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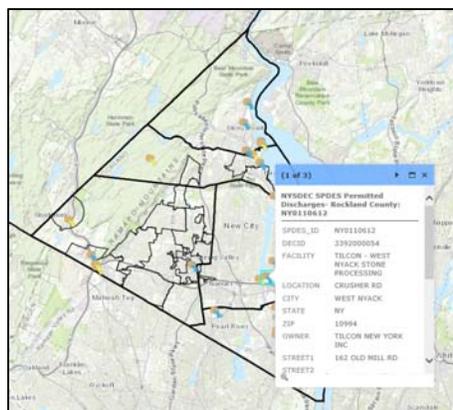


STORMWATER & WATER QUALITY INTERACTIVE MAP
CORNELL COOPERATIVE EXTENSION, ROCKLAND COUNTY

Clean Above means Clean Below!

Getting familiar with the Interactive Map:

- <http://rocklandcce.org/environment/water-quality-stormwater-education-homepage>
- Click on: *Stormwater Consortium of Rockland County (SCRC):Stormwater & Water Quality Interactive Map*
- When the map loads, click the LAYERS tab (circled below- under the title near the Home button). Scroll through all the available data layers, and select some. Click on the LEGEND tab. The legend displays the data you have selected.
- Click back on the LAYERS tab, and click on the map over one of the data layers you have selected. A pop-up box appears, with further information about that layer, and potential links to other sources.



- **CLICK ON THE RELEVANT LAYERS PERTAINING TO THE TOPICS WITHIN, AND EXPLORE THE DATA TO ANSWER THE ASSOCIATED QUESTIONS. YOU MAY NEED TO TURN SOME OVERLAPPING LAYERS OFF IF THEY INTERFERE WITH THE LAYER YOU ARE TRYING TO SELECT.**

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I. Watersheds:

Wherever you are standing in Rockland County, the pollutants on the ground, in your yard and in storm drains will flush to the waters within that *watershed*.

1. Click off all layers, then select all watershed layers. The HUC-14 is the smallest sub-watershed- what is the name of the one you live in? Pollutants will ultimately flush to this waterway.
2. Sub-watersheds ultimately discharge to larger waterways. What larger watersheds do your HUC-14 sub-watershed ultimately discharge into (HUC 12, HUC 10)? (the sub-watershed names are given after colon at the top).

II. Sanitary Sewer Overflows:

***Sanitary Sewer Overflows (SSOs)* are discharges of raw sewage.** These discharges can reach into homes, businesses, playgrounds, streams, etc, and are often caused by **FLUSHING WIPES** and **DUMPING GREASE** down the sink.

1. Select an SSO in Rockland County.
 - a) How much untreated sewage discharged, and for how long?
 - b) What was the reason for the discharge?

III. Waterbody Standards and Classifications:

Surface Waters of NYS are Classified to determine their best uses, then given a Standard to protect them.

1. Turn off all layers but the *Water Quality Classification*. Find the waterbody closest to your home and click on it.
 - a) What is the Classification? What does this mean? (see link below)
 - b) What is the Standard? Is there a (T) or a (TS) after the letter? If so, what does this mean? See: <http://rocklandcce.org/environment/regulating-clean-water>

IV. NYS Section 303D List:

These waterbodies are not supporting their best uses for their Classification (see [Regulating Clean Water](#)), and that may require development of a **Total Maximum Daily Load (TMDL)**. Click on a waterbody or lake.

1. What is the *pollutant* and the *suspected source*? (Note: To see the NYSDEC's list, click the *NYSDEC* link in the pop-up table. From the NYSDEC website, click on **Final 2016 NYS Section 303(d) List (PDF)** and find your waterbody (search 'Rockland').

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V. NYSDEC Waterbody Inventory/Priority Waterbody List (WI/PWL):

Turn off all layers but the *WI/PWL* data layers. Find the waterbody closest to your home and click on it.

1. What is the waterbody's name?
2. Is the waterbody impaired (see 'STATUS')?
3. What does this mean? (see [Regulating Clean Water](#)).
4. What 'BASIN' is the waterbody located in? Click on the [NYSDEC's WI/PWL Webpage](#), find your basin and click on it. Locate the *sub-basin* your waterbody is located in and click on it. You are looking at the NYSDEC's assessment of that waterbody. **NOTE:** If your 'BASIN' is the Lower Hudson River, your sub-basin is 'Hudson-Peekskill Hollow Creek Watershed'.

