WatershedNJ

Watershed Health Assessment Tool

NJ Community Water Monitoring Summit
- November 13, 2025 -

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

RUTGERS THE STATE UNIVERSITY OF NEW JERSEY

Agenda

- Introduction to WatershedNJ
- Watershed Health Assessment Walk Through
- Tabs of Interest
- Questions

Image: Forked River, James Loesch

Introduction to WatershedNJ

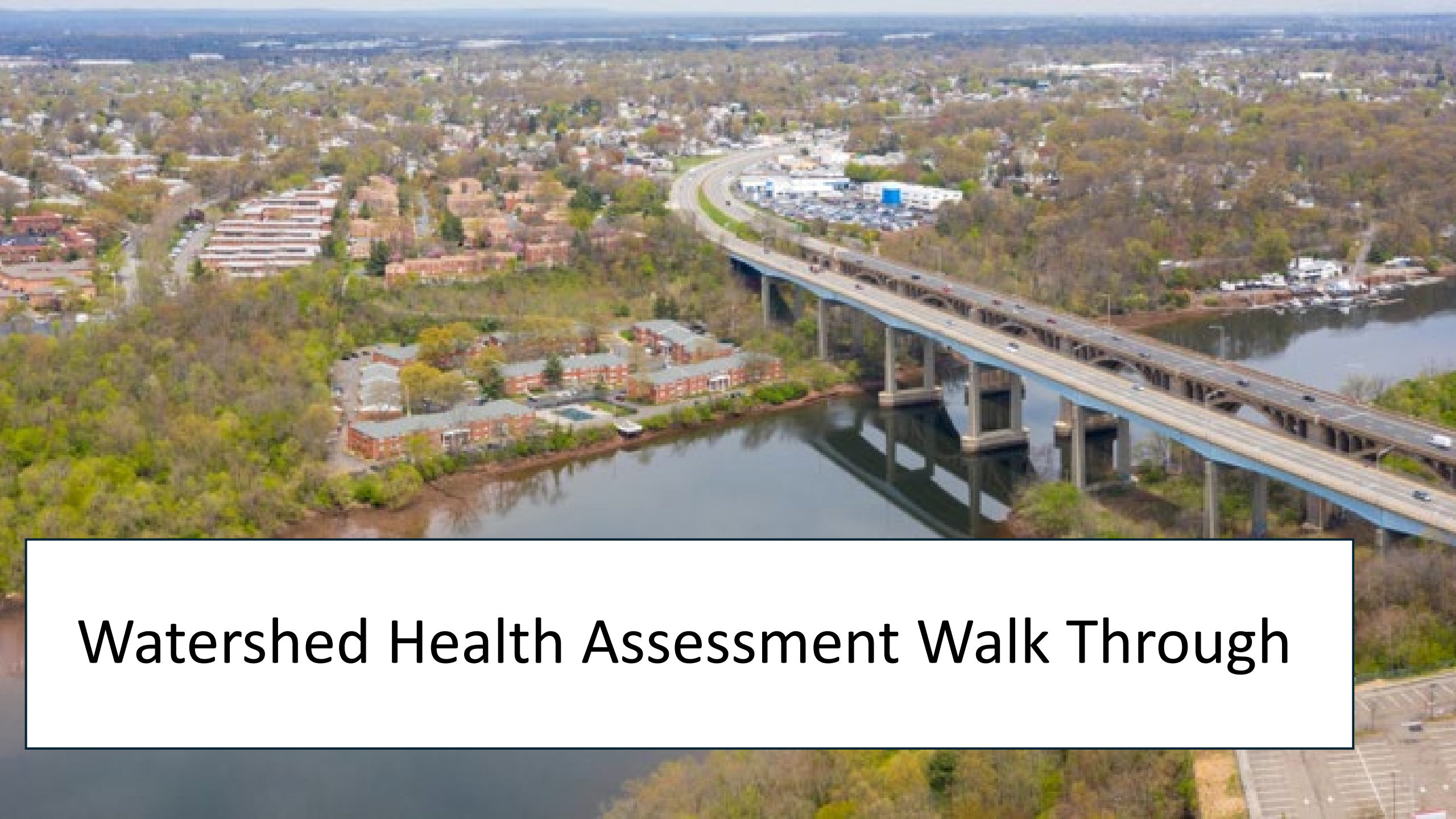
- There are many web-based mapping tools for various uses:
  - Climate Change adaptation
  - Flood mapping
  - Resilience projects
  - Environmental Justice
  - Water quality monitoring
  - Overall mapping of layers of facilities, land use, impervious cover, wetlands etc.
- All are useful, but many times not linked; linkage is needed to provide decision making tools specifically for Water Quality improvements.
- WatershedNJ is being designed to facilitate these linkages.

Image: Paulins Kill River, Jeff Burian

WatershedNJ Objective

- Develop a suite of online data and tools to support watershed management activities.
- Make the tool available to support multiple levels of users and their needs, from watershed experts to the general public.
- Enhance decision making to understand and improve the health of watershed across the state of New Jersey.

Image: Paulins Kill River, Jeff Burian



Watershed Health Assessment Walk Through

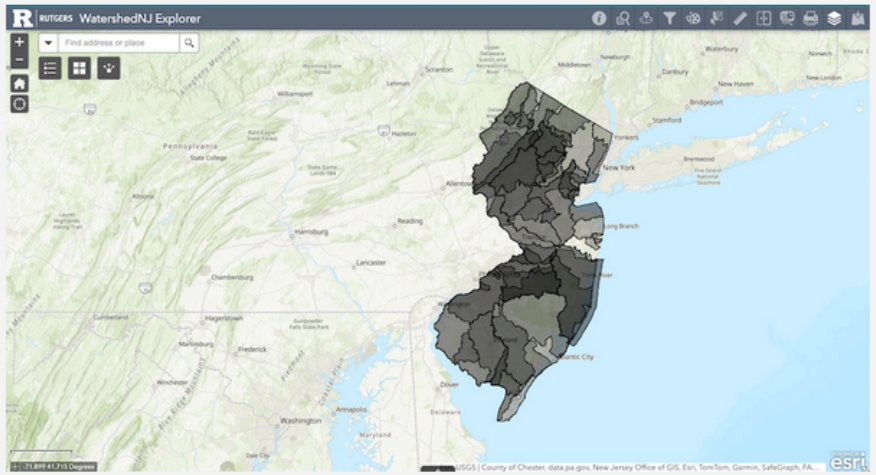
WatershedNJ

WatershedNJ is suite of online data and tools designed to support watershed education and watershed management activities. WatershedNJ tools use authoritative data to generate reports, maps, and recommendations that can be used by both members of the public and watershed experts to understand and improve the health of water bodies and watersheds across the state of New Jersey. WatershedNJ is a "one-stop-shop" for your water quality data needs.

Each WebTool of WatershedNJ will roll out in 2025/2026.

WatershedNJ's Watershed Explorer

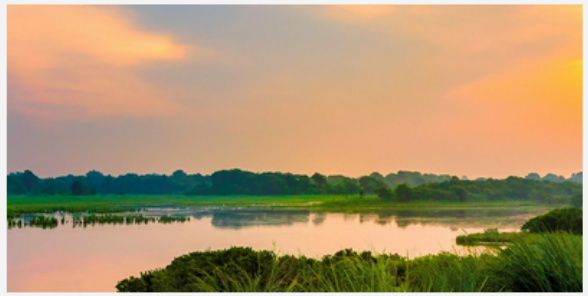
WatershedNJ's Watershed Explorer



Coming Summer 2026

Users can navigate through WatershedNJ through various gateways. Users who are interested in exploring all the data layers and tools included in WatershedNJ are encouraged to access WatershedNJ through the Watershed Explorer (accessible by clicking the map on the left). Users who are interested in a more guided experience (e.g., members of the public and those who are new to WatershedNJ) are encouraged to use one of the three WebTools below.

WatershedNJ's WebTools



Watershed Health Assessment WebTool

This is an interactive tool for members of the public who are interested in learning more about watershed health. A watershed is an area of land that channels rainfall, snowmelt, and runoff into a common body of water. Healthy watersheds play an important role in keeping our ponds, rivers, and coastlines free

Watershed Quality Stressor WebTool

Coming Spring 2026

This tool assists watershed managers, local officials, community organizations and others to identify stressors that may be decreasing local water quality. Define stressors. This tool brings together authoritative data from the NJDEP, USEPA,

Watershed Quality Solutions WebTool

Coming Summer 2026

This tool assists watershed managers, local officials, community organizations and others to identify possible solutions to improve water quality. This tool allows users to explore various best management practices for water quality improvement

Watershed Health Assessment WebTool

This is an interactive tool for members of the public who are interested in learning more about watershed health. A watershed is an area of land that channels rainfall, snowmelt, and runoff into a common body of water. Healthy watersheds play an important role in keeping our ponds, rivers, and coastlines free of pollution and functioning properly. Healthy water bodies provide critical services to support our economy, environment, and quality of life such as clean drinking water, productive fisheries, and outdoor recreation. To learn more about watershed basics and the health of a watershed near you, access the Watershed Health Assessment tool below.

