

2025 ANNUAL TRAINING & REFRESHER NYSDEC MS4 GENERAL PERMIT G.P.-0-24-001

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ACRONYM DEFINITIONS

- ❖ **SWPPP** – Stormwater Pollution Prevention Plan
- ❖ **SPDES** – State Pollutant Discharge Elimination System
- ❖ **EDC** – Effective Date of Coverage
- ❖ **MCM** – Minimum Control Measure
- ❖ **MS4** – Municipal Separate Storm Sewer System
- ❖ **ECL** – Environmental Conservation Law
- ❖ **EDP** – Effective Date of Permit
- ❖ **POC** – Pollutant of Concern
- ❖ **TMDL** – Total Maximum Daily Load Watershed
- ❖ **NOI** – Notice of Intent
- ❖ **NOT** – Notice of Termination
- ❖ **BMP** – Best Management Practice
- ❖ **SMP** – Stormwater Management Practice

Municipal Separate Storm Sewer Systems (MS4)

DEFINITION

- ❖ **Municipal Separate Storm Sewer Systems (MS4)**
 - ❖ Conveyance system that is:
 - Owned by state, city, town etc. that discharges to US waters
 - Designed or utilized to collect/convey stormwater
 - Completely separate stormwater from sewer system, treatment plants, etc.

OVERVIEW

- ❖ 1990 reauthorization of 1972 Clean Water Act (CWA)
 - ❖ Required Medium & Large Cities to obtain SPDES (State Pollutant Discharge Elimination System) permits (Phase 1)
 - ❖ 1999, small cities and towns were required to do the same (Phase 2)
 - For regulating untreated stormwater discharges
 - Reduce quantity of pollutants stormwater can transport
 - Hold guilty parties responsible for water pollution

UNFUNDED MANDATES

Unfunded Mandates Reform Act of 1995 – Created to avoid imposing unfunded federal mandates on state and local governments. The law is triggered only when a mandate imposes a cost of \$100 million or more on a local government.



