIENT:** Hillsboro Inlet District

Design, permitting and construction administration for 1.6-acre artificial reef mitigation project in association with the Hillsboro Inlet modifications. Monitoring of constructed reef for colonization and stability to ensure providing appropriate compensatory mitigation.

Hillsboro Inlet Bypassing, Broward County, Florida**CLIENT:** Hillsboro Inlet District

Environmental permitting for ongoing maintenance dredging and sand bypassing by the Hillsboro Inlet Maintenance and Improvement District. Evaluated marine resources including nearshore hardbottom in the exterior sand trap channel area and seagrass in the interior inlet area adjacent to the navigation channel. Processed permits and monitoring conditions through the U.S. Army Corps of Engineers, Florida Department of Environmental Protection, and Broward County Environmental Protection and Growth Management Department. Assisted the District with DEP cost-sharing of the acquisition of the new hydraulic cutterhead dredge.

Hillsboro Inlet Mitigation Project, Broward County, Florida**CLIENT:** Hillsboro Inlet District

Coastal Systems provided professional consulting services to the Hillsboro Inlet District for design, permitting and construction administration for channel improvements including rock dredging and mitigation for the unavoidable impacts of the channel improvements. The Project mitigation involves placing limerock boulders in an area adjacent to the natural hardbottom south of the Inlet entrance channel.

PENNY CUTT

Served as senior manager reviewing and approving work products of the Coastal Systems project manager regarding design, permitting and construction of the mitigation reef.

Hollywood Beach Strategic Beach Management, Broward County, Florida

CLIENT: City of Hollywood

Coastal Systems is providing strategic recommendations for beach management, environmental/permitting, mitigation and engineering consulting services to the City of Hollywood, Community Redevelopment Agency. As part of the plan development for a renourishment project in an area of serious erosion, fill design will be done to ensure that no additional mitigation will be required beyond that conducted for the beach nourishment in the area by Broward County in 2006. Serves as Project Manager for the City and senior manager approving the work products of the staff.

Hollywood/Hallandale Beach Renourishment Project, Hollywood & Hallandale Beach, Florida

CLIENT: City of Hollywood/Hollywood Beach CRA

Coastal Systems is providing engineering, design, permitting and resource assessment consulting services to the Cities of Hollywood and Hallandale Beach related to beach renourishment. Design, resource assessment and permit application processing are ongoing for a renourishment of approximately 2 miles of beach. Resource assessment involves preparation of a Biological Evaluation for endangered corals listed under the federal Endangered Species Act. Serves as Senior Manager reviewing and approving work products of environmental/permitting project manager for the project.

Museum Park Large Vessel Mooring Facility, Miami, Florida

CLIENT: City of Miami

Design and permitting of mooring dolphin structures as part of 22-acre city park on Biscayne Bay. Sixteen pile supported dolphin structures provide 750 feet of mooring space within the existing FEC slip to accommodate a variety of ships including tall ships up to 350 feet long. Structures are supported by 24-inch concrete piles with concrete caps providing 50-ton bollards along with fender systems.

Port Everglades Mangrove Assessment, Broward County, Florida

CLIENT: Broward County

Coastal Systems provided environmental consulting services to Port Everglades through the prime engineering consultant to the Port, Craven Thompson. The project involved providing a quantitative functional assessment of mangrove wetlands and seagrass resources on the Port property that will be converted to an expansion of the Port berthing area. Senior Manager reviewing and approving work products of project manager who conducted all field work and prepared the work products for the project.

PENNY CUTT

Port of Miami Mitigation Assessment for Bulkhead Replacement, Miami, Florida

CLIENT: Port Authority

Environmental design and UMAM assessment of a 1.65 acre artificial reef to offset impacts associated with loss of aquatic functions and values resulting from replacement of an existing bulkhead.

Rickenbacker Causeway Shoreline & Roadway Protection, Miami-Dade County, Florida

CLIENT: Miami-Dade County Department of Public Works

Design of shoreline stabilization and associated public recreation area improvements along 2.5 miles of shoreline of the Rickenbacker Causeway across Biscayne Bay. Marine resource and hydrographic surveys completed and coastal engineering analysis conducted to assess design wave conditions, sediment transport and optimum shoreline stabilization methods. Design elements included landscaping, invasive species removal with native species restoration, parking improvements, stormwater management and vendor kiosks for waterfront activities.

Village of Bal Harbour Beach Management, Bal Harbour, Florida

CLIENT: Village of Bal Harbour

Reviewed coastal processes and sediment budget at Bakers Haulover Inlet, including the Village shoreline. Evaluated bypassing alternatives, and prepared conceptual design of inlet bypassing options that could potentially reduce erosion at the Village, which is located downdrift of the Bakers Haulover Inlet. Additionally, evaluated feasibility of a bypassing operation with regards to regulatory approval and potential funding sources, including inlet tax district opportunities. Commenced preparation of Joint Coastal Permit Application and Miami-Dade County Department of Environmental Resources Management Class I Permit Application. Reviewed existing ecological resource assessments.

Village of Key Biscayne Beach Renourishment, Key Biscayne, Florida

CLIENT: Village of Key Biscayne

Providing engineering, design, permitting and monitoring consulting services to the Village of Key Biscayne related to beach renourishment. Design and permit application preparation are in process for a renourishment of 1.1 miles beach. Consulting services to restore seagrass related to impacts resulting from impacts from the dredge pipeline during a former renourishment event. Developed the seagrass restoration plan and managing a sub-consultant conducting the seagrass restoration work.

Village of Key Biscayne, Seagrass Restoration, Miami-Dade County, Florida

CLIENT: Village of Key Biscayne

Serves as project manager for the development and refinement of a large scale seagrass mitigation plan for impacts of a dredge pipeline on a seagrass bed adjacent to Key Biscayne, Biscayne Bay, Florida. Directly negotiated with senior DEP managers regarding the modified seagrass restoration plan. The seagrass mitigation plan involved significant

PENNY CUTT

challenges because of differing requirements within the State Biscayne Bay Aquatic Preserve (BBAP), and the area where the BBAP overlaps with the Florida Keys National Marine Sanctuary.

Berth Dredging in the Port of Miami associated with deepening the Federal Channel

Managed and conducted the review and decision making by the Corps of Engineers of the permit application to dredge the Port of Miami berthing areas, in association with the dredging of the Federal port entrance channel. The review and evaluation included identifying operational constraints on scow movement to ocean dredged material disposal area in order to protect coral resources on the offshore coral reef tracts. The evaluation also included evaluation of the impacts of turbidity and sedimentation on seagrass beds adjacent to the Port where dredging was permitted.

Flagstone Island Gardens Mega Yacht Marina

Managed and conducted the review and decision making by the Corps of Engineers of the permit application for the Island Gardens mega yacht marina in the Port of Miami. This project involved permitting dredging of approximately 13 acres of moderate ecological value hardbottom and seagrass communities and the mitigation associated with permitting those impacts. Evaluated alternatives to the proposed project and impacts to hard bottom and seagrass resources of the proposed dredging.

Rickenbacker Causeway Beach Restoration and Shoreline Stabilization

Managed and conducted the review and decision making by the Corps of Engineers of the permit application to place sand along the causeway public beach. Actively participated in discussions regarding the proposed impacts to Essential Fish Habitat (EFH), primarily seagrasses and the need for mitigation of marine resource impacts.

Singer Island Beach Stabilization, Palm Beach County, Florida

Managed and conducted the evaluation and decision making by the Corps of Engineers regulatory program of the type of NEPA review necessary and selected the consultant for the project, to be conducted by Palm Beach County. Identified the need for preparation of a Federal SEIS for the project due to the extensive detached breakwater approach being proposed for beach stabilization.

Town of Palm Beach Reach 8 Beach Nourishment, Palm Beach, Florida

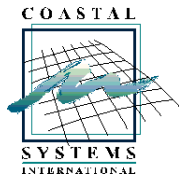
Managed and conducted the review and decision making by the Corps of Engineers on the permit application to place over 1 million cubic yards of sand on a beach from offshore borrow areas. Actively participated in discussions of the need for a Federal SEIS depending on impacts of the dredging in the borrow areas to adjacent coral resources and impacts to hard bottom by the beach fill. Informed the Town that the sand sources used for Reach 7 were not acceptable and worked with them on a search for and evaluation of alternative sand sources, including suggesting alternative sources which would minimize

PENNY CUTT

dredging impacts and provide better quality sand. Reviewed and evaluated the alternative sand source options identified by the Town.

Town of Palm Beach Reach 7 Beach Nourishment

Managed and conducted the review and decision making by the Corps of Engineers regulatory program of the permit application to dredge 1.9 million cubic yards of sand from offshore borrow areas and placement on the beach. Required avoidance of impacts to persistent ecologically valuable nearshore hardbottom by adjusting the fill template, evaluated mitigation proposed by the applicant and required mitigation for the hardbottom impacts that would fully offset the unavoidable impacts. This evaluation and approval of mitigation exposed a divergence between State and federal mitigation requirements for marine hardbottom resources. Actively participated in an interagency group established to work toward making the State and federal mitigation requirements consistent. Championed the approach to mitigation that would fully offset impacts, while being predictable for project proponents. Managed the preparation of the Federal Supplemental Environmental Impact Statement (SEIS) for the project.



EDUCATION

Doctorate of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hong Kong, China, 2001

Master of River and Coastal Engineering, Nanjing Hydraulic Research Institute, Nanjing, China, 1990

Bachelor of Science, Harbor and Waterway Engineering, Nanjing Hydraulic Research Institute, Nanjing, China, 1984

PUBLICATIONS

Wai, Onyx W.H., Chen, Y., and Li, Y.S. (2004) "A 3-D wave-current driven coastal sediment transport model." Coastal Engineering Journal, Vol. 46, No.4, pp385-424.

Chen, Y., Wai, Onyx W.H., and Li, Y.S. (2003) "Numerical Model for Wave Refraction-Diffraction near Pearl River Estuary, China." Journal of Waterway, Port, Coastal and Ocean Engineering, ASCE, Vol. 129, No.6, pp260-269.

Chen, Y., Wai, Onyx W.H., and Li, Y.S. (1999) "Three-dimensional numerical modeling of cohesive sediment transport by tidal currents in the Pearl River Estuary." International Journal of Sediment Research, Vol.14, No.2, pp107-123.

YONG CHEN, Ph.D.

Senior Coastal Engineer

Dr. Chen's coastal engineering experience includes projects involving wave statistical analysis, wave shoaling, refraction and diffraction analysis, sediment transport analysis, spectral analysis of wave-floating structural interactions, dynamic vessel motion study; structural design projects involving riprap shore protection, floating breakwaters, jetties, spread mooring systems, marinas, and floating dolphins.

Dr. Chen has strong skills in research and programming. He has research experience on wave-structural interactions and has developed many programs on wave statistics, dynamic vessel motion study, wave interaction with porous barriers, single-point mooring systems, and spectral analysis of floating bridges. He applies his research experience and programming skills to coastal structural design projects.

Dr. Chen is experienced in utilizing engineering software packages for numerical model simulations of coastal processes. He has applied the DHI MIKE-21 modules for wave propagation and transformation as well as the sediment transport packages, LITPACK and LITLINE. He has also used the HD package to simulate tidal hydrodynamics. Dr. Chen routinely programs computer applications for wave statistical analysis purposes.

Dr. Chen developed and conducted numerical models for coastal engineering projects for over 8 years at the Nanjing Hydraulic Research Institute, China. Dr. Chen's coastal engineering experience in China includes projects of navigation channel planning, port and harbor planning, sediment dredging analysis, beach protection and management, environmental impact study, and coastal structure design and planning using the methods of field survey, physical and numerical modeling. Dr. Chen prepared more than 20 coastal engineering reports for harbor developments, such as Shekou Harbor, Ciwan Harbor, Dachanwan Harbor, Tonggu Navigation Channel project and Zhuhai Gaolan Harbor in Pearl River Estuary.

PROJECT EXPERIENCE WITH THIS FIRM

Bal Harbour Beach Management, Village of Bal Harbour, Florida

CLIENT: Village of Bal Harbour

Evaluation of coastal processes and sediment transport downdrift of Bakers Haulover Inlet. Conducted feasibility study to evaluate inlet bypassing options to maintain sediment transport and reduce beach erosion in Bal Harbour and Miami-Dade County beaches.

Hallandale Beach, Florida

CLIENT: City of Hollywood/Hollywood Beach CRA

Coastal Systems is providing engineering, design, permitting and resource assessment consulting services to the Cities of Hollywood and

YONG CHEN, PH.D.

Hallandale Beach related to beach renourishment. Design, resource assessment and permit application processing are ongoing for a renourishment of approximately 2 miles of beach. Resource assessment involves preparation of a Biological Evaluation for endangered corals listed under the federal Endangered Species Act.

Hillsboro/Deerfield Beach Restoration, Broward County, Florida

CLIENT: Town of Hillsboro Beach

Coastal engineering and environmental permitting for 339,151 cubic yard beach fill project. Performed all beach profiles, hydrographic surveys, aerial photography, magnetometer surveys and monitoring.

Jensen Beach Managed Mooring Field, Martin County, Florida

CLIENT: Martin County

Design and environmental permitting of 51-slip managed mooring field. Prepared feasibility study to evaluate waterfront opportunities for wet slips and managed mooring field configurations. Conducted hydrographic and marine resource surveys and funding grant administration.

Makronisos Marina, Ayia Napa, Cyprus

CLIENT: SmithGroupJJR

Coastal engineering and numerical modeling for harbor design and reclamation for 450 slip marina. Conducted numerical modeling with DHI MIKE-21 of coastal processes including waves, hydrodynamics, and sediment transport to optimize the harbor design. Simulated dredge plume studies utilizing DHI MIKE-21 MT.

Puerto Chico Marina, Fajardo, Puerto Rico

CLIENT: Gibraltar Development Corporation

Planning and engineering design of 190-slip marina redevelopment. Coastal engineering study for establishment of design winds, waves, storm surge and tidal current. Evaluated wave attenuation and designed breakwater improvements and extension to protect marina basin.

Rybovich Marina, West Palm Beach, Florida

CLIENT: Rybovich Marina

Design of dredging and bulkhead for 150-slip marina redevelopment to accommodate vessels up to 250 feet long. Design of 100,000 cubic yards of dredging and 3,000 feet of bulkhead along with travel lift piers to accommodate 660-ton lift. Performed hydrographic surveys of marine for dredging design and surveyed dredge hole fill areas for mitigation construction.

Town of Palm Beach South End Restoration, Palm Beach County, Florida

CLIENT: Town of Palm Beach

Feasibility study, Equilibrium Toe of Fill Assessment, Mitigation Design, and modeling to support application processing for proposed beach nourishment project for the south end of the Town. Engineering assessment to evaluate sediment coming into project area from updrift beach renourishment and corresponding adjustment to project construction template. Further adjustments to template to accommodate

YONG CHEN, PH.D.

requests from NGOs to secure support for project. Evaluated beach management, environmental permitting and funding options and processing environmental permits to authorize beach project.

Village of Key Biscayne Beach Management, Florida

CLIENT: Village of Key Biscayne

Coastal engineering and environmental permitting for 37,485 cubic yard beach fill project. Marine resource and hydrographic surveys conducted, along with sand source search, jet probes, vibracores, and marine archeological surveys.

Hollywood Truck Haul Beach Nourishment, Hollywood, Florida

CLIENT: City of Hollywood/Hollywood Beach CRA

Secured Environmental Resource Permit, Corps Individual Permit, and Environmental Resource License, for 69,400 beach fill project. Prepared yearly funding applications and provided permit compliance services. Conducted pre- and post-construction biological monitoring including hardbottom edge and emergent epifauna surveys, nearshore transect data (quadrats, sediment & video), Acropora cervicornis, and artificial reef monitoring.

Benjamin S. Essien, P.E. – Principal Engineer

Education

*BS, Mechanical Engineering
University of Benin, Benin City, Nigeria 1980*

Additional Training/Continuing Education

EPA Asbestos Building Inspector & Mgmt. Planner

EPA Asbestos Contractor/Supervisor

40-Hour HazMat OSHA 29 CFR 1910

8-Hour HazMat Supervisor

EPA Lead-based Paint Risk Assessor & Inspector

AHERA Project Designer

EPA Radon Measurement Specialist

Registrations/Certifications

Professional Engineer, Florida

Asbestos Consultant, Florida

Licensed Mold Assessor, Florida

Qualifications Overview

Mr. Essien, a registered Professional Engineer in the State of Florida has over 31 years of experience of engineering design, project management, environmental consulting and construction. He has served as project manager and/or principal-in-charge for numerous projects including design, construction and inspection of major industrial and public facilities. He is also a licensed Florida asbestos consultant, certified lead-based paint risk assessor and radon measurement specialist with extensive experience in handling all asbestos, lead-based paint, radon and other indoor air quality testing/consulting issues and remediation.

