MAI ENVIRONMENTAL
Compliance • Hydrogeology • Engineering • Permitting

Statement of Qualifications

1034 Broadway South Portland, ME 04106
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MAIEnvironmental.com

This Statement of Qualifications includes the following components: Company Profile, List of Qualifying Services, List of References, and Professional Profile.

Company Profile

Marchewka & Associates, Inc. (MAI) is an Environmental and Geological Services Company started by John S. Marchewka, C.G. in March 2000. Mr. Marchewka is a Maine Certified Geologist with more than 20 years of environmental consulting experience in the State of Maine, New Hampshire, and throughout New England.

MAI specializes in Environmental and Hydrogeological assessments and has quickly established a reputation for providing quality, cost effective project management and technical services for its clients. Typical projects include investigations of hazardous waste and petroleum contaminated properties, hydrogeologic studies, water supply development, State and Federal grant assistance, environmental site assessments (ASTM), environmental sampling, nitrate studies, and project planning and development. MAI clients include industrial and manufacturing facilities, utilities, lending institutions, the Maine Department of Environmental Protection, and law firms.

Environmental Assessments

- Transaction Screenings
- Phase I and Phase II Environmental Site Assessments
- Nitrate and mounding analyses for subsurface disposal systems
- Work Plan Development
- Hydrogeologic Investigations
- Contaminant Transport and Delineation
- Remedial Investigation and Feasibility Study (RIFS)
- Hazardous Waste and Petroleum Impact Assessments
- Storage Tank Closure and Impact Assessment

Water Supply

- Groundwater Exploration
- Test Well Installation Programs
- Surficial and Bedrock Geologic Mapping
- Fracture Trace Analysis
- Groundwater Source Potential Assessments
- Well Head Protection Planning
- Pumping Test Design and Analysis
- Safe Yield Determination
- Water Quality Monitoring

Solid Waste and Recycling

- Landfill Monitoring
- Sampling and Analytical Work Plans
- Landfill Hydrogeologic Investigations
- Recycling Programs
- Pay per Bag and Curb Side Pick-up Programs

Field and Technical Services

- In-house direct-push drilling services
- Supervision of Drilling and Monitoring Well Installation
- Stormwater sampling and Testing
- Soil and Groundwater Sampling Borehole Hydraulic Conductivity Testing and Analysis
- Groundwater and Surface Water Flux Analysis
- Flow and Transport Modeling
- Construction Inspection

Water Treatment Systems

- Water Quality Sampling and Analysis
- Carbon Treatment for Petroleum and Hazardous Substances
- Inorganic and Hardness

East Wilton	Wilton Tanning Company	Petroleum-contaminated soil was excavated and a biopile was constructed to remediated the impacted soil. Removal and closure assessment for two No. 6 fuel oil tanks and one mineral spirits tank. All three tanks had leaked and soil excavation and removal was performed under the supervision of the DEP. (Chapter 691, D-Tree, DEP Land Spreading Guidelines).	Field oversight and communication with DEP and client. Worked with DEP to establish site-specific action levels for removal, report writing.	Bill Wallace
Fairfield	CN Brown	Petroleum-contaminated soil removed and land spread on-site in accordance with DEP guidelines. Removal and closure assessment for two 8,000 gal gasoline USTs. Soil monitoring with PID revealed soil contamination above reporting limits. (Chapter 691, D-Tree, DEP Land Spreading Guidelines).	Communication with DEP and client. Report writing and technical review.	Bob Randall
Hartland	Irving Tanning Company	Removal of two No. 6 fuel oil tanks. Excavation and remediation of petroleum-contaminated soil through mixing with high nitrate manure and landspreading. Tank closure assessment and report, post remediation monitoring. (Chapter 691, D-Tree, DEP Land Spreading Guidelines).	Field observation of excavation, communications with client and DEP, Project Management and technical review.	Bob Randall
Lincolnville	Maine DEP	Millington Site: Petroleum storage and homemade cracking facility. Assessed potential waste oil contamination of bedrock residential wells. (Chapter 691, Chapter 695, Remedial Action Guidelines).	Project management, field services, work scope, data analysis and interpretation, report preparation.	Lynn Cayting
Lincolnville	Maine DEP	Millington Site: Petroleum contamination of surficial groundwater at petroleum storage and homemade cracking facility. Evaluated potential waste oil contamination of groundwater in surficial deposits. Groundwater sampling using a Geoprobe®. (Chapter 691, Chapter 695, Remedial Action Guidelines).	Project management, field services, work scope, data analysis and interpretation, report preparation.	Lynn Cayting
Lisbon Falls	Ann Street Well Site	MTBE contamination in the Ann St. supply well (public water supply). Hydrogeologic investigation, soil borings, monitoring well installation, soil PID screening, groundwater sampling, borehole hydraulic conductivity testing, flow net construction and analysis, geologic mapping and analysis. (DEP Fast Track, D-Tree, Groundwater Remediation Action Levels).	Technical interpretation, field oversight and communication with DEP, client, and nearby homeowners. Geologic, soil and water quality analysis. Technical review.	Alex Pugh

