

A Day in the Life of a Long Island Ecosystem

2017



Partnership Program:

*Brookhaven National Lab
Central Pine Barrens Commission
NYS Department of Conservation
SCWA*

Table of Contents

• Page 3	2017 Statistics
• Page 4	2017 Locations & Dates
• Page 5-7	Mission & Goals
• Page 8-9	Data Collected
• Page 10-20	Maps and Sites
• Page 21-22	Website
• Page 23	Social Media
• Page 24-29	A Day in the Life Curriculum Development
• Page 30	2017 Partners
• Page 31	2017 Schools
• Page 32	What we provide
• Page 33	Photos

2017 A Day in the Life of the

Carmans River/ Peconic Estuary/ Nissequogue River/

Connetquot River/Carlls River/Green's Creek/Massapequa Park Preserve/Gardiner County Park/Mill River/Forge River and Fire Island

	Ecosystem	Students	Teachers	Schools	Experts
1	Carmans River	*(399)	*(21)	*(9)	*(29)
2	Greens Creek	35	2	1	2
3	Gardiner County Park	43	2	1	3
4	Massapequa Preserve	44	5	2	5
5	Fire Island	77	9	3	15
6	Nissequogue River	365	27	10	19
7	Carlls River	128	8	3	7
8	Forge River	106	11	3	8
9	Peconic Estuary	844	31	16	36
10	Connetquot River	105	8	2	10
11	Mill River	118	10	3	11
	Total	2,264	134	53	145

*Cancelled due to weather

Day in the Life ~

6th year of the program- Started with the Carmans River in 2012

Now 11 aquatic ecosystems

1. **Carmans**- September 20
2. **Green's Creek**-September 22
3. **Gardiner's County Park** – September 22
4. **Massapequa Park Preserve**- September 29
5. **Fire Island** – September 29
6. **Nissequogue**- October 6
7. **Carlls** (Seatuck Environmental Assoc.) - October 13
8. **Forge River** (Peconic Baykeeper) – October 13
9. **Peconic Estuary**- October 20
10. **Connetquot**- October 27
11. **Mill River** (Seatuck Environmental Assoc.) – November 3

A Day in the Life~

- Students collect scientific information to create snapshots of the river at locations along the river, then share their data using our *Portal to Discovery* website so they can better understand how their piece of the river fits into the entire ecosystem.

www.portaltodiscovery.org/aday



- A goal is to connect Long Islander's to nature. To help prepare students to become stewards of the river's water quality and natural resources.

A Day in the Life~

- Students use hands-on field techniques to describe their sites, catch fish in nets, collect water and invertebrate samples, and examine water chemistry parameters.



Goals of A Day in the Life~

- ***Using the Environment Integrated Context for Learning***- At each location, teams of students and environmental educators used seine nets and lab equipment to investigate aquatic life, biodiversity, water chemistry and quality, tides, weather and other parameters.
 - Teacher Guide
- ***Citizen Science***- Results for all locations and groups need to be posted on our A Day in the Life Website to be used by land use decision makers, civic groups, research students and the general public.
 - Website & Equipment
- ***Creating Environmental Stewards***- Students are our future decision makers; our goal is to give them the inspiration and knowledge to make informed decisions for environmental health.
 - Research

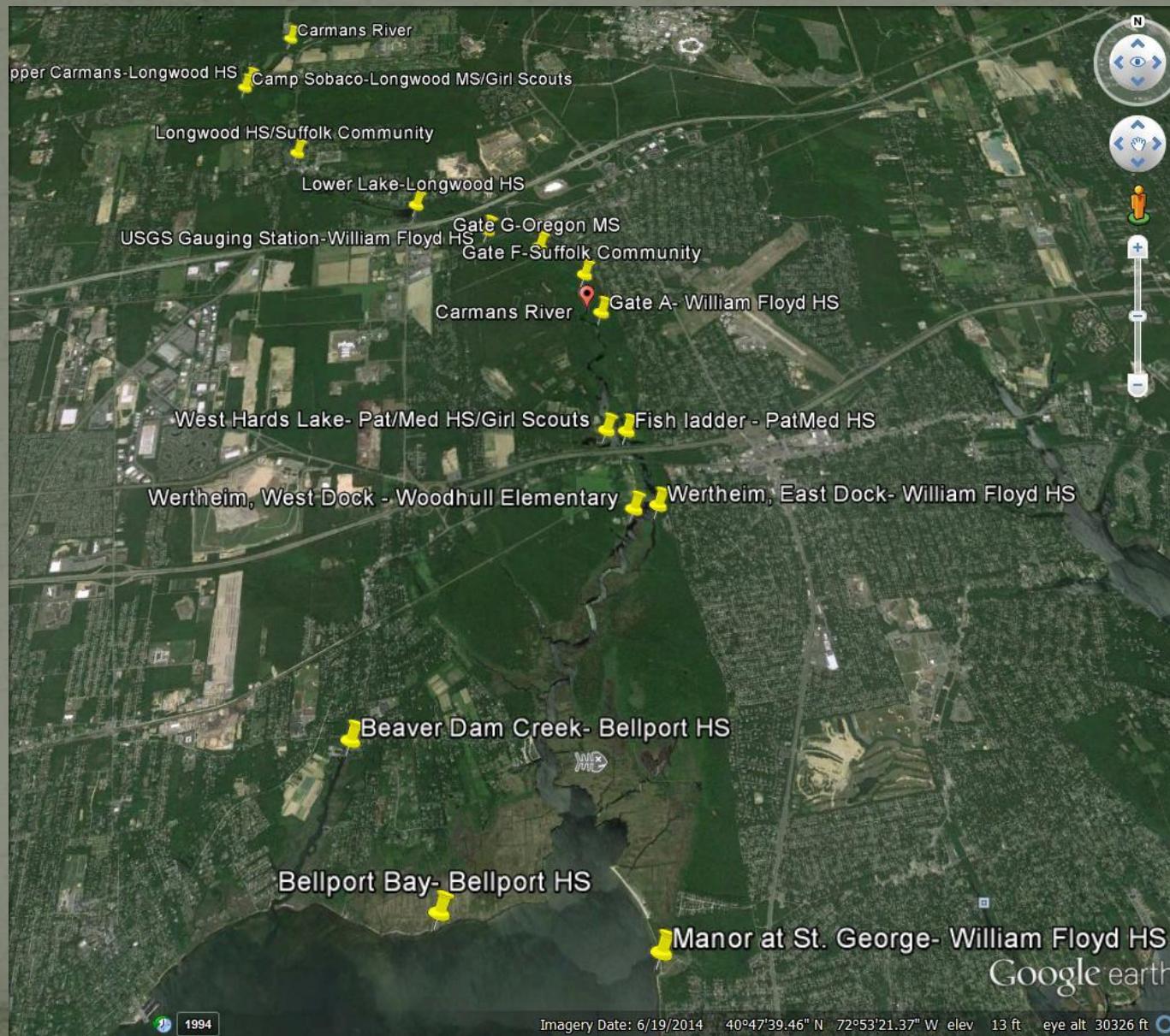
A Day in the Life~

- Group 1 - PHYSICAL DATA
 - Tasks and Measurements to Accomplish:
 - Tide Measurement
 - Current Direction and Speed
 - Cloud Cover and Air Temperature
 - Wind Direction and Speed
- Group 2 - SITE DESCRIPTION
 - Tasks and Measurements to Accomplish:
 - Physical Characteristics of the Site
 - Map of Site
 - Sediment Sample of Shoreline, Site Bottom

