



# V I L L A G E   O F   K E Y   B I S C A Y N E

*Village Council*

Mayra P. Lindsay, *Mayor*  
Franklin H. Caplan, *Vice Mayor*  
Luis F. de la Cruz  
Gary R. Gross  
Allison McCormick  
Brett G. Moss  
Katie Petros

*Village Manager*

Andrea Agha

## MEMORANDUM

DATE: October 30, 2018  
TO: Honorable Mayor and Council Members  
FROM: Andrea Agha, Village Manager  
RE: Professional Engineering, Surveying and Marine Biological Services for Annual Monitoring of the 2017 Beach Nourishment Project and No Name Shoal

### RECOMMENDATION

It is recommended that the Village Council authorize a work order to EAC Consulting, Inc. ("Consultant") pursuant to the competitively awarded continuing professional engineering services contract for the coastal engineering, coastal surveying, and marine biological services pursuant to Florida DEP permit required for the annual monitoring of 2017 beach nourishment project. The total professional fees are for a sum not to exceed \$99,105.

Funding will temporarily be transferred from the Underground Utility in the FY 2019 Capital Improvement Plan until the adoption of the five-year CIP. Approximately 50% of the physical and biological monitoring will be reimbursed by the Florida DEP.

### BACKGROUND

Pursuant to the FY19 Adopted Budget and Capital Improvement Plan, the Village implemented the 2017 beach nourishment. Environmental permits issued for this project from Miami-Dade DERM, Florida DEP, and U.S. Army Corps of Engineers require annual monitoring to be completed to evaluate the performance of the beach nourishment project. This monitoring is required to maintain permit compliance for the active permits, and the monitoring must be completed to maintain funding agreements with the Florida DEP as well as pending funding from FEMA for the Engineered Beach due to impacts from Hurricane Irma. The monitoring work has to be completed in a timely manner and by qualified personnel that are pre-approved by Florida DEP.

There are three separate work orders, and two of the work orders address physical and biological monitoring:

- Biological (Exhibit "1"): field assessments to map the limits of the seagrass line in the nearshore area along the length of the beach nourishment project, and conduct transects offshore at the intervals specified in the permits. These results will be compared to the surveys conducted prior to construction of the beach project. GIS spatial analysis and statistical tools are utilized to evaluate the seagrass beds, and a comprehensive biological report will be compiled and distributed to the agencies. There is budget allowance for some technical reviews and coordination.
- Physical Surveying (Exhibit "2") – beach profile surveys (cross sections) that extend from the dune offshore 2,000 feet are required to evaluate the beach conditions and further evaluate impacts from Hurricane Irma. A coastal engineering report is required evaluating the erosion and the need for the next beach nourishment.

Completion of the monitoring as quickly as possible is essential to maintain environmental permit compliance. The Village is addressing comments from Florida DEP on the LGFR for ongoing beach management as well as for FEMA reimbursements from Hurricane Irma. The survey work will also be used for new beach nourishment applications in early 2019 to initiate the Florida DEP permitting since these existing permits expire in 2020.

The third work order (Exhibit "3") addresses the coordination and permit processing for the seagrass mitigation at No Name Shoal relative to previous beach nourishment projects. The field work has been completed, and processing through Miami-Dade DERM, U.S. Army Corps of Engineers and Florida DEP is required to close out this permit compliance requirements. The initial field evaluation has indicated the seagrass mitigation project has met the required success criteria after 7 years of monitoring, so this permit requirement can be closed-out.

The Consultant has provided three work orders, attached as Exhibit "A", pursuant to the Continuing Professional Services Agreement.

Reviewed by Mr. Chad Friedman from Weiss Serota Helfman Cole & Bierman as to form and legal sufficiency.

