

To: Alison Higgins, Resiliency Manager From: Stantec Consulting Services Inc.
City of Key West 4798 New Broad Street #100
1300 White Street Orlando, FL 32814
Key West, FL 33040

Project/File: City of Key West Water Quality Date: March 17, 2026
Monitoring Program – Resume Key
West Harbor Monitoring

Reference: Task 0 – Resume Key West Harbor Monitoring

Dear Ms. Higgins,

This memorandum has been prepared to support the City of Key West (City) in resuming water quality monitoring in the Key West Harbor (Harbor). Enclosed you will find our proposed continuous monitoring approach/scope which details the sequencing and tasks necessary to resume baseline water quality monitoring in the Harbor.

Introduction and Approach

Previous monitoring of water quality in the Harbor had been conducted by the College of the Florida Keys (CFK) and provided valuable data to aid in the assessment of the impacts of external factors on water quality in the City's waters. The reinstatement of this monitoring will be important to bridge the temporal gap between the cessation of monitoring by CFK and the implementation of the City's comprehensive water quality monitoring program. Stantec is proposing to install continuous monitoring instrumentation with a suite of water quality sensors to resume the level of monitoring that was previously implemented to maintain comparability between datasets. All monitoring will be conducted in accordance with U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) standard operating procedures, including sensor calibration and quality control.

The following instrumentation will be procured from the manufacturer (YSI), in duplicate, and will be deployed in the Harbor for continuous water quality monitoring:

- YSI EXO3 multiparameter sondes (sondes) (house the sensors and measure depth)
- Temperature/conductivity sensors
- Dissolved oxygen sensors
- pH sensors
- Turbidity sensors
- Wipers (clean the sensors of biofouling before each measurement)

One of the sondes will be deployed near the water's surface (within approximately one meter of the surface), and one will be deployed near the bottom of the water column (approximately one meter from the bottom). Included with the sondes and sensors will be what YSI calls a "Turnkey System." This system includes all additional equipment necessary to power the sondes while deployed and allow for telemetry of

Reference: EPA South Florida Grant Application

the data recorded by the sensors. The data will be monitored via dashboard through YSI's HydroSphere cloud based platform.

Our approach as described below lays out the individual tasks/steps that would be required to install the monitoring equipment and maintain it through the end of the City's Fiscal Year 2026 (FY26) (i.e., September 2026).

Task 1: Pre-Installation

Prior to the installation of equipment, Stantec will meet with City representatives to confirm the Harbor installation location and establish a schedule for the purchase and installation of equipment. The installation design will also be finalized.

After the equipment is procured, Stantec will prepare the monitoring system for installation. This will include wiring the power and telemetry systems, testing the equipment for functionality, preparing the equipment with anti-fouling measures, servicing and preparing dive gear, and gathering of additional installation materials (i.e., the materials that will secure the equipment to the structure).

Task 2: Installation

Installation of the equipment in the Harbor includes a two-day allowance. While only one day is anticipated, budgeting for an extra day is included in the event unforeseen circumstances are encountered that might delay operations. The budget includes the use of two certified divers for the installation of the bottom sensors on the structure and covers any additional materials required to secure the equipment to the structure (e.g., Unistrut, bolts, straps). Sensors will be calibrated for deployment during the installation process so they are set up to collect quality data upon deployment.

Task 3: Operations & Maintenance

Monthly maintenance visits will be made by Stantec for sensor calibrations and cleaning of biofouling. The budget assumes equipment installation in June 2026, with maintenance occurring once per month July through September 2026. During these visits, the sensors will be calibrated, cleaned, and anti-fouling measures maintained/replaced as needed. These activities are imperative for the ongoing collection of quality data, reducing or eliminating the effects of calibration drift.

Task 4: Reporting

The reporting budget allows for the monitoring of the telemetered data through YSI's HydroSphere platform and the preparation and delivery of one quarterly report. The quarterly report will summarize the water quality monitoring results of the initial three-month deployment period and will include raw data files in a Microsoft Excel spreadsheet format.