A Day in the Life ~

- **Group 3 - BIOLOGICAL SAMPLING**
- Tasks and Measurements to Accomplish:
 - Aquatic Biological Survey
 - Biodiversity Inventory Survey
 - Habitat Association Survey
- **Group 4 - CHEMICAL ANALYSIS**
- Tasks and Measurements to Accomplish:
 - Water Temperature
 - Turbidity
 - Water pH
 - Salinity
 - Dissolved Oxygen

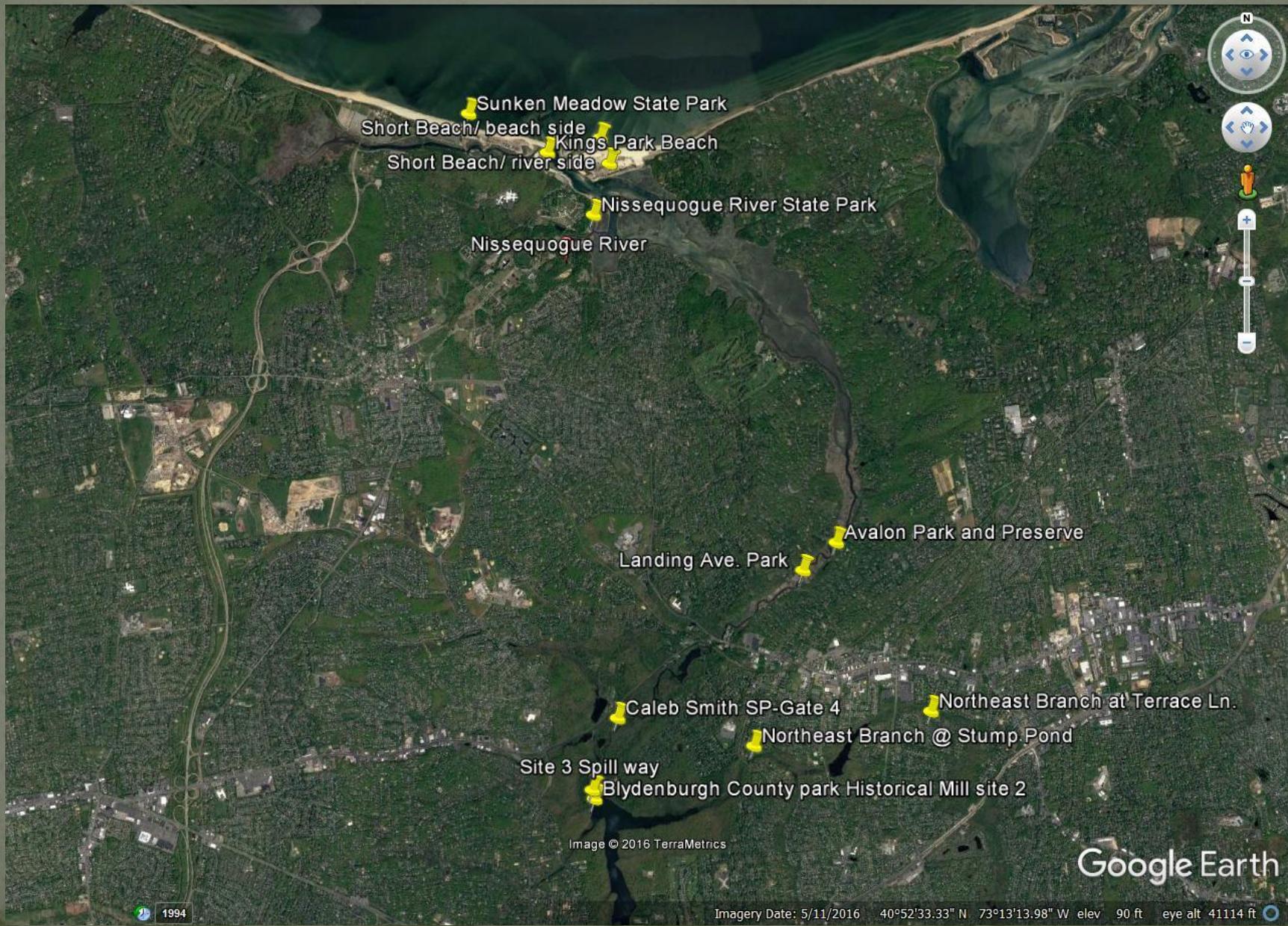
Carmans River Sites



Peconic Estuary Sites



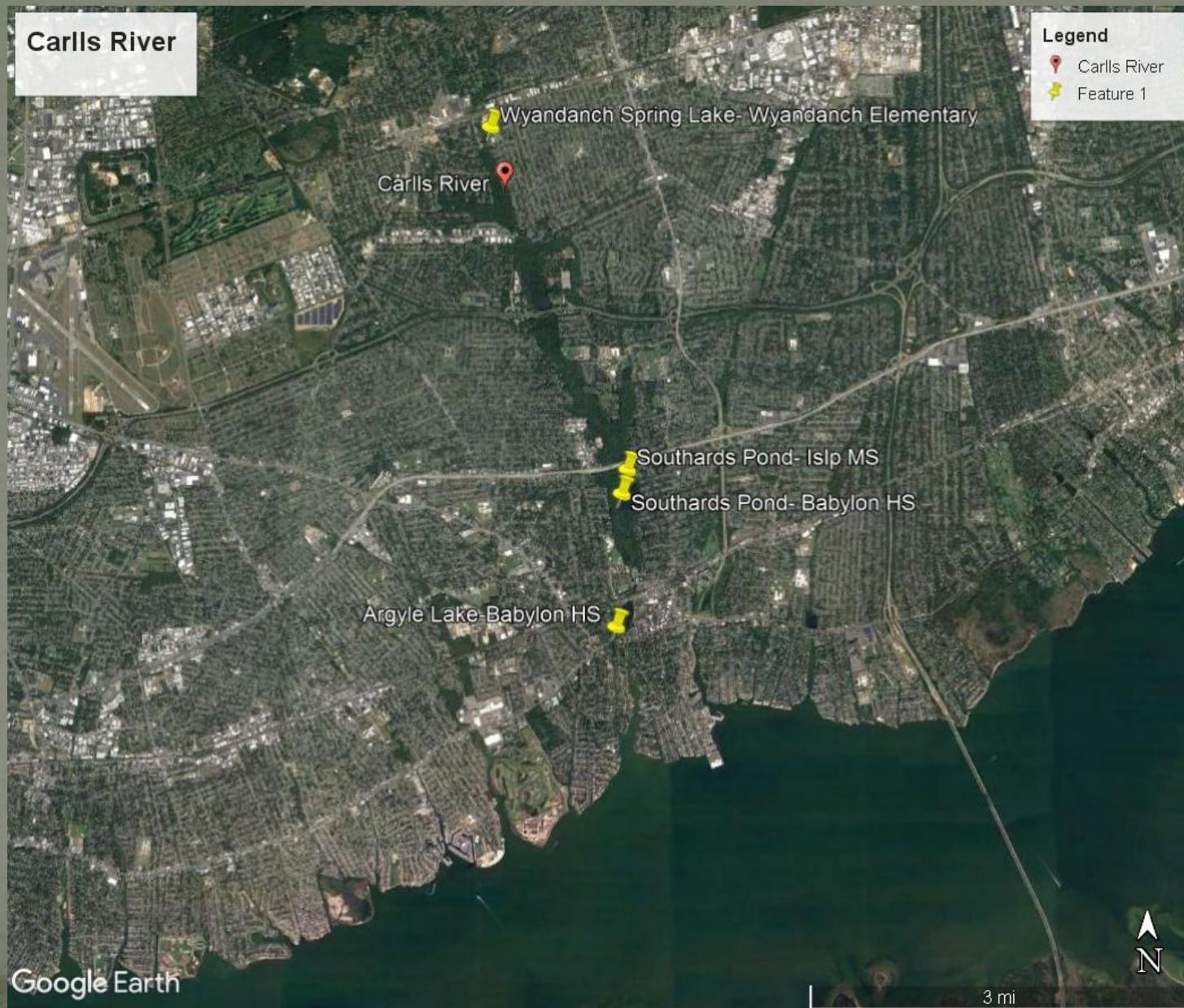
Nissequogue River Sites



