



Hydrologic Monitoring in the Central Pine Barrens



Pine Barrens Commission Meeting
Wednesday, March 18, 2020

Irene Fisher and Amy Simonson

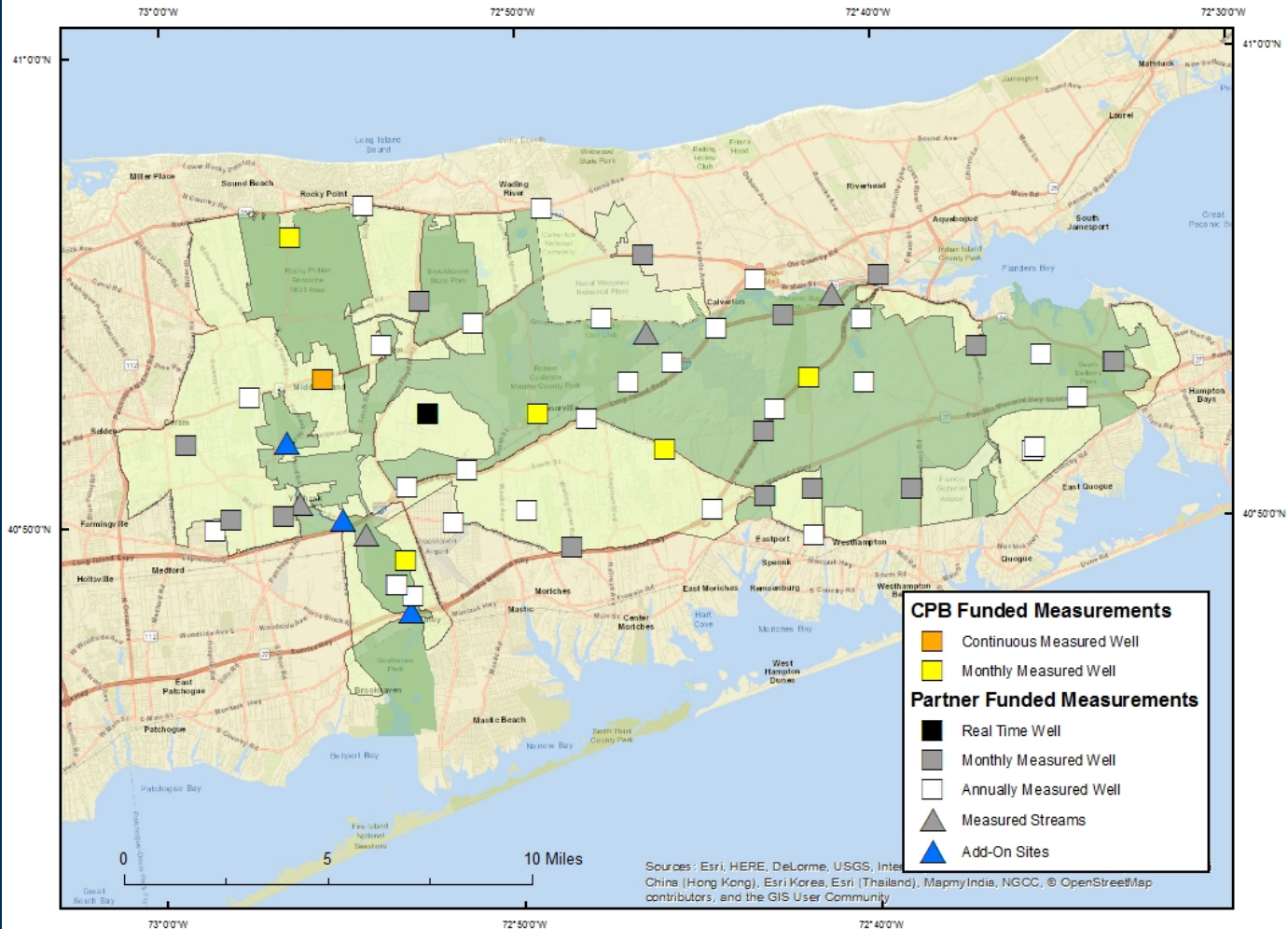
Objective:

Expand and operate a comprehensive water-resources monitoring program for the Central Pine Barrens region

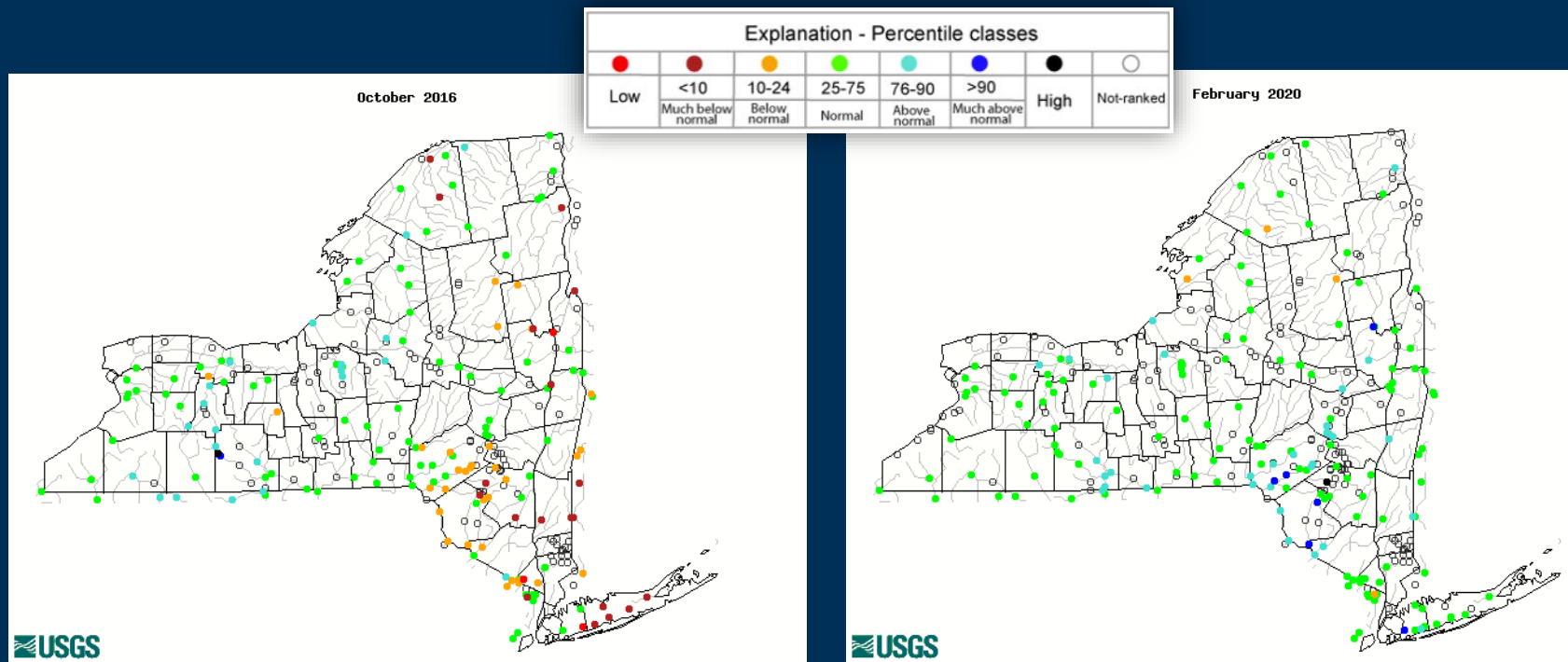
- Publicly accessible database of hydrologic conditions
- Baseline of water-resources conditions to assess hydrologic changes and trends
- Provide a data resource to monitor ecohydrologic stress