He is an effective and perceptive program/project manager who has won acclaims for both services and professionalism to many clients. With extensive contract administration and quality assurance/quality control (QA/QC) experience, he has administered hundreds of projects including multi-site/task design, construction inspections, contamination assessments, hazardous materials cleanup, etc.

Sample Projects

- **Project Principal: Industrial Hygiene/Indoor Air Quality Services, Building 702, MIA,**

Miami, Florida - Project principal for conducting indoor air quality studies in Building 702, Suites 215-217 and 218 following complaints by some employees in the area. This project included datalogging of key indoor air quality parameters such as relative humidity, temperature, carbon dioxide, carbon monoxide, volatile organic compounds, respirable particulates, fungi mold and allergen sampling in settled dust in the areas for 10 days. EBS obtained and evaluated the field data and laboratory results, and issued a report with conclusions and recommendations for action.

- **Project Principal: CAA Head Start Portable Classroom facilities, Miami-Dade County, FL** - for conducting comprehensive fungi mold assessment/moisture survey, AHERA asbestos surveys and radon screening measurements in 16 Multi-Headstart Portables locations throughout Miami-Dade County, Florida. This project also included laboratory analyses, evaluation of results and preparation of reports with conclusions and recommendations for remedial action. Additional work included preparation of technical specifications or work action plans for the abatement of the hazardous materials, air monitoring/clearance sampling and project management services.
- **Project Director - HUD Technical & Programmatic Support for Lead-Based Paint Evaluation Services:** EBS Engineering, Inc. was contracted in September 2007 by U.S. Department of Housing and Urban Development (HUD) to perform Quality Assurance Review for lead-based inspections and visual assessments for single family residences including field inspections, risk assessments, clearance sampling, comparative analysis, reports, etc. EBS using qualified and duly certified risk assessors or assessment firms as subconsultants, conducted QA inspection/visual assessments or clearance sampling in over 1,150 single family properties in 46 States including Alaska and Puerto Rico. All our reports were prepared to meet or exceed HUD required guidelines on performance.
- **Project Principal: Buildings 885, 886 887 & 888, Miami International Airport, Miami, FL** - demolition of Buildings 885, 886, 887 & 888 with asbestos survey and abatement of asbestos-containing materials prior to the demolition.

Tasks associated with the buildings demolition included asbestos survey, preparation of plans and specifications for removal of asbestos-containing materials and demolition of buildings, project management, project/air monitoring, and supervision of demolition work and grading of the site.

- **Project Principal: AT&T Telecommunication Facilities, Statewide, Florida** - responsible for conducting comprehensive AHERA asbestos surveys, pre-demolition asbestos surveys, air quality testing during abatements, lead-based paint testing, fungi mold testing, risk assessment, noise testing, report preparation. EBS also conducts awareness and right-to-know training, and consulting services.
- **Project Manager: City of Opa Locka Canal Cleaning and Drainage Improvements Project, Opa Locka, Florida:** Canal restoration and citywide stormwater structures cleaning estimated to cost over 20 million dollars. EBS staff collected data on the existing condition of the canals and conducted inventory of the stormwater structures in the city. The field data and conditions of the stormwater structures were analyzed and input into a GIS database using an aerial map of the city for planning and future construction work. EBS staff also worked with PBS&J (Prime Consultant) staff on the design of bank stabilization including selection of rip-rap materials, geoweb, etc. and provided on-site inspectors to ensure that the design was properly implemented by the contractor.
- **Project Principal: Miami City Hall – New Stormwater Trench Landscaping Area, Miami, Florida** - for the contaminated site assessment and remedial action operation (RAO). EBS performed remediation of a new stormwater trench with petroleum contaminated soil and groundwater at the City Hall landscaping project site. About 160 cubic yards of petroleum contaminated soil was removed for disposal. EBS conducted site investigation/sampling, and evaluated the laboratory result for the effectiveness of the remediation at the site. EBS also prepared and submitted a Report of Remedial Action and Source Removal Report Addendum to Miami-Dade Department of Environmental Resources Management (DERM).
- **Project Principal (EBS): Miami-Dade Transit North Corridor Metrorail Extension, NW 27 Avenue, Miami, Florida** - for Phase I Environmental Site Assessments for 64 of the parcels identified for acquisition or that maybe impacted by the planned rail extension - investigating historic land use at the sites, evidence of contamination past or present, impact of offsite activities and surrounding properties. Prepared a report of our findings with recommendations for Phase II assessments for some of the sites. EBS also performed Phase II site assessments along the corridor as a team with PEER Consultant, P.C. (Prime). Tasks included supervision of soil boring/well installation, soil/groundwater sampling, data evaluation, etc.
- **Project QA/QC Manager: HUD Big Buy Program (Nation-wide), USA** - EBS conducted the lead-based paint inspection using an x-ray fluorescence (XRF) analyzer in accordance with *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing; Chapter 7, Lead-Based Paint Inspection (1997 revision)*. To control cost, a risk assessment of each property is also conducted simultaneously with collection of wipe and soil samples. Quality assurance and quality control (QA/QC) measures are implemented at every step of the process. As the Project QA/QC Manager, Mr. Gomez performed regular in-house reviews, and periodic field quality assurance inspections and risk assessments as per the requirement of the QC Plan. EBS was ranked consistently as one of the top performers throughout the duration of the contract.
- **Project Principal: Little Haiti Housing Association, Miami, Florida** - for Phase II subsurface assessment of this property for the City of Miami, Florida. The assessment was conducted in order to investigate potential impacts to the site due to adjacent contaminated properties. Tasks associated with the investigation included regulatory file review, cost estimation, utility clearance, scheduling, supervision of soil boring advancement, supervision of well installation, supervision of soil and groundwater sampling, data evaluation and report preparation

Francisco E. Gomez – Senior Environ. Scientist

Education

BS, Biological Science

Florida State University, Tallahassee, Florida, 1982

Additional Training/Continuing Education

EPA Asbestos Building Inspector

EPA Asbestos Contractor/Supervisor

40-Hour HazMat OSHA 29 CFR 1910

8-Hour HazMat Supervisor

EPA AHERA Asbestos, Inspector & Supervisor

EPA Lead-based Paint Risk Assessor & Inspector

Registrations/Certifications

Licensed Mold Assessor, Florida

Qualifications Overview

Mr. Gomez has over 26 years of experience in a variety of environmental assessment areas including sample acquisition, hazard assessment, drum inspection, hazardous waste management, hazardous materials disposal and risk assessment. He is also experienced project/property manager and great at preparation of proposals and reports, cost estimating and training of environmental professionals. Mr. Gomez has managed some of the most complex multi-site/multi-phase projects including Phase I/II environmental assessments, contamination assessments, contaminated sites remediation, mold assessments/remediation, asbestos surveys and asbestos abatements, etc.

Sample Projects

- Project Manager: Industrial Hygiene/Indoor Air Quality Services, Building 702, MIA, Miami, Florida** - Project manager for conducting indoor air quality studies in Building 702, Suites 215-217 and 218 following complaints by some employees in the area. This project included datalogging of key indoor air quality parameters such as relative humidity, temperature, carbon dioxide, carbon monoxide, volatile organic compounds, respirable particulates, fungi mold and allergen sampling in settled dust in the areas for 10 days. EBS obtained and evaluated the field data and laboratory results, and issued a report with conclusions and recommendations for action.
- Project Manager: CAA Head Start Portable Classroom facilities, Miami-Dade County, FL** - for conducting comprehensive fungi mold assessment/moisture survey, AHERA asbestos surveys and radon screening measurements in 16 Multi-Headstart Portables locations throughout Miami-Dade County, Florida. This project also included laboratory analyses, evaluation of results and preparation of reports with conclusions and recommendations for remedial action. Additional work included preparation of technical specifications or work action plans for the abatement of the hazardous materials, air monitoring/clearance sampling and project management services.
- Project Manager: AT&T Telecommunication Facilities, Statewide, Florida** - responsible for conducting comprehensive AHERA asbestos surveys, pre-demolition asbestos surveys, air quality testing during abatements, lead-based paint testing, fungi mold testing, risk assessment, noise testing, report preparation. EBS also conducts awareness and right-to-know training, and consulting services.
- Deputy Project Director - HUD Technical & Programmatic Support for Lead-Based Paint Evaluation Services:** EBS Engineering, Inc. was contracted in September 2007 by U.S. Department of Housing and Urban Development (HUD) to perform Quality Assurance Review for lead-based inspections and visual assessments for single family residences including field inspections, risk assessments, clearance sampling, comparative analysis, reports, etc. EBS using qualified and duly certified risk assessors or assessment firms as subconsultants, conducted QA inspection/visual assessments or clearance sampling in over 1,150 single family properties in 46 States including Alaska and Puerto Rico. All our reports were prepared to meet or exceed HUD required guidelines on performance.
- Project manager: Buildings 885, 886 887 & 888, Miami International Airport, Miami, Florida:** Project Manager for demolition of Buildings 885, 886, 887 & 888 with asbestos survey and abatement of asbestos-containing materials prior to the demolition. Tasks associated with the buildings demolition included asbestos survey, preparation of plans

and specifications for removal of asbestos-containing materials and demolition of buildings, project management, project/air monitoring, and supervision of demolition work and grading of the site.

- Project Manager: Miami City Hall – New Stormwater Trench Landscaping Area, Miami, Florida** - for the contaminated site assessment and remedial action operation (RAO). EBS performed remediation of a new stormwater trench with petroleum contaminated soil and groundwater at the City Hall landscaping project site. About 160 cubic yards of petroleum contaminated soil was removed for disposal. EBS conducted site investigation/sampling, and evaluated the laboratory result for the effectiveness of the remediation at the site. EBS also prepared and submitted a Report of Remedial Action and Source Removal Report Addendum to Miami-Dade Department of Environmental Resources Management (DERM).
- Project manager: MIC-Earlington Heights Metrorail Extension Right-of-Way, Miami, Florida** - Project Manager (EBS) for Phase I & II Environmental Site Assessments for parcels which required assessment due to revised right-of-way alignment along the MIC-Earlington Heights Metrorail Extension corridor. Tasks included investigating the historic land used at the sites, any evidence of contamination past or present, impact of offsite activities and surrounding properties and report preparation. Tasks for Phase II included supervision of soil boring/well installation, soil/groundwater sampling, data evaluation, etc. EBS also conducted Pre-Demolition Asbestos Survey for the buildings to be demolished in each parcel.
- Deputy Project Manager: HUD Indefinite Quantity Contract for Lead Evaluation Services** - EBS is providing the services as part of a Joint with Chinye & Company, CPA starting in November 2010. The scope of services includes visual assessments, lead-based inspections, stabilization plans and clearance examinations for single family (1-4units) properties in Atlanta Home Ownership Center (HOC) covering 10 States, Puerto Rico and the Virgin Islands. This contract is on-going and estimated to evaluate 4,000 single family properties annually with total 5-year contract
- value of \$13.5m. EBS as the technical partner is responsible for using our qualified staff and subconsultant firms to execute the evaluation services to meet or exceed HUD required guidelines on performance.
- Project Manager (EBS): Miami-Dade Transit North Corridor Metrorail Extension, NW 27 Avenue, Miami, Florida** - for Phase I Environmental Site Assessments for 64 of the parcels identified for acquisition or that maybe impacted by the planned rail extension - investigating historic land use at the sites, evidence of contamination past or present, impact of offsite activities and surrounding properties. Prepared a report of our findings with recommendations for Phase II assessments for some of the sites. EBS also performed Phase II site assessments along the corridor as a team with PEER Consultant, P.C. (Prime). Tasks included supervision of soil boring/well installation, soil/groundwater sampling, data evaluation, etc.
- Project Manager: Little Haiti Housing Association, Miami, Florida** - for Phase II subsurface assessment of this property for the City of Miami, Florida. The assessment was conducted in order to investigate potential impacts to the site due to adjacent contaminated properties. Tasks associated with the investigation included regulatory file review, cost estimation, utility clearance, scheduling, supervision of soil boring advancement, supervision of well installation, supervision of soil and groundwater sampling, data evaluation and report preparation..
- Project QA/QC Manager: HUD Big Buy Program (Nation-wide), USA** - EBS conducted the lead-based paint inspection using an x-ray fluorescence (XRF) analyzer in accordance with *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing; Chapter 7, Lead-Based Paint Inspection (1997 revision)*. To control cost, a risk assessment of each property is also conducted simultaneously with collection of wipe and soil samples. Quality assurance and quality control (QA/QC) measures are implemented at every step of the process. EBS was ranked consistently as one of the top performers throughout the duration of the contract.

David Batey – Senior Inspector

Education

BS, Mechanical Engineering

University of Benin, Benin City, Nigeria

Additional Training/Continuing Education/Certifications

NPDES Stormwater Mgmt. for Construction

Intermediate Maintenance of Traffic (MOT) Training

Troxler Nuclear Safety Training

CTQP Asphalt Paving Technician I & II

ACI Concrete Field Technician 1

CTQP Earthwork Construction Inspection Level I

Qualifications Overview

Mr. Batey has over 28 years of experience in engineering practice including planning, design, project management and construction inspection. He has supervised construction of airport facilities, dredging and restoration of canals, and roadway reconstruction with drainage improvements. He has experience in engineering design analysis, project administration, inspection, preparation of reports, environmental field investigations, and sampling and project management for numerous asbestos, lead-based paint and mold projects. He is also an EPA certified AHERA building inspector and supervisor in Florida.

Sample Projects

- Environmental Project Manager - AT&T Telecommunication Facilities, Statewide, Florida:** Environmental project manager responsible for conducting comprehensive AHERA asbestos surveys, pre-demolition asbestos surveys, air quality testing during abatements, lead-based paint testing, fungi mold testing, risk assessment, indoor air quality surveys, noise testing and report preparation. Conducted awareness and right-to-know training, and consulting services.
- Environmental project manager - Buildings 60, Miami International Airport, Miami, Florida:** On-site project manager for removal of hazardous materials (asbestos) in over 150,000 square feet hangar/office/maintenance buildings at Miami International Airport. As part of the 40-year re-certification process, Building 60 was to be renovated to bring it up to current building code requirements. EBS was contracted by
- Miami-Dade Aviation Department (MDAD) to prepare technical specifications for the removal of the ACMs, asbestos survey, air monitoring and provide project management services.
- Environmental Project Manager - Building 860, Miami International Airport, Miami, Florida:** Project supervision for removal of hazardous materials (bird droppings and ACMs) in the hangar building with responsibility for project/air monitoring for compliance. This was about three-month abatement and demolition project with two crews working in different areas. He conducted periodic inspections and sampling, and prepared daily report to document progress and the percent of work completed.
- Asbestos Building Inspector: Miami-Dade Water and Sewer Department Buildings, Miami-Dade County, Florida:** EBS performed a facility wide comprehensive asbestos survey covering over 30 buildings in six facilities including water treatment plants, pump stations, etc. Mr. Batey was one of the two-member team that conducted the survey – sampling all suspect asbestos-containing materials (ACMs) in the buildings. He assessed and documented the materials conditions, quantities and potential for possible fibers release, took photographs and prepared chain-of-custody for samples.
- Environmental Project Manager - U.S. Department of Housing and Urban Development (HUD):** Engineering, Inc. was contracted in November 2010 by HUD to perform lead evaluation services at single family residences. EBS using qualified and duly certified risk assessors or assessment firms as subconsultants, is conducting over 3,500 individual inspection/visual assessments or clearance sampling annually in 12 States including US Virgin Islands and Puerto Rico. All our reports are prepared to meet or exceed HUD required guidelines on performance. Mr. Batey is responsible for the preparation of reports, quality assurance and quality control (QA/QC) reviews, and timely delivery of the reports to the client and HUD contracted Field Service Managers
- Inspector: Engineering Construction Management Services (E01-DERM-05), Dept. of Environmental Resources Management, Miami-Dade County, Florida (5/2002-7/2003):** Mr. Batey worked as a Construction Engineering

Inspection (CEI) Inspector on the Miami-Dade County FEMA/DORM Drainage Improvements projects throughout the County with total construction budget exceeding \$50 million. He coordinated with various roadway and drainage contractors and performs quality control inspection on all ongoing construction activities. He also prepared daily and weekly reports quantifying productivity, materials, equipment, and labor used.

