

Delaware Water Quality Portal

Visualizing Delaware Water
Quality Data

Christina Callahan
Delaware Environmental
Monitoring & Analysis Center

About DEMAC

Delaware Environmental Monitoring & Analysis Center

- NSF EPSCoR funded

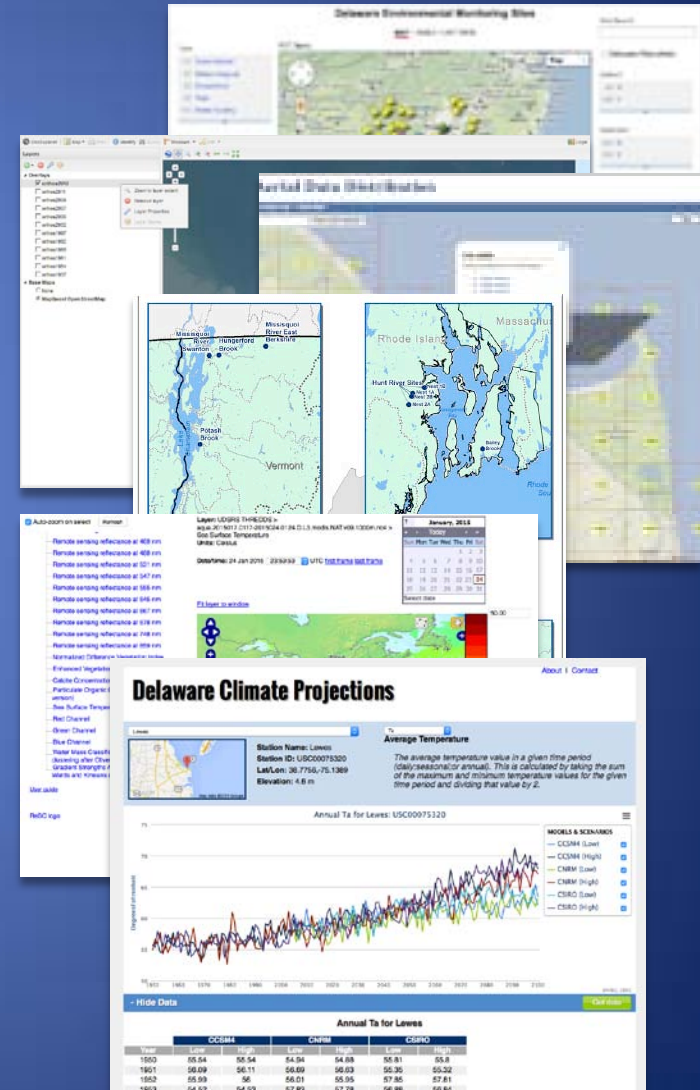


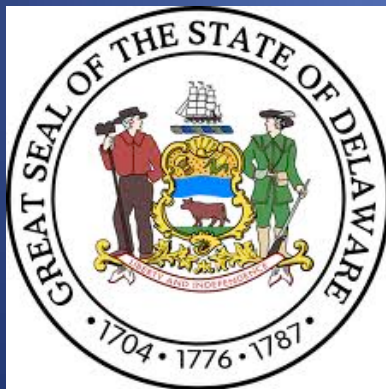
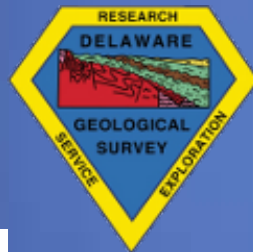
Goals:

- to coordinate and collaborate on environmental monitoring efforts throughout the State of Delaware and its surrounding areas
- to provide effective analysis and visualization tools for cross-discipline research
- assist researchers in sharing their findings with K-12, decision-makers, and the general public

DEMAC Projects

- Environmental Monitoring Portal
- Delaware Aerial Imagery Web Mapping Service and Tile download service (1937 – 2013)
- EPSCoR North East Water Resources Network (NEWRnet) Water Quality Monitoring Portal
- UD Satellite Receiving Station THREDDS server
- Delaware Climate Projections Data Portal





More specifically...