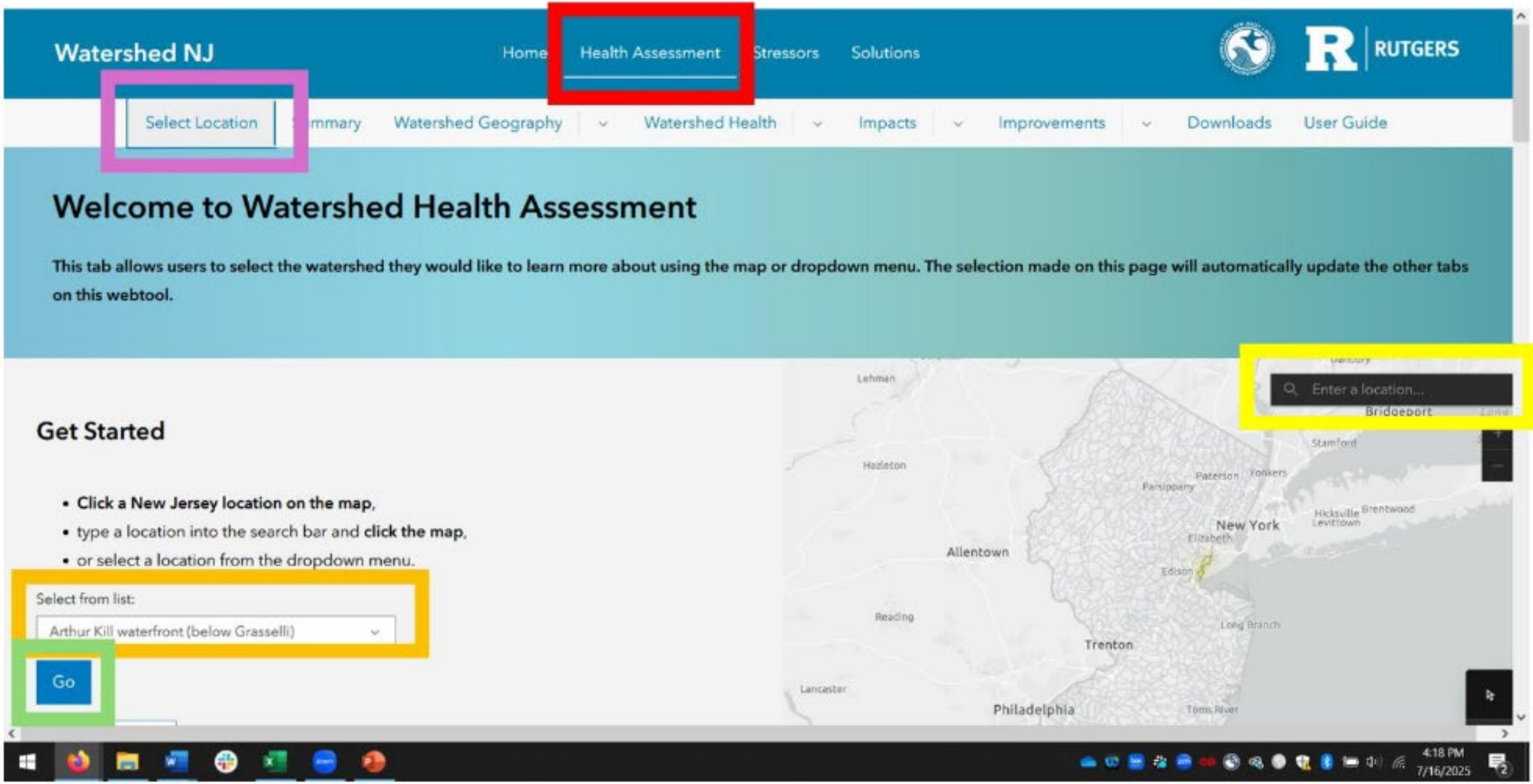
Future Tools

User Guide

Go to Watershed Health Assessment WebTool

Watershed Health Assessment Walk Through

Interested in following along?
Scan QR Code for a link to User Guide


Watershed NJ
Home
Health Assessment
Stressors
Solutions
RUTGERS
Select Location
Watershed Geography
Watershed Health
Impacts
Improvements
Downloads
User Guide
Welcome to Watershed Health Assessment
This tab allows users to select the watershed they would like to learn more about using the map or dropdown menu. The selection made on this page will automatically update the other tabs on this webtool.
Get Started
Click a New Jersey location on the map,
type a location into the search bar and click the map,
or select a location from the dropdown menu.
Select from list:
Arthur Kill waterfront (below Grasselli)
Go
Enter a location...
Lehman
Bridgeport
Stamford
Hazleton
Paterson
Yonkers
Parsippany
New York
Hicksville
Brentwood
Levittown
Elizabeth
Allentown
Edison
Reading
Long Branch
Trenton
Lancaster
Philadelphia
Toms River
4:18 PM
7/16/2025

Watershed NJ

Home | Health Assessment | Stressors | Solutions

RUTGERS

Select Locati | Summary | Watershed Geography | Watershed Health | Impacts | Improvements | Downloads | User Guide

Watershed Health Summary

This tab provides a snapshot of the detailed information found in the other tabs of this webtool. Start here to learn about watershed basics, then head to the other tabs for more details.

An Introduction to Watersheds
4,920 Acres HUC14 Area

Watershed Health
1/3 Water Quality Standards Met in Most Recent Monitoring

Impacts to Watershed Health
44.9% Impervious Surface

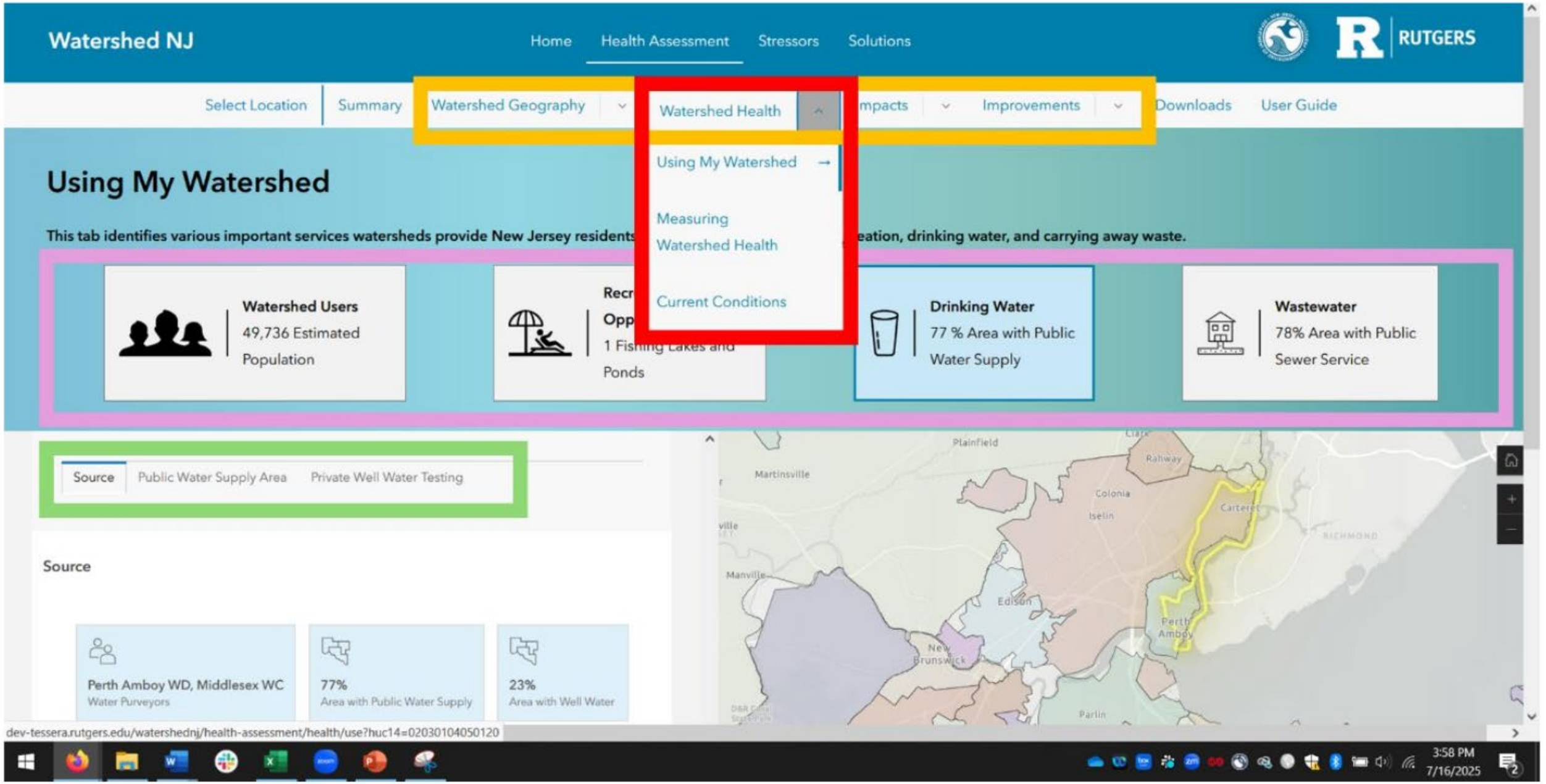
Improving Watershed Health
6 Watershed Groups