- **Inspector/Office Engineer: Engineering Construction Inspection Services -(E05-OCI—02, C), Miami-Dade County, Florida:** EBS staff provided construction engineering management services for various roadway/drainage improvement and canal dredging/restoration projects throughout the county with total construction budget exceeding \$20 million. He served as one of the inspector/office engineer for this project - performed quality control inspection on all ongoing work. He also observed the construction activities, checking for compliance, supervising on-site tests, checking on public complaints, resolving conflicts, and preparing daily report with quantities of materials used for construction or hauled for disposal.
- **Inspector: City of Opa Locka Canal Cleaning and Drainage Improvements Project, Opa Locka, Florida:** Canal restoration and citywide stormwater structures cleaning estimated to cost over 20 million dollars. EBS staff collected data on the existing condition of the canals and conducted inventory of the stormwater structures in the city. The field data and conditions of the stormwater structures were analyzed and input into a GIS database using an aerial map of the city for planning and future construction work. EBS staff also worked with PBS&J (Prime Consultant) staff on the design of bank stabilization including selection of rip-rap materials, geoweb, etc. and provided on-site inspectors to ensure that the design was properly implemented by the contractor.
- **Environmental Monitoring/Oversight Inspector: American Airlines North Terminal Program, Miami International Airport, Miami, Florida:** Mr. Batey worked on the American Airlines North Terminal Program at Miami International Airport as an on-site inspector, performing environmental monitoring and ensuring that contractors are in compliance with the National Pollution Discharge Elimination System (NPDES) regulations. Additional duties included oversight for construction inspection, groundwater sampling and soil sampling and/or screening.
- **Assistant Chief Engineer - NNPC-PPMC, Lagos, Nigeria: June 1985 – May 1999:** Supervised construction and commissioning of about 3,000 km of pipelines for petroleum products. Supervised the daily scheduling of petroleum products for distribution across the 3,000 km pipelines. Also served as Project Engineer responsible for the installation and commissioning of a stand-by 500kVA Generator for Gombe Depot. He also assisted the Materials Manager with bidding and general inventory administration.
- **Lead Field Staff - MIC-Earlington Heights Metrorail Extension Right-of-Way, Miami, Florida:** Phase I & II Environmental Site Assessments for parcels which required assessment due to revised right-of-way alignment along the MIC-Earlington Heights Metrorail Extension corridor. Tasks included investigating the historic land used at the sites, any evidence of contamination past or present, impact of offsite activities and surrounding properties and report preparation. Tasks for Phase II included supervision of soil boring/well installation, soil/groundwater sampling, data evaluation, etc. EBS also conducted Pre-Demolition Asbestos Survey for the buildings to be demolished in each parcel.
- **Lead Field Staff - Miami-Dade Transit North Corridor Metrorail Extension, NW 27 Avenue, Miami, Florida:** Phase I Environmental Site Assessments for 64 of the parcels identified for acquisition or that maybe impacted by the planned rail extension - investigating historic land use at the sites, evidence of contamination past or present, impact of offsite activities and surrounding properties. Prepared a report of our findings with recommendations for Phase II assessments for some of the sites. EBS also performed Phase II site assessments along the corridor as a team with PEER Consultant, P.C. (Prime). Tasks included supervision of soil boring/well installation, soil/groundwater sampling, data evaluation, etc.

Alex E. Sanchez, PE
Sr. Project Manager

Introduction



Mr. Sanchez has 18 years of experience in design, construction and construction management with a focus in fuel systems and civil/heavy construction. Mr. Sanchez is responsible for Construction operations at CEI, including a variety of Construction Professionals and Field Personnel. Mr. Sanchez is a Professional Engineer (PE), certified LP Gas Installer “A”, Pollutant Storage System Contractor (PSSC), General Contractor (GC), Underground & Excavation Contractor (CUC) in the State of Florida and a

PU Fuel Distribution Contractor in the State of North Carolina. His qualifications and experience allow him to perform the repair, modification, removal or installation of virtually all types of underground and aboveground fuel (liquid and gaseous) systems, and other utilities.

Mr. Sanchez has a proven track record for his capabilities in management of Design and Construction projects. He has considerable experience working on projects for Municipal Government agencies, the Federal Government, as well as other Public and Private Entities, such as Coca Cola, Verizon, and Cordis. In addition, Mr. Sanchez has an exceptional ability to provide solutions and meet high demands on difficult and sensitive Federal Contracts.

Some additional areas of expertise include: fueling equipment specification, pumping systems design and installation, tank removals, tank closures, tank testing, regulatory agency liaisons, oil/water separator (OWS) systems maintenance and installation, wash water recycle systems repair and modification, civil site work, drainage installation, water and sewer line installation, petroleum contamination remediation; and contamination assessment reports.

Representative Project Experience

- **Broward County Mass Transit – Fluid Distribution System Installation, Project Manager**
- **Fort Lauderdale Hollywood International Airport – Replacement of double-wall jet fuel hydrant line piping and installation of secondary piping leak detection system – Project Manager**
- **Broward County Mass Transit, UST Replacement Copans Road Facility, Design and Construction Management for the Replacement of 20 Single-Walled Underground Storage Tanks- Sr. Project Manager**
- **Naval Air Station Key West, Boca Chica, Pedro Falcon – Replacement of Jet Fuel Pump House & Fill Stands- Sr. Project Manager**
- **Terremark (Verizon) – Installation of Roof-top diesel piping, pumping system and pump/day tank control panels – Project Manager**

Years of Experience

18 years

Areas of Expertise

- Fuel Tanks & Piping
- Fueling Facility Design
- Heavy/Civil Construction

Education

B.S. Environ. Engineering,
University of Florida

Professional Registrations

- Professional Engineer, Florida (PE#54637)
- LP Gas Installer “A”, Florida (29026)
- Pollutant Storage Systems Contractor, Florida (PCC056813)
- PU Fuel Distribution, North Carolina (72792)
- General Contractor, Florida (CGC1505536)
- Underground & Excavation Contractor (CUC1224968)

Professional Affiliations

- American Society of Civil Engineers
- Florida Engineering Society
- Petroleum Equipment Institute
- NFPA

Training/Certifications

- USACE, Construction Quality Management Contractor’s Cert.
- OSHA 40 Hr. Hazwoper
- OSHA 30 Hr. Construct.
- OSHA 8 Hour Supervisor
- Excavation Competent Person
- Project Manager’s Boot Camp

Alex E. Sanchez, PE

Sr. Project Manager

- Eglin Air Force Base - Removal of 5 UST's and Installation of 3 USTs- Sr. Project Manager
- USMC Blount Island Command, Fuel Tanks Removal and Replacement for the Naval Facilities Command Jacksonville, Florida- Sr. Project Manager
- Miami-Dade Fire Rescue – Monthly inspections of fuel island fuel systems – Sr. Project Manager
- Miami-Dade Water & Sewer Department – Monthly inspections of Pump Station fuel systems – Sr. Project Manager
- Miami-Dade Transit Bus Facilities, Monthly Operation & Maintenance (O&M) Inspections of Fuel Tanks and Dispensing, Steam Clean & Washwater Recycling Sites- Project Manager
- Miami-Dade General Services Administration (GSA) Contract - UST/AST removal & installations at multiple county sites Dispensing Islands, Electronic Fuel Management System, Leak Detection System & Emergency Generator- Project Manager
- Terremark (Verizon) – Monthly inspections of fuel tanks, fuel pumps, fuel piping and leak detection systems – Project Manager
- Coca-Cola Distribution Facility, D/B for the replacement of corroded water line- Sr. Project Manager
- Clean Pro Enviro Solutions, LLC – Design of new Industrial Waste Pre-Treatment system, including Plumbing, Structural, Building, Mechanical and Electrical – Project Manager
- Broward County Fleet Service Center #3 – Replacement of underground fuel and lubrication piping, installation of UST sumps, replacement of tank level probes- Project Manager
- Broward County Fleet Service Center #8 – Removal of three USTs, abandonment of one UST, installation of one waste oil UST and installation of three diesel and unleaded ASTs, including dispensers, remote fills, tank level probes and sensors, and day tank – Project Manager
- South Florida Water Management District (SFWMD) Pump Station S-382 and S-9 Underground Diesel Piping Replacement- Sr. Project Manager
- Technology Center of America (TCOTA), Installation of New Fueling System including ASTs, Fuel Pumps, Fuel Cleaning & Filtering Systems and Tank Level & Monitoring System- Project Manager
- South Florida Water Management District (SFWMD) 10 Pump Stations – Replacement of single-wall fuel piping with double-wall piping and the addition of berms and electronic leak sensors- Project Manager

Introduction



Mr. Northrup has experience managing a wide range of Phase I, II and III site assessments and investigations, hazardous waste management and disposal, environmental permit acquisition, remediation involving large scale groundwater treatment, soil excavation and in-situ soil treatment. Mr. Northrup also has experience managing analytical laboratories, conducting QA/QC audits, and implementing QA procedures.

As Vice President of Sciences, Mr. Northrup is the immediate supervisor of the professional and paraprofessional staff. He is responsible for ensuring they receive adequate training, instruction, supervision and mentorship to effectively perform their duties. He also directly manages major contracts and clients by combining experience, expertise, judgment and sound fiscal practices to ensure that all projects are completed within budget and in accordance with approved regulatory permits. Mr. Northrup also serves as an Expert Witness for the Florida Department of Transportation (FDOT) and the Miami-Dade County Attorney Office.

Representative Project Experience

- **SHAW Environmental/FDOT, District VI District-wide Contamination Assessment & Remediation Services- Senior Technical Advisor**
- **Miami-Dade Department of Environmental Resources Management (DERM) Various Miami-Dade County Sites including site assessments, source removals, tank installations, Right-of-Way Permitting, Site Assessment Reports and Remedial Action- Senior Project Manager**
- **Broward County Aviation Department Fort Lauderdale/Hollywood International Airport Former National Car Rental Center, Remedial Action Plan, Air Sparging/Soil Vapor Extraction Ozone Injection System- Senior Project Manager**
- **HDR Engineering, Inc.- Fort Lauderdale/Hollywood International Airport, Airport Runway Expansion Former Taylor Road Budget Phase II Environmental Assessment Report- Sr. Project Manager**
- **United States Department of Homeland Security, Developed Remedial Action Plan at Former Gun Range- Sr. Technical Manager**
- **HDR Engineering, Inc., Site Investigation and Remediation of the Westside Maintenance Facility at Fort Lauderdale-Hollywood International Airport- Sr. Project Manager**
- **Miami-Dade Water & Sewer Department, Preparation of Spill Prevention Countermeasure Control Plans- Sr. Project Manager**

Years of Experience

30 years

Areas of Expertise

- Site Assessments
- Remediation Techniques
- Storage Tank Management
- Quality Assurance/ Quality Control

Education

- B.S. Chemistry, Butler University

Professional Registrations

- Professional Geologist, Florida (#1717)
- Professional Geologist, Georgia (#1998)
- Professional Geologist, Kentucky (#2136)
- Pollutant Storage Systems Contractor, Florida (PCC1256800)
- Certified Hazardous Materials Manager (#1575)

Professional Affiliations

- American Institute of Professional Geologists

Training/Certifications

- FDEP Field Sampling Course
- OSHA 40 Hour HAZWOPER
- OSHA 8 Hour Supervisor

Presentations/Papers

- Geological Society of America 2012: Environmental Site Assessments
- University of South Florida, US EPA Grant Brownfield Training, 2012
- Florida Remediation Conference 2013: Ensuring Contaminants Cooperate with the Construction Schedule



Gabino Cuevas, MBA, PE, LEED AP Chief Executive Officer

Introduction



Mr. Cuevas has 30 years of experience with environmental assessments and remediation. As the CEO for CEI, Mr. Cuevas oversees the Engineering and Sciences Division that encompasses Engineers, Scientists, Geologists, and Field Technicians. In addition, Mr. Cuevas handles client relations for major clients, including US Army Corp of Engineers, Miami-Dade County, Coca-Cola Enterprises, Inc., The South Florida Water Management District and The City of Miami. His responsibilities have included the pursuit, award, and managing of the environmental contracts noted below.

Mr. Cuevas has been the Engineer-of-Record on hundreds of projects in Florida and Georgia and is also certified in Leadership in Energy & Environmental Design Accredited Professional (LEED-AP). Due to his extensive experience in the Florida market and knowledge of Federal, State and Local regulations, Mr. Cuevas has provided expert testimony on legal proceedings related to contaminated sites.

Mr. Cuevas' specific areas of expertise include environmental site audits, underground storage tank management, contamination assessments, initial remedial activities, and remedial system designs and implementation. He also has experience in the design of soil vapor extraction, air stripping treatment, carbon adsorption, chemical oxidation and non-conventional treatment systems. Other environmental activities include: the preparation of spill prevention control countermeasure plans, the design of industrial waste pretreatment systems, conducting canal conveyance capacity studies, and management of Everglades restoration construction projects.

Representative Project Experience

Mr. Cuevas has been the Principal-in-Charge for all of CEI's environmental assessment, remediation and engineering contracts.

- **United States Army Corp of Engineers: Water Control Structure Repairs**
- **Miami-Dade County DERM E03-DREM-01: PSA for Environmental Cleanup, Compliance & Related Services**
- **Miami-Dade County DERM E04-DERM-01: PSA for Environmental Cleanup, Compliance & Related Services**
- **Miami-Dade County DERM E08-DERM-01: PSA for Environmental Cleanup, Compliance and Related Services**
- **Miami-Dade County DERM E09-DERM-01: PSA for Environmental Cleanup, Compliance & Related Services for Miami-Dade Transit**
- **City of Miami: Misc. Environmental Engineering Services**
- **City of Pompano Beach: Professional Environmental Testing & Consulting**
- **Coca-Cola Refreshments: Environmental Compliance, Assessment, Remediation, and Industrial Process Upgrading**

Years of Experience

30 years

Areas of Expertise

- Environmental Site Audits & Assessments
- Remedial System Designs & Implementation Program Management

Education

- Master of Business Administration, University of Florida
- B.S. Chemical Engineering, University of Florida

Professional Registrations

- Professional Engineer, Florida (PE#42530)
- Professional Engineer, Georgia (PE#30271)
- Professional Engineer, No. Carolina (PE#39616)
- LEED-AP, Florida (17832)
- Society of American Military Engineers

Professional Affiliations

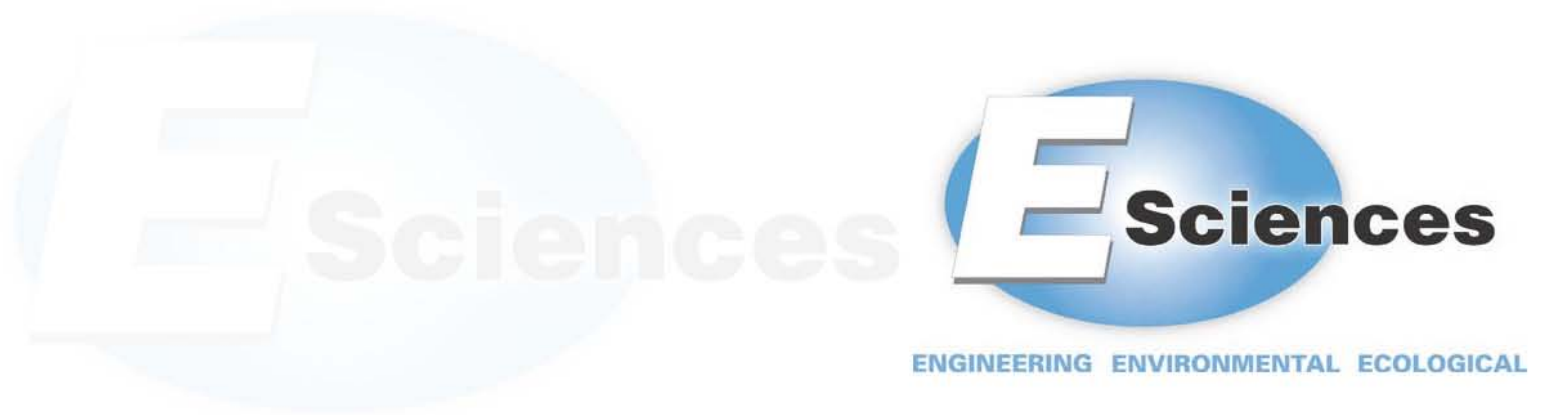
- National Society of Professional Engineers
- American Institute of Chemical Engineers
- National Association of Environmental Professionals
- National Groundwater Association
- US Green Building Council

Training/Certifications

- OSHA 40 Hour HAZWOPER
- OSHA 8 Hour Supervisor
- Bioremediation Engineering 24 Hour Workshop

Tab 4

Past Experience



Tab 4 Past Experience

The following highlights some of E Sciences' specific relevant project experience. This experience reflects our knowledge of working in the Keys, and for municipalities:

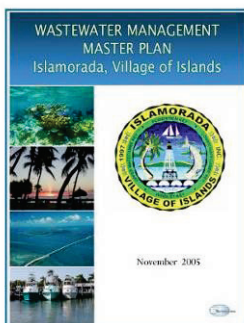


ISLAMORADA, VILLAGE OF ISLANDS ENVIRONMENTAL SERVICES

E Sciences has provided a variety of environmental engineering consulting services for Islamorada, Village of Islands, (the Village or Islamorada) including the following:

Interim Public Works Director — During transition between Village Public Works Directors, E Sciences was requested to fulfill the duties of the director on an interim basis. The transition took place during a critical phase of infrastructure growth — the Village was constructing its first wastewater treatment plant and collection system. E Sciences' role involved managing and overseeing multiple functions related to public works projects, including stormwater, wastewater and other capital improvement projects.