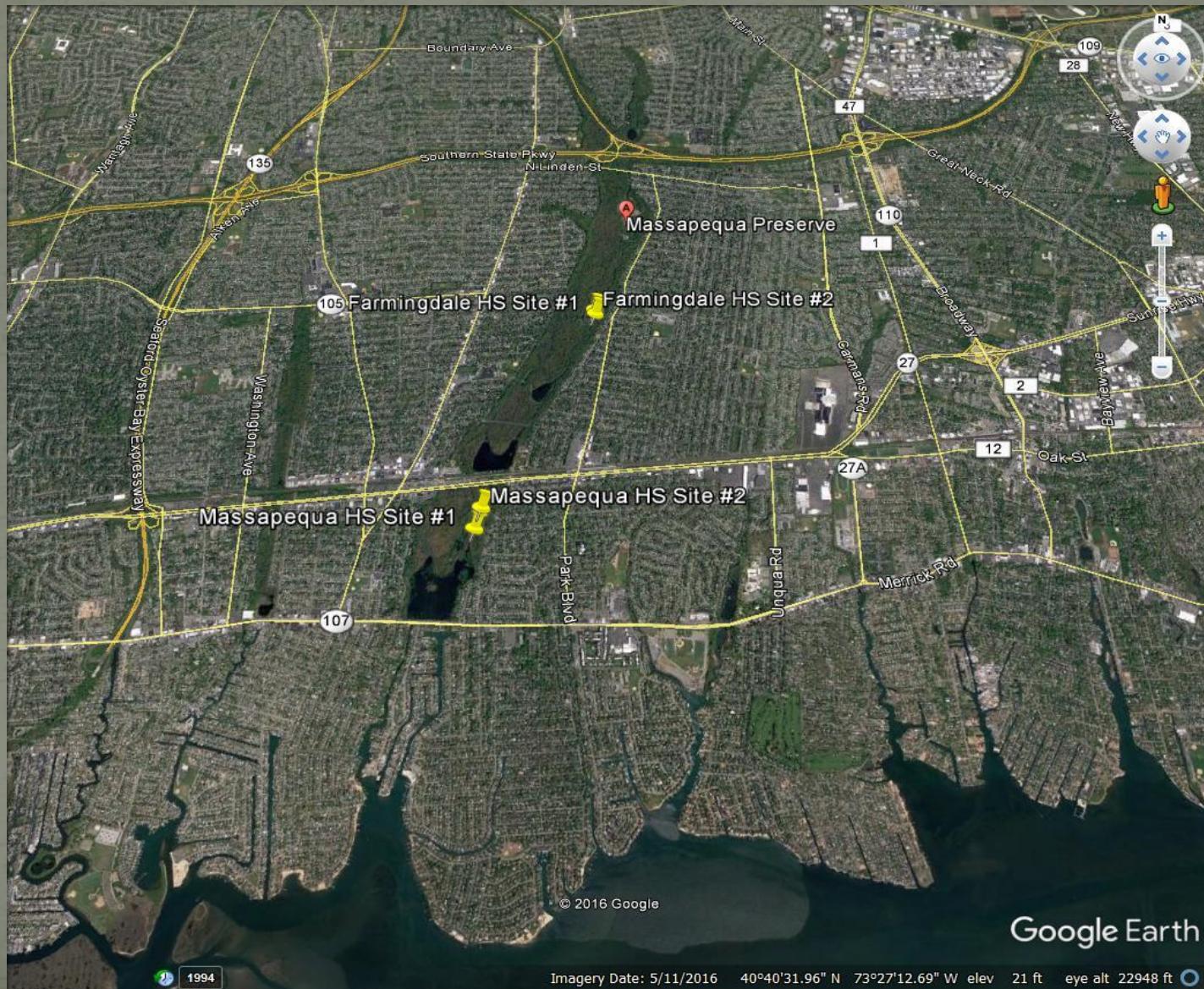
Connetquot River Sties



Carlls River Sites



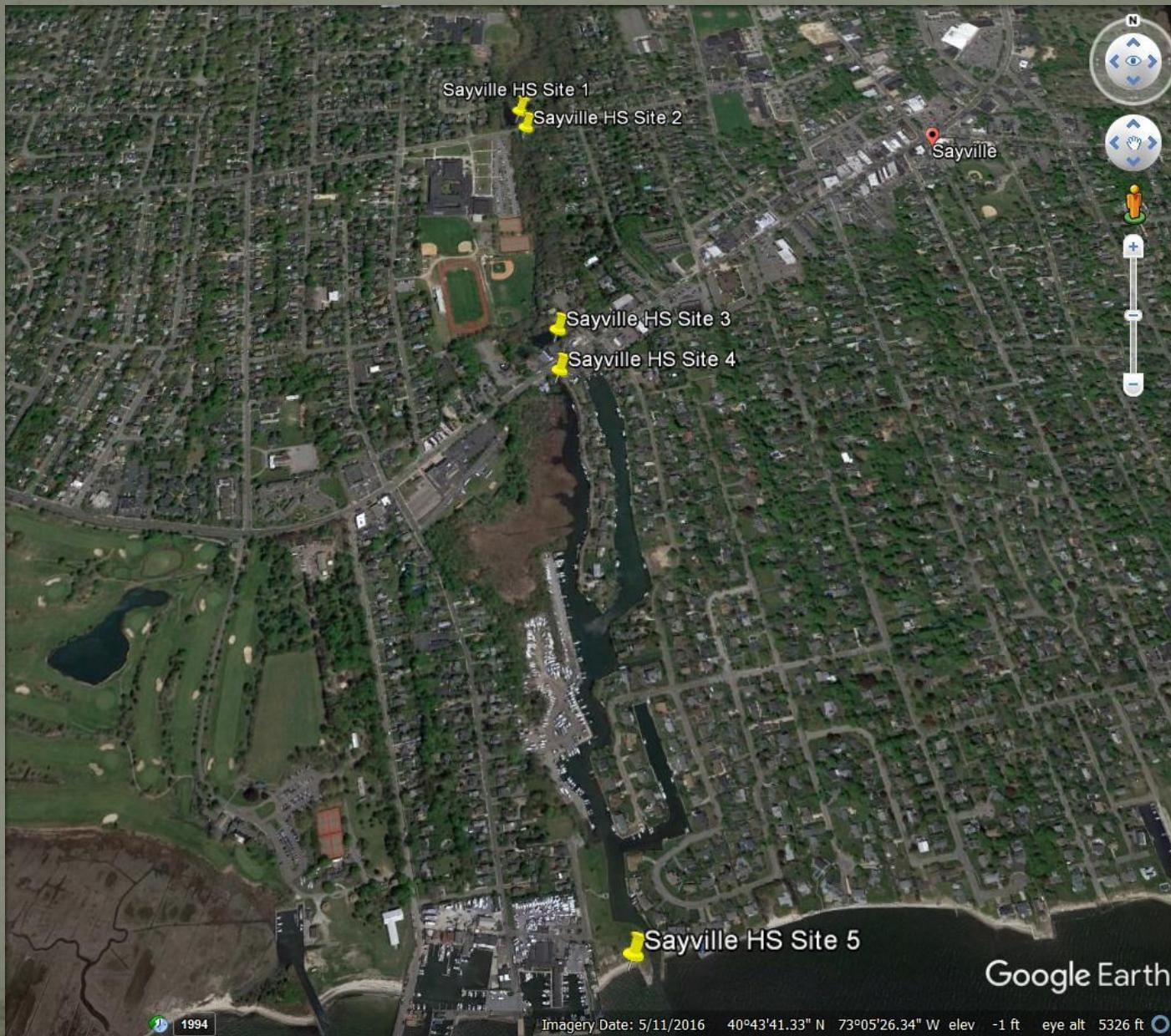
Massapequa Park Preserve



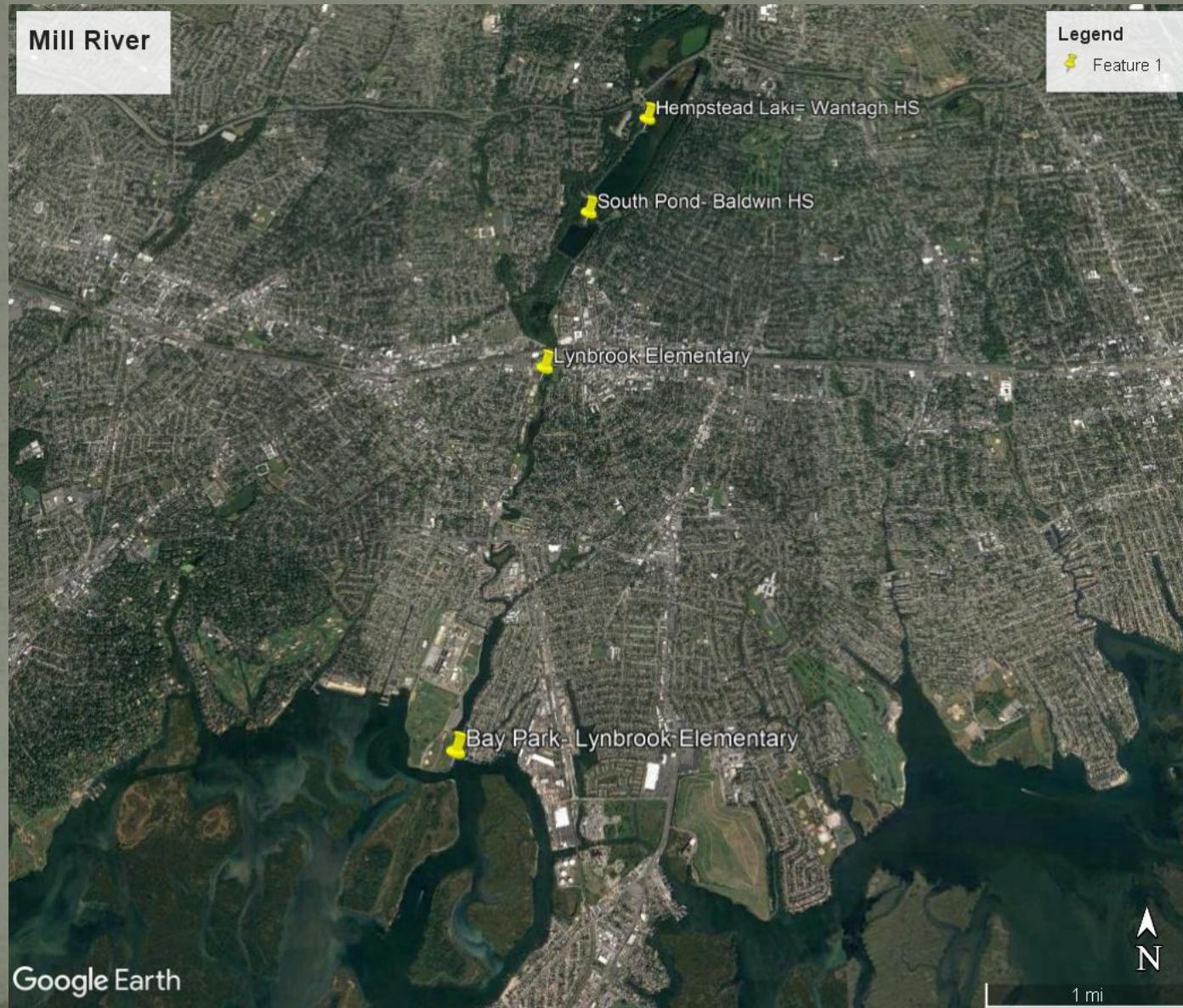
Gardiner County Park



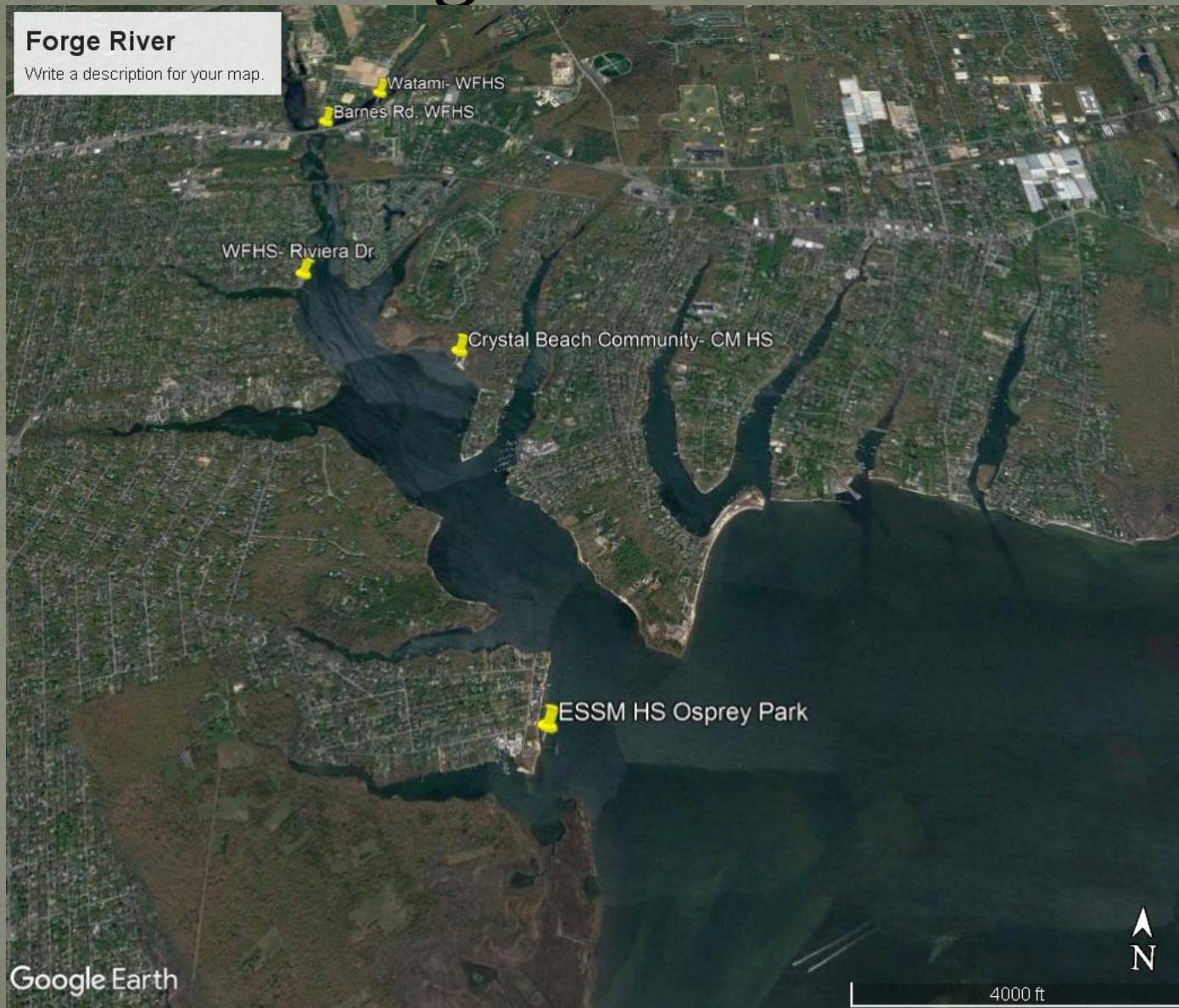
Green's Creek



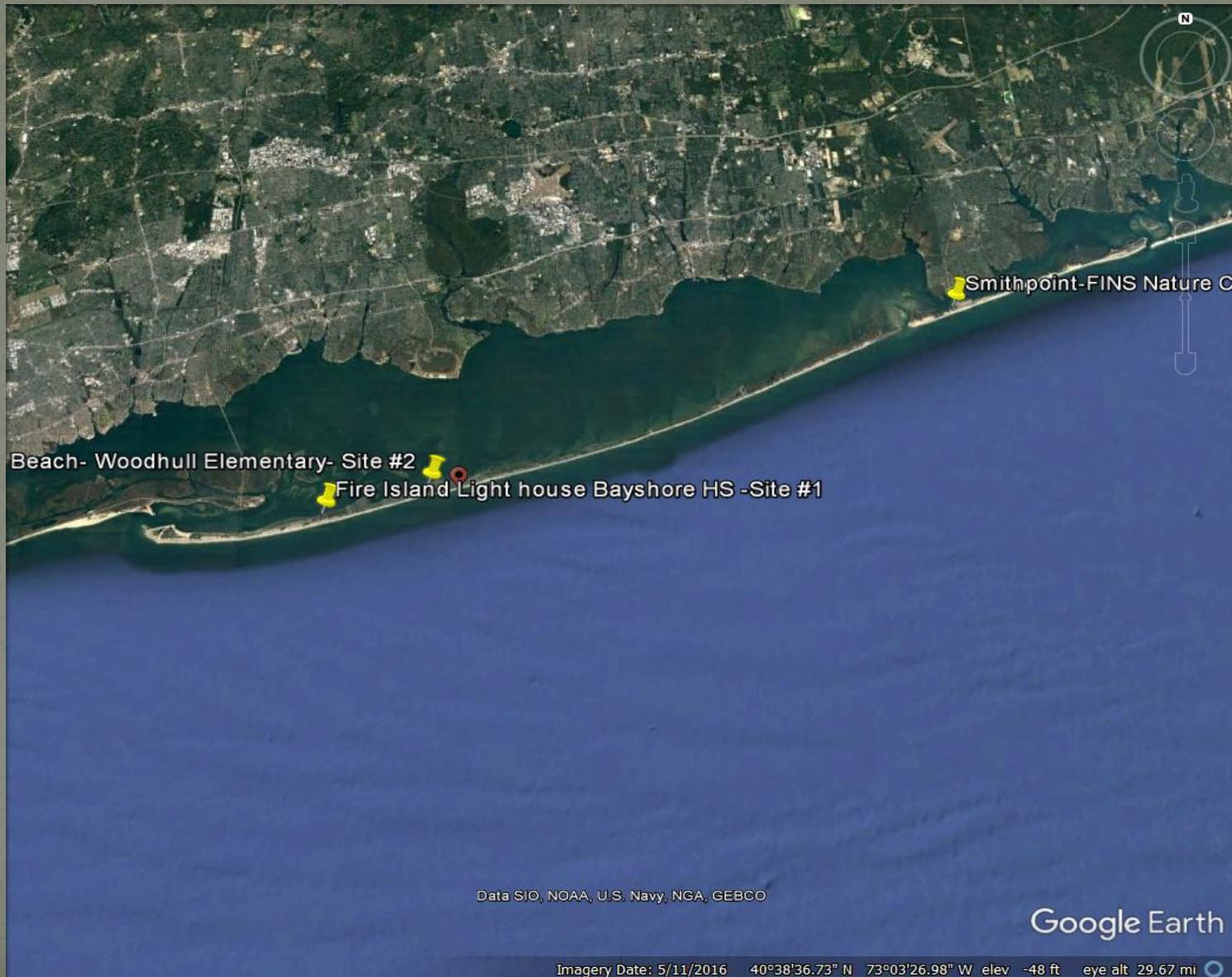
Mill River Sites



Forge River Sites



Fire Island Sites



Portal to Discovery hosted website

<http://www.portaltodiscovery.org/aday/>