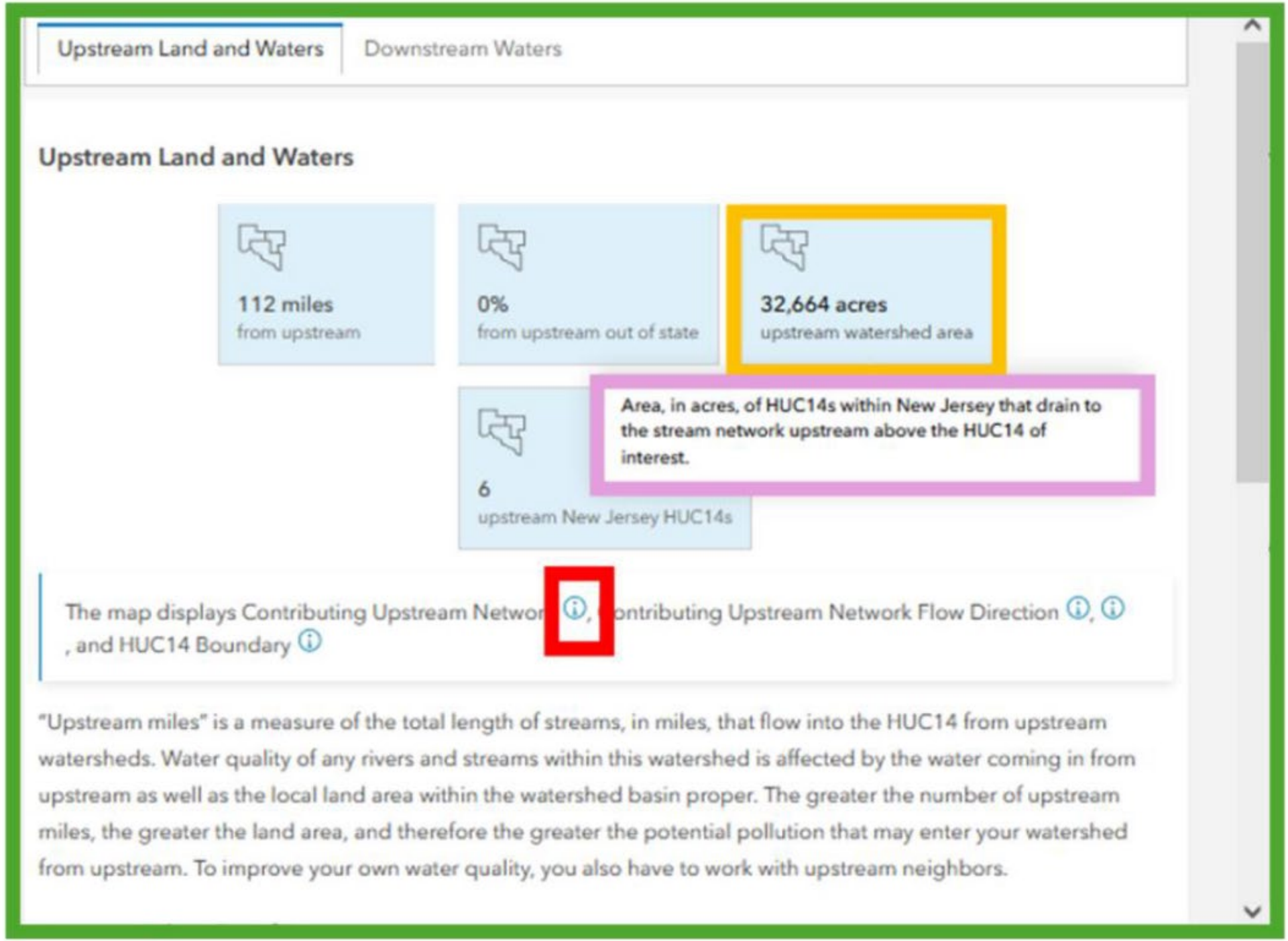
An Introduction to Watersheds

4,920 acres
area of the HUC14 watershed

The map displays HUC8 Boundary, HUC10 Boundary, HUC12 Boundary, HUC14

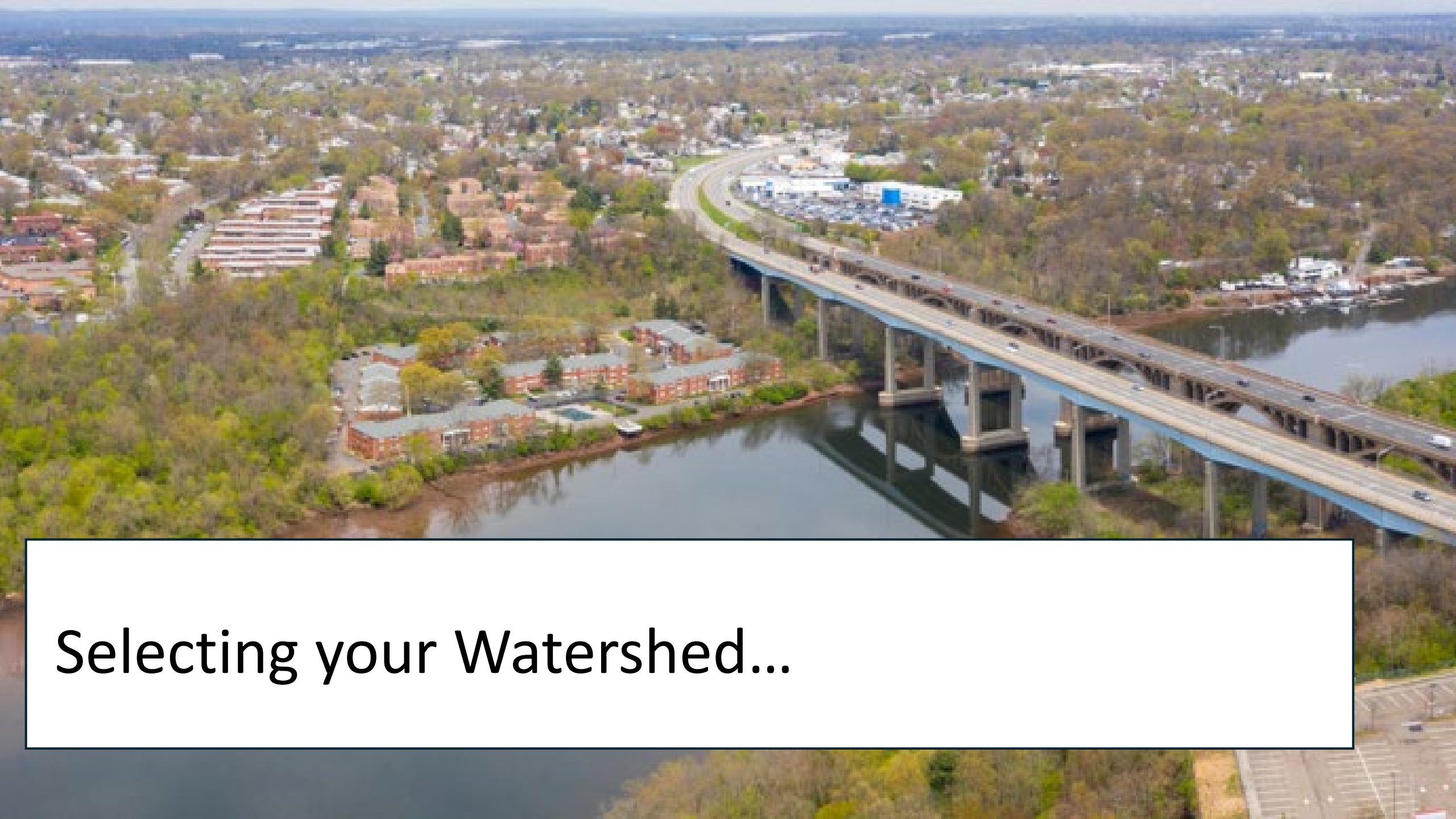
4:12 PM
7/16/2025


Watershed NJ
Home
Health Assessment
Stressors
Solutions
RUTGERS
Select Location
Summary
Watershed Geography
Watershed Health
Impacts
Improvements
Downloads
User Guide
Using My Watershed
Measuring Watershed Health
Current Conditions
Using My Watershed
This tab identifies various important services watersheds provide New Jersey residents
eation, drinking water, and carrying away waste.
Watershed Users
49,736 Estimated Population
Drinking Water
77 % Area with Public Water Supply
Wastewater
78% Area with Public Sewer Service
Source
Public Water Supply Area
Private Well Water Testing
Source
Perth Amboy WD, Middlesex WC
Water Purveyors
77%
Area with Public Water Supply
23%
Area with Well Water
Plainfield
Martinsville
Colonia
Iselin
Carteret
Manville
Edison
Perth Amboy
New Brunswick
Parlin
dev-tessera.rutgers.edu/watershednj/health-assessment/health/use?huc14=02030104050120
3:58 PM
7/16/2025


Upstream Land and Waters
Downstream Waters
Upstream Land and Waters
112 miles
from upstream
0%
from upstream out of state
32,664 acres
upstream watershed area
6
upstream New Jersey HUC14s
Area, in acres, of HUC14s within New Jersey that drain to the stream network upstream above the HUC14 of interest.
The map displays Contributing Upstream Networ
ntributing Upstream Network Flow Direction
, and HUC14 Boundary
"Upstream miles" is a measure of the total length of streams, in miles, that flow into the HUC14 from upstream watersheds. Water quality of any rivers and streams within this watershed is affected by the water coming in from upstream as well as the local land area within the watershed basin proper. The greater the number of upstream miles, the greater the land area, and therefore the greater the potential pollution that may enter your watershed from upstream. To improve your own water quality, you also have to work with upstream neighbors.


Smithville
Pomona
Atlantic City International Airport
Absecon
Pleasantville
Egg Harbor Township
Northfield
Linwood
Edwin B. Forsythe National Wildlife Refuge
Well Head Protection Areas For Public Community Water Supply Wells
Tier 1: 2-Year
Tier 2: 5-Year
Tier 3: 12-Year
Public Water Supply Source Areas
United Water-NJ
Elizabethtown Water Company
NJ American Water Company/ Monmouth
Passaic Valley Water Commission
Hackettstown MUA
NJ American Water Company/Short
New Jersey Office of GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS
Powered by Esri


1 of 2
Overburdened Community
Zoom to
Overburdened Community Criteria
Minority
Total Population
3,038
Percent Households with Limited English Proficiency
1.323408
Percent Low Income
13.265306
Percent Minority
54.970375
Municipality
BURLINGTON TWP
County
BURLINGTON
Block Group identifier
340057011034
Route 130 N



Selecting your Watershed…

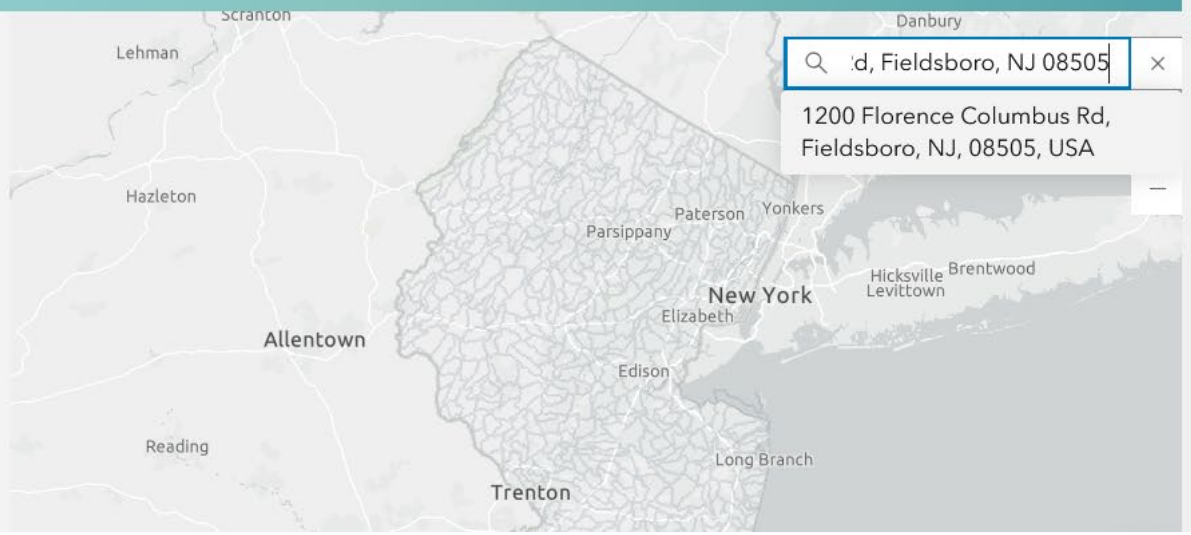
Welcome to Watershed Health Assessment

The Watershed Health Assessment gathers important data sets regarding watersheds and water quality from a wide range of sources and summarizes the information for a selected area of interest. This tab allows users to select the watershed they would like to learn more about using the dropdown menu or map. The selection made on this tab will automatically update the information found in other tabs of this webtool.

Get Started

The Watershed Health Assessment generates information regarding a selected watershed using data and information compiled from authoritative sources (e.g., USEPA, USGS, NJDEP). A watershed may be selected using either the map to the right or the dropdown menu below.

To select a watershed using the map, either (1) **click** a New Jersey location on the map or (2) type an address in the search bar AND click the map.



Get Started

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To select a watershed using the map, either (1) **click** a New Jersey location on the map or (2) type an address in the search bar AND click the map.

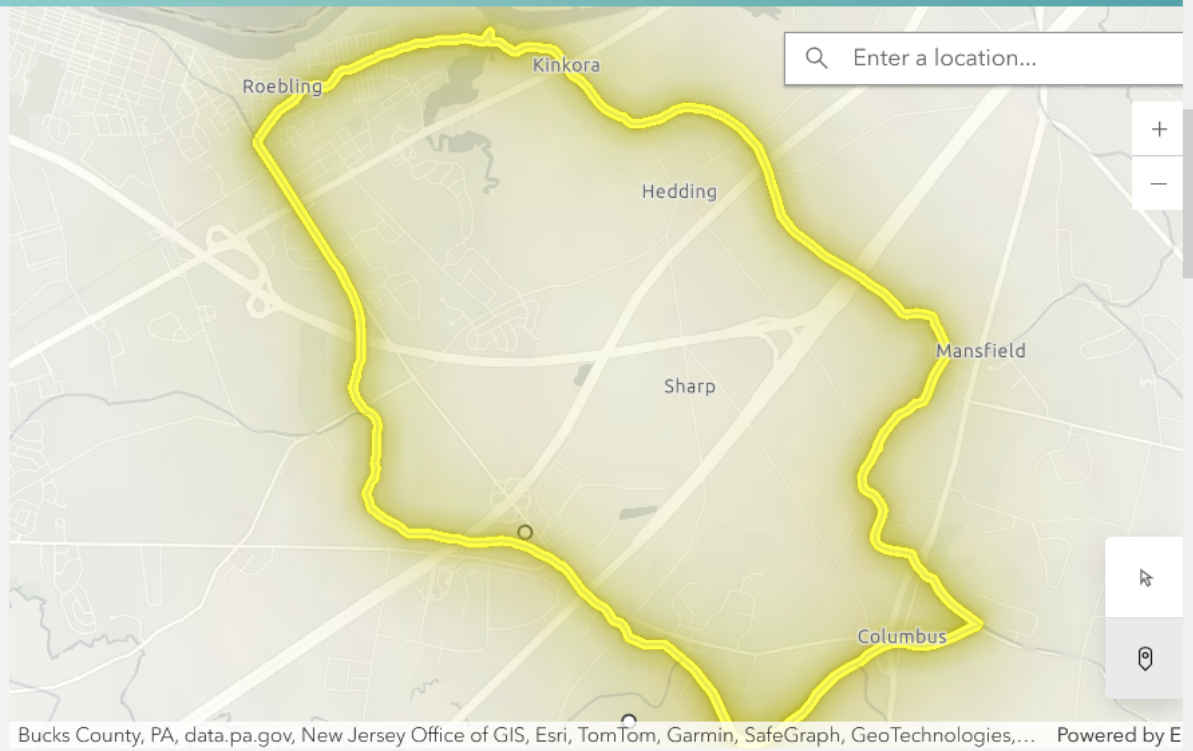
If you have a specific location or address you want to keep track of, you can drop a pin using the button on the lower right of the map. Your pinned location will show up on the maps as you navigate different topics. To stop using the pin tool, click the arrow button to return to a pointer mouse cursor. This feature only places a pin on the map; ensure a watershed is selected using the arrow cursor or the dropdown menu.