Wastewater Treatment Alternatives Analysis — E Sciences prepared a feasibility study and cost comparison to assist Islamorada in deciding whether to treat wastewater on-island or send all or a portion of it to a consolidated plant being constructed in Key Largo for treatment. This study involved a conceptual design of a transmission system from Key Largo to Islamorada, including all related wastewater facilities. We estimated capital and operational costs for four on-site wastewater treatment plants as well as a conveyance system to Key Largo's plant. Costs for the various scenarios were compiled and summarized to provide five alternatives for consideration. Additional considerations included construction and hook-up phasing, legal issues, environmental considerations, aesthetics, limited land availability, and legal issues. E Sciences met with the Village's Water Quality Improvement Citizens' Advisory Committee and presented the findings to the Village Council.



Wastewater Master Plan Due Diligence and Regulatory Compliance Assessment — E Sciences projected probable demand for reuse water, evaluated a full service package wastewater treatment facility scenario, and assessed comparative mass nutrient loading and regulatory compliance issues. A regulatory compliance assessment was also performed which assessed (based on actual performance data of existing facilities currently operating in the Village) the reliability of producing compliant wastewater treatment effluent if a complete network of package wastewater treatment facilities were constructed. FDEP data records were reviewed regarding the compliance history of package wastewater treatment facilities currently operating within the Village.

Request for Proposals Development and Wastewater Rate Study — E Sciences prepared a RFP for the design, construction and implementation of a wastewater treatment facility and collection system to serve North Plantation Key. E Sciences assisted the Village with securing a design/build team for Phase I North Plantation Key/North Plantation Key Colony Wastewater Treatment and Collection System. Staff members researched technical specifications and reviewed the Preliminary Design Report for North Plantation Key Colony/North Plantation Key Waste Water Collection System as well as the Monroe County Waste Water Master Plan to prepare the technical RFP for the Village. E Sciences attended several meetings including Village Council



Meetings, meetings with Village staff and Water Quality Committee Meetings. Staff worked closely with the water quality committee to address the communities' concerns in the RFP. E Sciences evaluated proposals submitted by bidders and ranked firms on technical merit, and conducted interviews on behalf of the Village. We then shortlisted the bidders and conducted a second round of interviews to choose the Design/Builder. E Sciences assisted the Village in negotiations with the potential Design/Builder and helped to secure a Design/Build Agreement.



Program Management / Plantation Key Wastewater Treatment Facility — E Sciences provided Engineering Support Services to the Village of Islamorada for the design and construction of the North Plantation Key (NPK) wastewater treatment facility and collection system. The NPK project entailed the construction of a 0.355 MGD-MMADF wastewater treatment facility using a membrane bioreactor activated sludge biological nutrient removal treatment process. The project also includes a vacuum collection system with eight miles of vacuum sewer piping and force main. Construction of a reclaimed water system with 3.5 miles of transmission main was also part of the project. Construction was accomplished through two design/build contracts. E Sciences' role extended throughout

the project. Our initial responsibilities included the preparation of technical RFPs for the two phases of this project. During the most recent contractor selection process, E Sciences provided two engineers to participate in the selection committee. E Sciences negotiated with the contractor on behalf of the Village and also was a lead participant in ensuring that the Village was able to receive \$6.5 million in grant funding by contributing technical ideas and research and project management services to ensure that ambitious grant-related milestones were met. E Sciences also supported the Village in the selection of the treatment plant O&M contractor through the preparation of an RFP and participation in the selection committee. E Sciences acted as the Village's Design Consultant during the design phase of each NPK project. In this role we performed detailed reviews of plans and specifications for compliance with the contract documents, industry standards, constructability, ease of maintenance and other issues important to our client. During the construction phase of each project we performed construction engineering and inspection services. This included reviewing shop drawings, attending and participating in progress meetings, performing site inspections, reviewing the contractor's pay applications, evaluating change orders, oversight during the testing and acceptance phase, evaluating technical issues that arose during construction and offering solutions, and performing final inspections and developing punch lists. We also tracked the tasks required to transition from the construction phase to the operational phase and coordinated the construction and O&M contractors' activities to ensure a smooth transition

Construction Engineering Services — E Sciences provided Construction Engineering Inspection (CEI) and engineering support services for the NPK / NPK Colony Wastewater Treatment Facility and Collection System in Islamorada, Florida. E Sciences prepared the technical RFP for Phase I NPK Colony Waste Water Treatment Facility and Collection System and assisted the Village with securing a Design/Builder for the project. Staff served as the design consultant for the Village of Islamorada for this project. Responsibilities included plans and specifications review; shop drawing reviews; general CEI services, including on-site inspections; payment application processing; and interaction between the client and the Design/Builder. E Sciences conducted weekly site inspections and attended monthly progress meetings.

These tasks also included negotiating a change order to expand the waste water treatment facility from a 0.1 MGD-AADF facility to the current 0.25 MGD-AADF facility.



E Sciences Fees:

- RFP Phase I Collection System: \$45,000
- RFP Phase II Collection System, Contractor Selection: \$46,000
- CEI and Phase I Plant and Collection System Design Reviews: \$160,000
- CEI Phase II: \$250,000
- Engineering support for grant acceptance, conceptual design work for plant design change to triple capacity, permitting assistance, project management and coordination, design review for new plant design and Phase II Collection System: \$161,350
- O&M RFP, contractor selection, coordination and technical assistance during transition: \$59,000

Construction Costs:

- Construction Dates: 2004 – 2008
- Phase I Collection System and 100,000 gpd AADF plant: \$6,046,000
- Reclaimed Water System: \$1,196,000
- Grant-driven plant upsize to 250,000 gpd AADF: \$2,578,920
- Phase II Collection System: \$10,653,477

Contractor: WPC Industrial Contractors, Inc.

Indian Key Fill Bike Path/Stormwater Demonstration — This project was a first year implementation project under the Village's Stormwater Master Plan. The project is located on a one mile long, narrow strip of land known as Indian Key Fill, which is bordered by Florida Bay on the west and the Atlantic Ocean on the east. In this area, these two water bodies are Outstanding Florida Waters and are part of the Florida Keys National Marine Sanctuary.



Indian Key fill is dissected by the Florida Keys major road artery, US 1, on either side of which was a sparsely vegetated, linear bike path that was on grade with the slope from the highway. The combination of the slope and sparse vegetation allowed stormwater to runoff almost unimpeded into the adjacent bay and the ocean. The goal of the project was to pre-treat stormwater runoff along the one-mile stretch to improve water quality and minimize pollutants discharging into Florida Bay and the Atlantic Ocean. The first step in the project was to demolish the old bike path. The area was then re-graded, and a new, meandering bike path with swales was constructed on both sides of US 1. The final step was to install xeriscape landscaping using native plants. The result of the project was to provide water detention for the stormwater that allowed percolation and biofiltering prior to discharging into the adjacent water bodies. Additional benefits include enhanced areas for native wildlife and added recreational open space for residents and visitors.

E Sciences services included assistance with negotiations with regulatory agencies and permitting, CEI, RFP bid evaluation, biological survey, wetland delineation, and turbidity reports.

Indian Key Fill Oceanside Restoration Demonstration — Islamorada required wetland delineation and habitat impact assessment during the reconstruction of a bike path along the Oceanside of US 1. The project was initiated after the SFWMD notified Islamorada of incidental fill being placed into wetlands otherwise identified as non-disturbance areas. E Sciences identified all unauthorized wetland fill areas and prepared a restoration plan and delivered the product to Islamorada and the SFWMD within two weeks of being notified of the problem. E Sciences also coordinated the field supervision during the restoration activities.

Stormwater Land Development Regulations and Technical Manual — E Sciences assisted Islamorada in developing land development regulations in regard to stormwater impacts during development/redevelopment within the Village. Services included compiling data related to existing stormwater systems within the Village and developing the language for the regulations. Areas covered in the regulation text included the development/redevelopment process and its relation to the Village's review process and adherence to existing county, water management district and state regulations. Services also included development of a matrix of alternatives related to the type of designated land use activities, as well as specific design criteria needed for each stormwater treatment facility, and development of a technical manual to assist the applicant in interpreting the regulations and specific examples.

Stormwater / Drainage Plan Reviews — E Sciences provides ongoing support to the Village's Planning and Development Services Department by reviewing drainage plans that are submitted to the Village for development, redevelopment or modifications to existing developments. E Sciences reviews the stormwater calculations and design to evaluate if the overall stormwater management plan is substantially consistent with the Village's stormwater management regulations and Stormwater Design Criteria Technical Manual. Formal review letters provide the results of our review.

If revised plans are submitted based upon our review comments, E Sciences reviews the submittals again to evaluate if the revised plans sufficiently address any noncompliance items. These reviews are often time sensitive and are regularly completed within three to five working days.

Water Quality Master Plan — The project included several tasks, the first of which was an Assessment Report that included an inventory of Village residential canals, attributes and classification using the Monroe County Residential Canal and Inventory report. This was supplemented with Village water quality monitoring data and, using this data, a recommendation for suitable canals for the water quality project with the funds available was provided. Once a decision was made regarding the canal and treatment technology, drawings were generated to prepare a bid package, permit applications.



- Client:** Islamorada, Village of Islands
- Contact:** Cheryl Cioffari, Director of Planning
Islamorada, Village of Islands
86800 Overseas Highway, Islamorada, Florida 33036
Tel. (305) 664-6422
- Project Dates:** 2003 – Ongoing
- Key Personnel:** Nadia G. Locke, PE; Patricia L. Gertenbach, PG; Maria Paituvi, PE; Trent VanAllen, EI
- Contract Amount:** \$1,090,832
- Contractor:** See above
- Construction Cost:** See above



CITY OF MIAMI BEACH ENVIRONMENTAL / COASTAL ENGINEERING CONTINUING SERVICES

E Sciences was awarded a contract with the City of Miami Beach to conduct environmental / coastal engineering services. To date, E Sciences has provided the City with the following services:

Sea Level Rise Evaluation — E Sciences conducted a study of correlations between groundwater elevations, tidal fluctuations and rainfall over a period of twelve months to help the City plan for the effects of sea level rise. To identify areas of potential short and long term flooding, we created GIS layers of surface water levels from high quality Light Detection and Ranging (LiDAR) data, groundwater elevations collected, and other research conducted. The critical component of the effort was to identify areas with limited soil storage capacity and areas where sea level rise is expected to further reduce unsaturated soil storage capacity. These data were contoured to provide a spatial presentation of areas with higher vulnerability for impacts of sea level rise through groundwater. A report outlining our methodology, the results of the study in narrative, charts and graphics, model discussion and recommendations was provided at the completion of the study.

SPCC Plans — E Sciences prepared SPCC Plans for 12 facilities throughout Miami Beach. These facilities included pump stations, fire stations, public works yard, Miami Beach Golf Club and the Convention Center. E Sciences' approach for performing the SPCC Plans required under this contract followed the steps outlined in applicable federal regulations (40 CFR 112). We conducted the following activities to obtain the information required to complete the Tier I SPCC Plan:

- Review available as-built drawings, surveys and plans related to the structures and drainage pathways
- Conduct a site visit of each facility with a person knowledgeable of the facility's tank systems, coordinated through the City's Environmental Department
- Interview the site manager or other personnel familiar with the tank systems and other oil storage systems
- Review records of previous spills
- Evaluate topography and surface water flow regimes
- Evaluate areas of obvious discharge potential and spill sources
- Identify environmentally sensitive areas and potential receptors if a spill were to occur
- Document security measures to prevent unauthorized access to oil handling areas
- Develop a list of emergency response personnel
- Review the City's spill response measures
- Review records of tank integrity and pressure tests
- Review the City's personnel training records

The above information was used to complete the Tier I SPCC Plan for each facility. The Plan was reviewed and certified by an E Sciences Professional Engineer. We also incorporated recommendations to assist the City with compliance with state regulations.

Green Waste Facility — This site is an undeveloped, bermed area located on the east side of the Miami Beach Golf Club. The site was previously used by the City of Miami Beach for solid waste management and a portion of



the area contained buried debris. In anticipation of constructing the wastewater reclamation facility, the City implemented a material screening plan to remove the buried solid waste and screen out the larger (greater than 2-inches) pieces of solid waste for off-site disposal. The recovered screened material (RSM) was merged with a berm around the solid waste handling area to separate it from adjacent properties and the golf course. The larger pieces of debris removed consisted primarily of rock, concrete and wood debris. Miami-Dade Department of Environmental Resource Management (DERM) (now known as Department of Regulatory and Economic Resources-RER) required the City to demonstrate that there was a minimum of two feet of clean fill or other engineering control in place covering areas of solid waste in or around the berm in order pursue regulatory closure for the site.

E Sciences provided the City with guidance on whether it could be demonstrated that there was two feet of clean fill covering the berm. In order to complete the project in a time and cost effective manner, E Sciences developed a phased sampling approach consisting of collection of all the necessary samples, but conducting laboratory analysis on an iterative basis. The limited initial sampling results revealed the presence of regulated contaminants above regulatory criteria, therefore additional analysis was not deemed necessary. The City is currently proposing to implement an engineering control (EC) to achieve conditional site closure. E Sciences is completing the engineering control design and coordinating review and approval with RER. We are including options for re-using unwanted, clean fill materials or recycled materials from other places within the City as part of the engineering control system. The proposed engineering control will consist of the installation of an impermeable geosynthetic clay liner (GCL) and fill/sod system over the RSM berm. Furthermore, E Sciences is facilitating guidance and recommendation for the installation of the GCL cover to the City and will provide site oversight during construction in order to verify the proper installation of the cover and proper handling of the contaminated soil. Upon completion of the cover installation, E Sciences will submit as-built drawings and cross-sections documenting the constructed condition of the berm to RER. Additionally, E Sciences will prepare and submit an inspection, monitoring and maintenance plan for the EC.

Fleet Management Facility — E Sciences conducted groundwater and soil assessment activities at the active fleet management facility. The assessment was completed in order to evaluate the presence of contamination associated with a historical discharge documented in 1992. This assessment revealed the presence of free floating product in the groundwater and soil impacts within a localized area at the facility. E Sciences prepared and submitted a Site Assessment Report Addendum (SARA) including source removal plan recommendations. The SARA and source removal plan has received regulatory approval from RER. E Sciences is currently procuring quotes and necessary information to implement the proposed source removal in order to achieve regulatory closure of this historical discharge.

Street Tree Inventory — E Sciences conducted street tree inventories for the Normandy Shores and Normandy Isles neighborhoods. A total of 6,010 trees were inventoried using sub-meter accurate global positioning equipment and provided the City an ESRI ArcGIS shape file. The work included assessing each tree for its general condition and providing recommendations for maintenance.

