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## Header 3

[List View](#)

## General Information

[Contact](#)[Default Values](#)[Discount](#)[Document Information](#)[Clarification Request](#)

Procurement Folder: 891802

Procurement Type: Central Purchase Order

Vendor ID: 

Legal Name: FONDRIEST ENVIRONMENTAL INC

Alias/DBA:

Total Bid: \$33,024.20

Response Date:  Response Time: Responded By User ID:  First Name: Last Name: Email: Phone: 

SO Doc Code: CRFQ

SO Dept: 0313

SO Doc ID: DEP2100000038

Published Date: 6/30/21

Close Date: 7/7/21

Close Time: 13:30

Status: Closed

Solicitation Description: 

Total of Header Attachments: 3

Total of All Attachments: 3



Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder:** 891802  
**Solicitation Description:** Water Quality Sondes with wiper  
**Proc Type:** Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2021-07-07 13:30	SR 0313 ESR07062100000000063	1

**VENDOR**  
 000000174281  
 FONDRIEST ENVIRONMENTAL INC

**Solicitation Number:** CRFQ 0313 DEP2100000038  
**Total Bid:** 33024.19999999999708961695432 **Response Date:** 2021-07-06 **Response Time:** 15:57:33  
**Comments:**

**FOR INFORMATION CONTACT THE BUYER**

Joseph E Hager III  
 (304) 558-2306  
 joseph.e.hageriii@wv.gov

**Vendor Signature X** **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Item 3.1.1 Multiparameter Water Sonde	4.00000	EA	5290.400000	21161.60

Comm Code	Manufacturer	Specification	Model #
41111965			

**Commodity Line Comments:** EXO3 multi-parameter water quality sonde with 4 sensor ports & 1 wiper port, no depth sensor  
EXO central wiper

**Extended Description:**

4 or 5 port multiparameter water quality sonde with central wiper (such as EXO 3, Aquatroll 600, or equal) Must be capable of collecting, logging, and storing parameter data from multiple sensors via self contained battery power supply (battery type must be field replaceable), port/sensor status monitoring capability, & QC software to check and validate probe configuration and calibration. Sonde must include proper storage and calibration "cup".

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Item 3.1.2 Sonde Guard	4.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
41111965			

**Commodity Line Comments:** Included standard with line 1.

**Extended Description:**

Sonde guard to protect probes and guard weight to minimize drift/movement of unit in water column

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Item 3.1.3 PH Sensor	4.00000	EA	484.500000	1938.00

Comm Code	Manufacturer	Specification	Model #
41111965			

**Commodity Line Comments:** EXO unguarded pH sensor

**Extended Description:**

PH Sensor as per attached

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Item 3.1.4 Temperature Sensor	4.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
41111965			

**Commodity Line Comments:** Included standard with line 5.

**Extended Description:**

Temperature sensor with 2 decimal place resolution, must be interchangeable in the field and wet-mateable for easy replacement

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Item 3.1.5 Conductivity Sensor	4.00000	EA	782.000000	3128.00

Comm Code	Manufacturer	Specification	Model #
41111965			

**Commodity Line Comments:** EXO conductivity & temperature sensor

**Extended Description:**

Conductivity sensor capable of displaying specific conductance and a range of at least 0 - 100 mS/cm. Hand-held display or display software must be able to report in uS/cm., must be interchangeable in the field and wet-mateable for easy replacement

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Item 3.1.6 Optical DO Sensor	4.00000	EA	1699.150000	6796.60

Comm Code	Manufacturer	Specification	Model #
41111965			

**Commodity Line Comments:** EXO optical dissolved oxygen sensor

**Extended Description:**

Optical DO sensor outfitted with field replaceable DO cap, must be interchangeable in the field and wet-mateable for easy replacement

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	Item 3.1.7 Sonde Specific Software	1.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
43230000			

**Commodity Line Comments:** Included standard with line 1.

**Extended Description:**

Sonde specific software to allow viewing of logged/collected data, graphic display, QA/QC, and basic analysis either via hand-held or via PC

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	Shipping/Handling	1.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
78121603			

**Commodity Line Comments:** Free ground shipping.

**Extended Description:**

Shipping and Handling



# EXO Sondes

BEST-IN-CLASS PLATFORM FOR THE HIGHEST-QUALITY DATA



YSI.com/EXO

### When only the best will do.

EXO is the premium water quality monitoring platform in the world.