**RESOLUTION NO. 2018- \_\_\_\_\_**

**A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AUTHORIZING THE VILLAGE MANAGER TO ISSUE WORK ORDERS TO EAC CONSULTING, INC. FOR ENGINEERING, SURVEYING, AND MARINE BIOLOGICAL SERVICES RELATING TO BEACH RENOURISHMENT PROJECTS; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, the Village of Key Biscayne (“Village”) issued Request for Qualifications No. 2016-02-09 (“RFQ”) for continuing professional engineering services; and

**WHEREAS**, pursuant to the RFQ, the Village Council selected EAC Consulting, Inc. (“Consultant”) as one of the consultants to provide continuing professional engineering services and authorized the Village Manager to execute an agreement with Consultant; and

**WHEREAS**, Consultant has provided three proposals, attached as Exhibit “A,” (the “Proposals”) for engineering, surveying and marine biological services relating to annual monitoring of the Beach Renourishment Projects (the “Projects”); and

**WHEREAS**, the Village Council desires to authorize the Village Manager to issue three work orders for the Projects consistent with the Proposals attached as Exhibit “A” and the professional services agreement entered into between the Village and Consultant; and

**WHEREAS**, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

**NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:**

**Section 1. Recitals Adopted.** That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

**Section 2.**    **Authorization.** The Village Manager is hereby authorized to issue three work orders to Consultant for the Projects consistent with the Proposals attached hereto as Exhibit “A” in an amount not to exceed \$99,105.00.

**Section 3.**    **Effective Date.** That this Resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

ATTEST:

\_\_\_\_\_  
MAYOR MAYRA PEÑA LINDSAY

\_\_\_\_\_  
JENNIFER MEDINA, CMC  
VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

\_\_\_\_\_  
VILLAGE ATTORNEY

**EXHIBIT "A"**

**PROPOSALS FROM EAC CONSULTING, INC.**





October 23, 2018

Andrea Agha, [aagha@keybiscayne.fl.gov](mailto:aagha@keybiscayne.fl.gov)  
Village Manager  
Village of Key Biscayne  
88 W. McIntyre St, Suite 210  
Key Biscayne, FL 33149

**Re: VKB Beach 2017 Re-Nourishment – Year 1 (2018) Post Construction Biological Monitoring Services**

Dear Ms. Agha:

EAC Consulting, Inc., as part of its Continuing Services Contract with the Village's respectfully submits this services to perform the following tasks as mandated by the Florida Department of Environmental Protection (FDEP).

These monitoring efforts are required to ensure compliance with issued regulatory permits and conditions.

The scope of services will be provided by our team including our sub consultants - **Moffatt & Nichol** providing coastal engineering services and **Smart Sciences, Inc** providing the field monitoring.

## **Background**

In 2017, the Village of Key Biscayne completed Beach Nourishment improvements along the VKB Beach coastline. The project location was within the Village of Key Biscayne between FDEP survey control monuments R-102 and R-108, approximately 5,425 feet (1,654 meters) of coastline, with control monitoring site located south of R-110, north of R-100. A Biological Monitoring Plan (BMP) was prepared in support of the project.

The goals of the BMP include delineating the western edge of the nearshore seagrass community offshore of the project area and estimating percent cover and species composition of seagrasses along perpendicular permanent transects within the project area.

The Miami-Dade County Regulatory and Economic Resources (RER), FDEP, and United States Army Corp of Engineers (USACE) permits require biological monitoring in accordance with the approved project specific BMP. The purpose of the monitoring is to identify unanticipated adverse impacts to submerged aquatic resources that result from construction and/or equilibration of the 2017 beach re nourishment project.

## **Scope of Work**

Our scope of services comprises of the following specific tasks and items required for conducting the seagrass restoration biological monitoring pursuant to Specific Conditions of approved permits.

### **Task 1: Year 1 - 2018 Beach Re-Nourishment Post Construction Biological Monitoring**

Our team shall conduct a biological monitoring survey to delineate the approximate western extent of seagrass and a qualitative survey for seagrass in accordance with the BMP for Village of Key Biscayne Beach Nourishment Project revised May 15, 2018. The survey limits are from FDEP survey control monuments R-102 through R-108 with control areas south of R-110 and north of R-100 and shall follow the methodology for marine benthic surveying based on the National Marine Fisheries Service (NMFS) Recommendations for Sampling *Halophila Johnsonii* at a Project Site (NMFS, 2002), using the "large area" protocol and consistent with past survey methods using the Braun Blanquet (BB) technique.