Monson	DPW	Removal and closure assessment of gasoline UST. Field observation, soil PID screening. (Chapter 691, D-Tree).	Field sampling, PID work, field data documentation, report preparation.	Tom Varney
Orono	CN Brown	Petroleum-contaminated soil was excavated and treated by land spreading on-site. Removal and closure assessment of two gasoline and one No. 2 fuel oil USTs. Soil monitoring with PID revealed contamination above action levels established for the site. Post remediation monitoring of soil. (Chapter 691, D-Tree, DEP Land Spreading Guidelines).	Field oversight and communication with DEP and client. Worked with DEP to establish site-specific action levels for removal, report writing.	Tom Varney
Palmyra	Lawn's One Stop	Gasoline contamination of bedrock aquifer, from leaky USTs. Residential well sampling, soil borings, soil PID screening and laboratory analysis, overburden and bedrock monitoring well installation, groundwater sampling, borehole hydraulic conductivity testing, aerial photo interpretation (fracture trace), bedrock geologic mapping, receptor analysis, comprehensive reporting (Chapter 691, D-Tree).	Project management, field oversight and communication with DEP, client, and nearby homeowners. Geologic, soil and water quality analysis. Technical review.	Cheryl Fontaine
Sanford	Central Maine Power	Petroleum-contaminated surficial groundwater. Hydrogeologic investigation. Long-term groundwater remediation by pump and treat. Contamination resulted from a leaky gasoline and No.2 fuel oil USTs. Project involved soil boring with PID screening and laboratory testing, soil vapor probe installation and monitoring, operation and maintenance of a groundwater pump and treat system, sampling and analysis of monitoring wells, and sampling and analysis of a public water system. (Chapter 691, D-Tree).	Project management, field services, analysis of soil and water quality data, preparation and technical review of quarterly and annual reports.	Peter Eremita
Searsport	CN Brown	Petroleum-contaminated soil was excavated and treated by land spreading on-site. Removal and closure assessment of two gasoline USTs. Soil monitoring with PID revealed contamination above action levels established for the site. Post remediation monitoring of soil. (Chapter 691, D-Tree, DEP Land Spreading Guidelines).	Field oversight and communication with DEP and client. Worked with DEP to establish site-specific action levels for removal, report writing.	Tom Varney

PROFESSIONAL PROFILE
JOHN S. MARCHEWKA, C.G.

Certifications

C.G. #319 State of Maine Certified Geologist
C.G. #316 State of New Hampshire Professional Geologist
OSHA 40-hour Hazardous Waste Certification Training
Maine Grade II Licensed Water Treatment Operator

Education

B.S. Geology, Montana State University, 1984
Masters Course Work, Hydrogeology and Environmental Engineering:
Boston University
University of Connecticut
University of New Haven

Employment History

2000 – Present. **President,** Marchewka & Associates, Inc., South Portland, Maine. Performance of a wide range of environmental and geologic services. Services include hazardous waste site compliance planning, water supply exploration and pumping tests, hazardous waste site and petroleum site investigation and closure, and petroleum and hazardous substance tank closure and remediation. Facilities grant work for public water systems and brownfields. Hydrogeological investigations for water supply development, landfill closures, Phase I and Phase II Environmental Site Assessments, and Federal Brownfield and State of Maine VRAP Projects.