The unmatched benefits of **EXO** include:



#### Highest Data Quality

Onboard monitoring systems verify sensor operation



#### Industry-leading Anti-fouling

Best-in-class anti-fouling wiper technology



#### Smart QC™

SmartQC checks for errors and ensures proper calibrations



#### Titanium Components

The toughest grade parts guarantee operation well into the future



#### Digital Smart Sensors

Auto-recognition of any sensor in any port



EX02<sup>S</sup>

EX03

EX01

EX02



## A Smart, Field-Ready Water Monitoring Platform

# Best-In-Class Sonde Platform



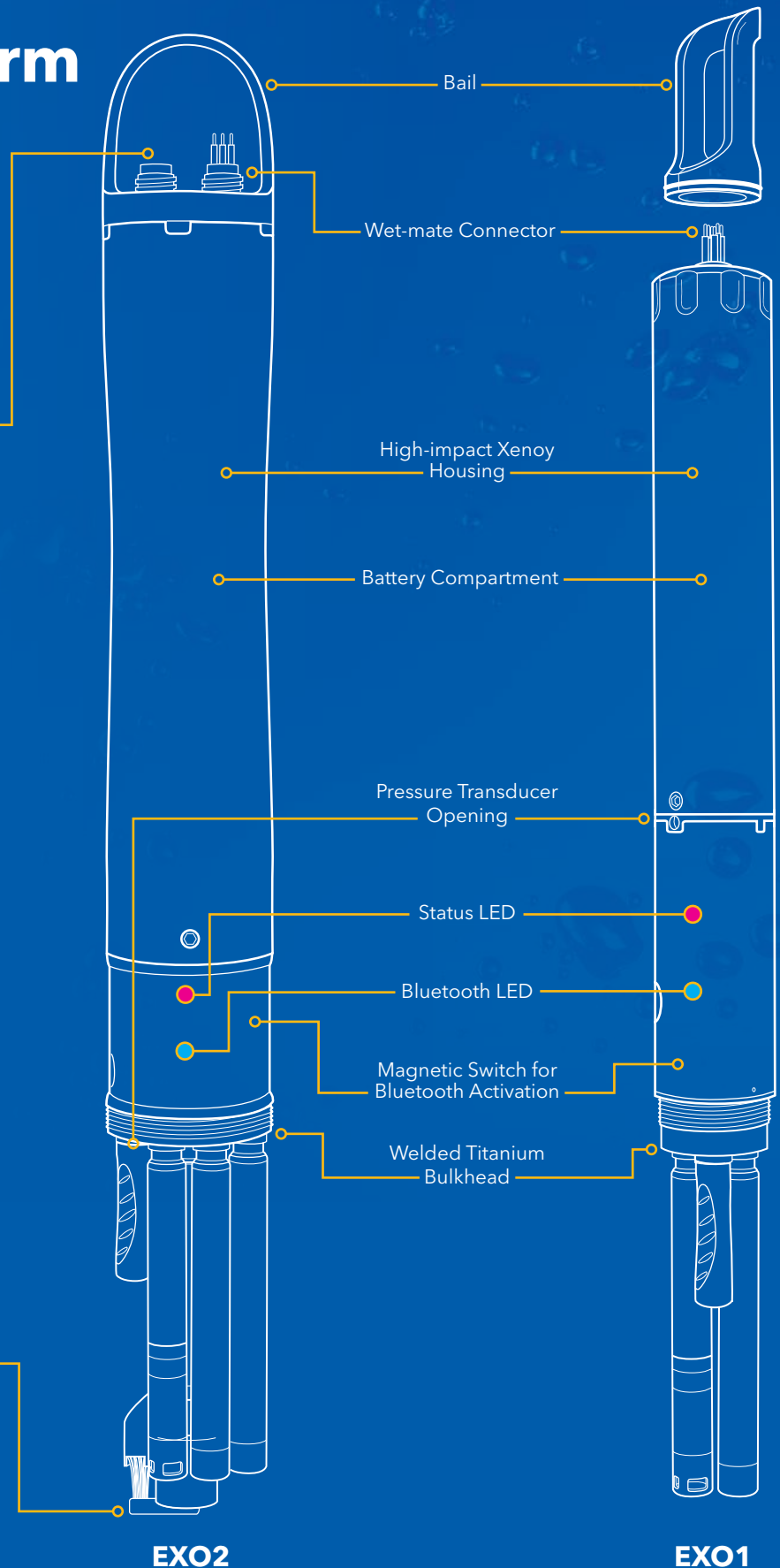
Cable connector, battery valve, and expansion port on EXO2