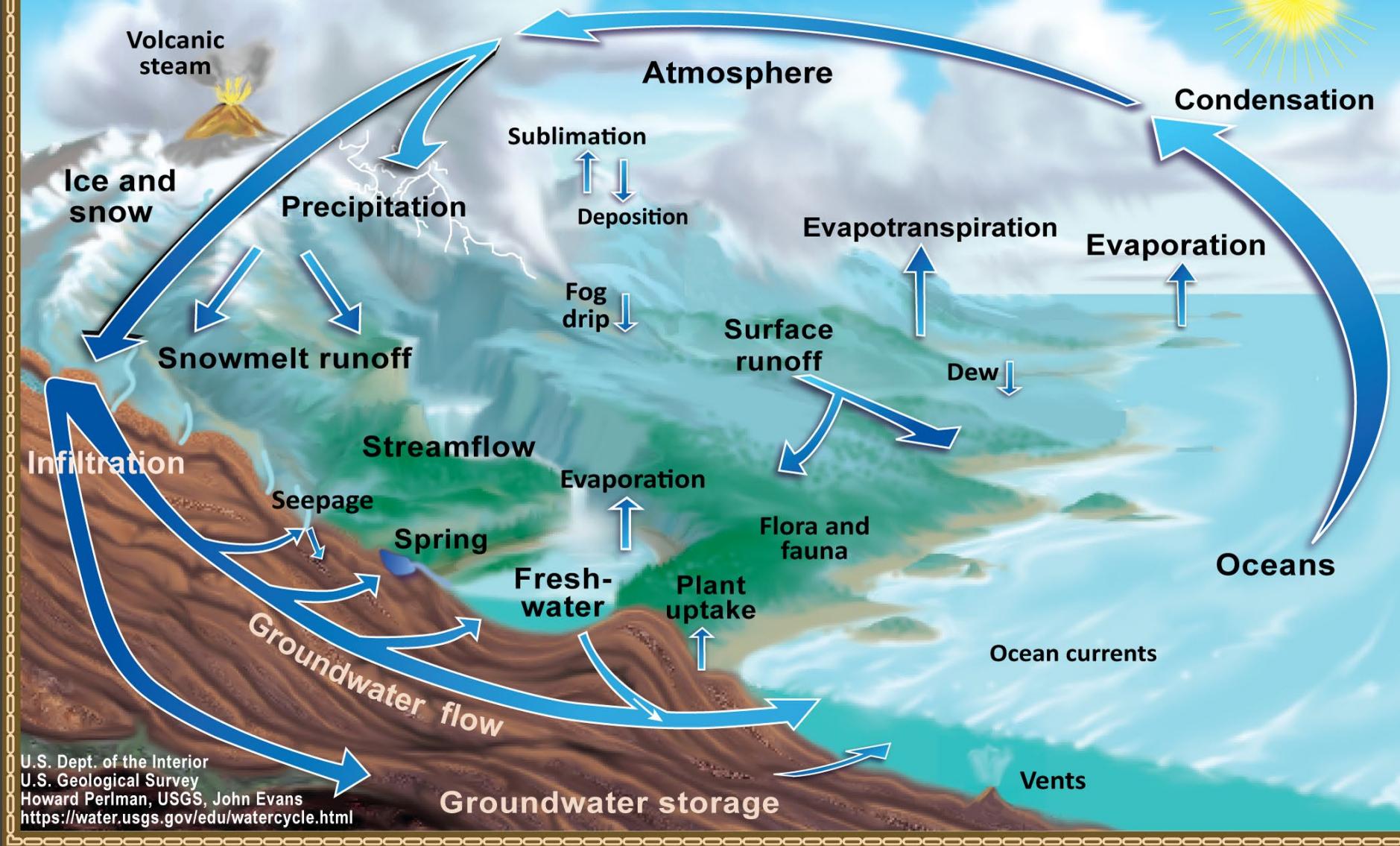
ADDITIONAL REQUIREMENTS

**NON-
TRADITIONAL
LAND USE**

**ENHANCED
REQUIREMENTS
FOR IMPAIRED
WATERS**

**TOTAL MAXIMUM
DAILY LOAD
(TMDL)**

The Water Cycle



Urban Wet Weather Flows

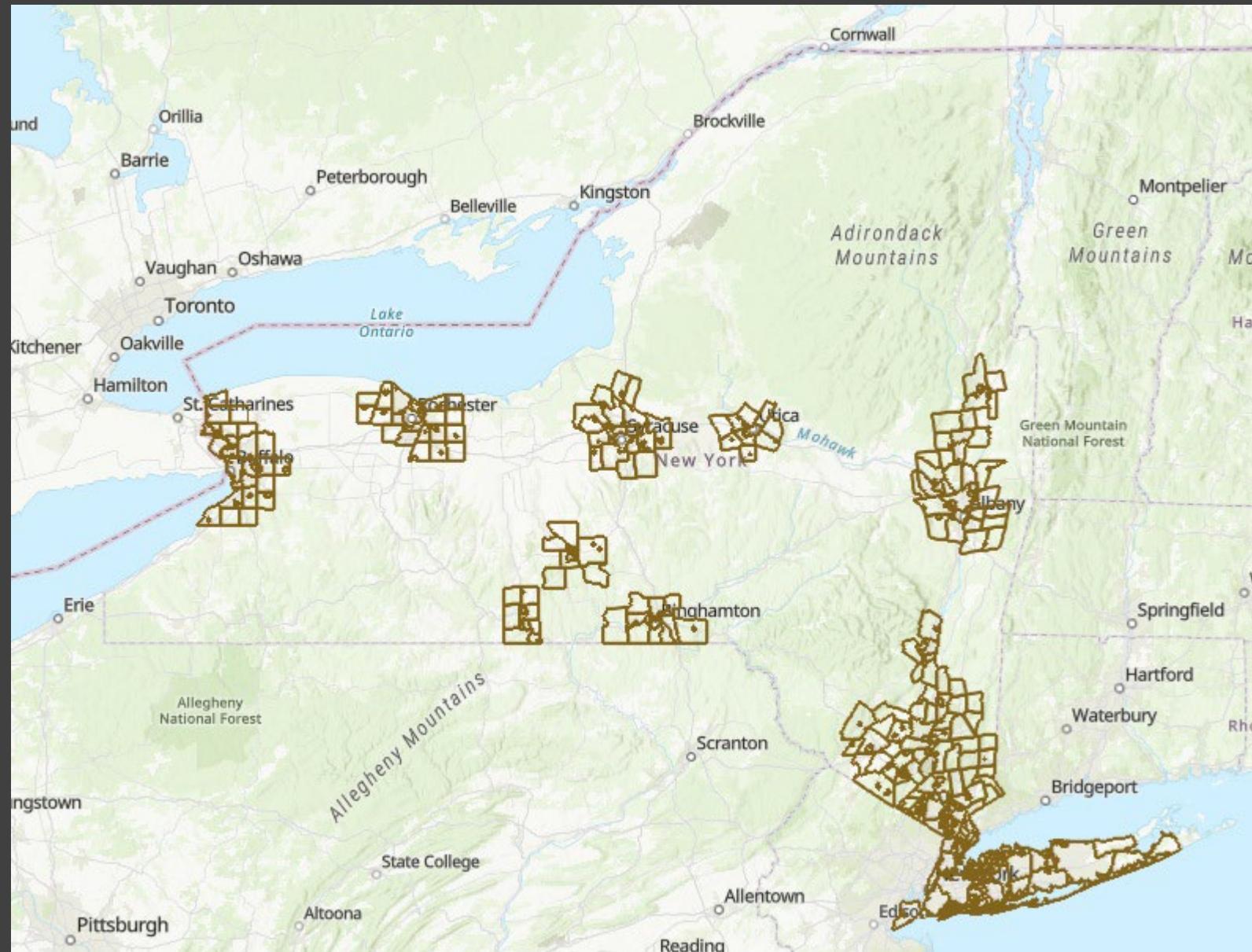


NEW YORK STATE MS4s

NYSDEC



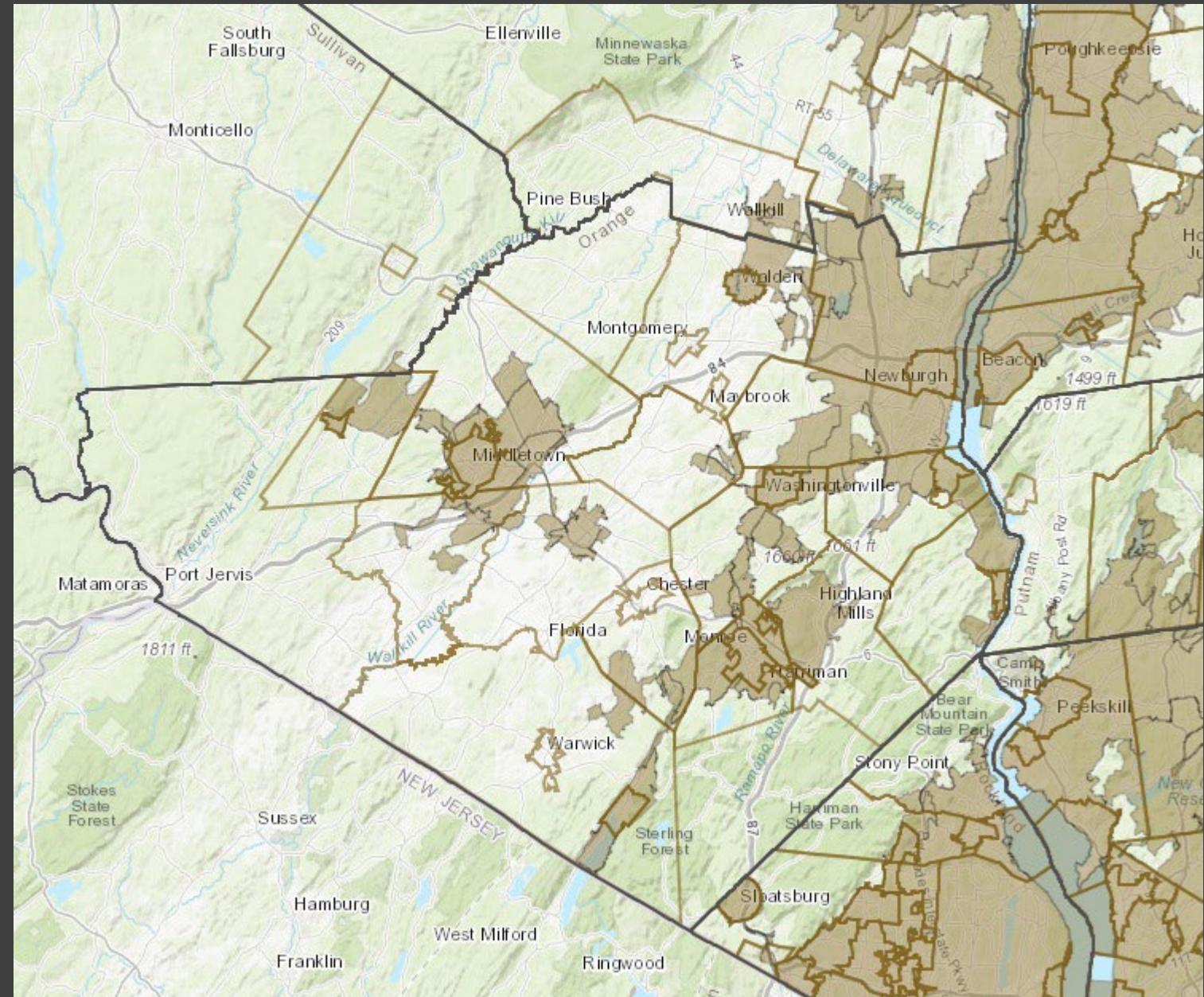
- ❖ 2003 NYSDEC ISSUES THE FIRST MS4 PERMIT
- ❖ THERE ARE CURRENTLY OVER 500 REGULATED MS4s IN NEW YORK STATE