1991 - 1999. **Vice President, Geologic Services**, Acheron, Inc., Falmouth, Maine. Responsible for the planning, execution and technical supervision of the geologic and hydrogeologic investigations for Acheron. Provided staff supervision, contract management and general office administration. As Acheron's Vice President of Geologic Services, performed and supervised hydrogeologic investigations at commercial and industrial facilities, petroleum spill sites, hazardous waste sites, and municipal and industrial landfills. Performed groundwater exploration, pump test analysis, and final well design for municipal water systems and replacement of contaminated residential and public water supply wells. Planned and developed efficient and cost-effective groundwater and surface-water monitoring plans for hazardous waste and landfill sites throughout the State of Maine.

1987 - 1991. **Project Hydrogeologist**, Anderson-Nichols and Company, Inc., Boston, Massachusetts. Technical supervision and performance of hydrogeologic studies for

landfill closure and expansion plans, underground storage tank removals, closure and replacements, numerical and analytical contaminant transport computer modeling, and design of long-term monitoring programs. Responsible for the management and supervision of the groundwater group. Directly performed projects involving groundwater exploration, pump-test designs, observation well layout and design, coordination of extended pump tests, analytical and numerical computer modeling for the analysis of aquifer parameters and delineation of wellhead protection zones.

1985 - 1987. **Hydrogeologist**, Heynen Engineers, Inc., Guilford, Connecticut. Responsible for the performance of landfill hydrogeologic studies, closure plans and report writing. Performed aquifer remediation projects involving design of pump and treat systems for contaminated aquifers resulting from faulty underground storage tanks and indiscriminant hazardous-waste disposal. Performed environmental site assessments for numerous industrial and commercial properties throughout New England, as well as geotechnical analysis and soil laboratory analysis for structural and foundation design.

1984 - 1985. **Survey Crew Chief**, Pantel Associates, Lyme, New Hampshire. Responsible for performance of land surveying, topographical mapping, and soil analysis for commercial and residential properties.

Affiliations

Association of Groundwater Scientists and Engineers
American Institute of Professional Geologists
Geologic Society of Maine
Board of Directors, Environmental Business Council of Maine
Chairman, Scarborough Solid Waste and Recycling Committee

Publications

Marchewka, John S., B.R. Bouck, P.B. Howard and N.A. Zessoules, 1991. Elm Bank: The Largest Public Water Supply Pumping Test Performed in the State of Massachusetts. Report prepared for presentation at the *Focus Conference on Eastern Regional Ground Water Issues, Portland, Maine, October 24, 1991.*

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PROFESSIONAL PROFILE
DONALD C. MCFADDEN

Certifications

OSHA 29 CFR 1910.120 40-hour Hazardous Waste Training
OSHA 29 CFR 1910.120 8-Hour Refresher Training (10/01)
U.S. Army Corps of Engineers Wetland Delineator

Education

B.S., University of Massachusetts, Amherst, Environmental Science, 1995
Minor: Geology
A.S., Environmental Technology, 1992
University of Southern Maine, Additional Coursework:
Geomorphology; Igneous and Metamorphic Petrology; and Mineralogy

Employment History

2002 – Present **Senior Geologist,** Marchewka & Associates, Inc., South Portland, Maine. Management and performance of a wide range of environmental and geologic services. Services include hazardous waste site compliance planning, hazardous waste site and petroleum site investigation and closure, and petroleum and hazardous substance tank closure and remediation. Hydrogeological investigations for water supply development, rock and gravel quarry permitting, landfill closure investigations, Phase I and Phase II Environmental Site Assessments, and Federal Brownfield and State of Maine VRAP Projects.

1999 - 2002 **Environmental Scientist/Geologist,** Sebago Technics, Inc. Westbrook, Maine. Responsibilities included: managing and performing geologic and hydrogeologic investigations, stormwater monitoring, Phase I and Phase II Environmental Site Assessments (ESAs), and remedial activities pursuant to Maine DEP VRAP; conducting wetland delineations, visual impact assessments, and Environmental Assessments; assisting in topographic and boundary surveys; providing staff supervision and contract management.