Smart ports accept any sensor, or central port may be used for anti-fouling wiper



Anti-fouling wiper cleans sensor faces, minimizing maintenance and maximizing length of deployment



EXO2

EXO1



## Selection Guide



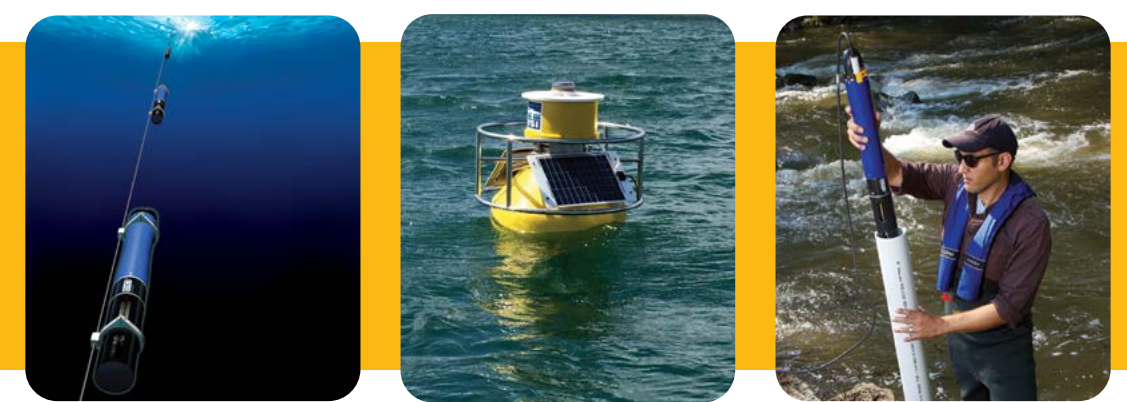
	EXO1	EXO2	EXO2 <sup>s</sup>	EXO3
Smart Ports	4	7	7	5
Battery Type	2 D-cell	4 D-cell	External Power	2 D-cell
Battery Life	90 days*	90 days*	N/A	60 days*
Dimensions	Length: 64.77 cm Diameter: 4.70 cm	Length: 71.10 cm Diameter: 7.62 cm	Length: 47.00 cm Diameter: 7.62 cm	Length: 58.67 cm Diameter: 7.62 cm
Weight (fully loaded)	1.42 kg	3.60 kg	1.10 kg	2.00 kg
SDI-12	with Adapter	with Adapter	with Adapter	Integral
Vented Level	✓	✓		
Wiper		✓	✓	✓
Auxiliary Port		✓	✓	

\*Battery life will depend on the type of sensors and measurement frequency. Specifications indicate typical performance and are subject to change. Please check [YSI.com/EXO](http://YSI.com/EXO) for up-to-date information.

## Sonde Specifications

Sondes	
Operating Temperature	-5 to 50°C
Storage Temperature	-20 to 80°C (may differ for sensors)
Depth Rating	0 to 250 m
Communications	Computer Interface: Bluetooth wireless technology, RS-485, USB Output Options: USB with signal output adapter (SOA); RS-232 & SDI-12 with DCP-SOA; Modbus & RS-485 with Modbus-SOA
Sample Rate	Up to 4 Hz
Data Memory	512 MB total memory; >1,000,000 logged readings
Warranty	2 years

EXO Sondes are perfect for long-term deployments. Daisy-chain multiple sondes for measurements at various depths.





# Monitoring Made Mobile



**EXO GO**

EXO GO uses Bluetooth to connect any Windows OS device to a submerged EXO Sonde.