Greenspace Canopy Assessment — Using i-Tree Canopy and i-Tree Vue, E Sciences assessed the extent of the City's urban forest canopy and the ecological services provided by the trees. Staff estimated the canopy coverage for the City's entire urban forest, its parks and its rights of way using i-Tree Canopy. It also estimated the percentage of available space remaining within the City for additional tree planting. E Sciences used this information to estimate the carbon sequestration and storage, as well as pollutant removal being provided by the trees. Staff developed a brochure for public education documenting the information from the study.



Groundwater Elevation Monitoring and Mapping Support, Sunset Harbor — E Sciences is currently assisting the City of Miami Beach with the completion of a groundwater elevation monitoring study in the Sunset Harbor neighborhood. This study is being conducted by the City to evaluate the soil storage capacity within this area to support the design and installation of a stormwater management system. E Sciences is currently providing the City with training and support during installation of the equipment and data collection, data management and modeling efforts. To date, the City has successfully installed equipment and downloaded data with the assistance of E Sciences' personnel.

Client: City of Miami Beach

Contact: Elizabeth Wheaton, LEED AP, Environmental Specialist
City of Miami Beach Public Works
1700 Convention Center Drive, 4th Floor, Miami Beach, Florida 33139
Tel. (305) 673-7080

Project Dates: August 2011 – Ongoing

Key Personnel: Nadia G. Locke, PE, Patricia L. Gertenbach, PG;
Maria Paituvi, PE; Trent VanAllen, EI, Justin Freedman, Brian Voelker

Contract Amount: \$216,014

Contractor: Not applicable

Construction Cost: Not applicable



CITY OF KEY WEST CITY HALL LANDSCAPE ARCHITECTURAL DESIGN AND ENVIRONMENTAL SUPPORT SERVICES

As a subconsultant to Bender and Associates Architects, E Sciences was contracted to provide environmental and landscape architectural support services. The City of Key West relocated the City Hall facilities to the site of the former Glynn Archer Elementary School at 1300 White Street. In support of design services efforts, E Sciences staff conducted an assessment of the approximately 65 trees at the site. The purpose was to evaluate the health and condition of the trees at the site, and to provide recommendations for preservation, transplantation and/or removal and replacement based on the existing site conditions, potential conflicts associated with the new design and in accordance with the City's municipal code.

We also provided landscape architectural design to include landscape and irrigation, aesthetic grading, hardscape amenities, architectural amenities and appointments, site lighting layout and fountain layout design.

Client: Bender and Associates Architects

Contact: Bert Bender, Project Manager
410 Angela Street, Key West, Florida 33040
Tel. (305) 296-1347

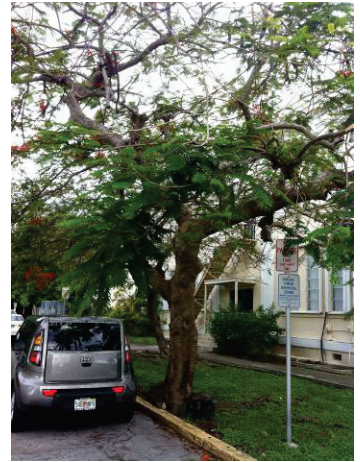
Project Dates: March 2013 – March 2014

Key Personnel: Patricia L. Gertenbach, PG; Justin Freedman, MS

Contract Amount: \$58,860

Contractor: Not applicable

Construction Cost: Not applicable





FORT LAUDERDALE CONTINUING CONTRACT FOR GENERAL ENVIRONMENTAL ENGINEERING

E Sciences was awarded a contract with the City of Fort Lauderdale (City) to provide on-going environmental engineering support during two separate consultant selection processes. The scope of the contract is broad and provided us with a wide range of opportunities to support the City. The following summarizes some of the projects that we completed for the City:

U.S. Department of Housing and Urban Development (HUD) Environmental Documentation and Area-wide Floodplain Management Eight-Step Decision-Making Process —The Fort Lauderdale City Commission has established four Community Investment Programs: the Neighborhood Community Investment Program, the Neighborhood Community Investment Grant Program, the Business Community Investment Program, and the Business Community Investment Grant Program. The goal of these programs is to provide matching grant funds for the construction of community improvements in the City's right-of-ways that beautify neighborhoods and enhance the quality of life for those who live, work, and visit the City of Fort Lauderdale. The majority of individual actions considered for these projects include the following: street name decorative posts, entryway monuments, entryway signs, concrete curbing, swales, sidewalks, median islands, decorative lighting, solar decorative lighting, landscape lighting, trees, landscaping, and irrigation.

E Sciences has prepared numerous environmental documentation packages to support HUD funding for the City of Fort Lauderdale's neighborhood improvement projects. The majority of these involved the preparation of Environmental Checklists and Environmental Assessment documentation in compliance with HUD regulations. E Sciences also prepared two Floodplain Management Eight-Step Decision-Making Process documents for them to utilize when projects are located within a 100-year floodplain as defined by FEMA. These included a citywide document and one for a specific neighborhood drainage and roadway improvement project.

Sistrunk Boulevard — E Sciences conducted soil and groundwater testing along Sistrunk Boulevard from I-95 to Andrews Avenue. The project was conducted in order to support the CRA with implementing a streetscape and enhancement project. Soil and groundwater testing was conducted at 36 locations to evaluate potential impacts to construction that may arise due to known contaminated sites historically located along the corridor. Potential sites of concern included historical dry cleaners, gasoline stations, junk yards and an incinerator ash landfill.

Prior to implementation, E Sciences worked with the FDOT to determine a scope of analytical services. E Sciences reconciled the proposed subsurface structure locations (drainage structures, light fixtures, etc.) identified on construction plan sheets with the existing corridor conditions and proximity to potentially contaminated areas. Due to the high number of utilities anticipated to be located in close proximity to the drilling locations, E Sciences engaged a private utility location contractor to locate underground utilities using ground penetrating radar and electromagnetic radiation surveys, to review the City's plans and provide coordination with Sunshine One Call. A Maintenance of Traffic (MOT) Plan was prepared and submitted to the City prior to field activities.

In addition to an assessment report, E Sciences provided general notes and bidding specifications language outlining requirements for managing contaminated soils and groundwater to be incorporated into the bidding and contract documents for this project. During construction, we assisted the City in working with the contractor to minimize impacts to construction and keep the project moving.

This "stimulus" project meant that deadlines were critical and that the work needed to be expedited. We developed a scope of work, met with FDOT to negotiate the scope, conducted private utility location, developed a MOT plan, and

initiated the sample collection within 13 days of the first phone call. Our draft report was provided to the CRA within an additional 12 working days. This project was completed to the satisfaction of the CRA and FDOT and we delivered the project under budget by more than \$12,000.

Fire Station #49 — This site was undergoing redevelopment with a new City fire station when petroleum contamination was discovered during construction. E Sciences mobilized to the site the same day as requested to further investigate the implications of this finding on construction and regulatory notification. Historical and regulatory records indicated historic USTs on the property. Consultation with regulatory agencies, collection of soil and groundwater samples and sound environmental judgment allowed this project to proceed with minimal time delay and costs to the project. E Sciences also conducted air monitoring for construction workers to evaluate potential health implications of exposure to the unknown products discovered and provide the City with such documentation.

Opinion of Post Closure Costs, Wingate Landfill — In response to a City audit, E Sciences was tasked to develop an opinion of post-remediation costs for this Superfund site. Historic and future operations with respect to maintenance and monitoring costs were compiled in several spreadsheets to provide future annual allocations until fiscal year 2032. E Sciences created the spreadsheets such that the cost forecasts may be updated annually.

Wingate Landfill Burrowing Owl Relocation — This hazardous waste superfund site that has undergone regulatory closure. A protective cap system was installed at this historical municipal landfill to eliminate potential exposure to contaminants and to prevent migration of contaminants in the landfill into the groundwater. A condition of the closure is conducting monitoring of the groundwater, surface water and fish tissues on a periodic basis for a period of 30 years. During a five year inspection, the EPA identified the presence of two burrowing owl burrows on top of the capped area of the landfill. The EPA directed the City to remove the burrows and evaluate the integrity of the landfill cap. E Sciences was engaged to evaluate the possible damage, and coordinate burrow removal with state and federal regulatory agencies.

The burrows were scoped and video recorded in an effort to assess whether or not the owls had affected/damaged the geomembrane with inconclusive results. However, it was determined that there were no eggs or flightless young in the burrows. Following coordination with the EPA, and the Florida Fish and Wildlife Conservation Commission (FWC), starter burrows were created outside of the cap area to encourage relocation of the owls to this area. The burrows were excavated and it was found that the cap had not been affected by the owls. The burrows were removed and the owls relocated themselves in the area outside the cap.

Fort Lauderdale Executive Airport Endangered Species Surveys, Permitting and Relocation — E Sciences conducted multiple endangered species surveys and relocation for proposed construction projects at Fort Lauderdale Executive Airport. Endangered species encountered, permitted or relocated include burrowing owls and gopher tortoises.

Fort Lauderdale Executive Airport Proposed U.S. Customs and Border Protection Facility — E Sciences was engaged by the City to assist with understanding the outstanding environmental and regulatory issues at a tenant space at the Fort Lauderdale Executive Airport as part of the planning for a future U.S. Customs and Border Protection Facility. The property is currently occupied by another private tenant who historically operated two fueling facilities: one abandoned in place and one recently taken out of service. Our scope of services included interviewing the tenant and a site visit, review of the tenant's consultant assessment reports, and communications with Broward County's Environmental Protection and Growth Management Department (EPGMD). This ongoing process is continuing as E Sciences provides periodic updates and advises the City in ways to reduce the potential for liability associated with these former fueling systems and reduce the potential for them to impact construction.

Progresso Village Neighborhood — E Sciences conducted a Phase I ESA for the City's Neighborhood Services group in order to support application for federal funding for decorative entranceway signs.

Hortt Elementary — E Sciences conducted a Phase I and Phase II ESA for the City to support their purchase of this school property intended for redevelopment as a neighborhood park. This property was initially developed by Mr. M.A. Hortt who was one of the early Fort Lauderdale settlers. The project was expedited to meet the constraints of contract timing.

Twin Lakes — E Sciences conducted a Phase I ESA and asbestos survey to support the City's purchase and redevelopment of this residence as a park.

Fort Lauderdale Executive Airport Fuel Spill Regulatory Assistance — Due to damage to an aircraft fuel tank during a low speed collision between two airplanes at Fort Lauderdale Executive Airport, a jet fuel discharge was reported to EPGMD. Immediately after the incident staff employed emergency procedures and properly managed the spill. E Sciences was initially called in to conduct soil testing to determine if the soils in the area were impacted with jet fuel. When E Sciences reviewed the documentation, we determined that everything had been sufficiently managed and that the activities should not require soil assessment or a formal discharge report, which would trigger a requirement to conduct a Site Assessment. E Sciences provided documentation and communications with EPGMD in order to prevent the reported discharge from entering the bureaucratic process of future assessment and remediation requirements.

Fort Lauderdale Low Level Bridges — E Sciences provided asbestos surveys in anticipation of demolition and reconstruction of three low level neighborhood bridges for the City: The Harborage, Marcetta River, and Carlotta River. These reports met the requirements for FDOT, as FDOT was providing funding for this project.

Fire Station #46 — E Sciences was contracted with the City to provide an industrial hygiene project. An indoor air quality survey was conducted to evaluate comfort-related issues posed by building occupants regarding indoor air quality. The scope of services included a walkthrough of the building; interviews with building occupants; observations of the air conditioning systems; measurements for temperature, relative humidity, carbon monoxide, and carbon dioxide in each building area; and moisture readings in areas where either visible indications of moisture impact were noted or that were reported by building occupants.

Sailboat Bend Preserve — E Sciences was hired by the City to conduct a Phase I and II ESA of vacant property being designated for use as recreational space and installation of a "tot lot". The property is adjacent to the City's public works and police department complex. No environmental concerns were identified.

Parcel Located at 538 NW 9th Avenue — E Sciences was engaged by the City's CRA to conduct a Phase I ESA of this property, located across the street from the CRA building. This vacant lot was being procured by the CRA as part of an assemblage of parcels for future development opportunities along Sistrunk Boulevard.

Client: City of Fort Lauderdale

Contact: Mr. Larry Teich
100 North Andrews Avenue, Fort Lauderdale, Florida 33301
Tel. (954) 828-7844

Project Dates: June 2008 – Ongoing

Key Personnel: Nadia G. Locke, PE; Patricia L. Gertenbach, PG; Maria Paituvi, PE; Trent VanAllen, EI, Justin Freedman, Brian Voelker

Contract Amount: \$234,727

Contractor: Not applicable

Construction Cost: Not applicable



BROWARD COUNTY CONTINUING ENVIRONMENTAL SERVICES

E Sciences has provided a host of environmental services for Broward County through our continuing "library" contract. Our services have focused on Phase I and Phase II ESAs, contamination assessment, remediation and storage tank services. The following outlines some of those projects:

Numerous Due Diligence Assessments — These Phase I and II ESAs have included vacant parcels to be acquired for open space preservation, rural lands being considered for conservation easements and developed land being considered for redevelopment. We have performed fast-track assessments for parcels that unexpectedly became available and provided follow-on services to municipalities for land that was acquired by the County for direct transfer for green space. On a parcel in Davie, the County had to respond swiftly to secure the rights for a conservation easement – we provided the results of the Phase I in less than one week! Due to our intimate knowledge of the many resources available to obtain such information, when the County aials did not provide sufficient coverage, we looked to alternate sources such as local historical societies and other state archives. E Sciences was able to provide verbal results to the County within a few days, and a written report was delivered within one week as requested.

Copans Road Mass Transit Facility — E Sciences started this project by providing the tank closure assessment documentation for an UST system upgrade project for 13 USTs with a combined total volume of 392,000 gallons, the largest tank upgrade in the State of Florida. As a subconsultant to Cherokee Enterprises, E Sciences' role was to provide assistance with developing the environmental portions of the contract documents for the construction project and to conduct the storage tank closure assessment and reporting activities. Our role grew to include conducting a baseline assessment of the groundwater contaminant concentrations. The baseline assessment was designed to provide justification for state funding for residual petroleum impacts around the USTs and to aid in planning the management of impacted soil and groundwater during the UST replacement. While working on the baseline assessment, a fuel delivery resulted in an off-site diesel fuel discharge. E Sciences provided the county with guidance on how to abate the source, reduce their third party liability, and assisted with negotiating an off-site access agreement. E Sciences then conducted a limited contamination assessment to satisfy the regulatory requirements.

The UST upgrade was completed and E Sciences facilitated source removal in several of the subsurface areas that were not covered under the state cleanup program, in order to not interfere with construction. We obtained \$50,000 in reimbursement funds from the State for the source removal efforts. Since the upgrade has been completed, E Sciences conducted a Site Assessment to define the non-program related petroleum discharges discovered during the tank upgrades.

Ravenswood Road Mass Transit Facility — E Sciences conducted an extensive soil and groundwater assessment at this site to accompany a State Rehabilitation Funding Allocation (SRFA) application submitted to the FDEP proposing a funding allocation between the Broward County and FDEP. During source removal activities administered under the Petroleum Preapproval Program, an ineligible discharge of petroleum product was observed seeping into the excavation. FDEP ordered the Broward County Transportation (BCTD) to conduct a site assessment and provided an opportunity to negotiate a SRFA agreement. The source of the discharge appeared to be the stormwater drainage system near the bus maintenance and bus wash areas.

In order to conduct a proper assessment, a thorough understanding of the underground utilities was the first step. Using geophysical techniques (electromagnetic survey and ground penetrating radar), Sunshine One Call utility locating service, dye tests, historic plans reviews, regulatory file review and interviews with past employees, E Sciences developed a detailed map that showed the connectivity between the various oil water separators, holding tanks, stormwater systems, floor drains and the bus wash.

A comprehensive sampling regime was necessary to properly assess the site due to the numerous suspect source areas. More than 50 soil samples and 18 groundwater samples were analyzed for various potential contaminants of concern. Fluorescent lighting to evaluate the presence of heavy petroleum was used as a field screening tool to complement the organic vapor analyzer readings and assist in the selection of soil samples for laboratory analysis. Areas with elevated total recoverable petroleum hydrocarbons (TRPH) were evaluated using fractionation in order to more accurately assess soils exceeding cleanup target levels (CTLs) and alternative leachability CTLs were developed using the FDEP Technical Report: Development of Cleanup Target Levels for Chapter 62-777. Other complicating factors included the need to obtain a permit for drilling in the FDOT/CSX Railway right-of-way, resolve outstanding utility easement property issues and coordinate with the concurrent stormwater drainage design/permitting project.