Water Quantity within the Central Pine Barrens

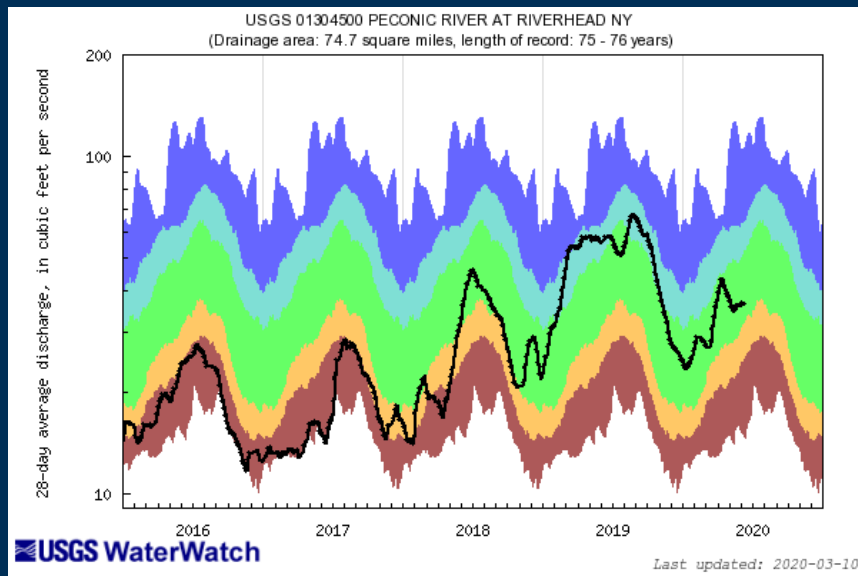
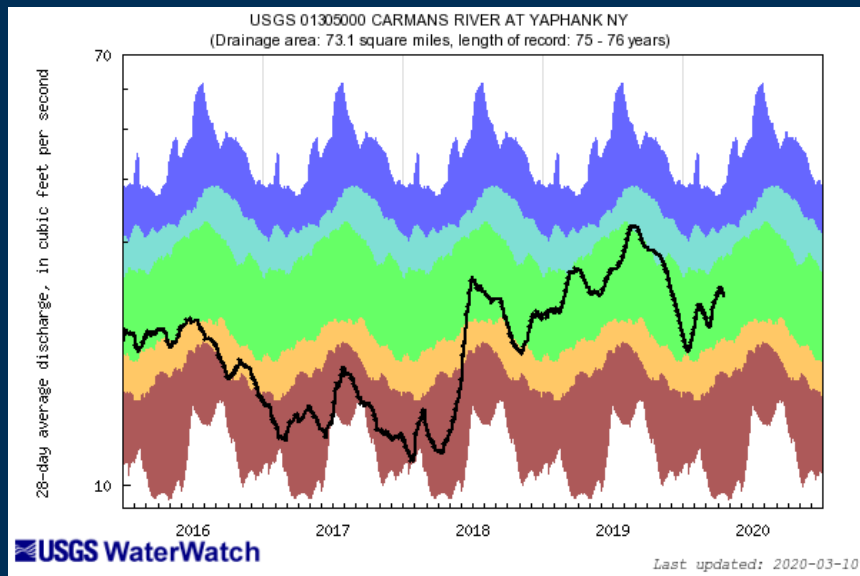