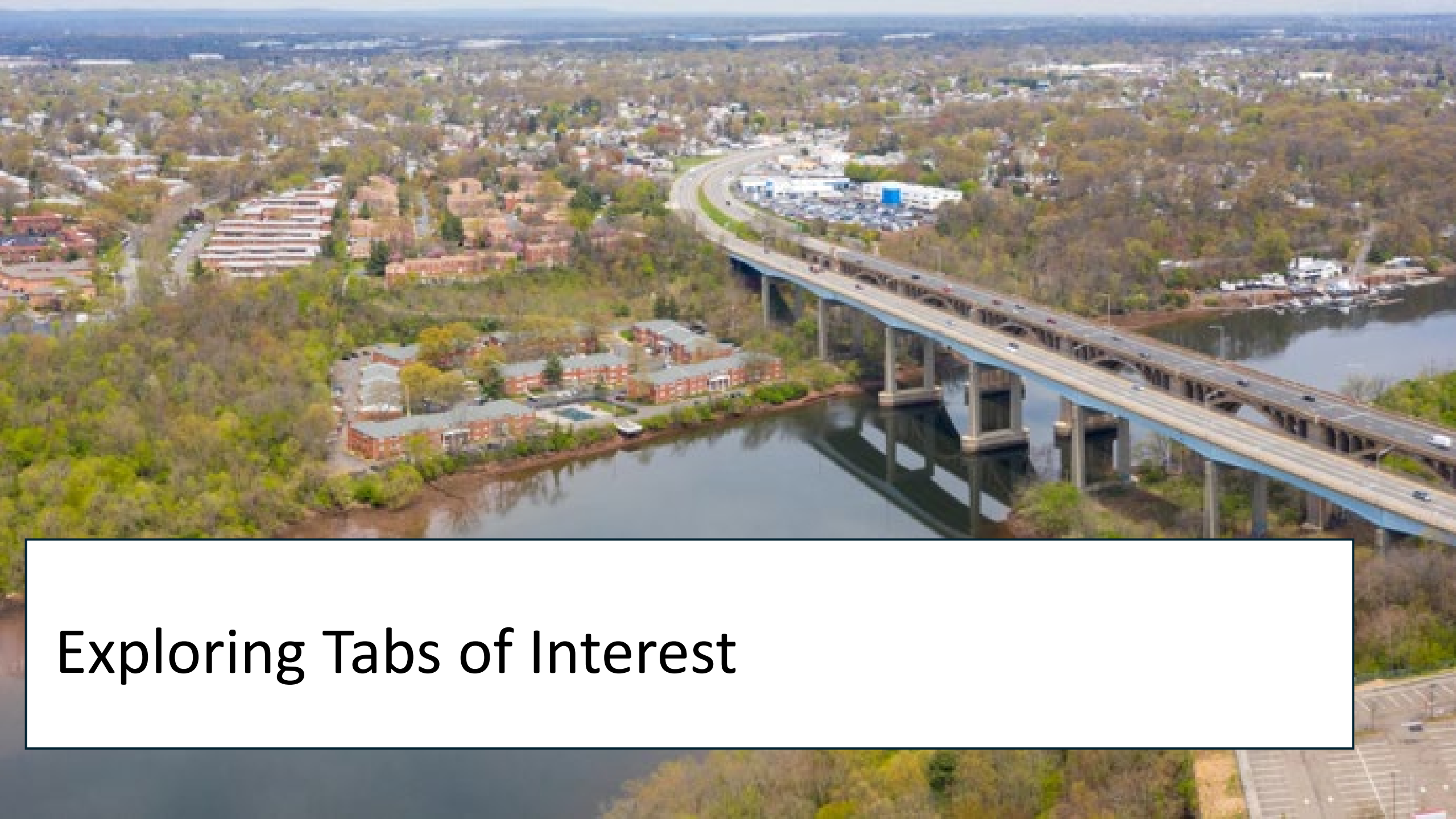
After selecting a watershed, **click Go** and you will be taken to the first informational tab in the Watershed Health Assessment.

Select from list:

Crafts Creek (below Rt 206)

Go

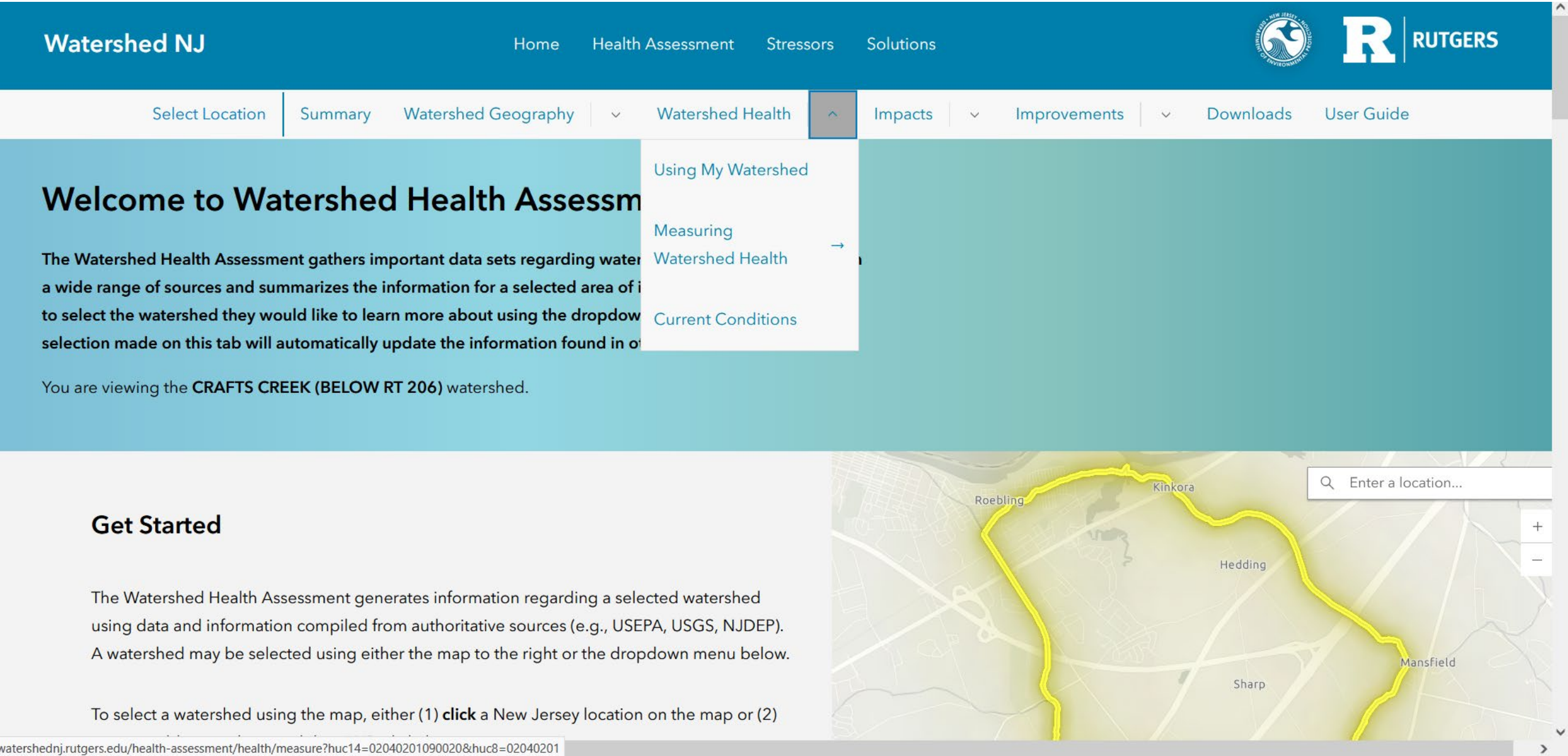




Exploring Tabs of Interest

Watershed Health Tab

Three themed pages under Watershed Health, let's focus on Measuring Watershed Health (2nd in dropdown)....



This is the Measuring Watershed Health themed page, 1nd fast fact selected…

Measuring Watershed Health

This tab summarizes the health of water bodies in your selected watershed based on monitoring data collected to assess different aspects of water quality.

You are viewing the **CRAFTS CREEK (BELOW RT 206)** watershed.

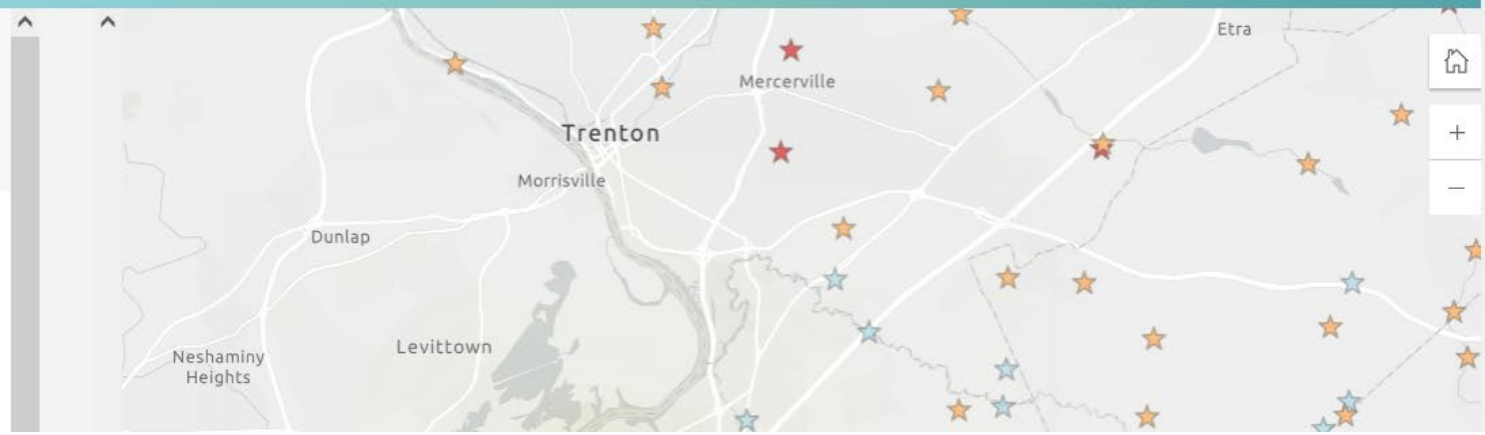
Watershed Health Overview
Excellent Macroinvertebrate Water Quality Indicator

Water Quality For Different Uses
1/4 Water Quality Standards Fully Met in Most Recent Monitoring

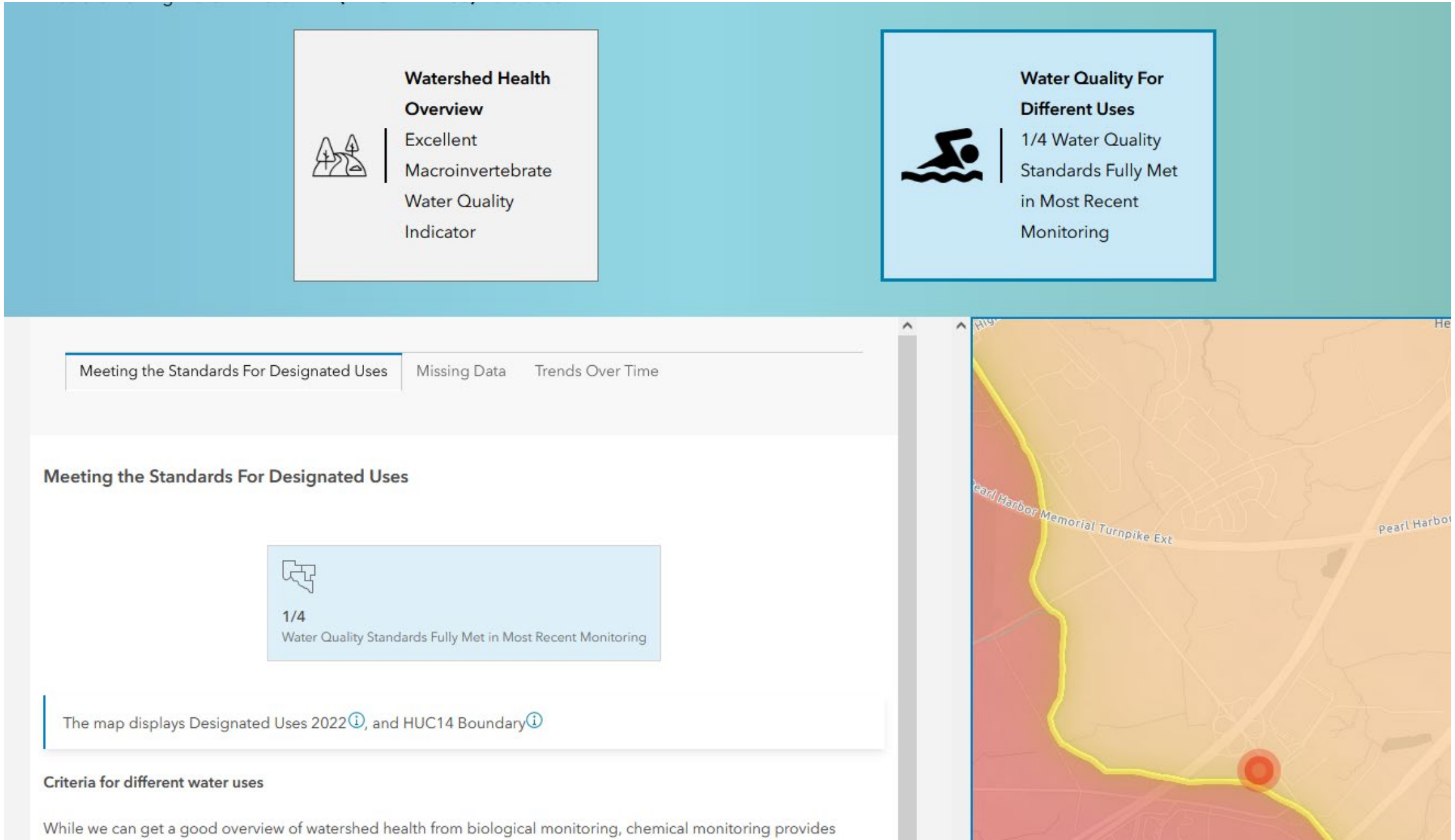
Water Quality Impairments
3 Pollutants Exceeding the Standards (303d and Sublist 4 Impairments)