NYSDEC



- ❖ EACH SUBSEQUENT PERMIT HAS INCLUDED STRICTER REGULATORY REQUIREMENTS
- ❖ CURRENTLY, ANY AREA WITH A POPULATION DENSITY OF 1,000 PEOPLE PER SQUARE MILE IS CLASSIFIED AS AN MS4
- ❖ ONCE DESIGNATED, AN MS4 AREA TYPICALLY RETAINS ITS DESIGNATION PERMANENTLY



ORANGE COUNTY MS4 LIST

- ❖ BLOOMING GROVE
- ❖ CHESTER
- ❖ TOWN OF CORNWALL
- ❖ VILLAGE OF CORNWALL
- ❖ TOWN OF GOSHEN
- ❖ VILLAGE OF GOSHEN
- ❖ GREENWOOD LAKE
- ❖ HAMPTONBURGH
- ❖ HARRIMAN
- ❖ HIGHLANDS
- ❖ KIRYAS JOEL
- ❖ CITY OF MIDDLETOWN
- ❖ TOWN OF MONROE
- ❖ VILLAGE OF MONROE
- ❖ TOWN OF MONTGOMERY
- ❖ MOUNT HOPE
- ❖ NEW WINDSOR
- ❖ TOWN OF NEWBURGH
- ❖ CITY OF NEWBURGH
- ❖ VILLAGE OF OTISVILLE
- ❖ SOUTH BLOOMING GROVE
- ❖ WALDEN
- ❖ WALLKILL
- ❖ WARWICK
- ❖ VILLAGE OF WASHINGTONVILLE
- ❖ WAWAYANDA
- ❖ WOODBURY

ULSTER COUNTY MS4 LIST

- ❖ ESOPUS
- ❖ GARDINER
- ❖ HURLEY
- ❖ TOWN OF KINGSTON
- ❖ CITY OF KINGSTON
- ❖ LLOYD
- ❖ MARLBOROUGH
- ❖ TOWN OF NEW PALTZ
- ❖ VILLAGE OF NEW PALTZ
- ❖ PLATTEKILL
- ❖ ROSENDALE
- ❖ SHAWANGUNK
- ❖ ULSTER
- ❖ WOODSTOCK

STORMWATER MANAGEMENT PROGRAM (SWMP)

Must Address Six Minimum Control Measures (MCMs):

- ❖ 1) Public Education and Outreach
 - Provide educational material to target audiences (residents, industry, commercial, construction) about their impact on Stormwater Pollution.
- ❖ 2) Public Participation/ Involvement
 - Provide opportunity for the public to have input on their Stormwater Management Plan.
- ❖ 3) Illicit Discharge Detection and Elimination
 - Find and eliminate sources of non-stormwater infiltration to storm sewer system.

STORMWATER MANAGEMENT PROGRAM (SWMP)

- ❖ 4) Construction Site Runoff Control

- Ordinance for management of SW discharges from construction sites that disturb more than 1 acre.

- ❖ 5) Post-Construction Runoff Control

- Manage SW where it falls and retain in on site, so that post development runoff is equal to or less than pre-development.

- ❖ 6) Pollution Prevention/Good Housekeeping

- Implement Good Housekeeping practices in municipal operations (catch basin cleaning, street sweeping, vehicle maintenance, etc.)