VI. EPA Waterbody Quality Assessment Report:

Turn off all layers but the *EPA Waterbody Quality Assessment Report* layers. Find the waterbody closest to your home and click on it. From the pop-up, scroll down to *EPA Assessment Report* and click on 'More Info'.

1. What are the Causes of Impairment for this waterbody?
2. Is there Data Available for other years? What does the most recent data say?
3. Is a Total Maximum Daily Loads (TMDL) recommended for this waterbody?

VII. Rockland County's Biological Stream Survey:

Since 2006, the Rockland County Department of Environmental Resources has sampled 20 stream sites each year for benthic (bottom dwelling) macroinvertebrates to determine both water quality. Macroinvertebrates are very sensitive to pollutants, and are not very mobile, making them great indicators of water quality. For further information on how/why macro("BIG")-invertebrates(without backbones) are used to determine water quality, see [Regulating Clean Water- NYSDEC's 30 Year Biological Trends Report](#) section.

1. Click on one of the locations in the data layer. What is the most recent BAP score for this location?
2. What does this mean (From the pop-up, click the *NYSDEC_BAP* link)?
3. Has there been a change in water quality over the years?

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VIII. NPDES and SPDES Permitted Discharge Facilities:

The [Clean Water Act](#) had made it unlawful to discharge any pollutant from a *point source* (discharges from a localized, stationary source such as an outfall) into *navigable waters*, unless a permit was obtained. EPA's [National Pollutant Discharge Elimination System \(NPDES\)](#) permit program sets the limits for discharges, which are then enforced through the states under their [State Pollutant Discharge Elimination System \(SPDES\)](#) programs. Each state has the authority to tighten the EPA's limits where and when it's warranted. In New York the [SPDES](#) program is regulated by the NYS Department of Environmental Conservation.

Load EPA's [Facility Search](#) tool: <https://echo.epa.gov/facilities/facility-search>. There are many links to explore utilizing this tool to learn about a facility's permitted SPDES discharges and compliance history.

1. Under 'Facility Characteristics' type in Facility ID Number **NY0031895** and click 'Search'.
2. Scroll down to 'Facilities' on bottom right, and under 'Facility ID' paste **NY0031895** and click 'Search'.
3. What facility is this? Click on the facility's name. Doing this brings you to that facility's detailed compliance report. Per the chart at the top, what is the facility's violation history?
4. Click on the *CWA Pollutant Loading Report* from this page. Doing this brings up the Discharge Monitoring Report (DMR). Look under *Receiving Water Information*. What waterbody does this facility discharge to? Is this waterbody an impaired water? If so what is it impaired for?

Exploring NPDES/SPDES facilities on CCE's interactive map:

Turn off all layers. Turn on the *National Hydrologic Data* layers, the *EPA NPDES Permitted Discharges*, and the *NYSDEC SPDES Permitted Discharges- Rockland County*.

1. Find a NYSDEC SPDES or EPA NPDES permitted discharge (outfall) and click on it. From the pop-up, copy the SPDES_ID or NPDES_ID number (example: NY0008010).
2. From the pop-up, scroll down to 'EPA REPORT' which will bring you to **EPA's Water Pollutant Loading Tool** under their **Enforcement and Compliance History (ECHO)** program.
3. Select Reporting Year as 2017 (or earlier) from the top. Note: *Selecting the current year will not display a full reporting year.*
4. Scroll down to 'Facilities' on bottom right, and under 'Facility ID' paste the SPDES_ID or NPDES_ID number. Click 'Search'.
5. Scroll down to 'Top Facility Discharges' on bottom and explore information about this facility under 'Reports'. **Note: Some facilities have no data because their permit currently DOES NOT REQUIRE them to monitor effluent (discharges) from their outfall.**

Note: Training on using EPA's ECHO website can be found here: <https://echo.epa.gov/help/tutorials>

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IX. Hazardous Algae Blooms:

Excess Nutrients lead to algae blooms. Some species of algae can produce toxins that can be harmful to people and animals, and multiply to dangerous levels known as Hazardous Algae Blooms.

Where have Hazardous Algae Blooms been reported in Rockland County?

1. See <http://rocklandcce.org/environment/nutrient-pollution>
2. Click on 'have there been hazardous blooms in your municipality?' Have there been any Hazardous Algae Blooms in your community since 2012 (search for 'Rockland')?
3. What was noticed in Congers Lake in 2013? What was listed about Rockland Lake?