Macroinvertebrates | Fish and Shell

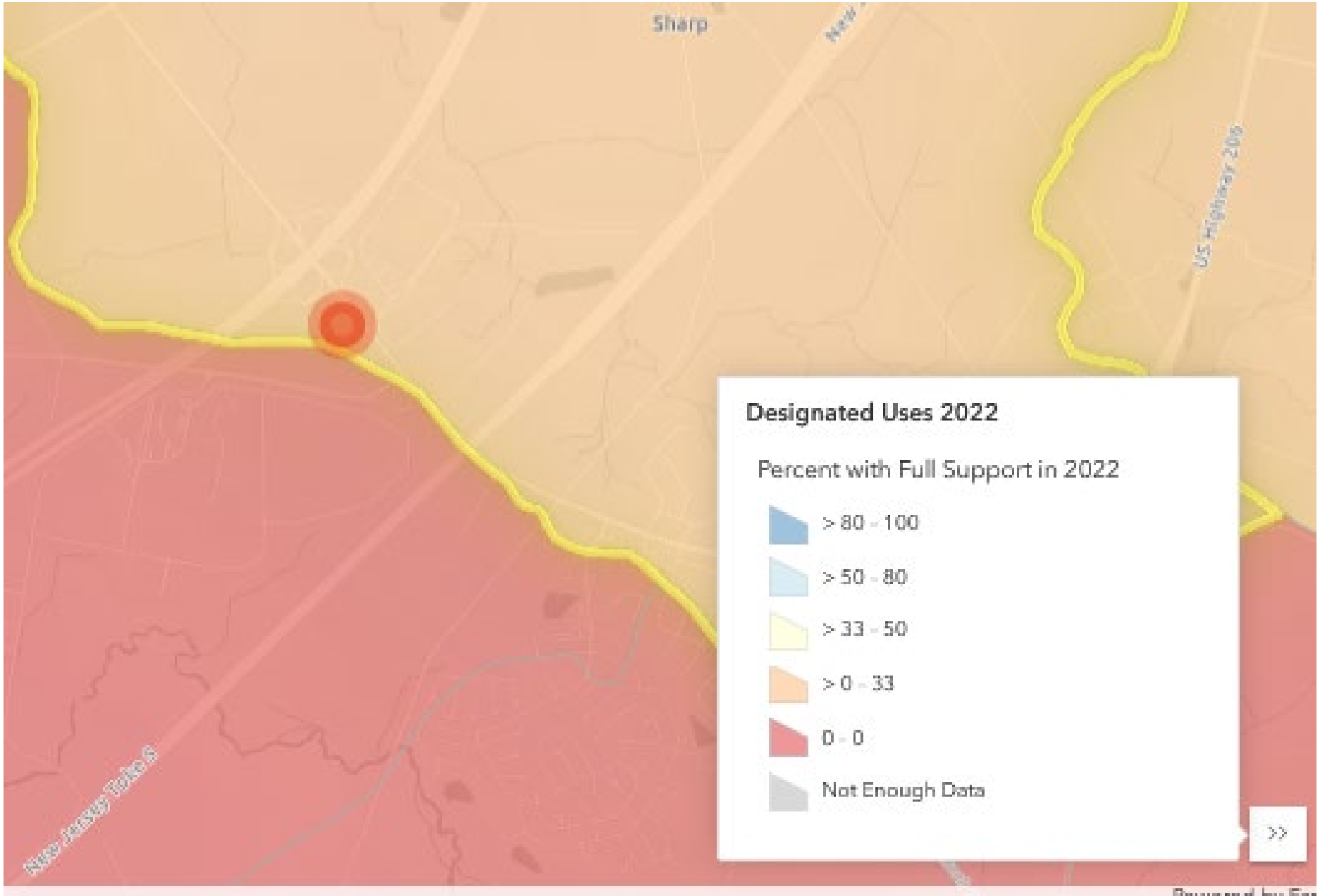
Macroinvertebrates



This is the Measuring Watershed Health themed page, 2nd fast fact selected…



Zooming in on legend....

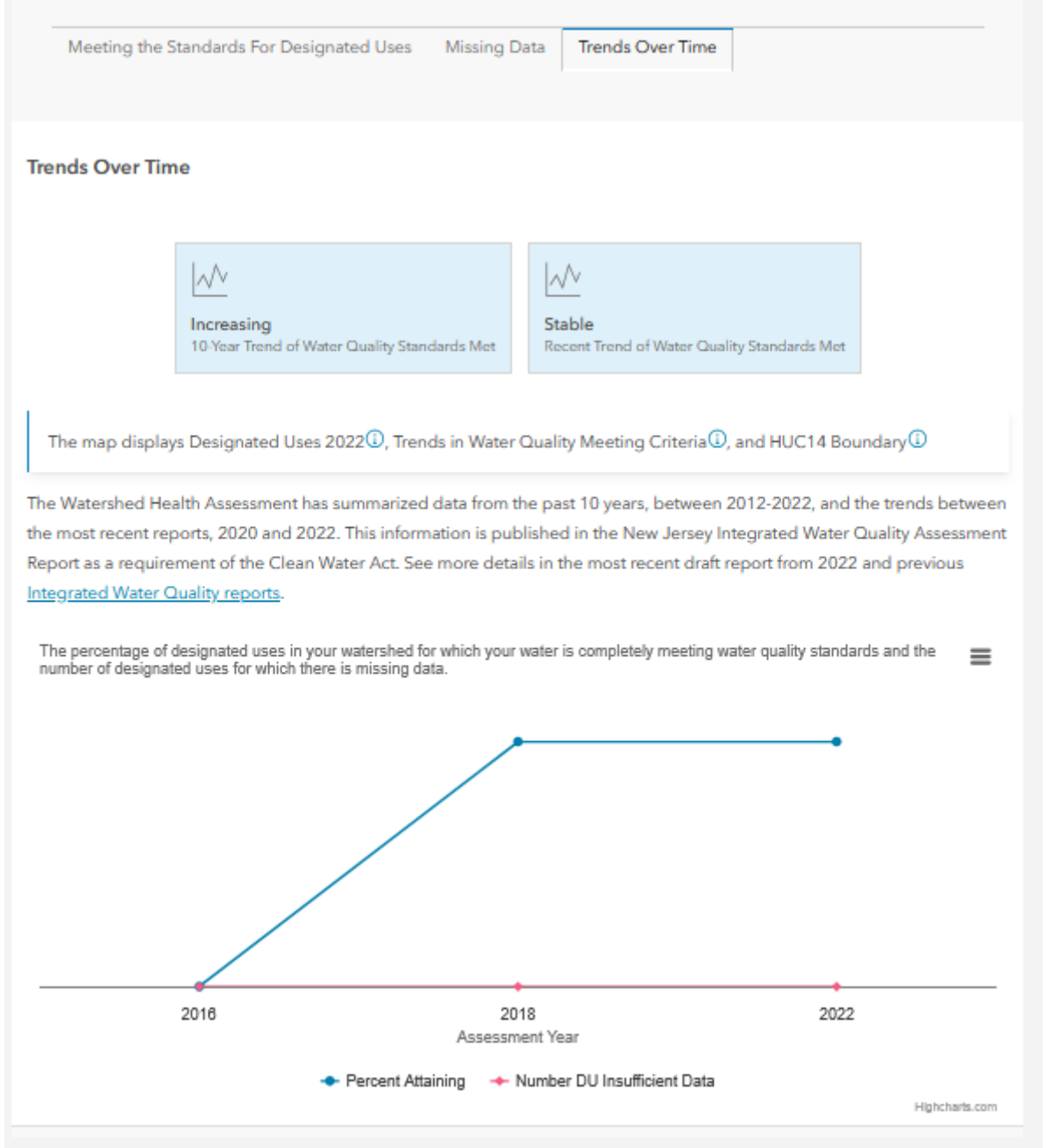


Scrolling down on the “meeting standards for designated uses” sub-tab provides this table….

All designated uses and level of support in this watershed

Type of Use	Meets All Standards
Public Water Supply	✗ Non Support
Recreation	✗ Non Support
Fish Consumption	✗ Non Support
General Aquatic Life	✓ Full Support
Trout	Not applicable to this watershed
Shellfish	Not applicable to this watershed

The reading pane has even more bonus content....



This is the Measuring Watershed Health themed page, 3nd fast fact selected…

Watershed Health Overview
Excellent Macroinvertebrate Water Quality Indicator

Water Quality For Different Uses
1/4 Water Quality Standards Fully Met in Most Recent Monitoring

Water Quality Impairments
3 Pollutants Exceeding the Standards (303d and Sublist 4 Impairments)

Quality Limited Waters | Plans for Priority Impairments (TMDLs)

Quality Limited Waters

3
Pollutants Exceeding the Standards

The map displays New Jersey 2022 303d and Sublist 4 Quality Limited Waters, and HUC14 Boundary

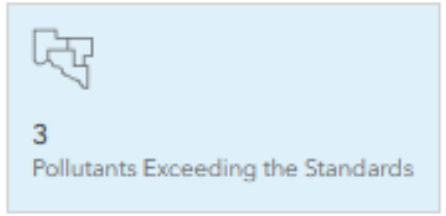
Waterbodies that don't meet water quality standards are considered impaired and require cleanup strategies.

Impairments in this watershed from the List of Quality Limited Waters (303d), 2022

Impaired Designated Uses	Failing Parameters	Has a TMDL
Public Water Supply	ARSENIC	No

Bonus content in reading pane....

Quality Limited Waters



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Waterbodies that don't meet water quality standards are considered impaired and require cleanup strategies.