ANNUAL REQUIREMENTS



- Information relative to the prevention of illicit discharges made available to municipal employees, business and public.
- Review & update the SWMP as necessary
- Update the comprehensive system mapping to include new monitoring locations, construction sites and municipal facilities.
- Submit annual and interim reports
- Provide an opportunity for public involvement/participation and implementation of the SWMP.
- Inspect all sites with construction activity.
- Update the inventory of post-construction SMPs
- Inspection of all municipally owned SMPs

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2-YEAR REQUIREMENTS



- Monitoring location and inspection program**
- Illicit Discharge Track Down Program**
- Illicit Discharge Elimination Program**
- Inventory of all municipal facilities (MCM 6)
- Interim Progress Certifications for the period of January 3rd – June 30th were submitted by October 1st 2025.
- Annual reports due April 1st annually.
- SWMP to be updated to include 2 year requirements by January 1, 2026

****MCM 3 Illicit Discharge Detection and Elimination
→ Specific training required and will be offered at a
later date**

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3-YEAR REQUIREMENTS



- Phase I additional mapping requirements including:
 - Monitoring locations
 - Focus Areas
 - Publicly owned post-construction stormwater management practices
 - Municipal facilities

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3-YEAR REQUIREMENTS

PUBLIC EDUCATION & OUTREACH PROGRAM

MCM 1



- Designate “Focus Areas” where the Municipality will focus its education resources to educate the public of distinct pollution generating activates in these areas.
- Identify & document target audiences & associated pollution generating activities. These include:
 - Regulated streams
 - Sewer Sheds
 - TMDL watersheds
 - Areas with construction activities
 - Areas with on site wastewater systems
 - Residential, commercial, and industrial activities
 - Stormwater hotspots
 - Areas with Illicit discharges
- Illicit discharge education, outreach topics, and how they will reduce potential for pollutants to be generated by the target audience(s).

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3-YEAR REQUIREMENTS

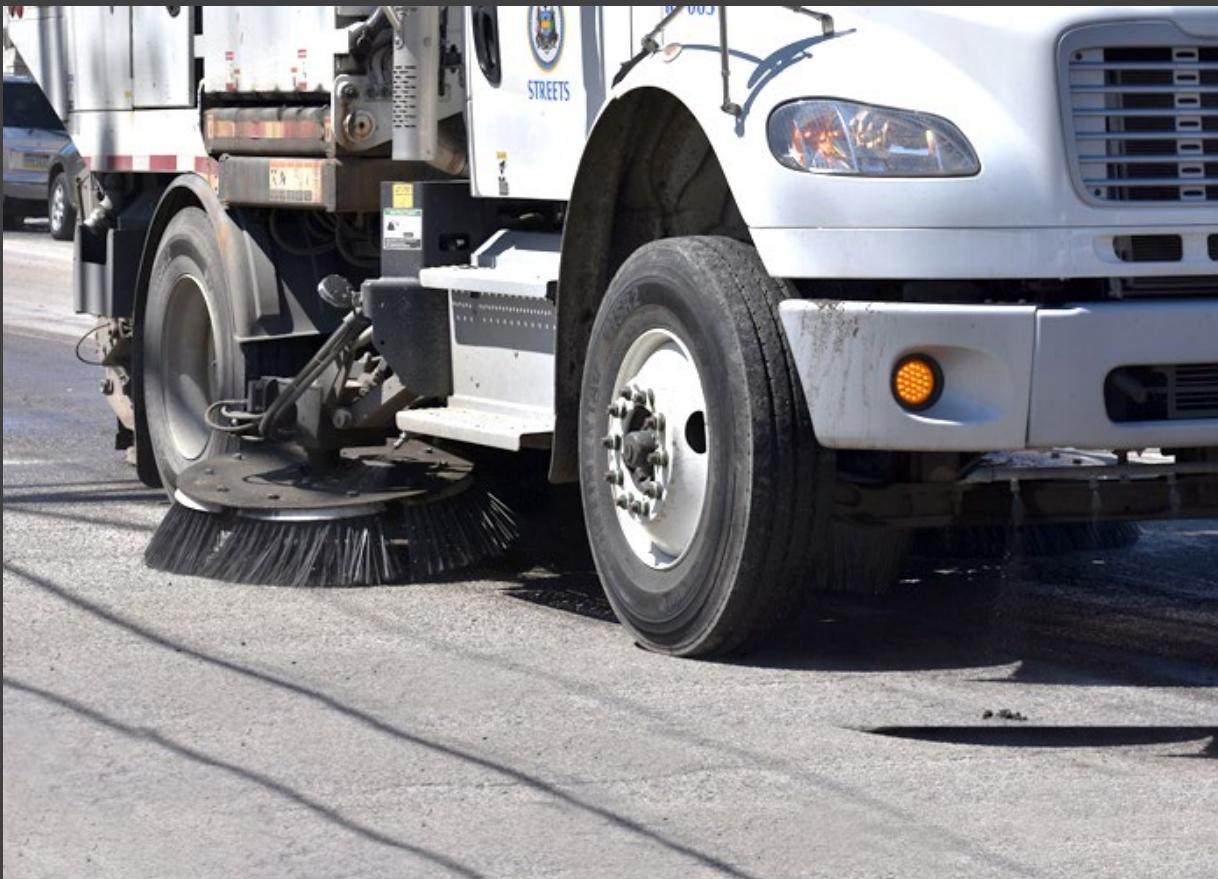


ILLICIT DISCHARGE & ELIMINATION MCM 3

- MS4 Operator must develop and maintain an inventory of monitoring locations (associated with illicit discharges).
- MS4 Operator must prioritize monitoring locations which area located in the monitoring locations inventory.

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3-YEAR REQUIREMENTS



POLLUTION PREVENTION & GOOD HOUSEKEEPING

MCM 6

- Incorporate BMPs into Municipal Facility Program & Municipal Operations Program
- Develop & implement a municipal facility program.
- Prioritize all known municipal facilities.
- Develop & implement municipal operations program
- Identify when catch basin inspection is needed.
- Inventory catch basin inspection information.

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4-YEAR REQUIREMENTS



- Interim Progress Certifications for the period of January 3rd – June 30th were submitted by October 1st 2025.
- Annual reports due April 1st annually.

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5-YEAR REQUIREMENTS



- Phase II additional mapping requirements including MS4 infrastructure, which also includes:
 - Conveyance systems, closed or open drainage
 - Direction of flow
 - Stormwater structures (catch basins, manholes, drop inlets, etc.)
 - Number of connections to and from structures
 - Privately owned stormwater facilities.
- Records required by MS4 permit must be kept for 5 years.
- (SWMP Evaluation) SWMP plan needs to be evaluated by the MS4 for compliance, effectiveness and deficiencies.