DELAWARE WATER QUALITY MONITORING EFFORTS

Delaware Water Quality Monitoring Portal

A web-based tool for the visualization and analysis of data from long term water quality monitoring sites in Delaware.

Since 2000

- ~ 190 sites monitored on a somewhat regular basis

Contains data from the following organizations/programs:

- Delaware Department of Natural Resources and Environmental Control (DNREC)
- Delaware Ambient Statewide Surface Water Quality Monitoring Program (21DELAQQ_WQX)
- Delaware River Basin Commission Delaware Estuary Boat Run Program (31DELRBC_WQX)
- DNREC Delaware Recreational Water Quality Monitoring Program (21DEBCH)



Delaware DNREC Watershed Assessment

Delaware Water Quality Portal

189 Items

Home About Contact

Text Search

Draw Watersheds Full State Zoom Search Data Bookmark Reset

Station Type

- 30 Beach
- 22 Boat Run
- 137 General

Select a Basin

- 30 Chesapeake Bay Drainage
- 90 Delaware Bay Drainage
- 47 Inland Bays / Atlantic Ocean
- 22 Piedmont Drainage

Select a Watershed

- 8 Appoquinimink River
- 1 Army Creek
- 1 Assawoman Canal
- 3 Blackbird Creek
- 3 Brandywine Creek
- 5 Broad Creek

Data Table

189 Items

Zoom	Station ID	Name
	842777	Town of Fenwick
	310011	Little Assawoman Bay @ Rt. 54 (The Ditch)
	311041	Buntings Branch @ Fenwick Rd. (Rt. 54)
	313011	Pocomoke River @ Bethel Rd. (Rd. 419)
	310071	Little Assawoman Bay Mid-Bay
	310031	Dirickson Creek @ Old Mill
	481609	Fenwick Island State Park
	304671	Raccoon Prong @ Pepper
	177694	South Bethel
	310121	Beaver Dam Ditch @ Bear
	467891	Trap Pond
	307081	Hitch Pond Branch @ Pepper
	237526	Bethel
	308361	Blackwater Creek @
	307171	Horsely Pond @ Sh

Beach Boat Run General

All data for this site were obtained from the National Water Quality Monitoring Council's National Water Quality Portal (www.waterqualitydata.us).

Purpose:
Query and Visualize water quality monitoring efforts for policy and planning

Investigation Tools:
Facet (filtering tool)
Search
Map
Table



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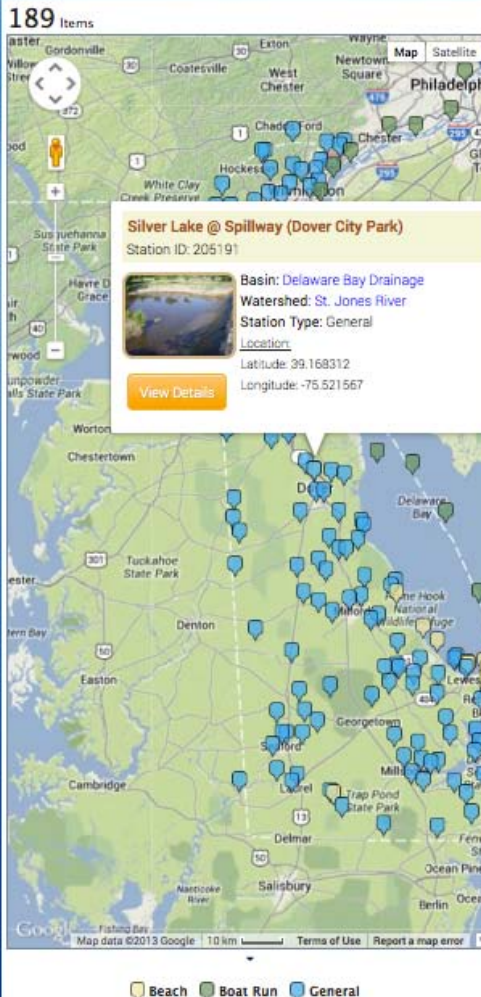