The western seagrass edge mapping shall occur adjacent to the re-nourishment area between FDEP survey control monuments R-102 and R-108. Approximately 5,425 feet (1,654 meters) of shoreline shall be surveyed to locate the western extent of the submerged aquatic vegetation (SAV). The western edge shall be delineated and recorded using Differential Global Positioning System (DGPS) for analysis and mapping purposes.

The qualitative seagrass community survey will occur within the same survey limits with the addition of six control transects, three located south of FDEP survey control monument R-110 and three located north of survey control monument R-100. Within the renourishment area, 25 transects will be established along the western seagrass edge identified above, spaced approximate 200 feet (60 meters) apart. Each transect will extend east 115 feet (35 meters), visually perpendicular to the shoreline. The beginning of each transect will be located using a handheld Global Positioning System (GPS) by Smart-Sciences and will correspond with the start of transect locations identified during the pre-construction survey and first annual post-construction survey.

If the seagrass area is a mixed bed, dominant seagrass species and other seagrass species occurring within the seagrass bed will be noted. The density estimate will be for the total seagrass coverage, not for each species separately. The biologists will also note the dominate species of attached macro-algae present within the seagrass bed, substrate composition, and take representative photographs of the survey area. Results will include calculations of density (average cover including zeros), abundance (average cover excluding zeros), and frequency of occurrence (percentage of quadrats containing seagrass) for each transect and also for the Project as a whole.

A control group composed of six additional seagrass community monitoring transects will be established approximately 2,000 feet (610 meters) south and north of the project area within Bill Baggs Cape Florida State Park and Crandon Park, respectively. Additional seagrass western edge mapping will be conducted in the control area as well. These six transects and the additional seagrass edge mapping area will be monitored using the same methods described above, resulting in a total of 48 qualitative measurements within the control areas. This information will serve as control data and will be used to distinguish natural sand displacement and natural changes in the seagrass community.

Snorkeling and SCUBA will be utilized for all transects and shoreline delineation. Tidal conditions may influence the pace and rate of speed at which the effort can be accomplished. Should adverse conditions be encountered, additional time may be required. This would be necessary if extreme tides, Village events, marine/pedestrian traffic, and/or poor visibility are encountered, which would make surveying this area dangerous and pose a safety risk to staff. ***Please note that Additional time if required to survey these areas will incur additional fees.***

This task also includes planning, coordination, and mobilization activities for field surveys, as well as safety briefings.

### **Task 2: Year 1 - 2018 Beach Re-Nourishment Post Construction Biological Monitoring**

Our team will ill prepare a comprehensive Post-Construction Biological Monitoring Survey Report to document results of the western seagrass edge mapping and qualitative survey. The report will provide a summary of the results of the biological monitoring survey along with identify any adverse impacts attributable to the project. The reports will analyze and discuss observations based upon the data collected and observations with comparison to control data. A statistical analysis will be prepared comparing Braun Blanquet data between the July 2017 post-construction monitoring to the 2018 Post-Construction Biological Monitoring Survey (proposed July 2018). The reports will include a comparison of the 2017 post-construction observations with 2018 post-construction observations and a discussion of the findings. If any impacts are identified, the report will include an estimate of the area of impact. A Geographic Information Systems (GIS) base map will be prepared comparing the western edge of seagrass mapped prior to commencement of construction to the western edge of seagrass mapped post-construction. Additional maps depicting the density and species distribution along the transects (25 in project area + six control) based upon the Braun Blanquet data, will also be prepared.



The reports will be submitted to FDEP, USACE and RER after the completion of the field survey. The report will be presented in hardcopy and electronic format. In addition, all collected raw data (Excel, field data sheets in PDF, etc.) will need to be provided to FDEP, USACE, and RER electronically so that it can be used for internal evaluations.

These reports will be submitted in electronic format to the Village for review after the completion of fieldwork. The electronic file will also include the Excel and raw field data sheets in PDF.

**Task 3: Year 1 - 2018 Beach Re-Nourishment Post Construction Biological Monitoring Meetings with VKB and/or Regulatory Agencies**

Our team will participate shall participate in conference calls and meetings as requested by the Village and/or regulatory agencies to review monitoring results and to address questions or concerns. Approximately eighteen (18) consulting hours are budgeted for this effort. If additional meetings are required, these will be provided under an addendum scope/budget with Client authorization.