E Sciences assisted BCTD with negotiating a 50/50 cost share with FDEP. We also conducted source removal activities and groundwater monitoring to confirm subsequent natural attenuation in areas that were considered to be outside of the FDEP eligible areas.

Client: Broward County Transportation Department

Contact: Ms. Cindy Corbett-Elder, Assistant to the Director
3201 West Copans Road, Pompano Beach, Florida 33069
Tel. (954) 357-8451

Project Dates: 2007 – Ongoing

Key Personnel: Nadia G. Locke, PE; Patricia L. Gertenbach, PG; Maria Paituvi, PE; Trent VanAllen, EI, Justin Freedman

Contract Amount: \$444,549

Contractor: Not applicable

Construction Cost: Not applicable

Similar projects for Coastal Systems.

FORT ZACHARY TAYLOR STATE PARK

Coastal Systems originally completed the field studies, numerical modeling and coastal engineering design of the terminal groin and offshore detached breakwaters in the mid-1990's, along with a beach nourishment and breakwater maintenance project in 2001, for the beach at Fort Zachary Taylor State Park in Key West. A truck haul beach nourishment project for the Park was designed and permit processing began in early 2005 after the hurricanes of 2004 to restore the recreational beach for Park patrons. Coastal Systems completed an upland sand source study as part of this project that was referenced in the FDEP Beaches 2008 Strategic Management Plan for the Florida Keys.

Coastal Systems worked closely with the FDEP and the U.S. Army Corps of Engineers (USACE) to design a project that would enhance the beach but also minimize impacts to upland vegetation. Environmental permits were processed and construction commenced in 2007. The 3,600 cubic yard beach nourishment was constructed with truck haul methods using sand from the Ortona Mine in central Florida.

Coastal Systems provided construction administration and permit close-out services. Coastal Systems is currently processing permits through the FDEP and the USACE for coastal breakwater and groin improvements. Permits are anticipated in early 2015.



- Client:** FDEP
- Contact:** Mr. Fred Hand, FDEP Bureau of Design and Construction
3540 Thomasville Road, Tallahassee, Florida 32309
Tel. (850) 488-5373
- Project Dates:** 11/2005 – 12/2007
- Key Personnel:** Timothy K. Blankenship, PE, Penny Cutt
- Contract Amount:** \$60,000 (2007)
- Contractor:** Mr. George Munn, American Earth Movers, Inc.
821 N.E. 79th Street, Miami, Florida 33138
Tel. (305) 756-7616
- Construction Cost:** \$412,000 (Truck Haul)

MONROE COUNTY MOORING FIELD FEASIBILITY STUDY

In 2013 Monroe County (County) commissioned Coastal Systems International (Coastal Systems) to conduct a Feasibility Study to evaluate siting and development of new mooring fields in the Florida Keys. The goals of this Study were to examine the existing unmanaged anchorages at Jewfish Creek, Buttonwood Sound, and Boca Chica Basin; identify potential shore side facilities; develop conceptual mooring field designs for all three sites; and determine the optimal mooring field location. Information was obtained via (1) discussions with County staff, (2) a background/literature review, and (3) cursory field assessments of water depths, marine resources, site utilization, and potential shore side access. This information was utilized to rank the potential sites, develop conceptual mooring field designs, and recommend next steps towards implementation. The Feasibility Report summarizes the permitting process including site specific challenges, identifies grant funding opportunities, provides recommendations for engineering/design schedule and contracting, and presents recommended next steps.



Services provided included the following:

- Hydrographic survey – conducted initial surveys of the three anchorage areas and existing navigation channels to assess water depths. This information was utilized to site the mooring fields and prepare conceptual designs.
- Marine Resource Survey – conducted seagrass surveys in the three anchorage areas to assist with the siting and development of conceptual designs for each of the mooring fields.
- Monroe County Mooring Field Feasibility Report, May 2014 – prepared a comprehensive feasibility report, which included the results from the above surveys at Jewfish Creek, Buttonwood Sound, and Boca Chica Basin. The report presents conceptual mooring field designs for each site and details the regulatory challenges associated with environmental permitting at each site. The report also discusses the process for implementation.
- Presentations – Coastal Systems presented the preliminary findings from the Monroe County Mooring Field Feasibility Study to the public during the Marine and Port Advisory Committee Meeting in July 2013. A presentation on the Final Report was made to the Board of County Commissioners in February 2014.

Client:	Monroe County
Contact:	Mr. Rich Jones 2798 Overseas Highway, Suite 420, Marathon, Florida 33050 Tel. (305) 289-2805
Project Dates:	2013 – 05/2014
Key Personnel:	Timothy K. Blankenship, PE, Christy J. Brush, Penny Cutt
Contract Amount:	\$27,000
Contractor:	Not Applicable
Construction Cost:	Not Applicable

VILLAGE OF KEY BISCAYNE

Coastal Systems has provided beach management consulting services to the Village of Key Biscayne since 1996. Services have included coastal engineering, beach nourishment design/permitting, sea turtle lighting ordinance development, marine biology, and hydrographic surveying. Environmental permits for maintenance beach nourishment projects were processed through the Miami Dade County DERM, FDEP, and the USACE for the 1.1-mile long beach to be nourished on an interval of 3 to 4 years. These permits are valid for multiple events, providing the Village with flexibility to manage the beach with upland sources of beach fill. The first event was constructed in June-July, 2012 with the placement of approximately 38,000 cubic yards of beach fill from the Ortona Mine in Central Florida utilizing truck haul construction methods at a cost of \$1.5M. The beach fill project was specifically designed based on two different modeling methodologies, as required by the regulatory agencies, to not impact adjacent nearshore seagrass. Coastal Systems assisted the Village with the bidding and managed the construction that included construction stake-out and pre/post construction beach profile surveys. Physical and biological monitoring in accordance with the environmental permits is ongoing.

Coastal Systems also assisted the Village in securing FEMA funding from impacts to the beach from Hurricane Wilma in 2005. The beach is classified as an "Engineered Beach" due to the ongoing beach management program, and \$1.3M in FEMA funding was obtained for a two phase project that included dune restoration in 2008 and the truck haul nourishment in 2012. The 2008 dune rehabilitation truck haul project was designed and permitted in 2007 to address severe erosion since Hurricane Wilma. This project rebuilt the high dry beach, as well as dune resources that had been eroded. Coastal Systems administered construction of this project.

Coastal Systems developed a long-range beach management plan in 1997 to address the Village of Key Biscayne's erosional shoreline. In order to develop the plan, the engineering team analyzed the physical processes influencing the project such as winds, waves, tides and storm impacts. These processes were evaluated to determine the erosional patterns, design criteria, and design life. The resulting 2002 beach renourishment project expanded the beach and created a dune, which required approximately 120,000 cubic yards of sand obtained from an offshore borrow area. The newly constructed dune was vegetated with a variety of native dune species and now connects the dune systems of the state and county park north and south of the project site. Construction took place over the summer of 2002, during which Coastal Systems provided construction administration services. Annual monitoring survey and reports were conducted to document the performance for the following four (4) years. Coastal Systems completed the physical monitoring of the project which included the analysis of the project performance based on annual beach profile surveys. Volume calculations were completed and shoreline recession rates calculated. Monitoring reports were submitted and processed through the environmental agencies.

Client:	Village of Key Biscayne
Contact:	Mr. John Gilbert, Village Manager 88 West McIntyre Street, Key Biscayne, FL 33149 Tel. (305) 365-8945
Project Dates:	2/2000 – Ongoing
Key Personnel:	Timothy K. Blankenship, PE and Christy J. Brush
Contract Amount:	\$650,000 (2007)
Contractor:	Bernie Eastman, Eastman Aggregate Enterprises, LLC 3705 Bellevue Avenue, Lake Worth, Florida 33461 Tel. (561) 969-7147
Construction Cost:	\$1.5 M (2012 Truck Haul)

Similar projects for EBS.

BUILDING 702, SUITES 215 – 217 AND 218

At the request of the Miami-Dade Aviation Department (MDAD), EBS conducted investigations of indoor air quality conditions in Building 704 (various executive suites). The air quality investigations were initiated in response to complaints by building occupants of allergic symptoms or respiratory ailments.

Indoor Air Quality Investigation: EBS conducted the indoor air quality survey in general accordance with the provisions of the Indoor Air Quality Association (IAQA) and the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) guidelines. The major tasks included visual observation of Suites 215-217 and 218, the mechanical room air handler serving Suites 215-217 and 218, ductwork serving the area and both field and data logging measurements. EBS performed a thorough walk-through of the building documenting visible air quality issues, air intake and exhaust, etc.

As part of the indoor air quality investigation, the air handling units supplying the area were inspected for anomalies which may impact the indoor air such as routine filter maintenance, proper drainage of the condensate pan and cleanliness of the evaporator coils. Also the general cleanliness of the subject area and air conditioning supply diffusers were observed for potential impacts. Measurements were recorded utilizing hand held and data logging equipment. The data logging equipment was deployed over the course of one week to record conditions during various times of day and building occupancy.

Tested Parameters of Air Quality: In the absence of diagnostic information from a physician concerning the probable causes of any adverse health symptoms reported by occupants in the area, we conducted an indoor air quality survey that tested for commonly known indoor air toxins.

- Carbon Dioxide
- Carbon Monoxide
- Volatile Organic Compounds
- Respirable Particulates (dusts)
- Moisture
- Fungal Mold
- Allergen Sampling in Settled Dust



The survey also simultaneously investigated the indoor conditions of temperature, relative humidity (rH) and pressure (pressurization).

Field Observations and Results: Field observations revealed fungal mold spores, settled dust/particulate on the HVAC diffuser. The majority of the smoke tube tests indicated that the mechanical room and return air plenum were negatively pressurized to the occupied area and that the supply duct was positively pressurized. No adverse air quality concerns were identified in the breathing zone resulting from pressure differential. Elevated moisture measurements were also recorded in one ceiling tile inside Suites 215-217. Laboratory analysis



of settled dust on the office furniture also revealed Cat Allergen in moderate quantities. Cat Allergen in moderate quantities can cause allergic reactions in some people.

EBS prepared a report with the project background information, survey procedures, the field and analytical results with conclusions and recommendations EBS recommends a thorough cleaning of all furniture surfaces and HVAC grills with accumulations of dust and particulates by a contractor experienced in microbial abatement techniques and dust control. In addition, EBS recommends a buildings systems specialist examine the building for moisture intrusion problems in the cubicles area of some suites.



Client: MDAD

Contact: Foster Mack, Project Manager III
4200 NW 36 Street, Miami, Florida 33159
Tel. (305) 876-8326

Project Dates: 11/2005 – 10/2011

Key Personnel: Benjamin S. Essien, PE and Francisco E. Gomez

Contract Amount: \$5,345

Contractor: Not Applicable

Construction Cost: Not Applicable

16 HEAD START PORTABLE CLASSROOM FACILITIES

Miami-Dade County GSA in association with Community Action Agency (CAA) awarded a contract to EBS for Industrial Hygiene/Indoor Air Quality services in 16 Head Start Portable Classroom facilities in the County. The scope of services included asbestos survey and hazard assessment, moisture and mold assessment; and radon measurement services, preparation of reports with recommendations, remedial action plans, project management and abatement reports, etc.

Asbestos Survey/Hazards Assessment: EBS conducted a comprehensive asbestos survey in accordance with the EPA Asbestos Hazard Emergency Response Act (AHERA). EBS performed a thorough walk-through in each of the facilities demarking both the functional and homogeneous sampling areas. This was followed by sampling and hazards assessment of the suspect asbestos containing materials (ACM) in each facility. The hazards assessment procedures focused on the condition, location and type of ACM. Friable and non-friable ACMs encountered during the survey were assessed. Friable materials, when dry, will crumble and release fibers under normal hand pressure, whereas non-friable materials will not.



The sampling protocol used in the asbestos survey was in general accordance with Title 40, Code of Federal Regulations (CFR), Part 763.86 and State of Florida Statutes. Bulk samples collected during the site survey were analyzed by Polarized Light Microscopy (PLM) coupled with dispersion staining.

The laboratory that analyzed the samples, has attained National Institute of Standards and Technology (NIST) accreditation through participation in the National Voluntary Laboratory Accreditation Program (NVLAP). Any material containing more than one percent (1%) of asbestos is considered by EPA and OSHA to be ACM.

EBS prepared a report of the survey and hazards assessment including the project information, bulk sampling procedures and the analytical results with recommendations for the removal of any ACMs identified. No ACM was identified in any of the tested facilities.



Moisture and Mold Survey/Assessment: EBS conducted a moisture survey and mold assessment in general accordance with the provisions of the American Conference of Governmental Industrial Hygienists (ACGIH), and New York State guidelines. The moisture survey was performed utilizing a Protimeter SurveyMaster (SM) meter in both measure and search mode.

Air samples were collected inside the classrooms and one sample was collected outside the building for comparative analysis. Tape lift or bulk samples were also collected to confirm the presence of mold growth on surfaces. EBS personnel utilized clean, disposable gloves prior to sample collection to prevent the potential for cross-contamination. The samples were placed in a sealed container, labeled and transported to accredited laboratory for identification of fungal mold.

EBS prepared a report of the moisture survey and mold assessment including the project information, sampling procedures and the analytical results with recommendations for the remediation of the fungi mold growth identified in some of the facilities.

Radon Screening Measurements: The radon screening measurements were performed in accordance with the Florida Department of Health statutes and EPA Guidelines for radon or radon progeny measurements or radon mitigation services. The measurement procedure used was activated charcoal method which utilizes small canisters of activated charcoal that are opened in the test structure for a known period of time. If radon is present in the air, it is absorbed by the charcoal. The amount of radon adsorbed is determined by reading the amount of alpha and beta particles produced by the adsorbed gas. This reading, along with the exposure time, is used to calculate the radon gas concentration present during the test. Typically, the detector is exposed in the structure for a minimum of 48 hours and for not more than 7 days.

The results of the radon screening measurements indicated that the areas tested had indoor radon gas levels less than the EPA threshold for action of 4 picoCuries per liter (pCi/l) of air. EBS prepared a report with the results of the radon screening measurements and general recommendations based on those results.

Mold Remediation Phase: The remediation work was performed in general accordance with the provisions of ACGIH, the New York State guidelines and the Work Action Plan prepared by EBS. EBS also provided a project supervisor onsite (full time) for project monitoring on a daily basis during abatement operations to observe all the abatement activities and the work practices of the abatement contractor. Specific responsibilities included: confirmation that the abatement contractor is in compliance with the work action plan specifications; abatement workers are correctly using protective equipment; and containment structures are properly constructed and well maintained, conduct visual inspection for completeness and clearance.



EBS conducted clearance sampling following the abatement work. Samples were collected inside each containment and one sample was collected outside the building, and the clearance "Pass" based upon comparative evaluation of the inside and outside samples. EBS also prepared an abatement report including a summary of work procedures and practice observations, air sampling procedure and clearance sampling results.

Client: Miami-Dade County GSA (ISD) Design and Construction Services Division

Contact: Cyrus Shojaie
864 NW 23rd Street, Second Floor, Miami, Florida 33127
Tel. (786) 299-2048

Project Dates: 9/2008 – 8/2009

Key Personnel: Benjamin S. Essien, PE and Francisco E. Gomez

Contract Amount: \$109,300

Contractor: Not Applicable

Construction Cost: Not Applicable

Similar projects for CEI.

UNITED STATES NAVY, BOCA CHICA NAVAL AIR STATION, FUEL PUMP HOUSE & FILL STAND REPLACEMENT

CEI was retained by Pedro Falcon Electrical Contractors as a mechanical subcontractor to upgrade aging equipment at the fuel pump house and fill stand.

The project was particularly challenging because the facility serves as the “Southernmost Top Gun Training Facility,” and construction was scheduled during the busiest part of the year for training. Construction needed to be “phased” to keep the old pump house and fill stand operating while the new facility was built. The new facility was then tied in and combined over the weekend so as not to impact flight operations.