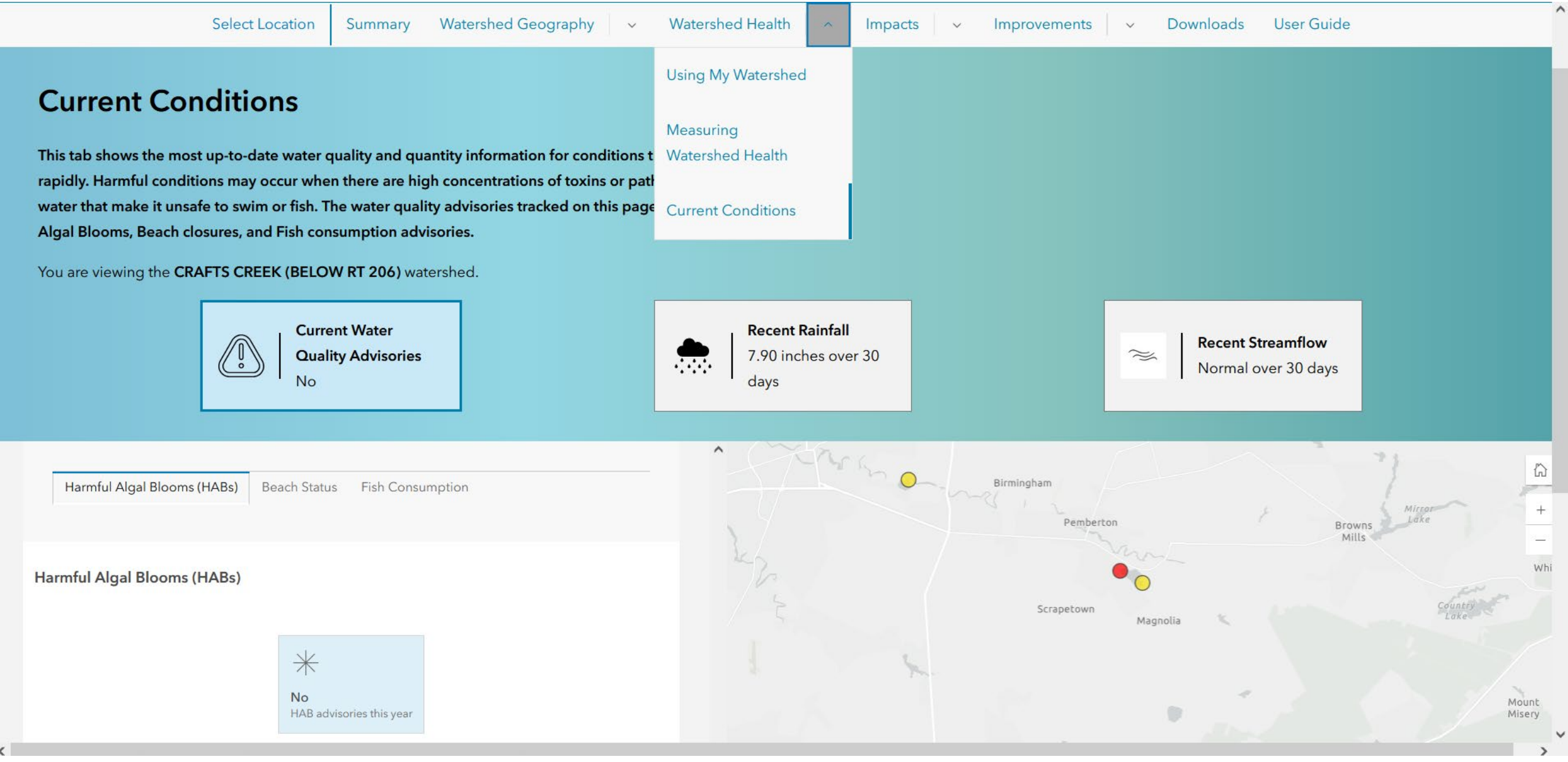
Impairments in this watershed from the List of Quality Limited Waters (303d), 2022

Impaired Designated Uses	Failing Parameters	Has a TMDL
Public Water Supply	ARSENIC	No
Recreation.Primary	ESCHERICHIA COLI (E. COLI)	No
Fish Consumption	PCBS IN FISH TISSUE	No

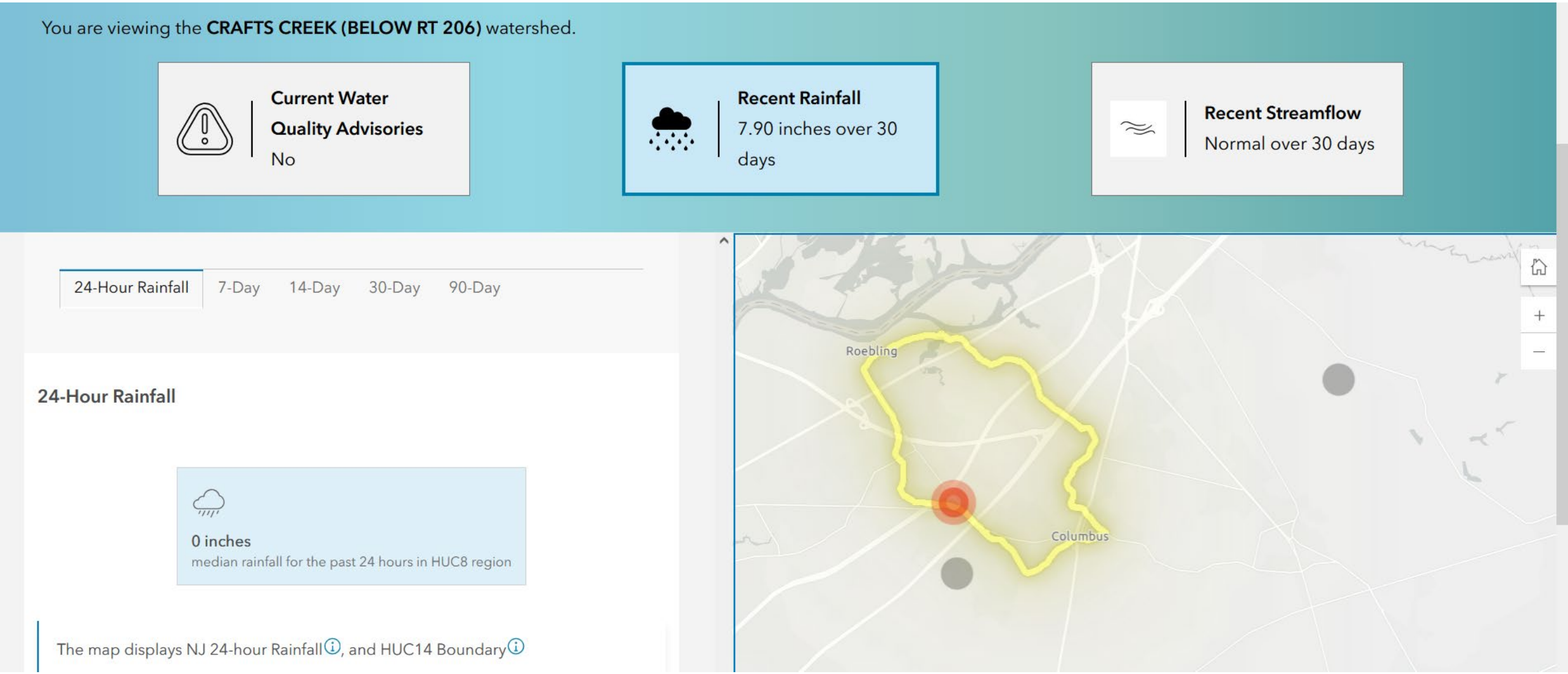
Zooming in on legend....

Current Conditions Tab

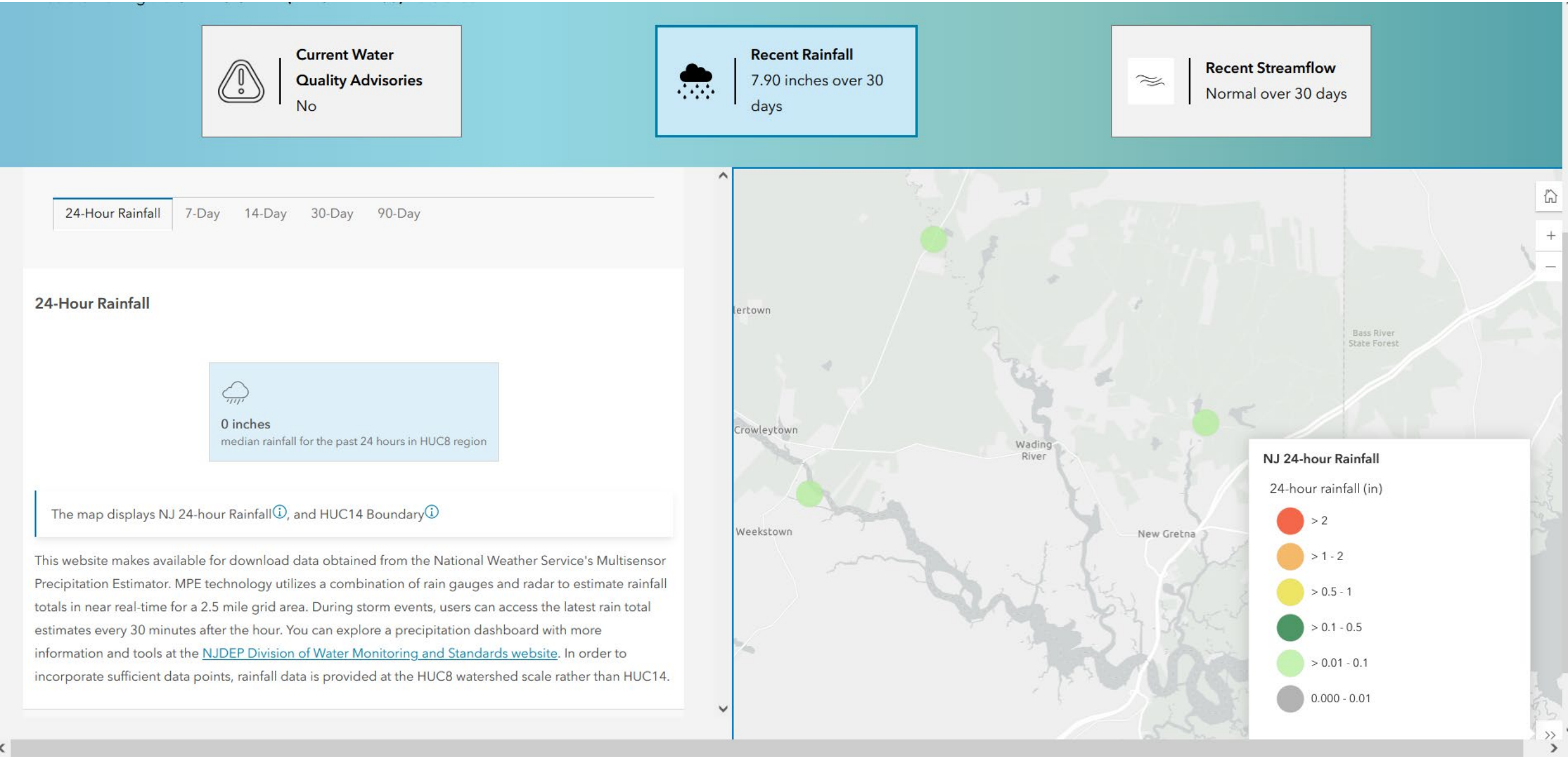
Select the third themed page under Watershed Health…this is what the 1st fast fact page looks like….



This is the Current Conditions tab, 2nd fast fact selected…



Zooming in on legend....