**Additional Services**

Services not included in this scope include, but are not limited to the following:

1. Addressing additional data collection/analysis requested by the regulatory agencies
2. Addressing any remedial mitigation services or coordination of subsequent monitoring events
3. Additional Meetings unaccounted for in this scope of work.
4. Services to request regulatory variance to conduct surveys and monitoring activities outside of the June – September USACE guidelines
5. Additional time required to complete surveys and monitoring due to inclement weather, extreme tides, Village events, marine/pedestrian traffic, and/or poor visibility condition.

**Contract Terms**

It is our understanding the statement of work will be undertaken under a work order to be issued subject to the terms and conditions of the professional services agreement, dated May 20th, 2016 entered into between the Village and EAC Consulting, Inc.

This scope of services is valid to be executed for sixty (60) days. While we make every effort to keep our fees within estimates quoted, additional costs may be incurred due to circumstances beyond our immediate control, including but not limited to, rule or procedural changes, project team or agency staff delays, and unforeseen circumstances.

**Compensation**

Compensation for the varying tasks is on a lump sum or hourly basis that is based on the following breakdown and will be invoiced on a percentage basis for lump sum tasks and hours expended for hourly tasks in accordance with the level or progress of completion at the time of billing.

<b>Task No.</b>	<b>Description</b>	<b>Basis</b>	<b>Fee</b>
1	Year 1 - 2018 Beach Re-Nourishment Post Construction Biological Monitoring	Lump Sum	\$ 27,152.00
2	Year 1 - 2018 Beach Re-Nourishment Post Construction Biological Monitoring Reports	Lump Sum	\$ 24,116.00
3	Year 1 - 2018 Beach Re-Nourishment Post Construction Biological Monitoring Meetings with VKB and/or Regulatory Agencies	Hourly	\$ 3,993.00
	Printing and Reimbursable(s):	Lump Sum	\$ 135.00
	<b>Total Compensation for this Work Order:</b>		<b>\$ 55,396.00</b>

**Schedule**

The schedule for the Year 1 post-construction biological monitoring/permit compliance is approximately four (4) months, although the regulatory agencies sometimes take up to 1 year to review the submitted reports

**Conclusion**

We are ready begin working on this assignment. If the above fee proposal and the terms above are acceptable to you, please provide us with a Work Authorization// Work Order and a signed Approval (below). Please feel free to contact me if any clarifications are required. Thank you for the opportunity to be of service to the Village of Key Biscayne.

Sincerely,  
**EAC Consulting, Inc**



Michael Adeife, P.E.  
Senior Vice President

cc: File  
Jake Ozyman (VKB)  
David Kuang (EAC Contracts)  
Tim Blankenship, P.E. (Moffat & Nichol)

<b>AGREED AND ACCEPTED</b>	
By: _____	_____
Andrea Agha, Village Manager	Date
_____	, 2018
Notice to Proceed Date	



EAC Consulting, Inc.

October 23, 2018

Andrea Agha, [aagha@keybiscayne.fl.gov](mailto:aagha@keybiscayne.fl.gov)  
Village Manager  
Village of Key Biscayne  
88 W. McIntyre St, Suite 210  
Key Biscayne, FL 33149

**Re: VKB Beach Re-Nourishment – Beach Physical Monitoring Services**

Dear Ms. Agha:

EAC Consulting, Inc., as part of its Continuing Services Contract with the Village's respectfully submits this services to perform the following tasks as required for the Physical Monitoring Activities as mandated by the Florida Department of Environmental Protection (FDEP).

These efforts are required to ensure compliance with issued regulatory permits and conditions.

The scope of services will be provided by our team including our sub consultants - **Longitude Surveying and Mapping, Inc** providing near edge surveying services and **Olin Hydrographic Solutions, Inc** providing water based hydrographic surveys and **Moffat & Nichol, Inc** providing coastal engineering services including the compilation of the data gathered and documentation.

**Scope of Work**

Our scope of services comprises of the following specific tasks and items needed for completing **VKB's Beach 2017 Re-Nourishment – Year 1 (2018) Post Construction Physical Monitoring Services**.