The screenshot shows a web browser window with the URL <http://www.portaltodiscovery.org/aday/> in the address bar. The page title is "A Day in the Life". The menu bar includes File, Edit, View, Favorites, Tools, and Help. The main content area features a large green title "A Day in the Life" with a yellow outline, set against a blue background with white wavy lines and a green lily pad. Below the title is a section titled "A Day in the Life Locations" with six thumbnail images and their corresponding labels: Carmans River, Green's Creek, Peconic Estuary, Nissequogue River, Connetquot River, and Carlls River.

File Edit View Favorites Tools Help

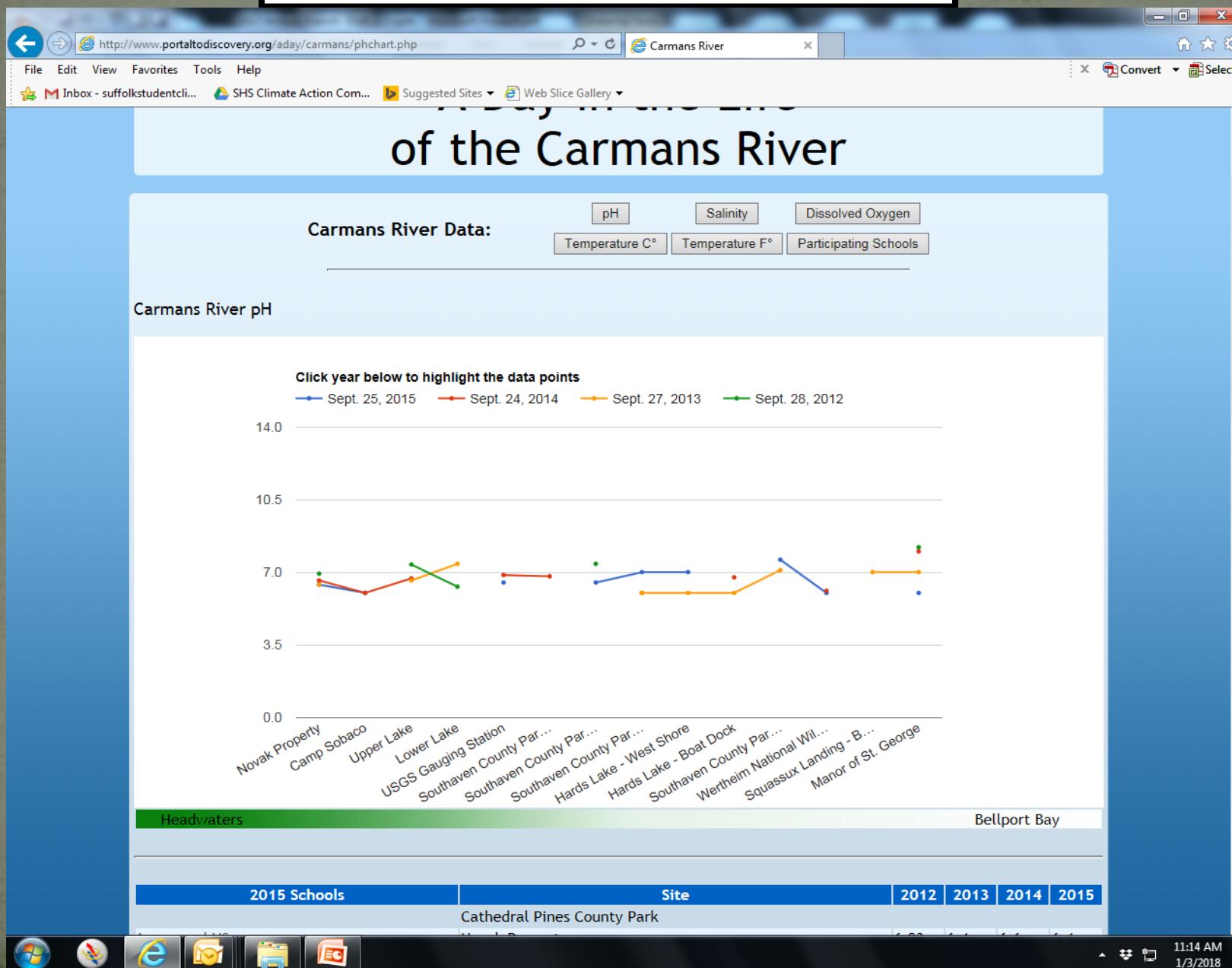
HOME SITES DATA RESOURCES ABOUT

A Day in the Life

A Day in the Life Locations

-  Carmans River
-  Green's Creek
-  Peconic Estuary
-  Nissequogue River
-  Connetquot River
-  Carlls River

Data Graphing



Social Media

https://www.facebook.com/adayintherifeofariver/

File Edit View Favorites Tools Help

A Day in the Life

Page Messages Notifications Insights Publishing Tools Settings Help

Like Following More

A Day in the Life shared NYS Department of Environmental Conservation's post. November 7, 2016

Thank you NYS Department of Environmental Conservation



NYS Department of Environmental Conservation added 18 new photos. November 7, 2016

On Friday, DEC's Education staff from our region 1 office (Long Island) teamed up with other natural resource experts to work with over one hundred high school ...

https://www.facebook.com/NYSDEC/photos/pb.10154736556770956/10154736554120956/?type=3