This is the Current Conditions tab, 3rd fast fact selected…

Current Water Quality Advisories
No

Recent Rainfall
7.90 inches over 30 days

Recent Streamflow
Normal over 30 days

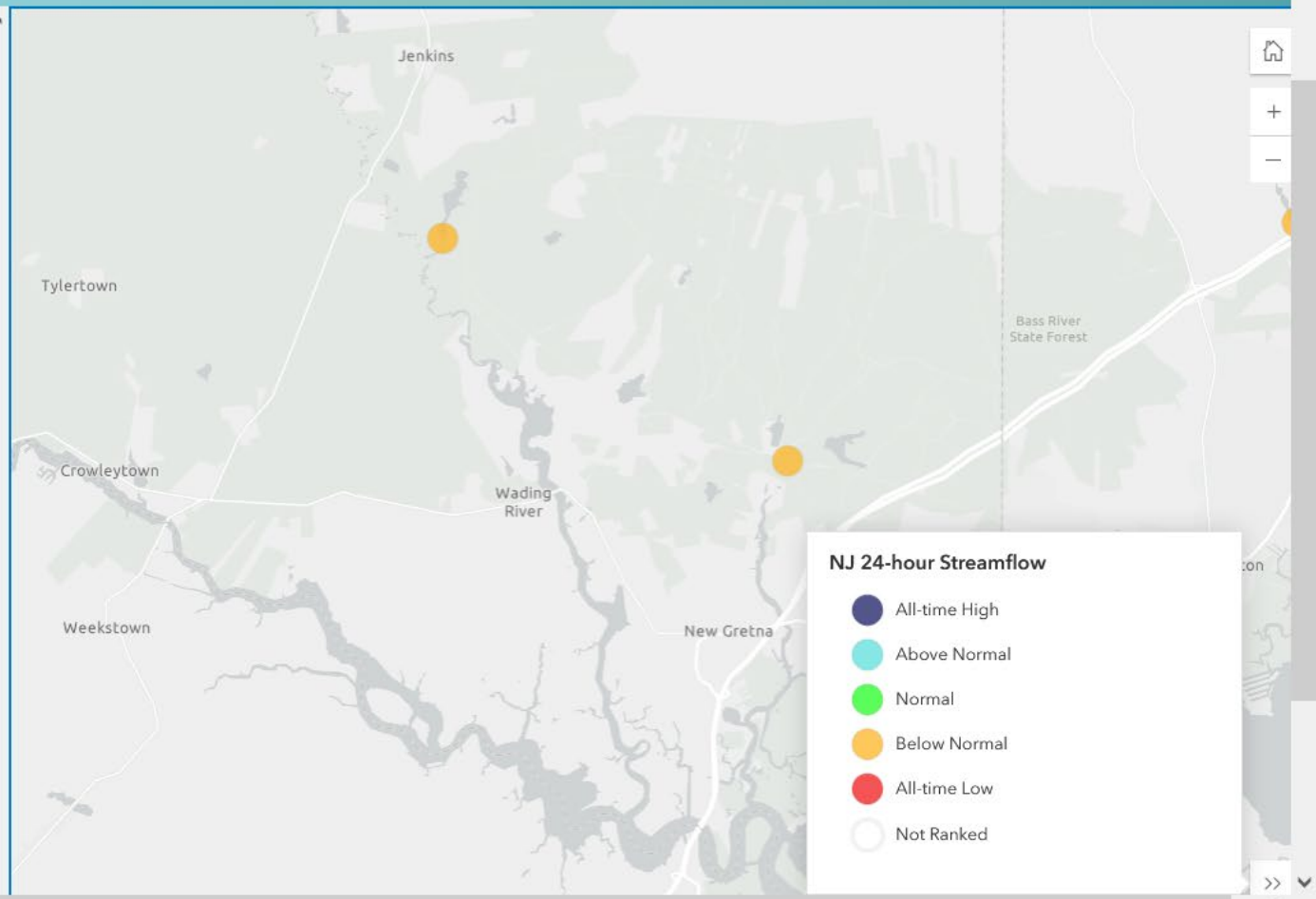
Current Streamflow | 7-Day | 14-Day | 30-Day | 90-Day

Current Streamflow

Normal
streamflow

The map displays NJ 24-hour Streamflow, and HUC14 Boundary

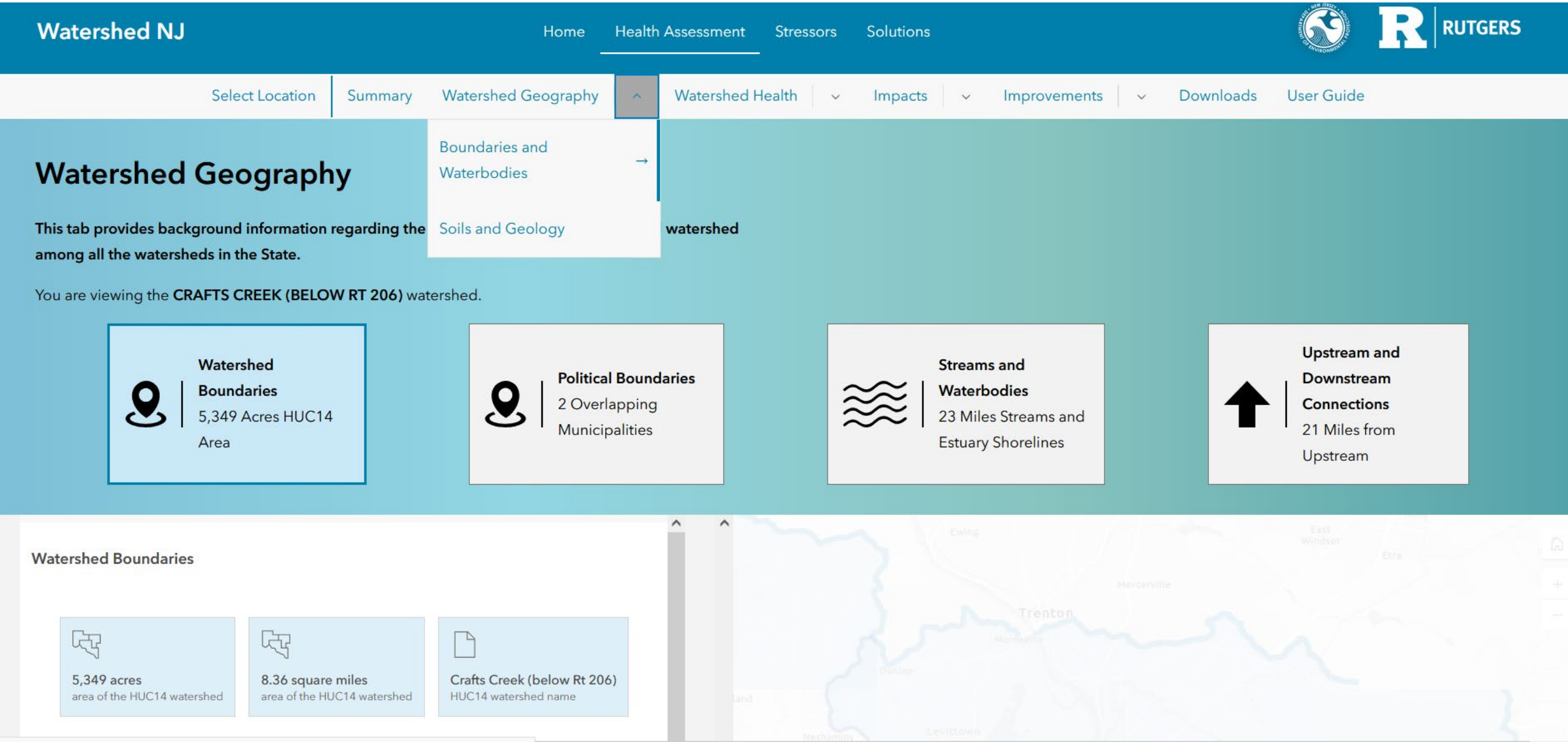
Streamflow refers to the amount of water flowing in a river during a specified period of time. Streamflow is always changing, from day to day and even minute to minute. The main influence on streamflow is precipitation runoff in the watershed. Streamflow can be measured by gages installed in streams and rivers that continuously monitor the height of the water. The United States Geological Survey (USGS) operates the National Streamgage Network. The Watershed Health Assessment provides summaries of streamflow levels at the HUC8 watershed scale rather than HUC14 in order to incorporate enough points. You can see all current and historical information from the whole stream gage network here: https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-nj. Learn more about the work of the



Watershed Geography

To gather HUC-14 meta-data....