1996 - 1999 **Environmental Scientist,** ENSR/Fugro East, Inc., Bourn, Massachusetts. Responsibilities included: managing remediation projects; performing Due Diligence ESAs using ASTM E 1527-97 and client specific methods; supervising underground storage tank removals, geotechnical and environmental drilling; assisting clients with state regulatory compliance; producing client and state regulatory compliance reports; designing, installing, operation, and maintenance of groundwater and soil remediation systems; performing monitoring well and groundwater elevation surveys; producing groundwater topography and contamination plume maps; soil classifications using ASTM Visual-Manual Methods; conducting soil gas surveys using gas chromatography.

1995-1996 **Environmental Technician,** Fugro East, Inc., Northborough, Massachusetts. Responsibilities included: oversight of drilling operations and installation of monitoring wells; conducting groundwater and soil sampling, underground storage tank removals, soil gas surveys; installing, operation, and maintenance of groundwater and soil remediation systems; and perform data analysis and generation of technical reports.

1994-1995 **Research Assistant,** Massachusetts Pesticide Analysis Laboratory, Amherst Massachusetts. Responsibilities included: gas chromatography analysis using NPD, FPD, ECD, FID, and Mass Selective detectors; chemical extractions using liquid:liquid and solid phase techniques; pesticide confirmation with Mass Spectrometry; and maintenance of chromatography equipment.

Affiliations

Geological Society of America
Geologic Society of Maine
National Ground Water Association

MAI

Sand Pond Monitoring Plan

Sand Pond
Sanford, Maine

April 2019

Prepared for:

Huttopia North America

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1034 Broadway
South Portland, Maine 04106

TABLE OF CONTENTS

3.0 REPORTING

Water quality data collected will be submitted on an annual basis to the City of Sanford. The submittal will include the annual water quality data compiled on the Maine DEP/LSM reporting forms. The submittal will allow the City to easily transfer the data to the DEP's lake monitoring data base and the Lakes Stewards of Maine (LSM) program if desired. The annual monitoring data will be submitted to the City by November 30 of each year and include two (2) hard copies and an electronic version.

4.0 QUALIFICATIONS OF SAMPLERS

Water quality sampling will be performed by professional individuals that have education, experience and/or training in environmental media sampling and that have been approved by the City of Sanford.

FIGURE

WIND DIR. CODES

N = 1 S = 5
NE = 2 SW = 6
E = 3 W = 7
SE = 4 NW = 8
no wind, enter 0

LAKE ______ TOWN ______

STATION DESCRIPTION ______ COUNTY ______

STATION: LAT ______ LONG ______ DATUM ______ ACCURACY ______ ON TARGET? Y / N

LAKE | MIDAS | STATION | CERTIFIED MONITORS 1 & 2 (Last name, First name) | PROJECT E I 0 3

MONTH DAY YEAR | MILITARY TIME | WIND VELOCITY | WIND DIRECTION | Sky Condition at Time of Secchi Readings – CIRCLE ONE: B C O (Bright (shadows), Cloudy Bright, Overcast) | Gloeo Category (0 to 6; Refer to Visual Aid)

DIRECTIONS: Use this form when obtaining Temp./D.O. profiles. Please fill out completely. Please indicate missing data by filling spaces with 9s.

PLEASE HELP US AVOID DUPLICATE DATA IN THE DATASET BY ENTERING SECCHI DATA ON ONLY ONE FORM

SCOPE TYPE CODES:

1 = None
2 = Flat glass, no mask
3 = Slant glass, no mask
4 = Slant glass & mask
5 = Flat glass & mask
6 = 6" diameter, slant glass & mask

SECCHI (meters) | SCOPE TYPE | DISK HIT BOT? Y/N | MONITOR'S QA CERTIFICATION # | READING # (1, 2 etc)

On two dates each year, please take two readings and record as Reading #1 & 2.

TEMPERATURE / DISSOLVED OXYGEN PROFILES

CIRCLE DEPTH UNITS: METERS / FEET **CIRCLE TEMP. UNITS:** CENT. / FAREN

PLEASE CIRCLE D.O. METHOD: *Titration:* Hach Kit, Lamotte Kit, Other Kit: ______ *Meter (enter model):* YSI Meter ______, Hach Meter ______, Other Meter: ______ METER ID#: ______

Check to indicate D.O. meter was calibrated

DEPTH	WATER TEMP	OXYGEN (mg/l)	DEPTH	WATER TEMP	OXYGEN (mg/l)	DEPTH	WATER TEMP	OXYGEN (mg/l)
0.			11.					
1.			12.					
2.			13.					
3.			14.					
4.			15.					
5.						**Required QA/QC Dupes (1 for every 10)**		
6.								
7.								
8.								
9.								
10.								