The project consisted of:

- Performing API inspection of approximately two miles of existing fuel transfer piping between the pump house and fill stand;
- Installing a product saver system at the at the tank farm to service four existing tanks;
- Demolishing existing pump house (4-150 GPM Pumps) and fill stand (2 – 300 GPM Filters), which contained lead based paint;
- Installing a new 1200 GPM system (2-600 GPM Pumps) and a spare 600 GPM Pump in the new pump house built by Pedro Falcon;
- Installing 2 new 600 GPM truck loading stands complete with surge suppressors, relaxation vessels, filter separators, control valves and meters ;
- 10% X-ray of piping (zero repairs);
- Pneumatic & hydrostatic testing;
- Flushing & startup;
- The pump house piping was constructed of carbon steel while the filter separator & fill stand were stainless steel.

Client: NAS Key West - Boca Chica Naval Air Station

Contact: Christian Brisson,
Boca Chica Naval Air Station,
Key West, Florida 33040 (Mile Marker #7 / Bldg A933)
Tel. (305) 872-2200

Project Dates: 6/2008 – 6/2009

Key Personnel: Alex E. Sanchez

Contract Amount: \$2M

Contractor: Pedro Falcon Electrical Contractors
31160 Avenue C, Big Pine Key, Florida 33043
Tel. (305) 872-2200

Construction Cost: \$2M

BROWARD COUNTY BUS MASS TRANSIT MAINTENANCE FACILITY UPGRADES, COPANS ROAD FACILITY

CEI provided design and construction management for the replacement of single-walled USTs with double-walled tanks to comply with the State of Florida's 2009 deadline for removing single walled underground tanks, in addition to supplemental environmental work. The design and construction management of this project consisted of the removal and replacement of 13 underground storage tanks at the Mass Transit's Copans Road facility. The project included the replacement of approximately 1,725 linear feet of underground waste oil piping within an active, congested Bus Maintenance Facility.

CEI's role was to design the facility; prepare plans and specifications for public bid; assist in the selection of a contractor; install a temporary fueling system; supervise the activities of the construction company; perform post occupancy evaluations; and, miscellaneous services as requested by the County using the Optional Services allocated funds. The environmental portion of this project consisted of preparing a Tank Closure Assessment Report, including sampling and reporting; preparing a Sampling Plan and submit to Broward County EPGMD for concurrence of alternative soil screening methodology for site to account for large size of excavation; laboratory analysis, soil samples for laboratory analysis of the Used Oil parameters and soil samples for laboratory analysis of the VOAs, PAHs, and TRPH; installed temporary groundwater monitoring wells and obtained groundwater samples for laboratory analysis of either Used Oil parameters or VOAs and PAHs; and, provisions for sampling. CEI and E Sciences were teamed for this project.

Client:	Broward County Transportation Department
Contact:	Cindy Corbett-Elder 3201 West Copans Road, Pompano Beach, Florida 33069 Tel. (954) 357-8451
Project Dates:	6/2009 – 3/2011
Key Personnel:	Alex E. Sanchez and Jeffrey S. Northrup
Contract Amount:	\$1,021,000
Contractor:	CEI
Construction Cost:	\$951,000



EVERGLADES NATIONAL PARK, HOLE-IN-THE-DONUT SITE RESTORATION

CEI was retained by the National Park Service to complete the mitigation activities of 258 acres at the Everglades National Park. All bulk vegetation, including Brazilian Pepper trees, and substrate in the project area were removed. During construction, weekly meetings were held with National Park Service staff and CEI project management to transfer info about this fast paced project. At the end of each week, a detailed report was provided.

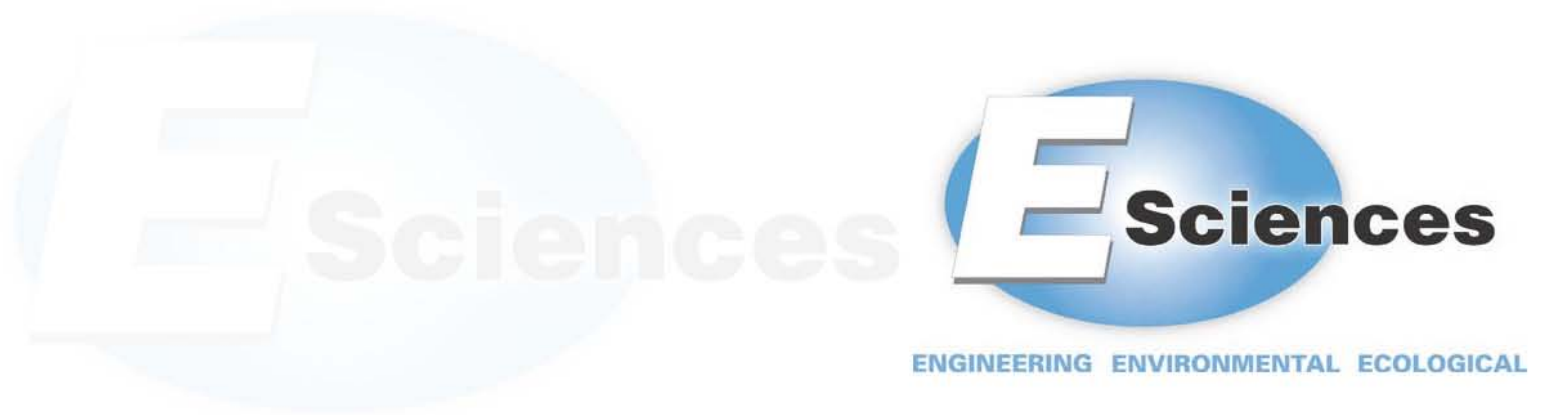
CEI provided competent project management, site supervision and quality assurance/quality control. CEI also exercised extreme caution when re-fueling and/or servicing equipment to avoid environmental impacts. Furthermore, CEI performed the work in an environmentally sensitive manner to minimize disturbances to the native animals and plant species in and around the project area.

This project was particularly challenging due to the fact that a large area needed to be remediated prior to the onset of the rainy season. CEI worked 6-7 days per week for up to 12 hours per day. The project was successfully completed only days before serious rains began that would have halted the work.

Client:	National Park Service
Contact:	Darrin L. Knapp PO Box 25287, Denver, Colorado 80225 Tel. (303) 969-2055
Project Dates:	6/2009 – 3/2011
Key Personnel:	Alex E. Sanchez
Contract Amount:	\$1.3M
Contractor:	CEI
Construction Cost:	\$1.3M



Management & QA/QC Approach



Tab 5 Management and Quality Assurance / Quality Control Approach

The following paragraphs highlight our approach, concepts, and quality control procedures that have proven to be successful on similar contracts.

Contract Management

E Sciences' management philosophy is based on listening to City staff and understanding the City's business and technical needs, budgetary constraints, staffing needs, and project deadlines. We will develop our project-specific scopes to satisfy these necessities, combining experience with ingenuity to develop the best solution for each situation. We consider efficiency of design, quality of work, and on-time performance essential components of our company. Our aim is to provide accurate information and sound solutions that satisfy the needs of the City, regulatory agencies and the public. E Sciences can mobilize teams to simultaneously complete multiple projects. We have successfully managed projects ranging from simple studies to large multi-disciplinary projects. The goal of our project management system is to provide quality service that is responsive to the client's needs, is on time, and is within budget.

Our organizational structure enables the project manager, Nadia Locke, to serve as your single point of contact; to provide overall contract management; and to oversee project execution in a centralized manner. If appropriate for smaller tasks, Ms. Locke may assign a project coordinator for managing simultaneous projects. In these instances, the project coordinator may handle the day-to-day execution of the project. This process will ensure that an integrated approach is used in executing individual task orders. Upon receipt of a task order from the City, Ms. Locke will review the task order; provide the fee estimate; and schedule the workflow. Ms. Locke will then assemble and mobilize the appropriate professional and technical team members for executing the work. She will monitor and report the status of schedule, budget, technical quality and overall performance directly to the City's project manager. Ms. Locke excels at proactively working to avoid or mitigate project problems before they adversely affect the performance of the assigned services.

In order to provide services expeditiously at the request of the City, our management approach also includes the partnership with two local firms: Terramar and Perez. While each firm has a separate skill set (Perez's focus is engineering and Terramar's focus is ecology and permitting), their professional staff are knowledgeable about island-specific issues and are well versed in many other environmental issues that the City may encounter. Working in partnership with our project manager and technical staff, E Sciences will be able to authorize these firms to send representatives to a project or City office to respond right away and to further develop and refine the next steps to meet any of the City needs.

Quality Assurance/Quality Control

E Sciences' QA/QC plan incorporates quality assurance and control into each facet of our services, from the first phone call to the final invoice, regardless of the project size. The ultimate purpose of our QA/QC plan is to provide the City with the confidence that all services are performed in accordance with project scope, specification, and industry standards and that quality assurance is integral to every step of our process. E Sciences has achieved excellent success with similar contracts as a result of our detailed, structured approach to controlling quality.

Each project is assigned to a Project Manager who is accountable for all aspects of the project. A Technical Quality Assurance Professional (TQAP) is assigned to each project task involving engineering or scientific evaluations, interpretation, or professional judgment. Documents provided to clients which contain technical data, observations, conclusions, or commitments require TQAP-level review in accordance with Company Policy. Each proposal, report, or

other document prepared for clients that contain engineering or scientific evaluation, interpretation, or professional judgment must be reviewed by two individuals, at least one of whom must be a TQAP Reviewer with qualifications and experience relevant to the area of work. Ms. Locke and Ms. Gertenbach are both TQAP Reviewers who will be involved in each and every City project.

E Sciences coordinates closely with client project managers during the quality control process to ensure the final product meets both corporate and client quality standards prior to publication. As part of our quality assurance review process, internal controls incorporate the diverse expertise of one or more senior staff members to perform initial technical reviews. Secondary reviews of revisions are conducted by senior staff as a part of report finalization. The TQAP then performs a final review of all finished products, with close interaction of senior staff, to provide accuracy and quality before delivery. E Sciences is committed to the goal of partnering and drawing upon the strengths, skills, and knowledge of each team member to achieve a quality project.

E Sciences' QA/QC plan includes prequalification of subcontractors to ensure that each subcontractor meets our standards for quality and accuracy in deliverables. Our subcontracts are reviewed periodically to re-qualify our subcontractors.

E Sciences' staff members attend quality assurance training workshops conducted by the FDEP and are well versed in "Standard Operating Procedures for Field Activities, DEP-SOP-001/01." Staff and project level scientists and engineers regularly attend training classes and seminars.

Our quality measures are incorporated into each project regardless if it is small, medium or large. The size of the project does not matter, as quality is equally important. An example of a small project may be a Phase I ESA. The TQAP Reviewer will discuss the project at the onset with the engineer or scientist conducting the assessment to set expectations, share information provided by the client and set the project goals. The project manager will discuss the schedule and budget constraints. Typically, some historical and regulatory information is compiled prior to a site visit. Therefore, prior to conducting a site or area reconnaissance together they decide what information is to be gathered. The compiled information is reviewed prior to the report preparation to ensure that no additional resources should be consulted prior to rendering an opinion. This avoids omissions, and delays that can occur due to the TQAP Reviewer identifying unnecessary data gaps/failures during review of the report. It also enables us to provide preliminary findings to our clients prior to issuance of the report. Conversely, a large project may consist of a site assessment of a chlorinated solvent plume. Similar to the Phase I ESA, project kick-off meetings are held with the TQAP Reviewer, staff involved and the project manager. This meeting will result in a mutual understanding of project goals, expectations, schedules and budgets. As assessment data becomes available, it is reviewed with the TQAP Reviewer and Project Manager to identify deviations in the scope or unexpected findings and to allow us to provide updates to the client on results and project progress. This process continues throughout the site assessment so that when the report is developed, findings, conclusions and recommendations have been vetted amongst the project team and there are no surprises or omissions.

Quality Requires Keeping Abreast of Emerging Issues and Regulations

Because of the changing technical requirements of environmental regulatory issues, and emerging knowledge regarding environmental trends, close adherence to scientific accuracy and application of current regulatory approaches are tracked throughout E Sciences. This ensures that industry standard protocols, current regulations are followed and our clients benefit from promising trends in science and technology.

E Sciences' senior staff are regularly invited to present and teach at seminars and meetings covering subjects including recent topics such as Green Remediation at Brownfield Sites, Environmental Justice, Economic Opportunities for Redevelopment, *Incorporating Contamination Considerations into Planning and Redevelopment* and Water Quality Updates in the Total Maximum Daily Loads (TMDL) and NPDES Programs. Our staff members are heavily invested in community and professional organizations.

Tab 6

Other Certifications



Tab 6 Other Certifications

E Sciences is providing the following fully executed forms as part of this proposal submittal.

- Addendum No. 1
- Insurance Certificate (for proposal purposes only)
- Anti-Kickback Affidavit
- Public Entity Crime Certification
- Equal Benefits for Domestic Partners Affidavit
- Cone of Silence Affidavit



**CITY OF KEY WEST
3126 Flagler Avenue
Key West, FL 33040**

ADDENDUM NO. 1 – RFQ Environmental Engineering/ ITB 14-004

This addendum is issued as supplemental information to the bid package for clarification of certain matters of both a general and a technical nature. The referenced bid package is hereby addended in accordance with the following items:

RFI Questions Submitted:

1.) Does the bid require that respondents be a licensed PE?

Yes, you should include a Licensed PE on your team.

2.) Can a Prime submit as a sub to another firm? Also, can a sub-contractor submit with more than one firm?

Yes.

3.) Please confirm the attached (46 pages) is the complete PDF for the subject submittal. Page 1 of the PDF states that the document is 47 pages in length. It also states that the "Request for Qualifications" section is 10 pages in length. However, per the attached, the section is 8 pages. I just want to be sure there are no missing pages.

Yes there are 46 pages and there are only 8 pages in the RFQ section.

4.) Under the "Scope of Work" section on page 7 of the RFQ, services from a Resident Project Representative would be required. Would a RPR differ from the Engineer of Record in this instance?

Yes, the RPR is the on-site staff providing daily (or other agreed on frequency) oversight (e.g., inspection)

5.) May firms only submit for one discipline or would a sub-consultant be needed to satisfy all service requirements per submission?

Must submit for all, using a sub-consultant as necessary.

6.) Will there be any page number limitations for any part of the qualification package?

Unless otherwise so stated in the RFQ, no limit

7.) Is there an incumbent? If so, can you provide the company name?

There is not an "incumbent" relative to an Environmental-specific General Services RFQ.

8.) Just to clarify the RFQ instructions, please advise: Put COPY Response and CD-ROM in envelope, seal it, mark it COPY and place inside of Envelope with ORIGINAL Response and CD-ROM, then seal that envelope? One envelope inside of another, correct?

Correct.

9.) Signed certifications are required by prime and subs, or just prime?

Just prime

10.) Please confirm that the required forms (Anti-Kickback Affidavit, Public Entity Crimes Certification, Equal Benefits for Domestic Partners Affidavit, and Cone of Silence Affidavit) are to be completed by the prime consultant only.

Correct.

11.) Are insurance certificates required to be provided at the time qualifications packages are submitted?

Yes

12.) Is a "description of the contractor's employee benefits plan" (page 17 of the RFQ) required to be included with the executed Equal Benefits for Domestic Partners Affidavit?

No

13.) Please confirm that electronic signatures are acceptable as originals.

Electronic signatures are acceptable

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

Peter K. Partlow, PE, Principal



E Sciences, Incorporated

Signature

Name of Business



CERTIFICATE OF LIABILITY INSURANCE

OP ID: JB

DATE (MM/DD/YYYY)

11/06/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hatcher Insurance, Inc. P.O. Box 540689 Orlando, FL 32854-0689 Marion F. Hatcher, III		Phone: 407-841-2686 Fax: 407-841-2688	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: ESCIINC
INSURED E Sciences, Incorporated Attn: Melanie Aldridge 34 E. Pine Street Orlando, FL 32801	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A : Transportation Ins. Co.		
	INSURER B : Continental Casualty Company		20443
	INSURER C : Zurich-American Ins. Co.		16535
	INSURER D : Hudson Specialty Ins. Co.		37079
	INSURER E :		
	INSURER F :		

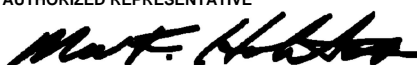
COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC			B4024246502	11/02/2013	11/02/2014	EACH OCCURRENCE	\$ 2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 300,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 2,000,000
							GENERAL AGGREGATE	\$ 4,000,000
							PRODUCTS - COMP/OP AGG	\$ 4,000,000
								\$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			B4024245527	11/02/2013	11/02/2014	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
								\$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$ 10000			B4024249173	11/02/2013	11/02/2014	EACH OCCURRENCE	\$ 3,000,000
							AGGREGATE	\$ 3,000,000
								\$
								\$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	WC9595815-04 USL&H INCLUDED	11/02/2013	11/02/2014	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
							E.L. EACH ACCIDENT	\$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
D	Professional Liab			ESB 1902121305	11/02/2013	11/02/2014	Ea Occ	1,000,000
D	Pollution Liab			ESB 1902121305	11/02/2013	11/02/2014	Aggregate	2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 General Liability includes Additional Insured if required by written contract.