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Station Type: 30 Beach, 22 Boat Run, 137 General

Select a Basin: 30 Chesapeake Bay Drainage, 90 Delaware Bay Drainage, 47 Inland Bays / Atlantic Ocean, 22 Piedmont Drainage

Select a Watershed: 8 Appoquinimink River, 1 Army Creek, 1 Assawoman Canal, 3 Blackbird Creek, 3 Brandywine Creek, 5 Broad Creek

Data Table: 21DEBCH-DE842777, 21DELAQ_WQX-205191

Station Information

Station ID: 21DELAQ_WQX-205191
Station Name: Silver Lake @ Spillway (Dover City Park)
Period of Record: Apr 17, 2000 - Jun 04, 2013
Basin: Delaware Bay Drainage
Watershed: St. Jones River
[View Historical Station Data](#)
[Download Historical Station Data \(.csv\)](#)



[Zoom to this station](#)

Latest Water Quality Samples

Parameter	Value	Date
Water Temp	24.5 °C	Jun 04, 2013
pH	7.5	Jun 04, 2013
Dissolved Oxygen	7.51 mg/l	Jun 04, 2013
Total Nitrogen	1.02 mg/l	Jun 04, 2013
Total Phosphorus	0.15 mg/l	Jun 04, 2013
Enterococcus	20.0 cfu/100 ml	May 06, 2013
Salinity	0.11 ppt	Feb 06, 2013
Total Suspended Solids	6.0 mg/l	Jun 04, 2013

Digging Deeper: Individual Site Details

Station Metadata

- ID, Name & Location
- Period of Record
- Watershed & Basin
- Site Photo

Data

- CSV Download
- Recent Sample Results

Getting More Information...

- Historical Data Queries
- Historical Data Reports



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Advanced Search

Data Type:

Operator:

Value (units):

From to

Use the form to query **all** the available water quality data that have been submitted to the EPA STORET Data Warehouse. The results that meet your query will be returned to the screen. Each station is linked to a historical data view. Feel free to review the data.

The results table will show all values for the matching station, including Water Temperature, pH, DO, Nitrogen, Phosphorus, Enterococcus, Salinity, Total Suspended Solids, and more information on these measured parameters.

Showing 1 to 25 of 25 entries

Show entries

Station	Date	Temp.	pH	DO	N	P
01021	04-09-2012	15.15	9.6	12.99	3.25	0.03
01021	07-17-2012	30.95	9.8	9.53	0.71	0.03
01021	08-14-2012	28.45	9.8	9.26	0.5	0.03
02021	08-07-2012	29.25	9.3	13.04	3.4	0.48
03051	06-06-2012	23.15	9.7	11.13	1.4	0.12
03051	07-17-2012	31.15	9.1	9.87	1.62	0.1
03051	08-14-2012	28.85	9.5	11.11	2.26	0.09
03051	09-19-2012	21.95	9.2	8.79	1.78	0.09
03331	04-09-2012	13.65	9.2	11.75	3.63	0.02
05181	07-18-2012	30.95	9.1	10.98	1.2	0.05
05191	08-15-2012	27.65	9.1	9.32	3.67	0.3
05211	07-18-2012	29.75	9.7	13.26	2.31	0.1
06361	04-16-2012	18.95	9.2	13.78	4.71	0.0
06361	07-16-2012	28.45	9.6	13.58	2.54	0
06361	08-13-2012	27.95	9.2	10.96	2.33	0
06451	04-16-2012	19.45	9.3	13.19	3.83	0
06451	06-11-2012	29.45	9.1	12.22	1.33	0
06451	07-16-2012	28.95	9.3	10.87	2.14	0
06451	08-13-2012	28.55	9.6	13.12	4.43	0
06451	09-11-2012	23.15	9.1	10.45	2.27	0
07081	04-17-2012	22.15	9.6	10.97	1.15	0
07171	06-12-2012	26.05	9.2	9.47	2.41	0
08071	04-10-2012	15.25	9.2	11.97	3.21	0
08071	08-15-2012	28.55	9.1	10.46	1.6	0
08181	04-09-2012	13.85	9.4	14.79	3.29	0