BOTTOM ______ CORE DEPTH: ______ CHL. #: ______ TP #: ______ AIR TEMP: ______ C / F

COMMENTS:

SIGNATURE:

DATA PROCESSING STAFF ONLY Please Date & Initial

Checked	- -
Entered	- -
Proofed	- -

LAKE ______ DATE ______
MIDAS ______ STATION ______

M = Meters
F = Feet
C = Core
G = Grab

METHODS: pH: C = Colorimetric, E = Electronic, A = Air Equilibrated, S = Sonde
Color: A/T = Apparent (unfiltered) / True (filtered)
N = Nessler, H = Hach wheel, F = Field Kit, S = Spectrophotometer
Conductivity: F = Field meter, L = Lab meter, S = Sonde
Alkalinity: M = Methyl Orange, G = GRAN Plot, L = Lamotte,
B = Methyl red/bromcresol green, O = other ______

REP: Assign a unique number for each replicate taken: e.g. 1, 2, 3, 4...
LAB CODES: H = HETL, P = PWD, C = Colby, N = Northeast Labs, S = Sawyer/Orono, D = DEP, U = UNH, O = Other ______

PAGE 2

DEPTH	M/F	C/G	pH	M	L	COLOR	A/T	M	L	CONDUCTIVITY	M	L	ALKALINITY	M	L	TP LABEL	TP (ppb)	Lab Code	Rep #	CHL a (ppb)	Lab Code	Rep #

ZOOPLANKTON: # of Tows ______ Depth of Tows ______ Net I.D. ______ Notes: ______

PHYTOPLANKTON: # of Cores ______ Depth of Cores ______ Notes: ______

SURFACE SEDIMENTS: # of Cores ______ Sed. Color ______ Sed. Odor ______ Worm Tubes? Y / N Notes: ______

LITTORAL EVALUATIONS COMPLETED: # Sites: ______ pHab: ______ Shoreline: ______ Macrophytes: ______ Macroinvertebrates: ______

PHOTOGRAPHS: Camera ID ______ # Taken ______ Descriptions: ______

NOTES

Uncorrected Conductivity: ______ Temp: ______ °C Cond. Cell Constant ______

Who determined pH, Color, Cond. & Alk? ______

Form DEP – 142c (Rev. 2/18)

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Sand Pond

Sanford, York, Maine
MIDAS 3862

Area (acres):	30
Perimeter (miles):	0.9
Mean Depth (feet):	
Max Depth (feet):	
Delorme Page:	2
Fishery Type:	No fishery
Invasive Aquatic Plant Infestation:	None known

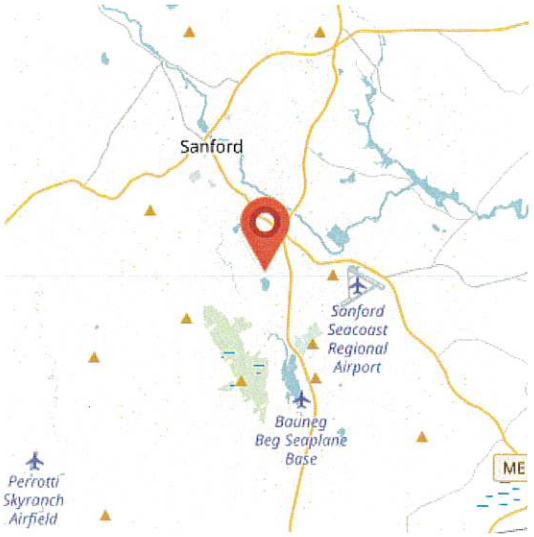
Other Lake & Watershed Information

% 500-m buffer in natural land cover:	88
% 500-m buffer in agricultural land cover:	4
% 500-m buffer in developed land cover:	8
% 500-m buffer covered by impervious surface:	1.2
Number of dams on the lake:	0
Lake elevation (m):	76
Length of shoreline (m):	1,446
Shoreline "irregularity index" *:	1.15

** This index is the ratio of shoreline length to the circumference of a circle of same area as the lake. The index is also known as the 'shoreline development index'. The greater the number, the more 'irregular' is the shoreline.*

Hide Information

Show Data Sources



Boat launches

Sand Pond
Terms of Use: click here »

Boating & Fishing Regulations for this and other Maine waters are available here.