Budget

The proposed budget for the procurement of necessary equipment and labor costs is provided in **Table 1**. Equipment costs are based on a quote provided by the manufacturer (Attachment A) for the Turnkey System and includes calibration standards for the turbidity sensor. The additional calibration solutions are for the conductivity and pH sensors from a third-party vendor (Exaxol). The proposed budget for Stantec

Reference: EPA South Florida Grant Application

time and materials for Tasks 1-4, as described above, are also included in **Table 1**. The Stantec budget assumes installation in June 2026 with three maintenance visits through the end of FY26.

Table 1. Equipment and Labor Costs to Execute Key West Harbor Monitoring through FY26.

Equipment	Cost
YSI Turnkey System	\$45,237.88
Calibration Solutions	\$1,297.05
Equipment Subtotal	\$46,534.93
Stantec Task	Cost
Task 1: Kickoff/Pre-Installation	\$8,536.72
Task 2: Installation	\$26,161.14
Task 3: Operations & Maintenance	\$23,898.81
Task 4: Reporting	\$10,711.20
Stantec Subtotal	\$69,307.87
TOTAL	\$115,842.80

Summary

Overall, the goal of the Harbor water quality monitoring is to bridge temporal data gaps for incorporation into the City's comprehensive water quality monitoring program. The proposed approach will allow for data comparison with previous monitoring efforts while providing quality data through adherence to EPA and FDEP standards.

Regards,

Stantec Consulting Services Inc.



Ashley Parks
Environmental Scientist
Phone: (321) 474-6458
ashley.parks@stantec.com

stantec.com

Attachments: Attachment A – YSI Quote for New Equipment



Quote Number: B269961
Quote Created: 2026 Feb 13
Quote Expiration Date: 2026 Apr 03

Quote Prepared For:

Ashley Parks
Stantec
4798 Broad Street
Suite 100
Orlando, FL32814
321-474-6458
ashley.parks@stantec.com

Prepared by: Shawn Sneddon
Cell Phone: +1 5088381023
Email: shawn.sneddon@xylem.com

NOTICE:

All prices quoted are exclusive of any applicable sales, use, excise, Goods and Services Tax, Value Added Tax, or similar tax, or duties, tariffs, or other governmental charges. Customer will have the responsibility for the payment of all such levies (whether local, state, or federal) imposed on Xylem or on the goods and/or services quoted.

*Please make PO out to YSI Incorporated. For YSI payment remittance instructions, please see the last page of this quote.



Proposal Summary

Real-Time System

Will be fitted with (2) EXO3 sondes

#	Part Number	Description	List Price USD	Qty	Ext. Price USD
1	203300	Turnkey Enclosure (No Data Logger) 12-in x 14-in NEMA 4X rated enclosure ready for data logger integration. Includes a 12v/18ah battery, 20 Watt solar panel, panel mount, and solar regulator. Also includes terminal strip, fusing, dessicant, and internal humidity sensor.	\$3,861.00	1	\$3,861.00
2	911450-01	CR350 Measurement and Control Datalogger	\$1,525.00	1	\$1,525.00
3	203254	Modem, Cellular, Campbell CELL210 External. Verizon only	\$832.00	1	\$832.00
4	203292	Turn Key, Ext Mast Antenna Kit, 10 FT.Includes the following:-10 ft. RG8, N-N RF cable-RG58/U adapter cable; right angle SMA(M) and Type N(M)-Bulkhead mount lightning arrestor-3G/4G Multiband antenna-Antenna mount	\$593.00	1	\$593.00
5	203287	EXO3 Flying Lead Port Option: For Flying Lead Cable into Enclosure (does NOT include SOA)	\$169.00	2	\$338.00
6	203242	Cellular communication subscription, 12 months NEW. Verizon service unless noted otherwise	\$674.00	1	\$674.00
7	911637	HydroSphere Cloud based data hosting and visualization platform. Includes: alarms, data exports, public website, scalable user roles, and more. 1 year subscription period for new accounts.	\$119.88	1	\$119.88
8	911500-00500	Programming and testing of system with (2) EXO3 sondes connected to a CR350 datalogger.	\$0.00	1	\$0.00
				Subtotal	\$7,942.88

EXO Sonde, Sensors, and Accessories

The following items have been grouped together.