The tasks under this fee proposal are described as follows:

**Task 1: Near Edge Topography Surveying Services**

Our team shall provide Surveying and Mapping support services to assist in mapping the near-edge of seagrass of the western edge of the seagrasses adjacent to the nourishment area (i.e., from at least R-102 to R-108). Our team shall utilize methodology required by the FDEP to perform the recording of the seagrass edge using a Trimble AgGPS Differential Global Positioning System (DGPS) with Survey Pro Beacon, or equivalent, interfaced to the HYPACK, Inc. processing program.

**Task 2: Beach Profile Surveying**

- a) Our team shall perform a hydrographic survey of for each range stations between and including Dade County DNR Monument R-100 and R-113 including the half monuments. This will include a total of 27 Survey Profiles. A topographic survey of the beach will be performed on each of these stations along the recorded azimuth using RTK GPS. The offshore portion of the work will extend out 2000 feet from the monument and will contain at least 20' overlap with the RTK survey on each profile. A survey fathometer will be calibrated for site conditions and used to obtain water depths. Positioning of the survey vessel will be provided using Differential GPS (DGPS). Survey data will be logged and navigation will be provided using Coastal Oceanographics' HYPACK software with an on-board laptop computer. Tidal Corrections will be managed by incorporating an RTK tides system during the hydrographic survey. Reference datum for the elevations will be NAVD 88.
- b) **Base Map and DEP Reporting:** Our team shall perform the post processing of the hydrographic survey data and convert to a digital terrain map DTM of the subsurface topography for use in future volume calculations. The water depths will be aligned in an AutoCAD drawing with any electronic land survey

or rectified aerial photograph. The data will be tabulated and a survey report generated which conforms to the DEP Bureau of Beaches and Coastal Systems (BBCS) Statewide Coastal Monitoring Program, Regional Data Collection and Processing Plan, March, 2001.

**Task 3: Year 1 Post Construction Physical Monitoring Documentation & Report**

Our team shall prepare an engineering report that will include the pre-construction, immediate post-construction and Year 1 post-construction beach profile data collected in Tasks 1 and 2 above. The report shall summarize and discuss the data, the performance of the beach fill project, and identify erosion and accretion patterns within the monitored area. In addition, the report shall include a comparative review of project performance to performance expectations and identification of any adverse impacts attributable to the project. The appendices of the report shall include plots of survey profiles and graphical representations of volumetric and shoreline position changes for the monitoring area. The results shall be analyzed for patterns, trends, or changes between annual surveys and cumulatively since project construction. The report shall be compiled and distributed to the environmental regulatory agencies for permit compliance within 90 days following the monitoring survey.

- **Deliverable:** Physical Monitoring Coastal Engineering Report (signed/sealed by a Florida Professional Engineer)

**Additional Services**

Services not included in this scope include, but are not limited to the following:

1. Additional time required to complete surveys and monitoring due to inclement weather, extreme tides, Village events, marine/pedestrian traffic, and/or poor visibility condition.

**Contract Terms**

It is our understanding the statement of work will be undertaken under a work order to be issued subject to the terms and conditions of the professional services agreement, dated May 20th, 2016 entered into between the Village and EAC Consulting, Inc.

This scope of services is valid to be executed for sixty (60) days. While we make every effort to keep our fees within estimates quoted, additional costs may be incurred due to circumstances beyond our immediate control, including but not limited to, rule or procedural changes, project team or agency staff delays, and unforeseen circumstances.

**Compensation**

Compensation for the varying tasks is on a lump sum or hourly basis that is based on the following breakdown and will be invoiced on a percentage basis for lump sum tasks and hours expended for hourly tasks in accordance with the level or progress of completion at the time of billing.

<b>Task No.</b>	<b>Description</b>	<b>Basis</b>	<b>Fee</b>
1	Near Edge Topography Surveying Services	Lump Sum	\$ 4,806.00
2	Beach Profile Surveying	Lump Sum	\$ 20,760.00
3	Year 1 Post Construction Physical Monitoring Documentation & Report	Lump Sum	\$ 9,116.00
	Printing and Reimbursable(s):	Lump Sum	\$ 300.00
	<b>Total Compensation for this Work Order:</b>		<b>\$ 34,992.00</b>

**Schedule**

The schedule for these services is approximately two (2) months.