Click the image below for a large depth map

Click the printer icon for printable depth map

Click the image below for a large aerial map

Click the printer icon for printable aerial map

Site built by Yellahoose
Hosting by Packawhallop

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Sand Pond

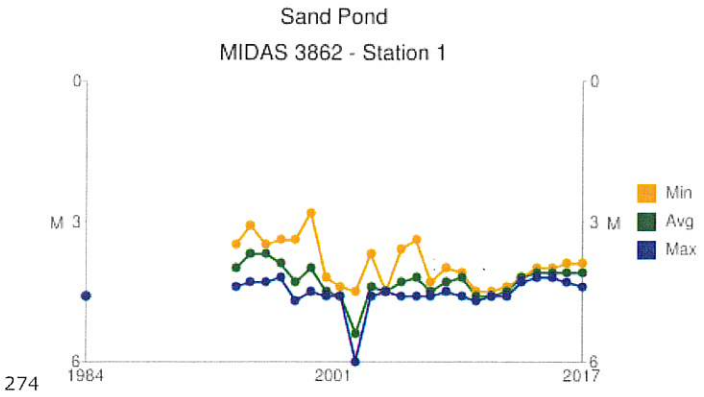
Sanford, York, Maine
MIDAS 3862

Secchi transparency (mean, maximum & minimum annual values)

Data and graph may take several seconds to load

Select Station: Station #1 ▼ Change

Default sampling station is #1 (generally the deepest part of the main lake basin (if > 1 basins). To view data from other stations, select the station from the drop-down above.



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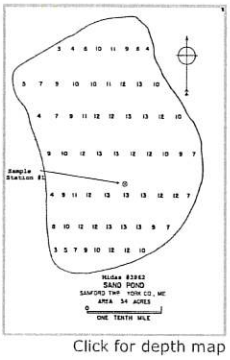
Sand Pond
MIDAS 3862 - Station 1

Year	Depth - Meters			Depth - Feet		
	Min	Avg	Max	Min	Avg	Max
1984	4.6	4.6	4.6	15.1	15.1	15.1
1985	n/a	n/a	n/a	n/a	n/a	n/a
1986	n/a	n/a	n/a	n/a	n/a	n/a
1987	n/a	n/a	n/a	n/a	n/a	n/a
1988	n/a	n/a	n/a	n/a	n/a	n/a
1989	n/a	n/a	n/a	n/a	n/a	n/a
1990	n/a	n/a	n/a	n/a	n/a	n/a
1991	n/a	n/a	n/a	n/a	n/a	n/a
1992	n/a	n/a	n/a	n/a	n/a	n/a
1993	n/a	n/a	n/a	n/a	n/a	n/a
1994	3.5	4	4.4	11.5	13.1	14.4
1995	3.1	3.7	4.3	10.2	12.1	14.1
1996	3.5	3.7	4.3	11.5	12.1	14.1
1997	3.4	3.9	4.2	11.2	12.8	13.8
1998	3.4	4.3	4.7	11.2	14.1	15.4

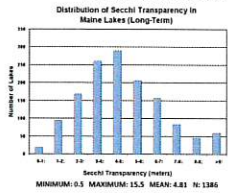
Understanding Transparency

Click here for more »