Pair with a tablet or laptop and leverage the full power of KorEXO Software for your monitoring applications.

Choose **EXO GO** for the flexibility of monitoring with any Windows OS device and access to the full features of KorEXO Software. EXO GO cuts out the middleman and delivers data directly to your PC!

**KorEXO Software**

Bring the full power of KorEXO to your site with any Windows OS portable device

**Bluetooth Communication**

Keep your sonde in the water while you view data in real time, download files, or adjust deployment settings on the GO

**GPS Tagging**

Georeference data sets using GPS



	EXO GO	EXO Handheld
USB Connectivity	✓	✓
Bluetooth Connectivity	✓	
IP-67 Rating	✓	
Display		✓
Onboard Memory		✓
Operating Temperature	-5 to 50°C	0 to 50°C
Storage Temperature	0 to 45°C	0 to 45°C
Dimensions	17.4 x 5.2 x 3.5 cm	8.3 x 21.6 x 5.6 cm
Weight	240 g	567 g
Warranty	1 year	3 year meter, 1 year battery

	Common Features
GPS	Accuracy: 2.5 m CEP (dependent on site conditions)
Barometer	Range: 375 to 825 mmHg Accuracy: +/-1.5 mmHg Resolution 0.1 mmHg
Battery	Operating Time: >15 hours Charging Time: 9 hours




**EXO Handheld**

The EXO Handheld offers a dedicated, streamlined interface to EXO Sondes.

Convenient monitoring is achieved with a backlit color display, ergonomic design, and simple operation.

Choose the **EXO Handheld** for an easy-to-use, purpose-built interface with a tactile keypad and full color display. Keep it simple and collect data in the most challenging environments with the EXO Handheld!

**Simplified Interface**

Lower the learning curve of collecting high-quality data with a simplified user interface and integrated help screens

**Transfer Data**

Quickly transfer collected data sets and calibration records to a USB flash drive with the push of a button

**Lithium-Ion Battery**

Collect more samples with the long-lasting, rechargeable battery

# Smart Sensor Suite

A dynamic range of sensors for multiparameter applications



**CENTRAL WIPER**



**DO**

**pH/ORP**

**TAL-PC**

**fDOM**

**C/T (WIPED)**

**TURBIDITY**

## DEPTH



EXO sondes feature universal smart ports for sensor installation

### Sensors Not Shown

CONDUCTIVITY / TEMPERATURE (NON-WIPED)

TOTAL ALGAE-PE

AMMONIUM ISE

CHLORIDE ISE

NITRATE ISE

pH

RHODAMINE

## Sensor Specifications

Sensor	Range	Resolution <sup>1</sup>	Accuracy <sup>2</sup>
Conductivity (Non-Wiped)	0 to 200 mS/cm	0.0001 to 0.01 mS/cm	±0.5% of reading or 0.001 mS/cm, w.i.g. (0-100 mS/cm) ±1% of reading (100-200 mS/cm)
Temperature	-5 to 50°C	0.001°C	±0.01°C (-5 to 35°C) ±0.05°C (35 to 50°C)
Conductivity (Wiped)	0 to 100 mS/cm	0.0001 to 0.01 mS/cm	±1% of reading or 2 µS/cm, w.i.g.
Temperature	-5 to 50°C	0.001°C	±0.2°C
Depth or Vented Level	0 to 10, 100 or 250 m	0.001 m	±0.04% Full Scale
	0 to 10 m	0.001 m	±0.03% Full Scale
Dissolved Oxygen	0 to 500% air sat.	0.1% air sat.	±1% of reading or 1% sat., w.i.g., (0 to 200%) ±5% of reading (200 to 500%)
	0 to 50 mg/L	0.01 mg/L	±1% of reading or 0.1 mg/L, w.i.g., (0 to 20 mg/L) ±5% of reading (20 to 50 mg/L)
fDOM	0 to 300 ppb QSE	0.01 ppb QSE	Linearity: $r^2 \geq 0.999$ for 0 to 300 ppb QSE, MDL of 0.016 ppb QSE
pH	0-14 pH units	0.01 pH unit	±0.1 within ±10°C of cal temp ±0.2 for all other temps
ORP	-999 to 999 mV	0.1 mV	±20 mV
Rhodamine	0 to 100 RFU or 0 to 1,000 µg/L	0.01 RFU or 0.01 µg/L	±5% or 0.1 µg/L w.i.g, Linearity: $r_2 > 0.999$
TAL-Chlorophyll	0 to 100 RFU or 0 to 400 µg/L chl	0.01 RFU or 0.01 µg/L of pigment	Linearity: $r^2 \geq 0.999$ for Rhodamine WT across full range
TAL-Phycocyanin or TAL-Phycoerythrin	0 to 100 RFU or 0 to 100 µg/L PC		
	0 to 100 RFU or 0 to 280 µg/L PE		
Turbidity	0 to 4000 FNU	0.01 FNU to 0.1 FNU	0.3 FNU or ±3% of reading, (0 to 999 FNU) ±5% of reading (1000 to 4000 FNU)