**Conclusion**

We are ready begin working on this assignment. If the above fee proposal and the terms above are acceptable to you, please provide us with a Work Authorization// Work Order and a signed Approval (below). Please feel free to contact me if any clarifications are required. Thank you for the opportunity to be of service to the Village of Key Biscayne.

Sincerely,

**EAC Consulting, Inc**



Michael Adeife, P.E.  
Senior Vice President

cc: File  
Jake Ozyman, P.E. (VKB)  
David Kuang (EAC Contracts)  
Tim Blankenship, P.E. (Moffat & Nichol)

<b>AGREED AND ACCEPTED</b>	
By: _____	_____
Andrea Agha, Village Manager	<b>Date</b>
_____	, 2018
<b>Notice to Proceed Date</b>	



October 23, 2018

Andrea Agha, [aagha@keybiscayne.fl.gov](mailto:aagha@keybiscayne.fl.gov)  
Village Manager  
Village of Key Biscayne  
88 W. McIntyre St, Suite 210  
Key Biscayne, FL 33149

**Re: VKB 2011 No Name Shoal (NNS) Seagrass Mitigation - Year 7 (2018) Biological Monitoring Services**

Dear Ms. Agha:

EAC Consulting, Inc., as part of its Continuing Services Contract with the Village's respectfully submits this services to perform the following tasks as mandated by the Florida Department of Environmental Protection (FDEP).

These monitoring efforts are required to ensure compliance with issued regulatory permits and conditions.

The scope of services will be provided by our team including our sub consultants - **Moffatt & Nichol** providing coastal engineering services and **Smart Sciences, Inc** providing the field monitoring.

## **Background**

In 2011, the Village of Key Biscayne (Village) and the National Park Service (NPS) collaborated on a seagrass restoration project at "No Name Shoal" (25.57446, -80.27194) within the boundary of Biscayne National Park (BNP). This shoal is characterized by dense seagrass meadows with thriving fish and invertebrate communities; but, this area has heavily impacted seagrass beds due to vessel groundings.

The restoration objectives were threefold:

1. Site stabilization: restore the blowouts to grade by filling the holes with sediment fill
2. Recruitment enhancement: apply nutrient fertilizer to the filled sites through the installation of bird roosting stakes
3. Site protection: protect the restoration sites and shoal in general by installing a lighted shoal marker on the previously-unmarked shoal.

Seventeen injury features totaling 0.35 acres (1,409 square meters) were restored on No Name Shoal during the months of June, July, and August 2011. The lighted shoal marker was installed in 2011. Bird stakes and restoration signage were removed in the fall of 2012. The restoration sites were monitored annually by NPS for a period of approximately five years between 2011 and 2016.

NPS' final monitoring event (T5, 57-Month Monitoring Report) was conducted June 2016, which marks the final collaborative monitoring event covered under the agreement between the Village and NPS. The 57-Month Monitoring Report for the No Name Shoal seagrass restoration project was submitted to the FDEP on November 23, 2016 and was evaluated by their resource reviewers. The purpose was to determine whether biological monitoring was conducted in compliance with permit requirements and whether the mitigation site achieved permit-established success criteria.

Review of this report revealed that the 2016 monitoring event was conducted in compliance with permit conditions. The report suggests that sites are generally trending towards success, as evidenced by the increased number of sites containing *Thalassia testudinum* and the increased short shoot density and percent cover for *T. testudinum*.

The results of the 57-month survey indicate that the restored sites have not yet achieved the permit success criteria. FDEP understands that the 57-month survey was the final collaborative monitoring event covered under the agreement between the Village of Key Biscayne and the National Park Service.

The Village, as the permittee, is responsible for ensuring that mitigation sites are continually monitored until permit-required success criteria are met. The FDEP may require contingency mitigation if the mitigation success criteria is not satisfied after at least 5 years of monitoring, but not more than 7 years. Additionally, the FDEP advised VKB to consider potential options for adaptive management (including but not limited to planting) to facilitate / expedite recovery by the target species, *T. testudinum*.

## **Scope of Work**

Our scope of services comprises of the following specific tasks and items required for conducting the biological monitoring pursuant to Specific Conditions of approved permits.