Comparison of Streamflow Maps



<https://waterwatch.usgs.gov/>

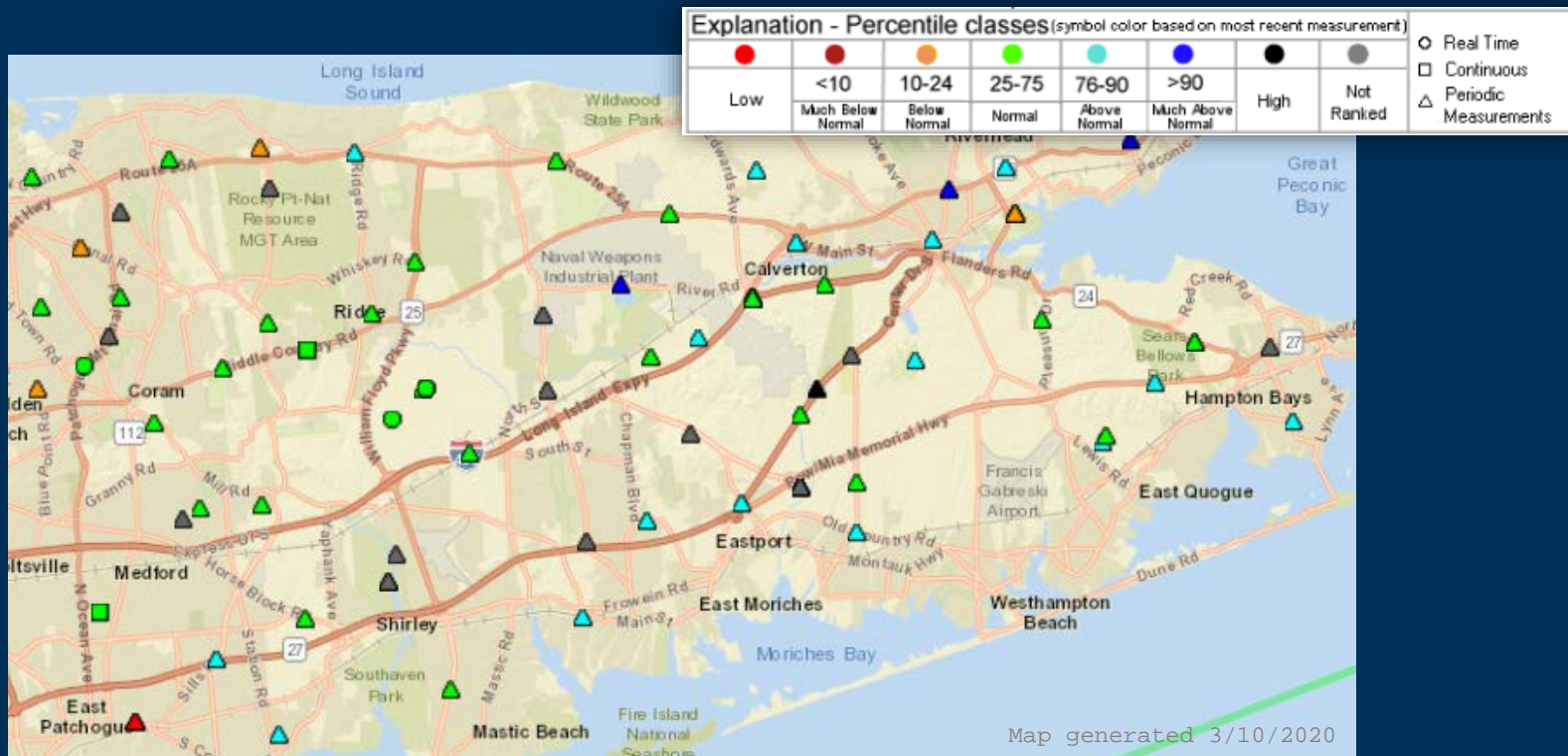
Carmans & Peconic Hydrographs, 2016-2020