Two themed pages…



This is the Boundaries and Waterbodies themed page...4th fast fact selected

Watershed Boundaries
5,349 Acres HUC14 Area

Political Boundaries
2 Overlapping Municipalities

Streams and Waterbodies
23 Miles Streams and Estuary Shorelines

Upstream and Downstream Connections
21 Miles from Upstream

Upstream Land and Waters | Downstream Waters

Upstream Land and Waters

21 miles
from upstream

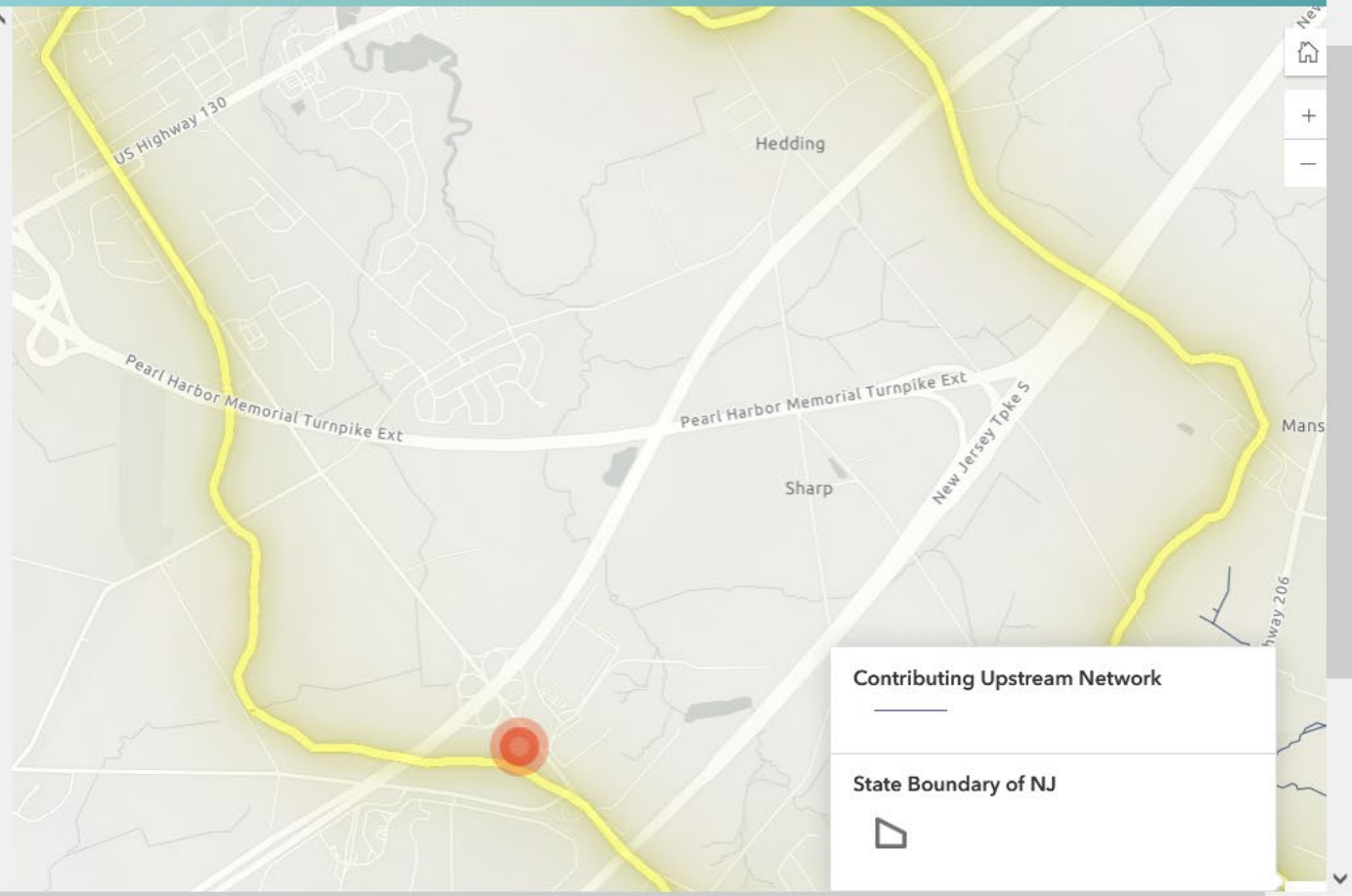
0%
from upstream out of state

7,862 acres
upstream watershed area

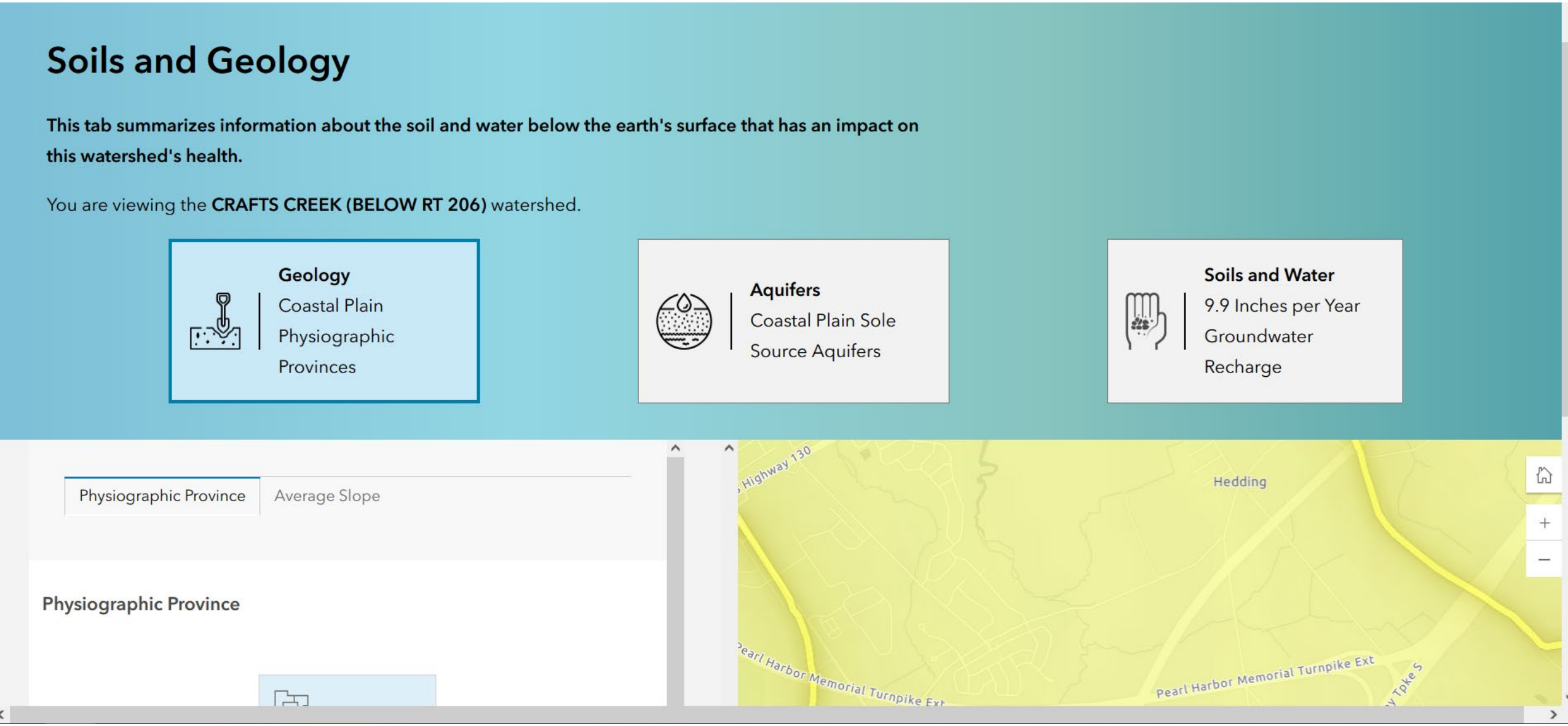
2
upstream New Jersey HUC14s

The map displays ⓘ, Contributing Upstream Network ⓘ, Contributing Upstream Network Flow Direction ⓘ, and HUC14 Boundary ⓘ

"Upstream miles" is a measure of the total length of streams, in miles, that flow into the HUC14 from upstream watersheds. Water quality of any rivers and streams within this watershed is affected by the



This is the Soils and Geology themed page…1st fast fact selected



Downloads

Downloads

This tab allows you to download data for each of the tabs at the top of your screen for your selected watershed[s]. Each row in the table below represents a tab in the Watershed Health Assessment. Follow the link in each row to download data from ArcGIS as a csv file.

You are viewing the **CRAFTS CREEK (BELOW RT 206)** watershed.

Watershed Geography

Watershed Health

Using My Watershed

Watershed Health

Using My Watershed

Measuring Watershed Health

Current Conditions
no download available

Impacts to Watershed Health

Natural Resources

Stressors

Flooding and Precipitation

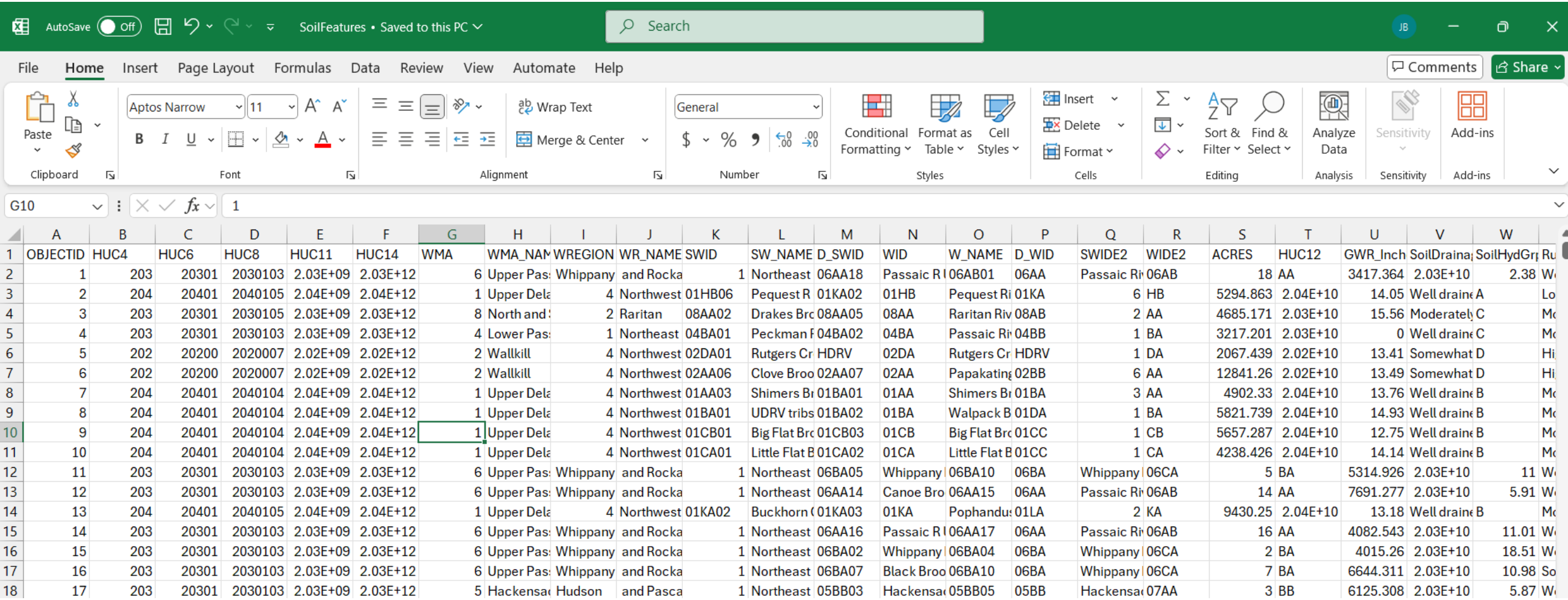
Soils and Geology

Improving Watershed Health

Current Actions

Taking the Next Step
no download available

Download from the Soils and Geology tab....



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	OBJECTID	HUC4	HUC6	HUC8	HUC11	HUC14	WMA	WMA_NAM	WREGION	WR_NAME	SWID	SW_NAME	D_SWID	WID	W_NAME	D_WID	SWIDE2	WIDE2	ACRES	HUC12	GWR_Inch	SoilDraina	SoilHydGr
2	1	203	20301	2030103	2.03E+09	2.03E+12	6	Upper Pas	Whippany	and Rocka	1	Northeast	06AA18	Passaic R	06AB01	06AA	Passaic Ri	06AB	18	AA	3417.364	2.03E+10	2.38
3	2	204	20401	2040105	2.04E+09	2.04E+12	1	Upper Dela	4	Northwest	01HB06	Pequest R	01KA02	01HB	Pequest Ri	01KA	6	HB	5294.863	2.04E+10	14.05	Well draine	A
4	3	203	20301	2030105	2.03E+09	2.03E+12	8	North and	2	Raritan	08AA02	Drakes Brc	08AA05	08AA	Raritan Riv	08AB	2	AA	4685.171	2.03E+10	15.56	Moderately	C
5	4	203	20301	2030103	2.03E+09	2.03E+12	4	Lower Pas	1	Northeast	04BA01	Peckman I	04BA02	04BA	Passaic Ri	04BB	1	BA	3217.201	2.03E+10	0	Well draine	C
6	5	202	20200	2020007	2.02E+09	2.02E+12	2	Wallkill	4	Northwest	02DA01	Rutgers Cr	HDRV	02DA	Rutgers Cr	HDRV	1	DA	2067.439	2.02E+10	13.41	Somewhat	D
7	6	202	20200	2020007	2.02E+09	2.02E+12	2	Wallkill	4	Northwest	02AA06	Clove Broo	02AA07	02AA	Papakating	02BB	6	AA	12841.26	2.02E+10	13.49	Somewhat	D
8	7	204	20401	2040104	2.04E+09	2.04E+12	1	Upper Dela	4	Northwest	01AA03	Shimers Br	01BA01	01AA	Shimers Br	01BA	3	AA	4902.33	2.04E+10	13.76	Well draine	B
9	8	204	20401	2040104	2.04E+09	2.04E+12	1	Upper Dela	4	Northwest	01BA01	UDRV tribs	01BA02	01BA	Walpack B	01DA	1	BA	5821.739	2.04E+10	14.93	Well draine	B
10	9	204	20401	2040104	2.04E+09	2.04E+12	1	Upper Dela	4	Northwest	01CB01	Big Flat Brc	01CB03	01CB	Big Flat Brc	01CC	1	CB	5657.287	2.04E+10	12.75	Well draine	B
11	10	204	20401	2040104	2.04E+09	2.04E+12	1	Upper Dela	4	Northwest	01CA01	Little Flat B	01CA02	01CA	Little Flat B	01CC	1	CA	4238.426	2.04E+10	14.14	Well draine	B
12	11	203	20301	2030103	2.03E+09	2.03E+12	6	Upper Pas	Whippany	and Rocka	1	Northeast	06BA05	Whippany	06BA10	06BA	Whippany	06CA	5	BA	5314.926	2.03E+10	11
13	12	203	20301	2030103	2.03E+09	2.03E+12	6	Upper Pas	Whippany	and Rocka	1	Northeast	06AA14	Canoe Bro	06AA15	06AA	Passaic Ri	06AB	14	AA	7691.277	2.03E+10	5.91
14	13	204	20401	2040105	2.04E+09	2.04E+12	1	Upper Dela	4	Northwest	01KA02	Buckhorn (	01KA03	01KA	Pophandus	01LA	2	KA	9430.25	2.04E+10	13.18	Well draine	B
15	14	203	20301	2030103	2.03E+09	2.03E+12	6	Upper Pas	Whippany	and Rocka	1	Northeast	06AA16	Passaic R	06AA17	06AA	Passaic Ri	06AB	16	AA	4082.543	2.03E+10	11.01
16	15	203	20301	2030103	2.03E+09	2.03E+12	6	Upper Pas	Whippany	and Rocka	1	Northeast	06BA02	Whippany	06BA04	06BA	Whippany	06CA	2	BA	4015.26	2.03E+10	18.51
17	16	203	20301	2030103	2.03E+09	2.03E+12	6	Upper Pas	Whippany	and Rocka	1	Northeast	06BA07	Black Broo	06BA10	06BA	Whippany	06CA	7	BA	6644.311	2.03E+10	10.98
18	17	203	20301	2030103	2.03E+09	2.03E+12	5	Hackensac	Hudson	and Pasca	1	Northeast	05BB03	Hackensac	05BB05	05BB	Hackensac	07AA	3	BB	6125.308	2.03E+10	5.87

Interested in getting involved in WatershedNJ development?

WatershedNJ Listserv

Questions?

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