The tasks under this fee proposal are described as follows:

### **Task 1: Year 7 - 2011 NNS Biological Monitoring**

Our team will communicate with the Village, Biscayne National Park, and the local, state and federal regulatory agencies relative to review of previous monitoring results for the No Name Shoal (NNS) Seagrass Mitigation, strategy for next steps, and coordination of the Year 7 monitoring event. Our team will coordinate with Biscayne National Park regarding notifications regarding work within the Park. Our team will coordinate with the FDEP regarding their potential participation in the monitoring field work, per FDEP staff request. Our team will coordinate with team members regarding monitoring fieldwork and reporting schedule, and will review/comment relative to data collection, analysis and reporting. Based on the monitoring event results, our team shall make recommendations to the Village regarding next steps.

### **Task 2: Year 7- 2011 NNS Biological Monitoring Report**

Our team will perform quality control reviews on the Biological Monitoring Report that documents the results of the survey and data analyses on the general patterns of seagrass community development.

### **Task 3: Year 7 – 2011 NNS Biological Monitoring Meetings with the VKB and/or Regulatory Agencies**

Our team will participate shall participate in conference calls and meetings as requested by the Village and/or regulatory agencies to review the NNS Year 7 mitigation monitoring results and to address questions or concerns. Approximately thirteen (13) consulting hours are budgeted for this effort. If additional meetings are required, these will be provided under an addendum scope/budget with Client authorization.

### **Additional Services**

Services not included in this scope include, but are not limited to the following:

1. Addressing additional data collection/analysis requested by the regulatory agencies
2. Addressing any remedial mitigation services or coordination of subsequent monitoring events
3. Additional Meetings unaccounted for in this scope of work.
4. Services to request regulatory variance to conduct surveys and monitoring activities outside of the June – September USACE guidelines
5. Additional time required to complete surveys and monitoring due to inclement weather, extreme tides, Village events, marine/pedestrian traffic, and/or poor visibility condition.

### **Contract Terms**

It is our understanding the statement of work will be undertaken under a work order to be issued subject to the terms and conditions of the professional services agreement, dated May 20th, 2016 entered into between the Village and EAC Consulting, Inc.

This scope of services is valid to be executed for sixty (60) days. While we make every effort to keep our fees within estimates quoted, additional costs may be incurred due to circumstances beyond our immediate

control, including but not limited to, rule or procedural changes, project team or agency staff delays, and unforeseen circumstances.

**Compensation**

Compensation for the varying tasks is on a lump sum or hourly basis that is based on the following breakdown and will be invoiced on a percentage basis for lump sum tasks and hours expended for hourly tasks in accordance with the level or progress of completion at the time of billing.

Task No.	Description	Basis	Fee
1	Year 7 - 2011 NNS Biological Monitoring	Lump Sum	\$ 4,016.00
2	Year 7- 2011 NNS Biological Monitoring QA/QC Reviews	Lump Sum	\$ 1,808.00
3	Year 7 – 2011 NNS Biological Monitoring Meetings with the VKB and/or Regulatory Agencies	Hourly	\$ 2,808.00
	Printing and Reimbursable(s):	Lump Sum	\$ 85.00
	<b>Total Compensation for this Work Order:</b>		<b>\$ 8,717.00</b>

**Schedule**

The schedule for the No Name Shoal Seagrass Mitigation Monitoring consulting services is approximately four (4) months, although the regulatory agencies sometimes take up to 1 year to review the submitted reports.

**Conclusion**

We are ready begin working on this assignment. If the above fee proposal and the terms above are acceptable to you, please provide us with a Work Authorization// Work Order and a signed Approval (below). Please feel free to contact me if any clarifications are required. Thank you for the opportunity to be of service to the Village of Key Biscayne.

Sincerely,  
**EAC Consulting, Inc**

Michael Adeife, P.E.  
 Senior Vice President

cc: File  
 Jake Ozyman, P.E. (VKB)  
 David Kuang (EAC Contracts)  
 Tim Blankenship, P.E. (Moffat & Nichol)

<b>AGREED AND ACCEPTED</b>	
By: _____	_____
Andrea Agha, Village Manager	Date
_____, 2018	
Notice to Proceed Date	