Show entries

DEMARC



This site was developed by the Delaware Environmental Observing System and the Delaware Environmental coordination with the DNREC Watershed Assessment Section. All data in this site have been downloaded

Advanced Querying of Full Data Repository

Historical Station Data Reports

Delaware Water Quality Portal

Historical Data for 21DELAQ_WQX-303051



Station Name: Red Mill Pond @ Rt. 1

Period of Record:

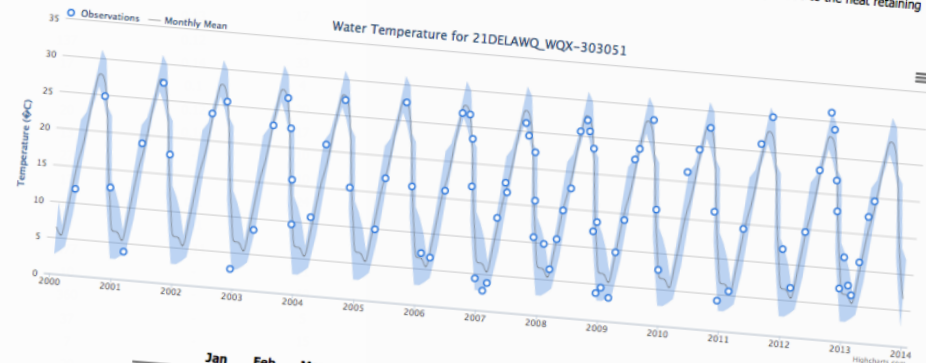
Basin: Delaware Bay Drainage

Watershed: Broadkill River

[Download Historical Station Data \(.csv\)](#)

Water Temperature

Temperature, like salinity, undergoes wide variations seasonally, although it is much less variable and much more predictable than any other water quality parameter displayed here. This can be seen by looking at the historical range for the long-term stations for any given month. This relative stability is due to the heat retaining properties of water, which make it much more resistant to temperature changes than our atmosphere.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min	2.75	3.25	3.85	8.35	15.95	22.85	26.15	24.45	21.95	12.15	7.25	2.75
Average	6.41	5.38	9.4	14.91	18.6	24.28	27.83	26.96	22.85	16.25	10.67	6.59
Max	9.85	6.75	12.85	21.35	22.45	26.05	31.15	29.85	23.45	22.25	13.45	11.95

pH

pH, in simple terms, is a chemical measure of whether or not something is an acid or a base. It is measured on a log scale of 0 to 14, with each unit representing a tenfold change. A pH of 7 is neutral, a pH of 5 is acidic, and a pH of 9 is basic. The pH scale is logarithmic, meaning that a change of one unit represents a tenfold change in the concentration of hydrogen ions.

DEMO

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	481609	Fenwick Island State Park Beach
	304671	Raccoon Prong @ Pepperbox Rd. (Rd. 66)
	177694	South Bethany Beach
	310121	Beaver Dam Ditch @ Beaver Dam Rd. (Rd. 368)
	467891	Trap Pond Beach
	307081	Hitch Pond Branch @ Pepper Pond Rd. (Rd. 449)
	237526	Bethany Beach
	308361	Blackwater Creek @ Omar Rd. (Rd. 54)
	307171	Horsey Pond @ Sharptown Rd. (Rt. 24)
	308091	Pepper Creek @ Main St. (Rt. 26)

Beach
 Boat Run
 General

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<http://demac.udel.edu/waterquality>

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Next Steps

Incorporate data from:

- additional WQ monitoring efforts
 - UD Citizen Monitoring Program
- real-time monitoring efforts

For more information:

Delaware Environmental Monitoring & Analysis Center
demac.udel.edu



Tina Callahan
tina.callahan@udel.edu

Delaware Environmental Observing System
deos.udel.edu



Kevin Brinson
kbrinson@udel.edu