<sup>1</sup>Range dependent.

<sup>2</sup>Specifications indicate typical performance and are subject to change. Please check YSI.com/EXO for up-to-date information.

### EXO Smart Sensor Anatomy



### Calculated Parameters

The following parameters are calculated from one or more sensors listed above. More information about the methods and calculations may be found in the EXO User Manual.

- Absolute Pressure
- Ammonia
- DO% Local
- DO% LocalB
- Gauge Pressure
- nLF Conductivity
- Resistivity
- Salinity
- Specific Conductivity
- Total Algae cells/mL
- Total Dissolved Solids
- Total Suspended Solids
- Vertical Position
- Water Density

# KorEXO Software

KorEXO is an accessible, feature-rich software platform for managing EXO instrumentation and water quality data. The software allows you to calibrate sensors, setup long-term deployments, and ensure equipment is operating at peak performance. Designed to run on Windows OS computers and tablets, the interface is optimized for touchscreens and streamlined for operation in the field, lab, or office.

The screenshot shows the KorEXO software interface. At the top, there are tabs for HOME, CALIBRATION, DEPLOYMENT, LIVE DATA, RECORDED DATA, and INSTRUMENT AND SENSORS. The main dashboard area has a central question 'What would you like to do?' with several icons: View Live Data, View Recorded Data, Calibrate Sensors, Manage Deployments, Create New Site, Manage Handheld, Visit EXO University, Order Replacement Parts, and Provide Feedback. On the right, the 'Instrument Connection Panel' displays 'Serial Number: 17D106877', 'Instrument ID: Sonde 17D106877', and 'Firmware Version: 1.0.35'. It includes buttons for DISCONNECT, START DOWNLOAD FROM DEVICE, and VIEW DOWNLOADED COLLECTED DATA. At the bottom, there's a status bar with 'SERIAL NUMBER: 17D106877', 'AVERAGING MODE: Default', 'IDLE', and '80.4%'.

Graph view makes it easy to visualize live or recorded data and spot trends.

Complete calibrations faster than ever! Redo or add calibration points on the fly with tips to ensure accuracy.

Sonde status is always on display so users know whether or not the sonde is deployed. New data are automatically downloaded when the sonde is connected.

The 'Provide Feedback' button allows users to share their thoughts and make suggestions to continuously enhance the experience.

KorEXO Software assigns a QC Score after every calibration. Notifications are displayed for calibration errors or if sensors are not performing properly.

## Support and Protection for Your Peace of Mind

### Protect your investment with the EXO Factory Service Plan\*

With an **EXO Factory Service Plan**, you can minimize down-time and unexpected maintenance costs by keeping your equipment in top working order.

#### What does the Service Plan include?

Plans cover standard replacement parts, firmware updates, seal restoration, cleaning, comprehensive evaluation, testing, and calibration of all sensors.

#### What equipment is covered?

Each plan covers a single EXO sonde, field cable, handheld, and sensors purchased with the sonde.