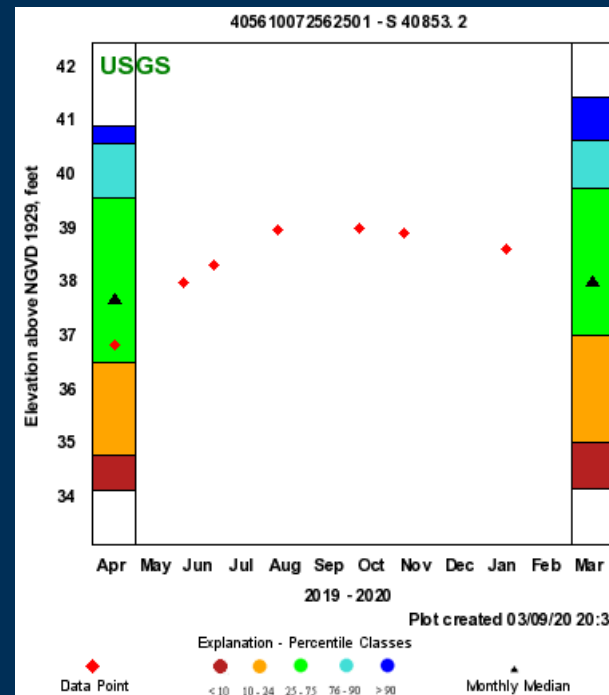
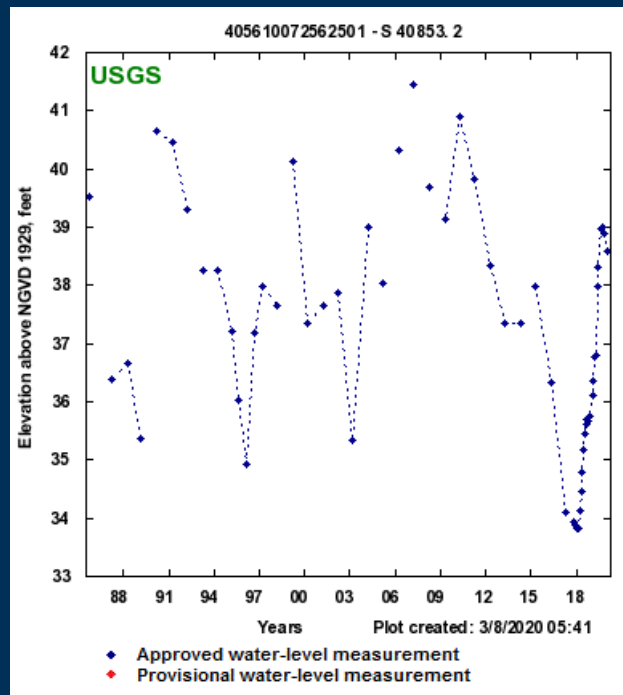
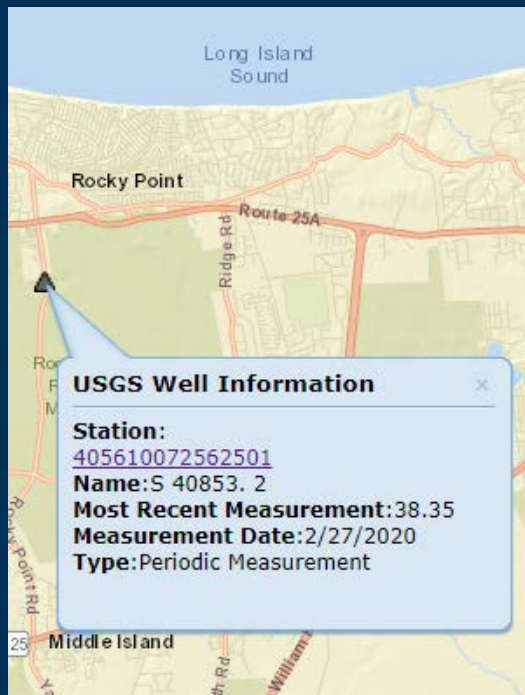
Explanation - Percentile classes					Flow
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	
Much below normal	Below normal	Normal	Above normal	Much above normal	