Click for depth map

Distribution of Secchi Disk Transparency in All Maine Lakes



Source Data:
Maine Lakes Transparency, Color & Chemistry: Annual Mean Values

Date-specific Secchi data for this and other Maine lakes can be found HERE

1999	2.8	4	4.5	9.2	13.1	14.8
2000	4.2	4.5	4.6	13.8	14.8	15.1
2001	4.4	4.6	4.6	14.4	15.1	15.1
2002	4.5	5.4	6	14.8	17.7	19.7
2003	3.7	4.4	4.6	12.1	14.4	15.1
2004	4.5	4.5	4.5	14.8	14.8	14.8
2005	3.6	4.3	4.6	11.8	14.1	15.1
2006	3.4	4.2	4.6	11.2	13.8	15.1
2007	4.3	4.5	4.6	14.1	14.8	15.1
2008	4	4.3	4.5	13.1	14.1	14.8
2009	4.1	4.2	4.6	13.5	13.8	15.1
2010	4.5	4.6	4.7	14.8	15.1	15.4
2011	4.5	4.6	4.6	14.8	15.1	15.1
2012	4.4	4.5	4.6	14.4	14.8	15.1
2013	4.2	4.2	4.3	13.8	13.8	14.1
2014	4	4.1	4.2	13.1	13.5	13.8
2015	4	4.1	4.2	13.1	13.5	13.8
2016	3.9	4.1	4.3	12.8	13.5	14.1
2017	3.9	4.1	4.4	12.8	13.5	14.4

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Hosting by Packawhallop

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Sand Pond

Sanford, York, Maine
MIDAS 3862

Dissolved Oxygen & Temperature

An adequate level of dissolved oxygen (DO) in lake water is essential to most life in the lake. DO is also a sensitive indicator of lake water quality, and it influences lake chemistry.

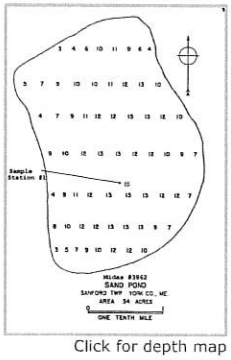
DO levels in lakes are strongly affected by water temperature, which is why the two indicators nearly always displayed together. Lake water temperature has a strong bearing on many physical, chemical and biological processes in lake ecosystems.

Note: data and graph may take several seconds to load

To modify the graph, select from the options below and click "GO!".

Understanding Dissolved Oxygen & Temperature

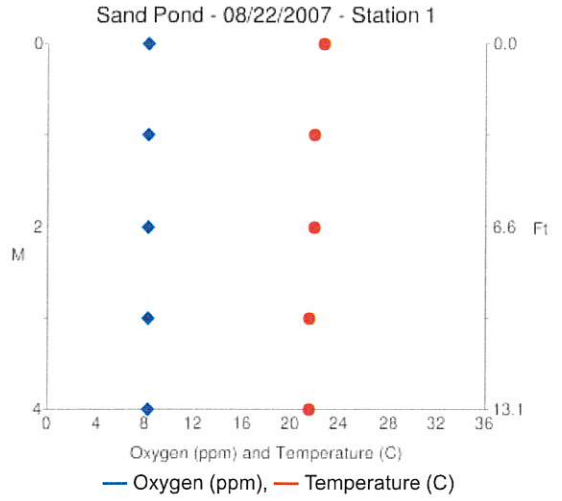
Click here for more »



Click for depth map

Source Data:

Maine lakes water quality - temperature & dissolved oxygen



Using data from station 1 ▼
Using readings from this date 08/22/2007 ▼
Go!

Date	Depth (m)	Oxygen (ppm)	Temp. (C)
08/22/2007	0	8.3	22.5
08/22/2007	1	8.3	22.1
08/22/2007	2	8.4	21.8
08/22/2007	3	8.3	21.7
08/22/2007	4	8.4	21.6

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Sand Pond

Sanford, York, Maine
MIDAS 3862

Lake Chemistry

Data below include the overall mean values for each water quality parameter. (Overall means are average of annual means.) Click on the links to view annual averages and date-specific data. Data displayed are for station 1 only.

Total Phosphorus:

- Overall Average: Epilimnetic core: 8 ug/L, Surface grab: 5 ug/L, Bottom grab: no data
- Annual Average »
- Specific Dates »

Chlorophyll a:

- Overall Average: 4.7 ug/L
- Annual Average »
- Specific Dates »

Color:

- Overall Average: 13 SPU
- Annual Average »
- Specific Dates »

Conductivity:

- Overall Average: 33 uS
- Annual Average »
- Specific Dates »

pH:

- Overall Average: 6.86 pH
- Annual Average »
- Specific Dates »

Total Alkalinity:

- Overall Average: 5.4 mg/L
- Annual Average »
- Specific Dates »

Understanding Lake Chemistry

Phosphorus »

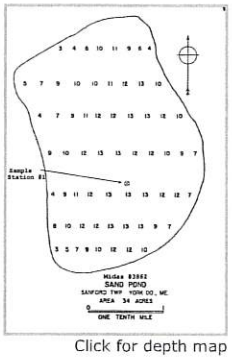
Chlorophyll a »