#	Part Number	Description	List Price	Qty	Ext. Price
1	599503-01	<p>EXO3 Sonde, 10m Depth, 5 Sensor Ports, Central Wiper Compatible</p> <ul style="list-style-type: none"> - Depth Range: 0-10m - No AUX Port / Compact Battery Compartment - Contains: Sonde, 2 D Batteries, Calibration Cup, Tool Kit, 3 port plugs, USB drive loaded with User Manual and KOR Software 	\$6,850.00	2	\$13,700.00
2	599827	<p>EXO Wiped Conductivity/Temperature Sensor</p> <ul style="list-style-type: none"> - Purpose-built for combating sensor fouling in long-term monitoring applications - Designed and engineered for compatibility with EXO2 Sonde's Central Wiper - Additional Central Wiper Brush and Spacing Kit included 	\$1,950.00	2	\$3,900.00
3	577602	<p>EXO ISE02 pH Sensor Assembly, Unguarded, Ti</p> <ul style="list-style-type: none"> - Patented user replaceable sensor head - Incorporates wet-mate connector and welded titanium housing 	\$785.00	2	\$1,570.00
4	599100-01	<p>EXO Optical DO Sensor, Ti</p> <ul style="list-style-type: none"> - Compatible with any EXO sonde - User replaceable sensor cap (installed) - Incorporates wet-mate connector and welded titanium housing 	\$2,300.00	2	\$4,600.00
5	599101-01	<p>EXO Turbidity Sensor, Ti</p> <ul style="list-style-type: none"> - Compatible with any EXO sonde - Wide range Sensor reads from 0-4000 FNU - Incorporates wet-mate connector and welded titanium housing 	\$2,150.00	2	\$4,300.00
6	599090-01		\$1,515.00	2	\$3,030.00

#	Part Number	Description	List Price	Qty	Ext. Price
		EXO Central Wiper, EXO2, EXO3, Ti - Installs in center wiper port on EXO 2 and EXO 3 only - Includes 2 wiper brushes and installation tool - Used in unattended monitoring deployments to reduce biofouling			
7	599008-10	EXO 10-m Flying Lead Cable - Connects EXO sonde to DCP Signal Output Adapter	\$695.00	2	\$1,390.00
8	599810	EXO Signal Output Adapter - USB - Allows connections between EXO sonde and a PC	\$565.00	1	\$565.00
9	599564	EXO2 Anti Fouling Guard Sensor Guard designed with copper alloy to inhibit growth and extend deployment time	\$1,090.00	2	\$2,180.00
				Subtotal	\$35,235.00

Calibration Solution

The following items have been grouped together.

#	Part Number	Description	List Price	Qty	Ext. Price
1	607200	Turbidity Std. - 12.7 NTU (6136), 12.4 NTU (EXO & ProDSS) - 1 Gallon	\$400.00	3	\$1,200.00
2	607300	Turbidity Std. - 126 NTU (6136), 124 NTU (EXO & ProDSS), - 1 Gallon	\$430.00	2	\$860.00
				Subtotal	\$2,060.00

Payment Remit Address for quote B269961

Remit to

YSI, Inc.

26717 Network Place

Chicago, IL 60673 - 1267

Please review the last page of this quote for payment details via
ACH, Wire, Swift and Check

Grand Total (in USD)	\$45,237.88
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Terms Net 30

Ex Works (Incoterms 2020)
Seller's plant or
Distribution Center Origin

This order is subject to the Standard Terms and Conditions of Sale - Xylem Americas effective on the date the order is accepted which terms are available at <https://www.xylem.com/en-us/support/xylem-americas-standard-terms-and-conditions/> and incorporated herein by reference and made a part of the agreement between parties.