<https://waterwatch.usgs.gov/>

Active Groundwater Sites near CPB

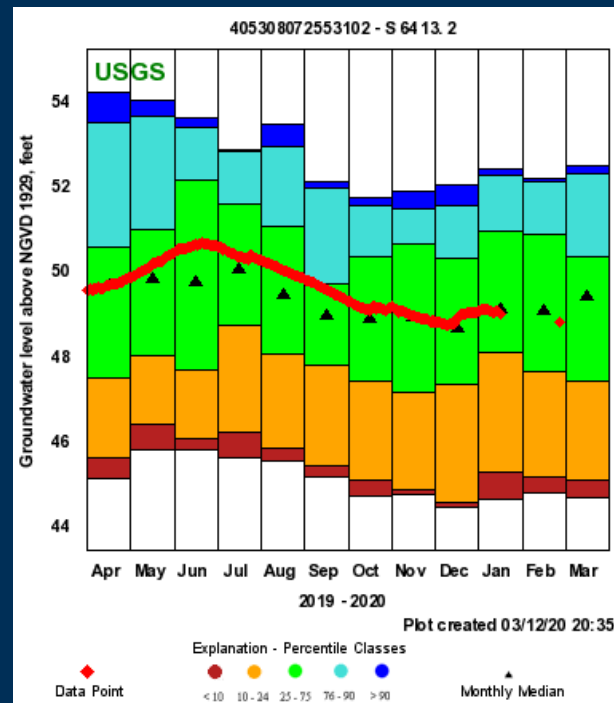
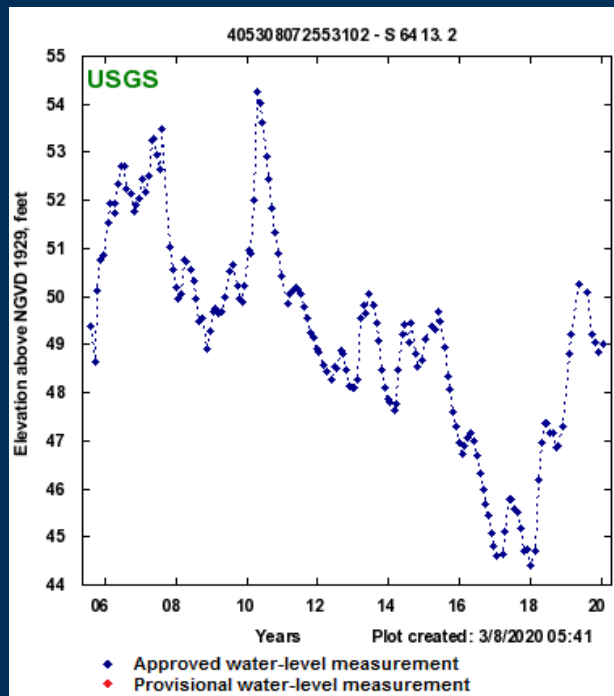
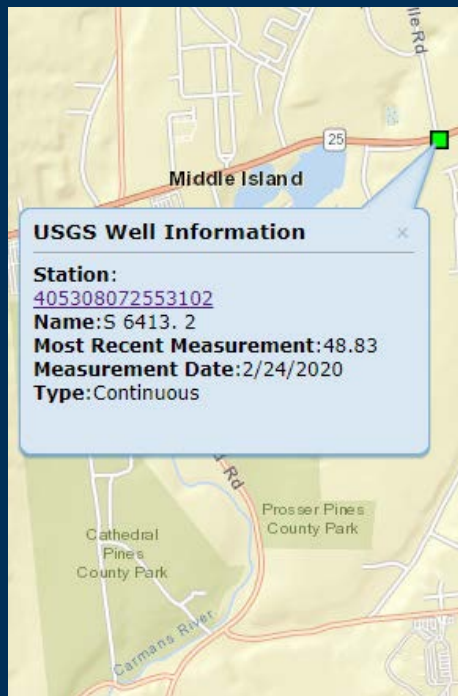


S 40853.2 – Groundwater Measurements



<https://groundwaterwatch.usgs.gov/>

S 6413. 2 – Groundwater Measurements



<https://groundwaterwatch.usgs.gov/>

A photograph showing two researchers in safety gear (USGS vests, gloves, and waders) standing by a stream. One researcher is pouring water from a white jug into a clear plastic bottle held by the other. The background shows a large tree trunk and a stream with water flowing.

Water Quality

Develop baseline chemistry for the streams

Determine the degree of influence from anthropogenic sources

2018 Data Release

USGS.gov/LIPineBarrens

- Access to this data release and all future data releases can be found under the “Data and Tools” tab of the project page.
- Data releases are in Science Bases.

The screenshot shows the USGS ScienceBase-Catalog interface. At the top left is the USGS logo with the tagline "science for a changing world". Below it are navigation links for "ScienceBase-Catalog", "Communities", and "Help". On the right, there is a "Log In" button. The main content area displays the title "2018 Hydrologic Data Summary for the Central Pine Barrens Region, Suffolk County, New York" with a "View" button. Below the title, there are sections for "Dates", "Citation", and "Summary".

Dates

Publication Date :	2019-07-26
Start Date :	2017-10-01
End Date :	2019-09-30

Citation

Fisher, I.J., Bayraktar, B.N., and Simonson, A.E., 2019, 2018 Hydrologic Data Summary for the Central Pine Barrens Region, Suffolk County, New York: U.S. Geological Survey data release, <https://doi.org/10.5066/P9JUS00>.

Summary

This document provides a summary of surface water-quality, streamflow, and groundwater data collected by the U.S. Geological Survey (USGS) within the Central Pine Barrens (CPB) Region of Suffolk County, New York. The data were collected in cooperation with the Central Pine Barrens Commission and the Town of Brookhaven under a five-year comprehensive water resources monitoring program.