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5-YEAR REQUIREMENTS

PUBLIC EDUCATION & OUTREACH PROGRAM

MCM 1



- Once every five (5) years, the MS4 Operator must identify and document in the SWMP Plan:
 - Prescriptive method(s) shall be used for the distribution of education messages.
 - Frequency of each message.
 - Review and update the focus areas, target audiences, education, and outreach topics.

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5-YEAR REQUIREMENTS

ILLICIT DISCHARGE & ELIMINATION

MCM 3

- For existing staff, training on the MS4 Operator's illicit discharge elimination procedures must be given prior to conducting illicit discharge eliminations once every five years.



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5-YEAR REQUIREMENTS

POST-CONSTRUCTION STORMWATER MANAGEMENT MCM 5

- Within 5 years of the EDC, specific information must be included in the inventory either by using the MS4 Operator maintenance records or by verification of maintenance records provided by the owner of the post construction SMP.
- For existing staff, training on the MS4 Operator's post-construction SMWP Inspection & Maintenance Procedures, is required.



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5-YEAR REQUIREMENTS



POLLUTION PREVENTION & GOOD HOUSEKEEPING

MCM 6

- Develop & implement municipal facility specific SWPPP for each high priority.
- Wet weather visual monitoring.
- Comprehensive site assessment for each high priority municipal facility.
- Sweep all roads, bridges & parking lots.
- Must implement the following maintenance provisions:
 - Pave, mark and seal in dry conditions.
 - Stage road operations and maintenance activity
 - Restrict herbicide/pesticide application for roadside use.
 - Contain pollutants with bridge activity.
- Winter road maintenance requirements:
 - Routinely calibrate equipment to control salt/sand application rates.
 - Ensure that routine snow disposal activities comply with the Division of Water Technical Operation Guidance Series 5.1.11, Snow Disposal.

MAPPING REQUIREMENTS

STANDARD FOR ALL WATERBODIES *EXCEPT:*

IMPAIRED WATERBODIES

1. MONHAGEN BROOK AND TRIBUTARIES (Wallkill & Wawayanda)
2. ORANGE LAKE (Newburgh)
3. GREENWOOD LAKE (Greenwood Lake & Warwick)

TMDL WATERBODY

GREENWOOD LAKE AND WATERSHED

Stormwater Interactive Map

Search
Tools
Permit Related Layers

Lakes

Impaired Waterbodies for MS4 GP

- Rivers and Streams
- Estuaries
- Lakes

TMDL Watersheds for MS4 GP

Regulated MS4s

- Municipal Separate Storm Sewer System (MS4) Automatically Designated
- MS4 Additionally Designated Area (Criterion 3)

Classified Waters

- Rivers and Streams
- Lakes

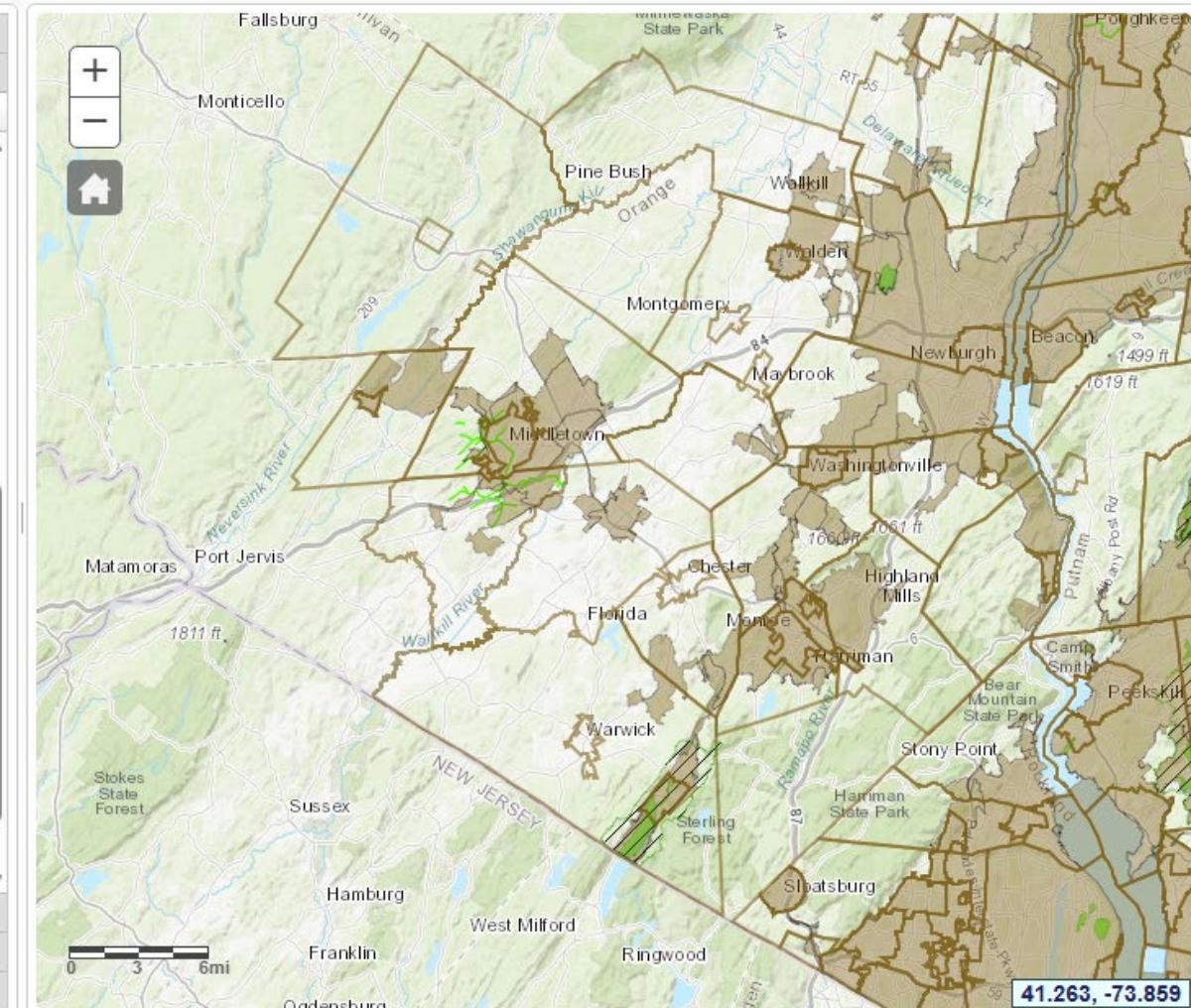
Waterbody Inventory/Priority Waterbodies List

