

**Field Instrumentation:**

Parameter Name	Method/Instrument	Dates Used (shore-based stations)	Dates Used (mid-channel stations)
Dissolved Oxygen	Modified Winkler titrations (full-bottle technique)	Jan 1975 – May 2016	Jan 1975 – May 2016
	YSI 6150 ROX dissolved oxygen sensor on a YSI 6600 V2 multiparameter sonde	Jun 2016 – Dec 2018	Jun 2016 – Jun 2019
	YSI EXO optical dissolved oxygen smart sensor on a YSI EXO2 multiparameter sonde	Jan 2019 – Dec 2019	Jul 2019 – Dec 2019
Water Temperature	Seabird-Scientific Thermistor	—	Jan 1975 – Dec 2011
	YSI handheld instrument	Jan 1975 – Dec 2015	—
	YSI 6560 probe on a YSI 6600 V2 multiparameter sonde	Jan 2016 – Dec 2018	Jan 2012 – Jun 2019
	YSI EXO conductivity and temperature smart sensor on a YSI EXO2 multiparameter sonde	Jan 2019 – Dec 2019	Jul 2019 – Dec 2019
Nephelometry/Turbidity	Hach 2100A Turbidimeter	January 1975 – Mar 2002	Jan 1975 – Dec 1998
	Turner Designs 10AU Nephelometer	—	Jan 1999 – Sep 2011
	Hach 2100P Turbidimeter	Apr 2002 – Dec 2015	—
	YSI 6136 turbidity probe on a YSI 6600 V2 multiparameter sonde	Jan 2016 – Dec 2018	Oct 2011 – Jun 2019
	YSI EXO turbidity smart sensor on a YSI EXO2 multiparameter sonde	Jan 2019 – Dec 2019	Jul 2019 – Dec 2019
Specific Conductance	Beckman RC-19 Conductivity Bridge	Jan 1975 – Mar 2002	Jan 1975 – Feb 2001
	Sea-Bird Scientific	—	Mar 2001 – Sep 2011
	YSI handheld instrument	Apr 2002 – Dec 2015	—
	YSI 6560 conductivity probe on a YSI 6600 V2 multiparameter sonde	Jan 2016 – Dec 2018	Oct 2011 – Jun 2019
	YSI EXO conductivity and temperature smart sensor on a YSI EXO2 multiparameter sonde	Jan 2019 – Dec 2019	Jul 2019 – Dec 2019
pH	Leeds and Northrup (model 7410) pH meter	—	Jan 1975 – Dec 1988
	Beckman pH meter	—	Jan 1989 – Dec 1995
	VWR SympHony pH meter	—	Feb 2009 – Aug 2009
	YSI handheld instrument	Mar 2009 – Dec 2015	—
	YSI 6589 fast response pH sensor on a YSI 6600 V2 multiparameter sonde	Jan 2016 – Dec 2018	Sep 2009 – Jun 2019
	YSI EXO pH Smart Sensor on a YSI EXO2 multiparameter sonde	Jan 2019 – Dec 2019	Jul 2019 – Dec 2019
Wind Direction	Danforth electronic wind speed indicator	—	Jan 1984– Dec 1995
	Dwyer handheld wind speed indicator	Jan 1984– Dec 1995	—

Beckman = Beckman Instruments, Inc. (Brea, CA)

Hach = Hach Company (Loveland, CO)

Leeds and Northrup = Leeds & Northrup Company (Philadelphia, PA)

Sea-Bird = Sea-Bird Scientific (Bellevue, WA)

Turner Designs = Turner Designs, Inc. Sunnyvale, CA

VWR = VWR International (Radnor, PA)

YSI = Yellow Spring Instruments, Inc. (Yellow Springs, OH)

**Laboratory Analysis Methods:**

Analyte Name	Laboratory Method	Dates Used
Dissolved Ammonia	EPA method 350.1	Jan 1979 – Dec 2019
Total Ammonia	EPA method 350.2	Jan 1975 – Dec 1978
Dissolved Calcium	EPA method 200.7	Jan 2011 – Dec 2019
Dissolved Chloride	EPA method 325.2	Apr 1980 – Oct 2000
	EPA method 300.0	Nov 2000 – Dec 2019
Total Chloride	Standard Method 4500	Jan 1975 – Mar 1980
Chlorophyll <i>a</i>	Standard method 10200 H	Jan 1975 – Dec 2019
Pheophytin <i>a</i>	Standard method 10200 H	Jan 1975 – Dec 2019
Dissolved Nitrate + Nitrite	EPA method 353.2	Jan 1975 – Jun 1996
	Standard Method 4500-NO <sub>3</sub> -F (DWR Modified)	Jul 1996 – Sep 2019
	EPA method 300.0	Oct 2019 – Dec 2019
Dissolved Organic Carbon	EPA method 415.1	Jan 2011 – Jun 2019
	EPA method 415.3	Jul 2019 – Sep 2019
	Standard Method 5310	Oct 2019 – Dec 2019
Total Organic Carbon	EPA method 415.1	Jan 2011 – Jun 2019
	EPA method 415.3	Jul 2019 – Sep 2019
	Standard Method 5310	Oct 2019 – Dec 2019
Dissolved Organic Nitrogen	EPA method 351.3	Jan 1975 – Apr 1978
	EPA method 351.2/350.1	May 1978 – Dec 2019
Total Organic Nitrogen	EPA method 351.3	Jan 1975 – Apr 1978
	EPA method 351.2	May 1978 – Jan 1979
Dissolved Ortho-phosphate	Standard Method 4500-P	Jan 1975 – Dec 1978 Jul 1996 – Jul 1998
	EPA method 365.1 (DWR Modified)	Jan 1979 – Jun 1996 Aug 1998 – Sep 2019
	EPA method 300.0 or 365.3	Oct 2019 – Dec 2019
Total Phosphorus	Standard Method 4500-P	Jan 1975 – Apr 1978
	EPA method 365.4	May 1978 – Sep 2019
	EPA method 365.3	Oct 2019 – Dec 2019
Dissolved Silica (SiO <sub>2</sub> )	USGS I-1700-85	Jan 1975 – Feb 1994
	Standard Method 4500-Si-D	Mar 1994 – Jul 1997
	EPA method 200.7	Aug 1997 – Dec 2019
Total Dissolved Solids	Standard Method 2540-C	Dec 1997 – Dec 2019
Total Suspended Solids	EPA method 160.2	Dec 1997 – Dec 2019
Volatile Suspended Solids	EPA method 160.4	Dec 1997 – Dec 2019
Total Kjeldahl Nitrogen	EPA method 351.3	Jan 1975 – Apr 1978
	EPA method 351.2	May 1978 – Dec 2019
Total Alkalinity	Standard Method 2320B	Sep 2019 – Dec 2019
Dissolved Bromide	EPA method 300.0	Sep 2019 – Dec 2019