**YSI Inc. Order Process and Payment Remittance Instructions
Including YSI, ISS, Aanderaa, Global Water and SonTek**

Credit Card Order: Please reference quote B269961

For YSI, ISS, Aanderaa, Global Water

Call customer service at (937) 767-7241 (Option 3)

For SonTek

Call customer service at (858) 546-8327 (Option 3)

PO(Purchase Order) Please make the PO out to “YSI Inc.” using the address below, and make sure to copy your Sales Rep shawn.sneddon@xylem.com.

Address

YSI Inc.
1725 Brannum Lane
Yellow Springs, OH 45387

For YSI, ISS, Aanderaa, Global Water

Email or fax the PO along with a copy of this quote to
ysi.orders@xylem.com
Fax: (937) 767-1058

For SonTek

Email the PO along with a copy of this quote to
sontek.orders@xylem.com

Purchase Order Guidelines:

- **Submission Method:** POs must be sent via Email or Fax. Carrier submissions are not accepted.
 - **PO Details:** Ensure all POs include complete billing and shipping information and are clearly marked.
 - **PO Content:** Ensure all Item Numbers, Quantities, and Prices for each line item are listed on the PO.
 - **Contact Information:** Provide an email address for Order Acknowledgement, Shipping Acknowledgement, and Invoice.
 - **Additional Charges:** Taxes, tariffs, and shipping charges are extra and not included in the pricing unless specifically listed as a line item.
 - **Tax Exemption:** Tax-exempt customers must include their Tax ID on the PO and provide proof of Tax Exemption status.
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Payment Remit Address

26717 Network Place
Chicago, IL 60673-1267

Tax Identification # 31-0526418
DUNS 00-424-6716

By Check (Drawn on US Banks Only)

26717 Network Place
Chicago, IL 60673-1267
Account Number: 20000011127562
Account Name: YSI Inc.

By ACH (with Addenda Record), Wire or SWIFT

YSI Inc.
JPMorgan Chase Bank, N.A.
New York, NY 10005
Wire Routing Number: 021000021
ACH Routing Number: 028000024
SWIFT BIC: CHASUS33

Warranty

General

YSI Integrated Systems, including standard sensor and accessories, are warranted for one year from date of purchase by the end user against defects in materials and workmanship. All Cables are warranted for one year from date of purchase by the end user against defects in material and workmanship. The warranty period for chemicals and reagents is determined by the expiration date printed on their labels. Within the warranty period, YSI will repair or replace, at its sole discretion, free of charge, any product that YSI determines to be covered by this warranty. Third party sensors and items not manufactured by YSI are not covered under this warranty. The original manufacturer's warranty may apply to the end customer, warranty claims should be directed to original manufacturer.

To exercise this warranty, write or call your local YSI representative, or contact YSI Customer Service in Yellow Springs, OH, USA (information at the bottom of this page). Send the product and proof of purchase, transportation pre-paid, to your local YSI representative or the Factory Service Center selected by YSI. Repair or replacement will be made and the product returned transportation pre-paid. Repaired or replaced products are warranted for the balance of the original warranty period or at least 90 days from date of repair or replacement.

Limitation of Warranty

This warranty does not apply to any YSI product damage or failure caused by:

- (i) failure to install, operate or use the product in accordance with YSI's written instructions,
- (ii) abuse or misuse of the product,
- (iii) failure to maintain the product in accordance with YSI's written instructions or standard industry procedure,
- (iv) any improper repairs to the product,
- (v) use by you of defective or improper components or parts in servicing or repairing the product, or
- (vi) modification of the product in an way not expressly authorized by YSI.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. YSI's LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, AND THIS SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY DEFECTIVE PRODUCT COVERED BY THIS WARRANTY. IN NO EVENT SHALL YSI BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECTIVE PRODUCT COVERED BY THIS WARRANTY.

YSI Factory Service Centers

United States

Quote #: B269961
Expires: 2026 Apr 03

YSI Integrated Systems & Services

1725 Brannum Lane

Yellow Springs, OH 45387

Phone: 937-767-7241

E-Mail: YSISystems.Support@xylem.com