- Lakes and Reservoirs
- Estuaries

Other Useful Reference Layers

General Permit Information

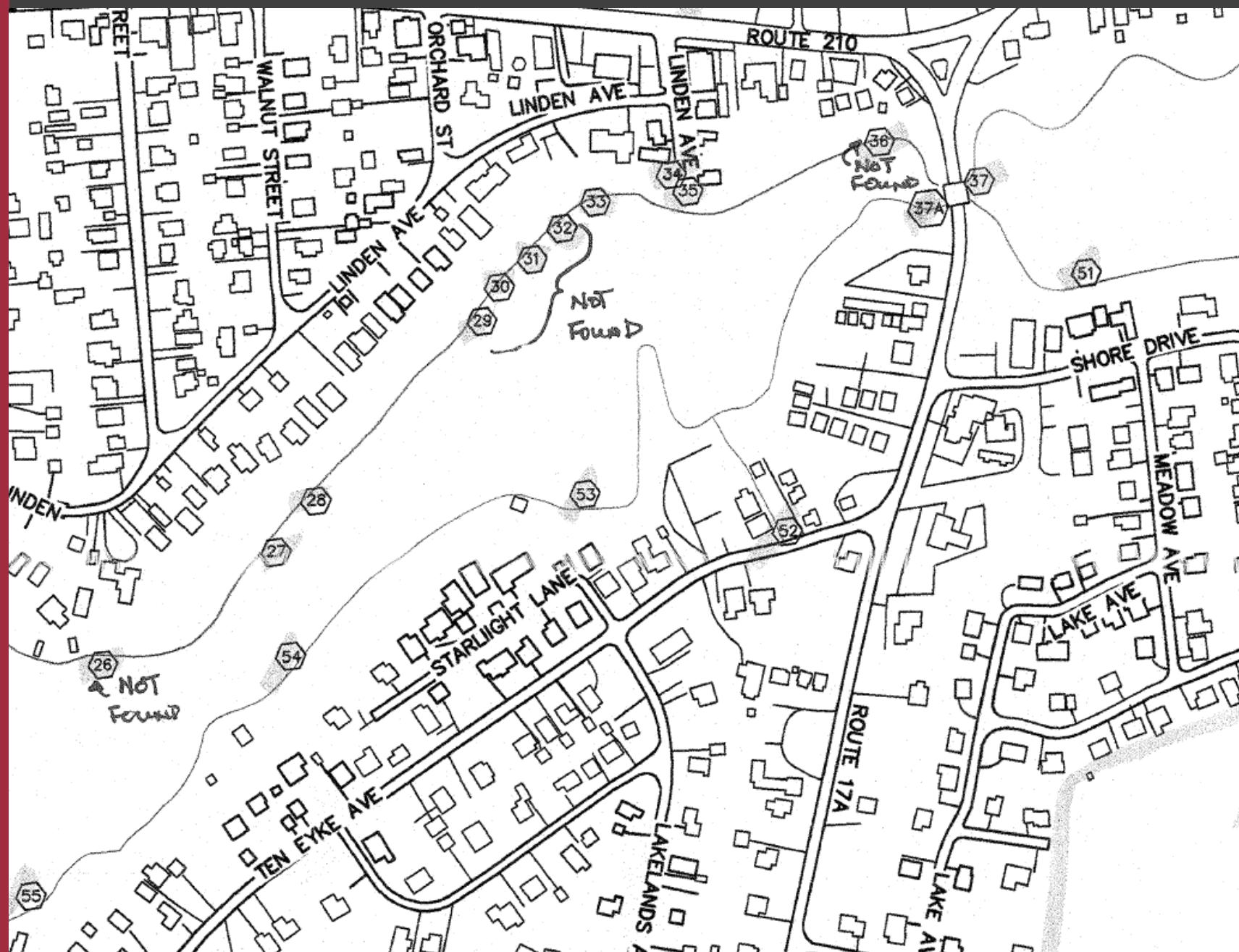
Contacts



MAPPING REQUIREMENTS

6 month req. → 7/3/24

- ❖ MS4 OUTFALLS AND ADA MS4 OUTFALLS
- ❖ INTERCONNECTIONS
- ❖ PRELIMINARY STORM-SEWERSHED BOUNDARIES
- ❖ BASEMAP
- ❖ TMDLS HAVE ADDITIONAL MAPPING:
 - CONVEYANCE SYSTEMS
 - CULVERT CROSSINGS
 - STORMWATER STRUCTURES



MAPPING REQUIREMENTS

3 YEAR req. → 1/3/27

- ❖ PUBLICLY OWNED-OPERATED POST CONSTRUCTION SMPS
- ❖ MUNICIPAL FACILITIES
- ❖ MONITORING LOCATIONS
- ❖ FOCUS AREAS

- ❖ IMPAIRED HAVE ADDITIONAL MAPPING:
 - SEWERSHEDS OF MS4 AND ADA MS4 OUTFALLS
 - UPDATE OUTFALL INFO WITH:
 - i. RETAIL AND WHOLESALE NURSERIES
 - ii. COMMERCIAL LAWN CARE FACILITIES
 - iii. GOLF COURSES
 - ADA OUTFALLS