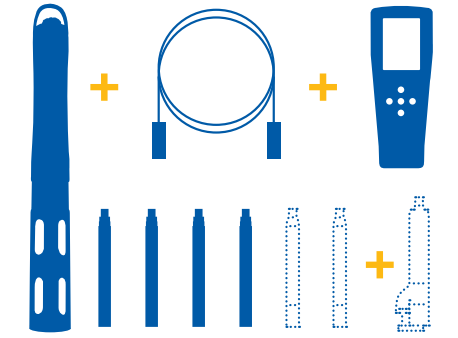
#### How long does coverage last?

Plans are available for coverage up to 3 years from the time the EXO Sonde is purchased.

\*Currently available in North America. Check with your regional technical support for service options.



Factory Service Center located in Yellow Springs, Ohio



## Industry-Leading Technical Support

Our expert **Technical Support Team** is available to provide assistance and answer any questions that may come up in the field or lab.

Call +1 (937) 767-2762 to speak with our knowledgeable staff

Email [info@ysi.com](mailto:info@ysi.com) for questions regarding your EXO equipment

Live Chat at [YSI.com](https://www.ysi.com) for immediate response from technical experts



Technicians are available for in-house or on-site training events

# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

**For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)**

*"I'm very proud of the great work our customers do using our best-in-class sonde platform."*



**Dr. Stephanie A. Smith**  
EXO Product Manager



EXO Handheld



EXO2<sup>S</sup>



EXO3



EXO1



EXO2

**xylem**  
Let's Solve Water

YSI, a Xylem brand  
1725 Brannum Lane  
Yellow Springs, OH 45387

- +1.937.767.7241
- info@ysi.com
- YSI.com

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[YSI.com/EXO](http://YSI.com/EXO)

**SOLICITATION NUMBER:**  
**Addendum Number:**

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The purpose of this addendum is to modify the solicitation identified as (“Solicitation”) to reflect the change(s) identified and described below.

**Applicable Addendum Category:**

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

**Description of Modification to Solicitation:**

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

**Terms and Conditions:**

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

# ATTACHMENT A

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.:** \_\_\_\_\_

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

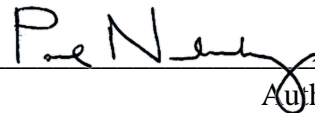
(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Fondriest Environmental, Inc.

\_\_\_\_\_  
Company



\_\_\_\_\_  
Authorized Signature

7/6/2021

\_\_\_\_\_  
Date

**NOTE:** This addendum acknowledgment should be submitted with the bid to expedite document processing.

Revised 6/8/2012

**RFI: Questions from vendors for CRFQ DEP21\*38 Water Quality Sondes with Wiper**

**Q.1.** On the proposal you are asking for a conductivity sensor and a temperature sensor. I have what we call a combo sensor that has both temperature and conductivity on it. Will it be OK to use this sensor? This would allow the user to add one more sensor if circumstances required another parameter? We would then need to add a port plug, but I could include that in the cost of the Sonde.

**A. Yes, if it is a combo that covers both parameters that is acceptable.**

**Q.2.** I wanted to clarify the temperature / conductivity sensor. We have a stand alone temperature sensor, but if you want both temperature and conductivity then both of these will be on one sensor. Most of our sensors are temperature compensated, this is why we have a stand alone temperature sensor.

**A. The temperature parameter can come from the combo sensor, and does not need to be a stand alone sensor.**

**Q.3.** I wanted to circle back with you about a couple of items you should add to the parts, so the AT 600 will work correctly. As I mentioned earlier, we don't carry a stand alone conductivity sensor. What we carry is a temperature sensor, and the combo sensor of Temperature / Conductivity sensor, which is **part number 0063491**. Because of this you will have one open port, so you will need to add a port plug.

**The part number the port plug is 0063510.**

The other item you will need, unless you have a direct read cable that you will attach to the AT 600, is a Twist Lock Hanger. This is a cap that goes on top of the sonde. This will allow you to run a steel cable through the cap and then anchor it to the ground or hang it from the top of the well.

**The part number for this is: 0051480.**

I just wanted to make sure people are adding these to their quote, so the equipment will work for you out of the box.

**A. Per Section 3.1.1.1 on the specifications, the port plug will be needed if there is an open port as mentioned. Regarding the Twist Lock Hanger, yes this will be needed for the AT 600 if that is required for the sonde to be used without a communication cable.**