

Field Instrumentation:

Parameter Name	Method/Instrument	Dates Used (shore-based stations)	Dates Used (mid-channel stations)
Dissolved Oxygen	Modified Winkler titrations (full-bottle technique)	January 1975 – May 2016	January 1975 – May 2016
	YSI 6150 ROX dissolved oxygen sensor on a YSI 6600 V2 multiparameter sonde	June 2016 – December 2018	June 2016 – June 2019
	YSI EXO optical dissolved oxygen smart sensor on a YSI EXO2 multiparameter sonde	January 2019 – December 2020	July 2019 – December 2020
Water Temperature	Seabird-Scientific Thermistor	—	January 1975 – December 2011
	YSI handheld instrument	January 1975 – December 2015	—
	YSI 6560 probe on a YSI 6600 V2 multiparameter sonde	January 2016 – December 2018	January 2012 – June 2019
	YSI EXO conductivity and temperature smart sensor on a YSI EXO2 multiparameter sonde	January 2019 – December 2020	July 2019 – December 2020
Nephelometry/Turbidity	Hach 2100A Turbidimeter	January 1975 – March 2002	January 1975 – December 1998
	Turner Designs 10AU Nephelometer	—	January 1999 – September 2011
	Hach 2100P Turbidimeter	April 2002 – December 2015	—
	YSI 6136 turbidity probe on a YSI 6600 V2 multiparameter sonde	January 2016 – December 2018	October 2011 – June 2019

	YSI EXO turbidity smart sensor on a YSI EXO2 multiparameter sonde	January 2019 – December 2020	July 2019 – December 2020
Specific Conductance	Beckman RC-19 Conductivity Bridge	January 1975 – March 2002	January 1975 – February 2001
	Sea-Bird Scientific	—	March 2001 – September 2011
	YSI handheld instrument	April 2002 – December 2015	—
	YSI 6560 conductivity probe on a YSI 6600 V2 multiparameter sonde	January 2016 – December 2018	October 2011 – June 2019
	YSI EXO conductivity and temperature smart sensor on a YSI EXO2 multiparameter sonde	January 2019 – December 2020	July 2019 – December 2020
pH	Leeds and Northrup (model 7410) pH meter	—	January 1975 – December 1988
	Beckman pH meter	—	January 1989 – December 1995
	VWR SympHony pH meter	—	February 2009 – August 2009
	YSI handheld instrument	March 2009 – December 2015	—
	YSI 6589 fast response pH sensor on a YSI 6600 V2 multiparameter sonde	January 2016 – December 2018	September 2009 – June 2019
	YSI EXO pH Smart Sensor on a YSI EXO2 multiparameter sonde	January 2019 – December 2020	July 2019 – December 2020

Wind Direction	Danforth electronic wind speed indicator	—	January 1984– December 1995
	Dwyer handheld wind speed indicator	January 1984– December 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	Date Used
Dissolved Ammonia	EPA method 350.1*	January 1979 – December 2020
Total Ammonia	EPA method 350.2	January 1975 – December 1978
Dissolved Calcium	EPA method 200.7	January 2011 – December 2020
Dissolved Chloride	EPA method 325.2	April 1980 – October 2000
	EPA method 300.0*	November 2000 – December 2020
Total Chloride	Standard Method 4500	January 1975 – March 1980
Chlorophyll <i>a</i>	Standard method 10200 H*	January 1975 – December 2020
Pheophytin <i>a</i>	Standard method 10200 H*	January 1975 – December 2020
Dissolved Nitrate + Nitrite	EPA method 353.2	January 1975 – June 1996
	Standard Method 4500-NO ₃ -F*	July 1996 – September 2019
		June 2020 – December 2020
	EPA method 300.0	October 2019 – December 2019
	EPA method 353.2	January 2020 – March 2020

Dissolved Organic Carbon	EPA method 415.1	January 2011 – June 2019
	EPA method 415.3	July 2019 – September 2019 June 2020 – December 2020
	Standard Method 5310	October 2019 – March 2020
Total Organic Carbon	EPA method 415.1	January 2011 – June 2019
	EPA method 415.3	July 2019 – September 2019 June 2020 – December 2020
	Standard Method 5310	October 2019 – March 2020
Dissolved Organic Nitrogen	EPA method 351.3	January 1975 – April 1978
	EPA method 351.2/350.1*	May 1978 – December 2020
Total Organic Nitrogen	EPA method 351.3	January 1975 – April 1978
	EPA method 351.2	May 1978 – January 1979
Dissolved Ortho-phosphate	Standard Method 4500-P	January 1975 – December 1978 July 1996 – July 1998
	EPA method 365.1*	January 1979 – June 1996 August 1998 – September 2019 June 2020 – December 2020
	EPA method 300.0 or 365.3	October 2019 – March 2020
Total Phosphorus	Standard Method 4500-P	January 1975 – April 1978
	EPA method 365.4*	May 1978 – September 2019 January 2020 – December 2020
	EPA method 365.3	October 2019 – December 2019
Dissolved Silica (SiO ₂)	USGS I-1700-85	January 1975 – February 1994
	Standard Method 4500-Si-D	March 1994 – July 1997
	EPA method 200.7	August 1997 – December 2020

Total Dissolved Solids	Standard Method 2540-C	December 1997 – December 2020
Total Suspended Solids	EPA method 160.2	December 1997 – September 2019 June 2020 – December 2020
	Standard Method 2540D	October 2019 – March 2020
Volatile Suspended Solids	EPA method 160.4	December 1997 – December 2020
Total Kjeldahl Nitrogen	EPA method 351.3	January 1975 – April 1978
	EPA method 351.2*	May 1978 – December 2020
Total Alkalinity	Standard Method 2320B	September 2019 – December 2020
Dissolved Bromide	EPA method 300.0*	September 2019 – December 2020