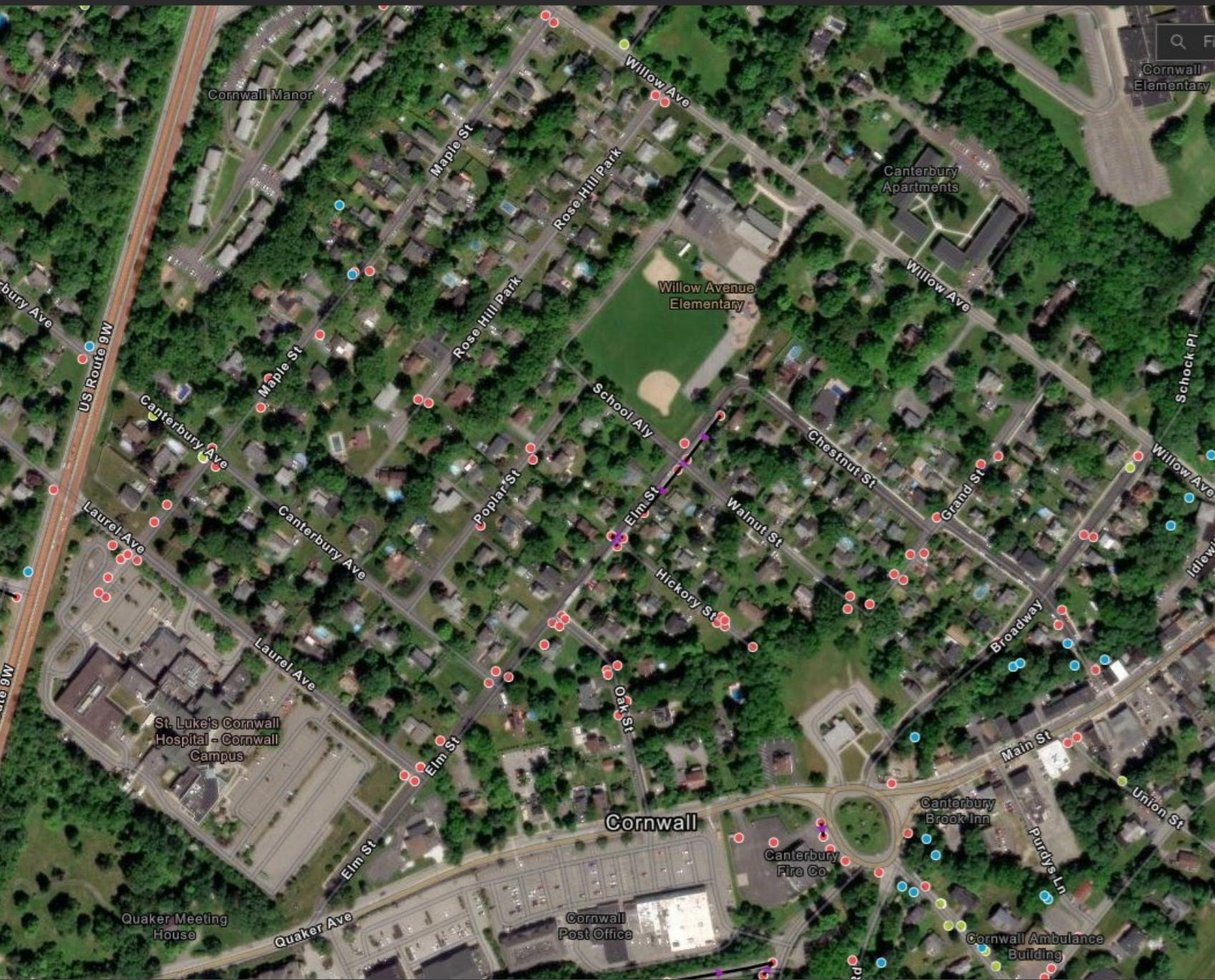
- ❖ TMDL HAS ADDITIONAL MAPPING:

- AREAS WITH POTENTIAL TO CONTRIBUTE PHOSPHORUS TO TMDL WATERBODY:
 - i. RETAIL AND WHOLESALE NURSERIES
 - ii. COMMERCIAL LAWN CARE FACILITIES
 - iii. GOLF COURSES
 - iv. COMMERCIAL OR INDUSTRIAL YARD WASTE STORAGE AREAS
- TYPE AND OWNERSHIP OF POST CONSTRUCTION SMPs