The surface water-quality data within the CPB for the 2018 water year (October 1, 2017 to September 30, 2018) includes data from the Carmans River and the Peconic River. The streams were sampled several times throughout the year at seven pre-determined locations. The Carmans River was sampled at five locations: 1) CARMANS RIVER AT MIDDLE ISLAND NY (01304990; Bartlett), 2) CARMANS RIVER NEAR YAPHANK NY (01304995; Upper Lake), 3) CARMANS RIVER BELOW LOWER LAKE AT YAPHANK NY (01304998; Lower Lake), 4) CARMANS RIVER AT

Image of surface water and groundwater sites within the Pine Barrens region where data were collected for this study.

Map »

2019 WQ Update

All samples collected for FY 2019 ☺

2019 Data Release will be available soon on USGS.gov/Lpinebarrens



2020 Sampling Plan

FY 2020 Pine Barrens Sampling

- Carman's River: Fall*, Winter, Spring, Summer
- Peconic River: Fall* and Spring

* organics collected

Fall and Winter sampling for 2020 has been completed.



Organic Detections

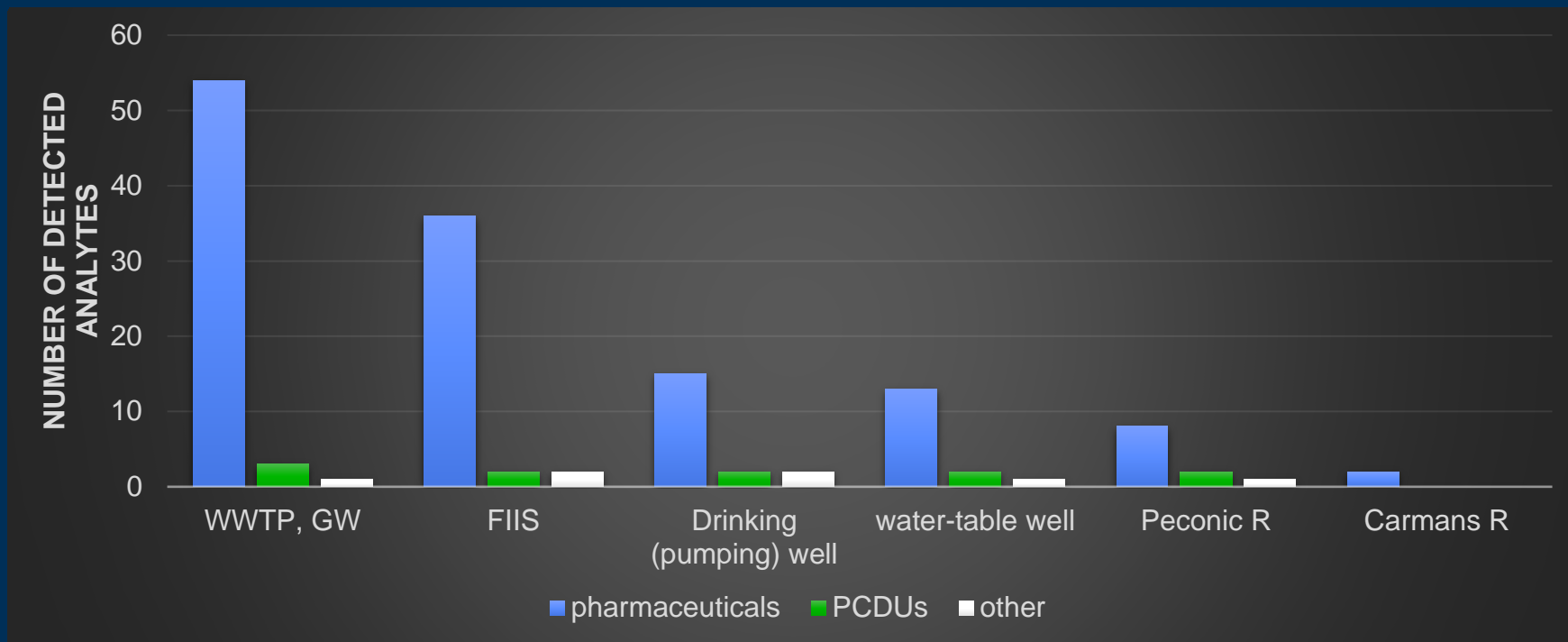
Organic detections in Pine Barrens streams November 2017