CERTIFICATE HOLDER**CANCELLATION**

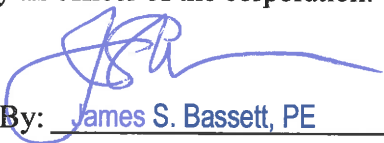
INFOXXX INFORMATIONAL/PROPOSAL PURPOSES ONLY	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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ANTI-KICKBACK AFFIDAVIT


STATE OF FLORIDA)
 : SS
COUNTY OF Orange)

I, the undersigned hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.


By: James S. Bassett, PE

Sworn and subscribed before me this

26 Day of June, 2014.



NOTARY PUBLIC, State of Florida at Large

My Commission Expires: June 9, 2017



**SWORN STATEMENT UNDER SECTION 287.133(3)(a)
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

**THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICE
AUTHORIZED TO ADMINISTER OATHS.**

1. This sworn statement is submitted with Bid, Bid or Contract No. RFQ No. 14-004 for City of Key West Environmental Engineering Services

2. This sworn statement is submitted by E Sciences, Incorporated
(Name of entity submitting sworn statement)
whose business address is 224 SE 9th Street, Fort Lauderdale, Florida 33316
and (if applicable) its Federal Employer Identification Number (FEIN) is 59-3667002 (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.)

3. My name is James S. Bassett, PE and my relationship to
(Please print name of individual signing)
the entity named above is Vice President.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any Bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means
 1. A predecessor or successor of a person convicted of a public entity crime: or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1)(8), Florida Statutes, means any natural

person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which Bids or applies to Bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies.)

Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

There has been a proceeding concerning the conviction before a hearing of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order.)

The person or affiliate has not been put on the convicted vendor list. (Please describe any action taken by or pending with the Department of Environmental Services.)

(Signature)

6/26/2014
(Date)

STATE OF Florida

COUNTY OF Orange

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

James Bassett who, after first being sworn by me, affixed his/her signature in the
(Name of individual signing)

space provided above on this 26th day of June, 2014.

My commission expires:
NOTARY PUBLIC

6/9/17



EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

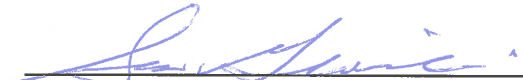
STATE OF FLORIDA)
 : SS
COUNTY OF Orange)

I, the undersigned hereby duly sworn, depose and say that the firm of E Sciences, Incorporated provides benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses per City of Key West Ordinance Sec. 2-799.


By: James S. Bassett, PE

Sworn and subscribed before me this

26th Day of June, 2014.



NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 6/9/17



City Ordinance Sec. 2-799
Requirements for City Contractors to Provide Equal Benefits for Domestic Partners

- (a) Definitions. For purposes of this section only, the following definitions shall apply:
- (1) **Benefits** means the following plan, program or policy provided or offered by a contractor to its employees as part of the employer's total compensation package: sick leave, bereavement leave, family medical leave, and health benefits.
 - (2) **Bid** shall mean a competitive bid procedure established by the city through the issuance of an invitation to bid, request for proposals, request for qualifications, or request for letters of interest.
 - (3) **Cash equivalent** means the amount of money paid to an employee with a domestic partner in lieu of providing benefits to the employee's domestic partner. The cash equivalent is equal to the employer's direct expense of providing benefits to an employee for his or her spouse.

The cash equivalents of the following benefits apply:

- a. For bereavement leave, cash payment for the number of days that would be allowed as paid time off for the death of a spouse. Cash payment would be in the form of the wages of the domestic partner employee for the number of days allowed.
 - b. For health benefits, the cost to the contractor of the contractor's share of the single monthly premiums that are being paid for the domestic partner employee, to be paid on a regular basis while the domestic partner employee maintains such insurance in force for himself or herself.
 - c. For family medical leave, cash payment for the number of days that would be allowed as time off for an employee to care for a spouse who has a serious health condition. Cash payment would be in the form of the wages of the domestic partner employee for the number of days allowed.
- (4) **Contract** means any written agreement, purchase order, standing order or similar instrument entered into pursuant to the award of a bid whereby the city is committed to expend or does expend funds in return for work, labor, professional services, consulting services, supplies, equipment, materials, construction, construction related services or any combination of the foregoing.
 - (5) **Contractor** means any person or persons, sole proprietorship, partnership, joint venture, corporation, or other form of doing business, that is awarded a bid and enters into a covered contract with the city, and which maintains five (5) or more full-time employees.
 - (6) **Covered contract** means a contract between the city and a contractor awarded subsequent to the date when this section becomes effective valued at over twenty thousand dollars (\$20,000).
 - (7) **Domestic partner** shall mean any two adults of the same or different sex, who have registered as domestic partners with a governmental body pursuant to state

or local law authorizing such registration, or with an internal registry maintained by the employer of at least one of the domestic partners. A contractor may institute an internal registry to allow for the provision of equal benefits to employees with domestic partner who do not register their partnerships pursuant to a governmental body authorizing such registration, or who are located in a jurisdiction where no such governmental domestic partnership registry exists. A contractor that institutes such registry shall not impose criteria for registration that are more stringent than those required for domestic partnership registration by the City of Key West pursuant to Chapter 38, Article V of the Key West Code of Ordinances.

- (8) *Equal benefits* mean the equality of benefits between employees with spouses and employees with domestic partners, and/or between spouses of employees and domestic partners of employees.
- (b) Equal benefits requirements.
- (1) Except where otherwise exempt or prohibited by law, a Contractor awarded a covered contract pursuant to a bid process shall provide benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses.
 - (2) All bid requests for covered contracts which are issued on or after the effective date of this section shall include the requirement to provide equal benefits in the procurement specifications in accordance with this section.
 - (3) The city shall not enter into any covered contract unless the contractor certifies that such contractor does not discriminate in the provision of benefits between employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees.
 - (4) Such certification shall be in writing and shall be signed by an authorized officer of the contractor and delivered, along with a description of the contractor's employee benefits plan, to the city's procurement director prior to entering into such covered contract.
 - (5) The city manager or his/her designee shall reject a contractor's certification of compliance if he/she determines that such contractor discriminates in the provision of benefits or if the city manager or designee determines that the certification was created, or is being used for the purpose of evading the requirements of this section.
 - (6) The contractor shall provide the city manager or his/her designee, access to its records for the purpose of audits and/or investigations to ascertain compliance with the provisions of this section, and upon request shall provide evidence that the contractor is in compliance with the provisions of this section upon each new bid, contract renewal, or when the city manager has received a complaint or has reason to believe the contractor may not be in compliance with the provisions of this section. This shall include but not be limited to providing the city manager or

his/her designee with certified copies of all of the contractor's records pertaining to its benefits policies and its employment policies and practices.

- (7) The contractor may not set up or use its contracting entity for the purpose of evading the requirements imposed by this section.

- (c) Mandatory contract provisions pertaining to equal benefits. Unless otherwise exempt, every covered contract shall contain language that obligates the contractor to comply with the applicable provisions of this section. The language shall include provisions for the following:

- (1) During the performance of the covered contract, the contractor certifies and represents that it will comply with this section.
- (2) The failure of the contractor to comply with this section will be deemed to be a material breach of the covered contract.
- (3) If the contractor fails to comply with this section, the city may terminate the covered contract and all monies due or to become due under the covered contract may be retained by the city. The city may also pursue any and all other remedies at law or in equity for any breach.
- (4) If the city manager or his designee determines that a contractor has set up or used its contracting entity for the purpose of evading the requirements of this section, the city may terminate the covered contract.

- (d) Enforcement. If the contractor fails to comply with the provisions of this section:

- (1) The failure to comply may be deemed to be a material breach of the covered contract; or
- (2) The city may terminate the covered contract; or
- (3) Monies due or to become due under the covered contract may be retained by the city until compliance is achieved; or
- (4) The city may also pursue any and all other remedies at law or in equity for any breach;
- (5) Failure to comply with this section may also subject contractor to the procedures set forth in Division 5 of this article, entitled "Debarment of contractors from city work."

- (e) Exceptions and waivers.

The provisions of this section shall not apply where:

- (1) The contractor does not provide benefits to employees' spouses.
- (2) The contractor is a religious organization, association, society or any non-profit charitable or educational institution or organization operated, supervised or controlled by or in conjunction with a religious organization, association or society.
- (3) The contractor is a governmental entity.

- (4) The sale or lease of city property.
- (5) The provision of this section would violate grant requirement, the laws, rules or regulations of federal or state law (for example, The acquisition services procured pursuant to Chapter 287.055, Florida Statutes known as the "Consultants' Competitive Negotiation Act").
- (6) Provided that the contractor does not discriminate in the provision of benefits, a contractor may also comply with this section by providing an employee with the cash equivalent of such benefits, if the city manager or his/her designee determines that either:
 - a. The contractor has made a reasonable yet unsuccessful effort to provide equal benefits. The contractor shall provide the city manager or his/her designee with sufficient proof of such inability to provide such benefit or benefits which shall include the measures taken to provide such benefits or benefits and the cash equivalent proposed, along with its certificate of compliance, as is required under this section.
- (7) The city commission waives compliance of this section in the best interest of the city, including but not limited to the following circumstances:
 - a. The covered contract is necessary to respond to an emergency.
 - b. Where only one bid response is received.
 - c. Where more than one bid response is received, but the bids demonstrate that none of the bidders can comply with the requirements of this section.
- (f) City's authority to cancel contract. Nothing in this section shall be construed to limit the city's authority to cancel or terminate a contract, deny or withdraw approval to perform a subcontract or provide supplies, issue a non-responsibility finding, issue a non-responsiveness finding, deny a person or entity prequalification, or otherwise deny a person or entity city business.
- (g) Timing of application. This section shall be applicable only to covered contracts awarded pursuant to bids which are after the date when this section becomes effective.

CONE OF SILENCE AFFIDAVIT


STATE OF Florida)
 : SS
COUNTY OF Orange)

I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of E Sciences, Incorporated have read and understand the limitations and procedures regarding communications concerning City of Key West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence (attached).


James S. Bassett, PE, Vice President

Sworn and subscribed before me this

26th Day of June, 2014.


NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 6/9/17



Sec. 2-773. Cone of Silence

- (a) **Definitions.** For purposes of this section, reference to one gender shall include the other, use of the plural shall include the singular, and use of the singular shall include the plural. The following definitions apply unless the context in which the word or phrase is used requires a different definition:
- 1) *Competitive Solicitation* means a formal process by the City of Key West relating to the acquisition of goods or services, which process is intended to provide an equal and open opportunity to qualified persons and entities to be selected to provide the goods or services. Competitive Solicitation shall include request for proposals ("RFP"), request for qualifications ("RFQ"), request for letters of interest ("RFLI"), invitation to bid ("ITB") or any other advertised solicitation.
 - 2) *Cone of Silence* means a period of time during which there is a prohibition on communication regarding a particular Competitive Solicitation.
 - 3) *Evaluation or Selection Committee* means a group of persons appointed or designated by the City to evaluate, rank, select, or make a recommendation regarding a Vendor or the Vendor's response to the Competitive Solicitation. A member of such a committee shall be deemed a city official for the purposes of subsection (c) below.
 - 4) *Vendor* means a person or entity that has entered into or that desires to enter into a contract with the City of Key West or that seeks an award from the City to provide goods, perform a service, render an opinion or advice, or make a recommendation related to a Competitive Solicitation for compensation or other consideration.
 - 5) *Vendor's Representative* means an owner, individual, employee, partner, officer, or member of the board of directors of a Vendor, or a consultant, lobbyist, or actual or potential subcontractor or sub consultant who acts at the behest of a Vendor in communicating regarding a Competitive Solicitation.
- (b) **Prohibited Communications:** A Cone of Silence shall be in effect during the course of a Competitive Solicitation and prohibit:
- 1) Any communication regarding a particular Competitive Solicitation between a potential Vendor or Vendor's Representative and the City's administrative staff including, but not limited to, the city manager and his or her staff;

- 2) Any communication regarding a particular Competitive Solicitation between a potential Vendor or Vendor's Representative and the Mayor, City Commissioners, or their respective staff;
- 3) Any communication regarding a particular Competitive Solicitation between a potential Vendor or Vendor's Representative and any member of a City evaluation and/or selection committee therefore; and
- 4) Any communication regarding a particular Competitive Solicitation between the Mayor, City Commissioners, or their respective staff, and a member of a City evaluation and/or selection committee therefore.

(c) Permitted Communications: Notwithstanding the foregoing, nothing contained herein shall prohibit:

- 1) Communication between members of the public who are not Vendors or a Vendor's representative and any city employee, official or member of the City Commission;
- 2) Communications in writing at any time with any city employee, official or member of the City Commission, unless specifically prohibited by the applicable Competitive Solicitation.

(A) However, any written communication must be filed with the City Clerk. Any City employee, official or member of the City Commission receiving or making any written communication must immediately file it with the City Clerk.

(B) The City Clerk shall include all written communication as part of the agenda item when publishing information related to a particular Competitive Solicitation.

- 3) Oral communications at duly noticed pre-bid conferences;
- 4) Oral presentations before publically noticed evaluation and/or selection committees;
- 5) Contract discussions during any duly noticed public meeting;
- 6) Public presentations made to the City Commission or advisory body thereof during any duly noticed public meeting;

- 7) Contract negotiations with city staff following the award of a Competitive Solicitation by the City Commission; or
- 8) Purchases exempt from the competitive process pursuant to section 2-797 of these Code of Ordinances.

(d) Procedure

- 1) The Cone of Silence shall be imposed upon each Competitive Solicitation at the time of Public Notice of such solicitation as provided by section 2-826 of this Code. Public notice of the Cone of Silence shall be included in the notice of the Competitive Solicitation. The city manager shall issue a written notice of the release of each Competitive Solicitation to the affected departments, with a copy thereof to each Commission member, and shall include in any public solicitation for goods and services a statement disclosing the requirements of this ordinance.
- 2) The Cone of Silence shall terminate at the time the City Commission or other authorized body makes final award or gives final approval of a contract, rejects all bids or responses to the Competitive Solicitation, or takes other action which ends the Competitive Solicitation.
- 3) Any City employee, official or member of the City Commission that is approached concerning a Competitive Solicitation while the Cone of Silence is in effect shall notify such individual of the prohibitions contained in this section. While the Cone of Silence is in effect, any City employee, official or member of the City Commission who is the recipient of any oral communication by a potential Vendor or Vendor's Representative in violation of this section shall create a written record of the event. The record shall indicate the date of such communication, the persons with whom such communication occurred, and a general summation of the communication.

(e) Violations/penalties and procedures.

- 1) A sworn complaint alleging a violation of this ordinance may be filed with the City Attorney's office. In each such instance, an initial investigation shall be performed to determine the existence of a violation. If a violation is found to exist, the penalties and process shall be as provided in section 1-15 of this Code.

- 2) In addition to the penalties described herein and otherwise provided by law, a violation of this ordinance shall render the Competitive Solicitation void at the discretion of the City Commission.
- 3) Any person who violates a provision of this section shall be prohibited from serving on a City of Key West advisory board, evaluation and/or selection committee.
- 4) In addition to any other penalty provided by law, violation of any provision of this ordinance by a City of Key West employee shall subject said employee to disciplinary action up to and including dismissal.
- 5) If a Vendor is determined to have violated the provisions of this section on two more occasions it shall constitute evidence under City Code section 2-834 that the Vendor is not properly qualified to carry out the obligations or to complete the work contemplated by any new Competitive Solicitation. The City's Purchasing Agent shall also commence any available debarment from city work proceeding that may be available upon a finding of two or more violations by a Vendor of this section.



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