Color »

Conductivity »

pH »

Alkalinity »



Click for depth map

Source Data:

Maine Lakes Transparency, Color & Chemistry: Overall Mean Values

Maine Lakes Transparency, Color & Chemistry: Annual Mean Values

Maine lakes water quality - pH, color, conductivity, alkalinity (by date)

Maine lakes water quality - chlorophyll (by date)

Maine lakes water quality - total phosphorus (by date)

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Hosting by Packawhallop

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Keep Maine Lakes Clear and Clean
Donate

Sand Pond

Sanford, York, Maine
MIDAS 3862

Water Quality

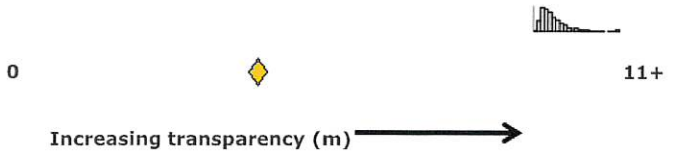
These charts display the values of water quality indicators for this lake, compared to the range of values seen across all of Maine's surveyed lakes . Color ramps represent the range of values across all lakes. Yellow diamonds display the mean values for this lake, as averaged across all sampling sites. Click on any diamond to view the data.

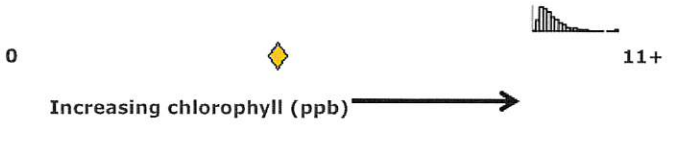
To further explore the statewide distribution of indicator values, click on the bar chart icon . The red lines on the histogram show data from one or more sampling stations for this lake – superimposed on the statewide distribution for the indicator.

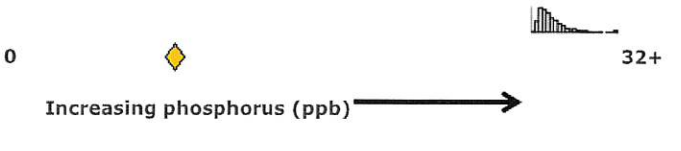
NOTE: Where data are identical for multiple stations, those station numbers will be superimposed on each other on the histograms and may thus be difficult to differentiate from each other.

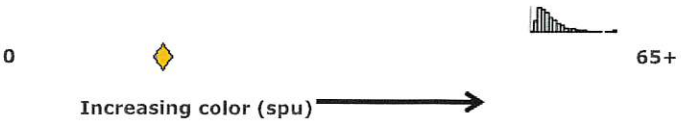
Understanding the Color Ramps & Column Charts »

An icon indicates that no data are available for this parameter at this lake.









Understanding Water Quality

Find out more about how lake water quality is measured and why it matters.
Click here for more »

Depth Map

DEP Water Quality Overviews

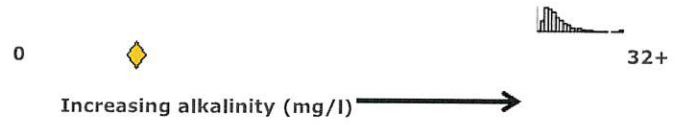
Brief summaries of water quality for this lake. Report(s) summarize data through 2017 (or earlier, where 2017 data are not available) for the sampling station(s) in this lake.

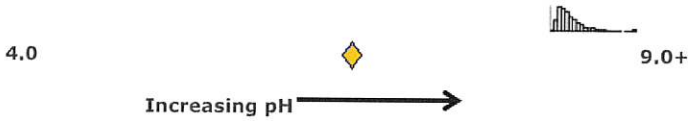
Click HERE for an explanation of these reports.

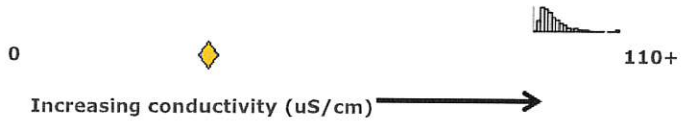
For more information about individual water quality measures, use the menu above.

2017 Reports

HTML Station #1







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