Stream	Pharmaceutical	Pesticide
Carmans River	2	4
Peconic River	9	4

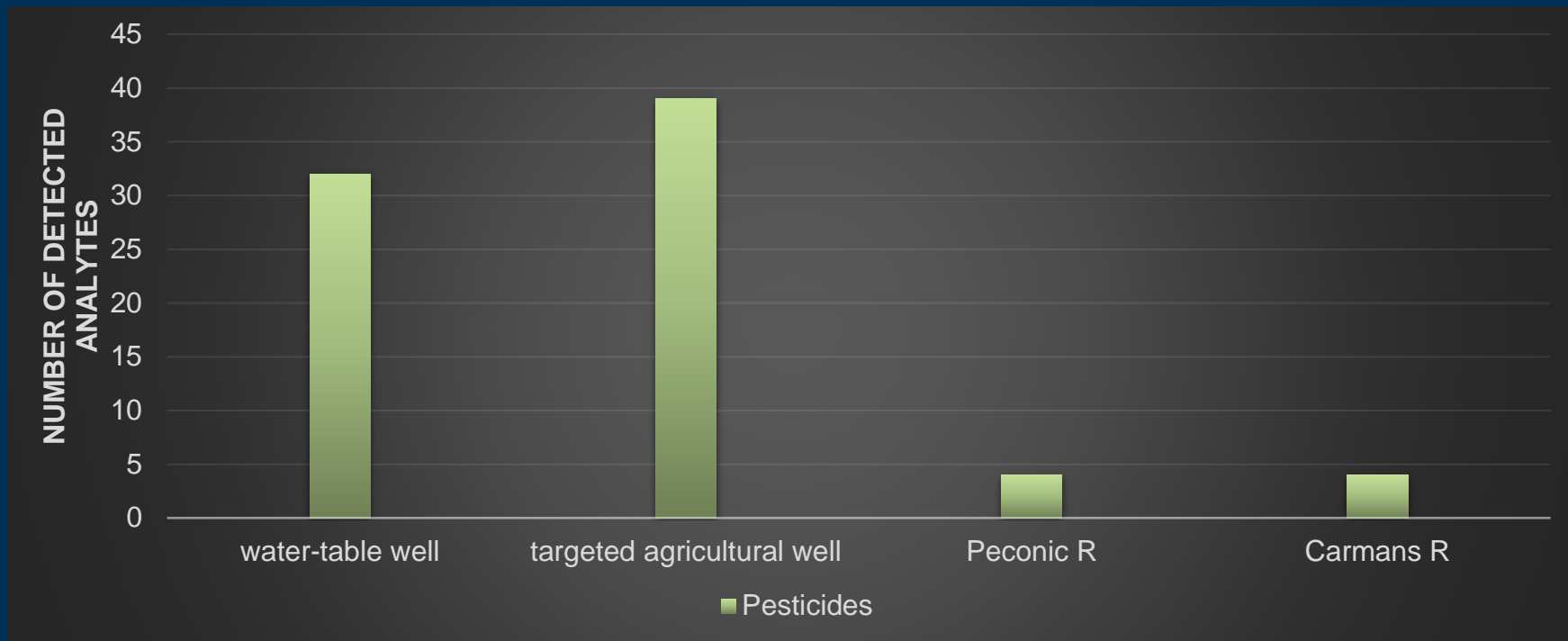
Organic detections in Pine Barrens streams May 2019

Stream	Pharmaceutical	Pesticide
Carmans River	1	5
Peconic River	4	10

Comparing Stream WQ to Long Island GW WQ



Comparing Stream WQ to Long Island GW WQ



Deliverables:

- Regular presentations on project progress
- Website with data mapper
- Annual data summary; available on project website



Partners





Visit the project page at [USGS.gov/Lipinebarrens](https://www.usgs.gov/Lipinebarrens)

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