

# Bay of Panama Water Quality Monitoring Program

Program initiated in July 2017

## Methods:

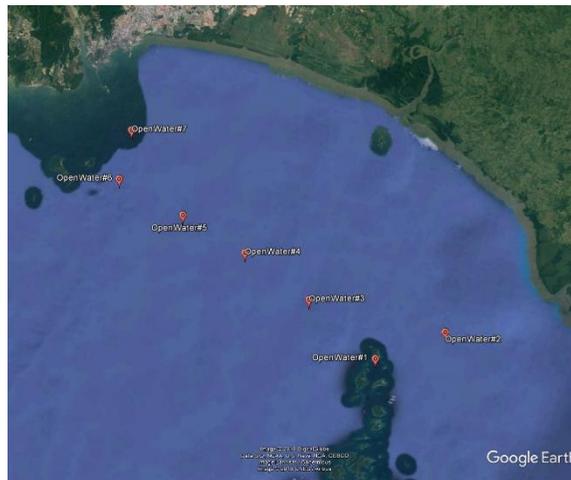
Sampling is carried out approximately weekly at 7 locations in the Bay of Panama (see table and map below) using a YSI EXO 2 multi-sensor sonde (manual accompanies this document).



The following parameters are measured: temperature, pH, salinity/conductivity, turbidity, chlorophyll, dissolved oxygen (see next page for sensor information).

Measurements are made at approximately 10m intervals from 1m to approximate maximum depth at each location (maximum 45m). Actual depths may vary due to the deflection of the sonde by ocean currents. Sonde is kept at each depth for 60 seconds recording every second.

Sampling Stations		
Site #	Latitude	Longitude
1	8° 38.743'N	79° 2.887'W
2	8° 42.498'N	78° 57.855'W
3	8° 41.894'N	79° 9.648'W
4	8° 44.138'N	79° 15.955'W
5	8° 45.670'N	79° 21.906'W
6	8° 47.078'N	79° 27.968'W
7	8° 51.308'N	79° 28.162'W



**List of variable codes, their meaning and units**

<b>Code</b>	<b>Definition</b>	<b>Units</b>
Bgarfu	Blue-green algae Phycocyanin	rfu
Bgaug	Blue-green algae Phycocyanin	µg/liter
Chlrfu	Chlorophyll	rfu
Chlug	Chlorophyll	µg/liter
Cond	Conductivity	µSiemens/centimeter
Condnlf	Conductivity	nlf
Condsp	Specific Conductivity	µSiemens/centimeter
Fdomqsu	Fluorescent Dissolved Organic Matter (FDOM)	qsu
Fdomrfu	Fluorescent Dissolved Organic Matter (FDOM)	rfu
Odo	Dissolved Oxygen	mg/liter
Odosat	Dissolved Oxygen saturation	%
pH	pH	pH
Sal	Salinity	ppt
Tds	Total dissolved solids	mg/liter
Tss	Total suspended solids	mg/liter
Turb	Turbidity	nfu
wt	Water temperature	Celsius

<b>Sensor</b>	<b>Webpage</b>
EXO pH Smart Sensor	<a href="http://www.ysi.com/product/id-599701/EXO-pH-Smart-Sensor">www.ysi.com/product/id-599701/EXO-pH-Smart-Sensor</a>
EXO Optical Dissolved Oxygen Smart Sensor	<a href="http://www.ysi.com/Product/id-599100-01/EXO-Optical-Dissolved-Oxygen-Smart-Sensor">www.ysi.com/Product/id-599100-01/EXO-Optical-Dissolved-Oxygen-Smart-Sensor</a>
EXO fDOM Smart Sensor	<a href="http://www.ysi.com/Product/id-599104-01/EXO-fDOM-Smart-Sensor">www.ysi.com/Product/id-599104-01/EXO-fDOM-Smart-Sensor</a>
EXO Turbidity Smart Sensor	<a href="http://www.ysi.com/Product/id-599101-01/EXO-Turbidity-Smart-Sensor">www.ysi.com/Product/id-599101-01/EXO-Turbidity-Smart-Sensor</a>
EXO Total Algae PC Smart Sensor	<a href="http://www.ysi.com/EXO/TALPC">www.ysi.com/EXO/TALPC</a>
EXO Conductivity & Temperature Smart Sensor	<a href="http://www.ysi.com/Product/id-599870/EXO-Conductivity--Temperature-Smart-Sensor">www.ysi.com/Product/id-599870/EXO-Conductivity--Temperature-Smart-Sensor</a>