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PEOPLE ALSO LIKE

New York Phenology Project Non-Profit Organization

https://twitter.com/pinebarrensLI

File Edit View Favorites Tools Help

Central Pine Barrens (@pinebarrensLI)

Home Moments Notifications Messages

Tweets 342 Following 318 Followers 73 Likes 34 Lists 0 Moments 0

Edit profile

Central Pine Barrens @pinebarrensLI · 2 Nov 2016

Young Island citizen scientists explore Coecles Harbor #education #featuredstory



Young Island citizen scientists explore Coecles Harbor - Shelter Island... Some young Shelter Island citizen scientists agreed a field trip Friday to Ram's Island gave them a better understanding of... Read More shelterislandreporter.timesreview.com

Central Pine Barrens @pinebarrensLI · 1 Nov 2016

A Day in the Life of the Connetquot River, Friday Nov. 4th! #citizenscience #adayintherifeofariver @BayShoreHS @connetquotnhs @BrentwoodHS



1:18 PM 12/20/16

Teachers implement the A Day in the Life (ADITL) Data into their STEM and other interdisciplinary curriculum

- GIS Online
- Research projects
- Science
- Math
- Social Studies
- Art
- Media

The Central Pine Barrens Commission worked directly with the Sayville School District to train students on using the ADITL data with GIS Online

- Sayville District Elementary Family STEM Learning Symposium



3 Elementary Schools
25 Students with
Parents!
8 Teachers



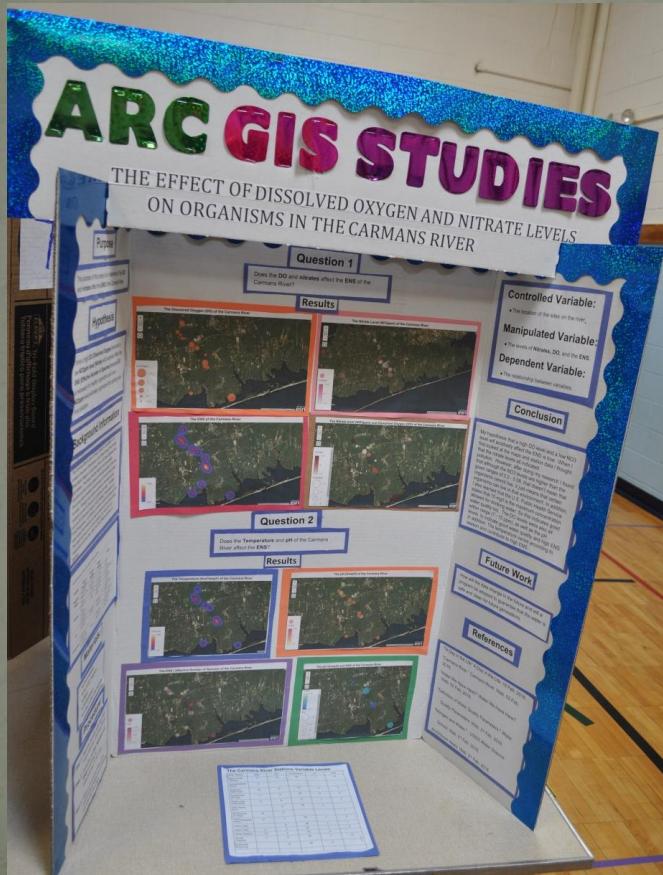
Using ADITL Data

5th Grader Samantha Hmelovsky

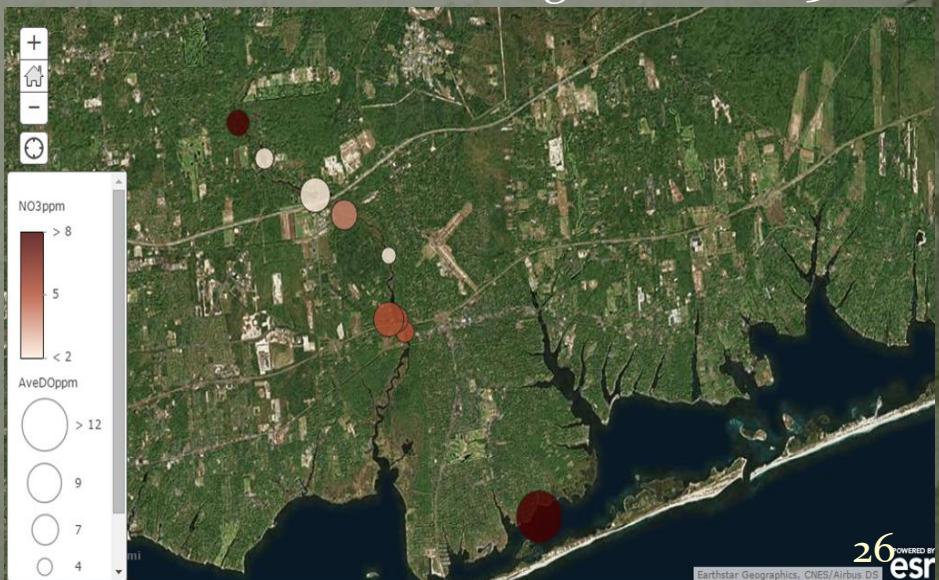
1st Place – Elementary Division @

ESRI International User Conference

June (2016) San Diego, California

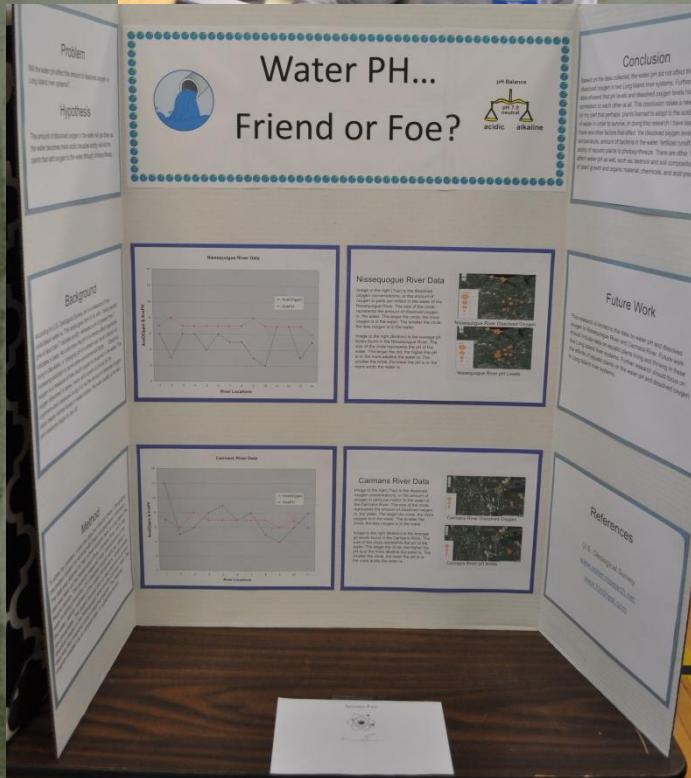


Carmans River Average DO & NO₃



Using ADITL Data

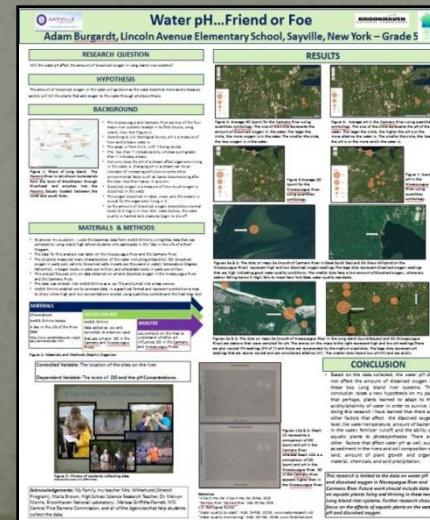
Sayville 5th Grader- Adam Burghardt's project



Carmans River Average DO

- Poster accepted into ESRI International User Conference – Map Gallery June (2016) San Diego, California

Award : 2nd Place
Elementary Division





Mastic Beach, NY - November 7, 2016 William Floyd High School student researchers recently discovered an unpublished invertebrate DNA sequence and were the first to use an established primer set through the Barcode Long Island Program that can be used to successfully identify various species of aquatic vegetation. These findings are set to be published in GenBank, a comprehensive genetics database containing publicly available nucleotide sequences for more than 240,000 named organisms obtained primarily through submissions from individual laboratories and batch submissions from large-scale sequencing projects. This research project was a joint collaboration between Cold Spring Harbor Laboratory DNA Learning Center's Barcode Long Island student research program, Stony Brook University and the William Floyd High School Research program.

Massimo Saputo and Taylor Bombaci, both seniors, have been working for several years on a project titled, **“Using DNA Barcoding to Analyze the Biodiversity of Dermaptera on Long Island,”** in which they collected 20 samples of earwigs from two distinct locations, a coastal region at the Manor of St. George along the Carmans River estuary in [Mastic](#) and a more inland location of Southaven Park in [Yaphank](#).

A Day in the Life of the Carmans River 2015

Liberty Partnerships Program (LPP) at Suffolk County Community College

Project Goals of 9/25/15:

- Record physical data
- Make a site description
- Obtain biological samples
- Document the findings



Students took tide measurements, calculated current direction and speed, and observed air temperature, cloud cover, and the wind.

- Air temperature was recorded at 82.4°F
- Cloud cover was estimated between 25-50% or partially cloudy
- Wind direction was observed to be from the southeast
- Wind speed was recorded to be 5.8 mph and a 2 on the Beaufort Scale

The process of making a site description involved observing physical characteristics of the site, producing a map of the site, and taking sediment samples from the shoreline and site bottom.

- The site was described as sandy and muddy with slight vegetation
- A map of the site was made



The students collected 7 Banded Killifish ranging in size from 6-8 cm.

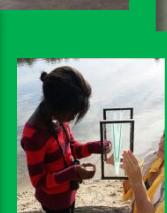


While documenting their findings the students photographed the site, all interesting plants and animals found, and fellow group members in action.



Special thanks to:

- Dr. Melvin Morris - Open Space Stewardship Program
Brookhaven National Laboratory
- Melissa Griffiths Parrott - Central Pine Barrens Joint Planning and Policy Commission



2017 Partners:

1.	Brookhaven National Lab	23.	Avalon Park and Preserve
2.	Central Pine Barrens Commission	24.	The Nature Conservancy
3.	NYS Department of Environmental Conservation	25.	LI Sound Study
4.	SCWA	26.	The Group for the East End
5.	Cornell Cooperative Extension, Suffolk County	27.	South Fork Natural History Center
6.	Trout Unlimited	28.	East Hampton Town Shellfish Hatchery
7.	Wertheim National Wildlife Refuge	29.	LI Science Center
8.	Town of Brookhaven	30.	Chris Paparo
9.	US Geological Survey	31.	SUNY Southampton
10.	Foundation for Ecological Research in the Northeast (FERN)	32.	Cold Spring Harbor DNA learning Center
11.	Brookhaven Science Associates (BSA)	33.	Sayville HS
12.	Suffolk County Parks	34.	Seatuck Environmental Association
13.	Suffolk Community College	35.	Eastern Suffolk BOCES
14.	Post Morrow Foundation	36.	Peconic Bay Keeper
15.	Manor of St. George	37.	LI Aquarium
16.	Peconic Estuary Program	38.	National Park Service/ Fire Island National Seashore
17.	Yaphank Civic Association	39.	Fire Island Light House Preservation Society
18.	Girl Scouts of Suffolk County	40.	Adelphi University
19.	Sweetbriar Nature Center		
20.	NY State Parks		
21.	NY Sea Grant		
22.	4 Harbors Audubon		

*Managing partnerships

A Day in the Life

2017 Schools/Organizations:

1.	William Floyd High School District	24.	Sayville SD
2.	Suffolk Community College	25.	Brentwood SD
3.	Patchogue-Medford SD	26.	Connetquot SD
4.	Longwood SD	27.	Massapequa SD
5.	South Country SD	28.	Farmingdale SD
6.	Girl Scouts of Suffolk County, Inc.	29.	Baldwin SD
7.	Shelter Island SD	30.	Lynnbrook SD
8.	Southold SD	31.	Sachem SD
9.	Oysterponds SD	32.	Harbor Country Day
10.	Springs SD	33.	Northport SD
11.	Lindenhurst SD	34.	The Stony Brook School
12.	Riverhead SD	35.	Smithtown SD
13.	Fire Island SD	36.	Kings Park SD
14.	Hampton Bays SD	37.	Three Village SD
15.	Eastport/S. Manor SD	38.	Avalon Park and Preserve
16.	Riverhead Charter School	39.	Smithtown Christian School
17.	Shoreham Wading River SD	40.	Lynbrook School District
18.	Greenport SD	41.	Wantagh School District
19.	Westhampton SD	42.	Wyandanch School District
20.	Babylon SD	43.	Center Moriches SD
21.	Islip SD		
22.	N. Babylon SD		
23.	Bayshore SD		

What we provide:

- Professional support
- Teacher trainings
- Photo Release forms
- Natural History expert at site
- Assistance with coordination
- Assistance with acquiring permits
- Curriculum Development & Training
- La Motte Water Quality test kits
- STEM hub web site dedicated to A Day in the Life of the Carmans River: www.portaltodiscovery.org/aday
- Facebook Page:
<https://www.facebook.com/adayinthelifeofariver/>
- Annual Culminating Event-
OSSP Student Celebration @ BNL