MAPPING REQUIREMENTS

5 YEAR req. → 1/3/29

- ❖ CONVEYANCE SYSTEMS
- ❖ STORMWATER STRUCTURES
- ❖ PRIVATELY OWNED-OPERATED POST CONSTRUCTION SMPS



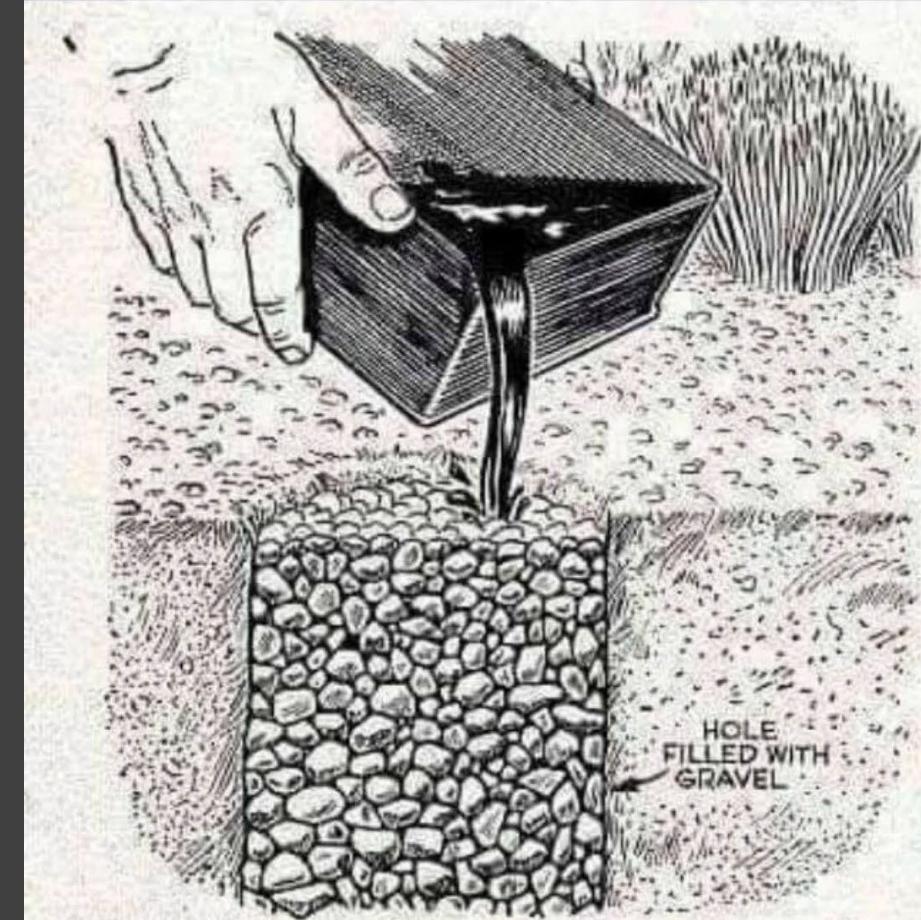


Firefighters battle a fire on Ohio's Cuyahoga River in 1952. The polluted river caught fire on several occasions between 1936 and 1969, when debris and oil had concentrated on the water's surface and ignited. A blaze in 1969 came at a time of increasing environmental awareness and symbolized years of environmental neglect. The Cuyahoga River fires helped spur grassroots activism that resulted in a wave of federal legislation devoted to taking serious action against air and water pollution.

PAST PRACTICES THAT ARE NOW ILLEGAL

Who remembers changing the oil in your car—or helping your dad do it—and then dumping the used oil onto the ground?

The thinking was: “Oil came from the ground, so lets just put it back where it came from.”



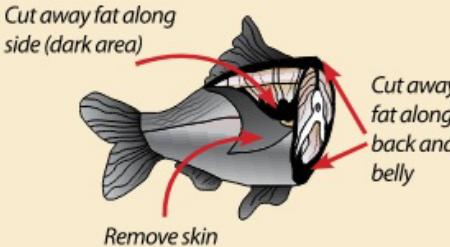
Disposing of used engine oil can be a problem. Solution: Dig a hole in the ground with a posthole digger and fill it with fine gravel. Then pour in the oil. It will be absorbed into the ground before your next change. Cover the spot with soil.

NYSDOH

Current guidelines on Hudson River Fish Consumption Who Should Eat It How Often

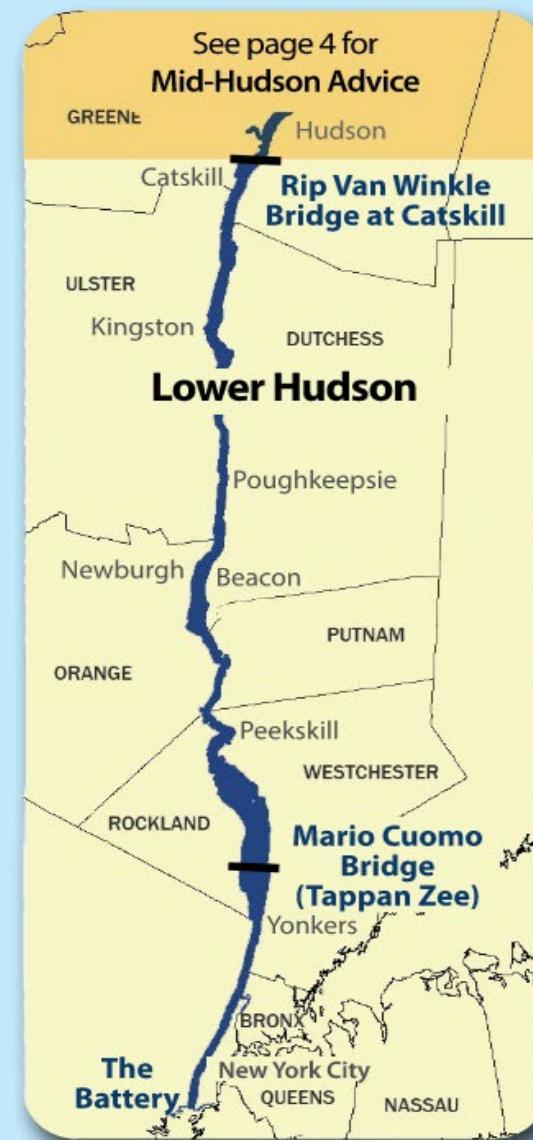
Due to Ongoing PCB Contamination from GE's Pre-1977 Dumping

Cut the Fat to Cut PCBs
Follow the advice below to reduce PCBs by nearly one half.



- After trimming as shown, broil, grill, or bake the fish on a rack so that fat drips away.
- Do not pan-fry the fish or use drippings to make stock or sauce.

Do not eat the "green stuff" (tomalley) in crabs or use the cooking liquid.



Lower Hudson		General Population	Sensitive Population
From Rip Van Winkle Bridge at Catskill to the NYC Battery			
Brown trout	Rainbow trout	Yellow perch	
Bluegill	Pumpkinseed/Sunfish	Black crappie	4 meals/month
White sucker	Rock bass	any fish not listed	0 DON'T EAT
Striped bass	Smallmouth bass	Largemouth bass	
Bluefish	Brown bullhead	White perch	1 meal/month
Goldfish	Carp	Freshwater drum	0 DON'T EAT
Chain pickerel	Atlantic needlefish	Northern pike	
Blue crab	Do not eat the tomalley ("green stuff," mustard, hepatopancreas) or reuse cooking water		6 crabs/week
Walleye	White catfish	Channel catfish	0 DON'T EAT
American eel*	Gizzard shad		0 DON'T EAT

*DEC regulations prohibit taking American eel for food from the Hudson River

The sensitive population refers to people who can become pregnant (under age 50) and children under 15. The general population refers to everyone else.

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL



EROSION AND SEDIMENT CONTROL

INSTALLED CORRECTLY



INSTALLED INCORRECTLY



EROSION AND SEDIMENT CONTROL

SEDIMENT TRAP



OVERWHELMED SILT FENCE



ARE THESE ILLICIT DISCHARGES?



Sediment



Cooking Oil



Irrigation Channels

ARE THESE ILLICIT DISCHARGES?



Car Wash Soap



Pool Water



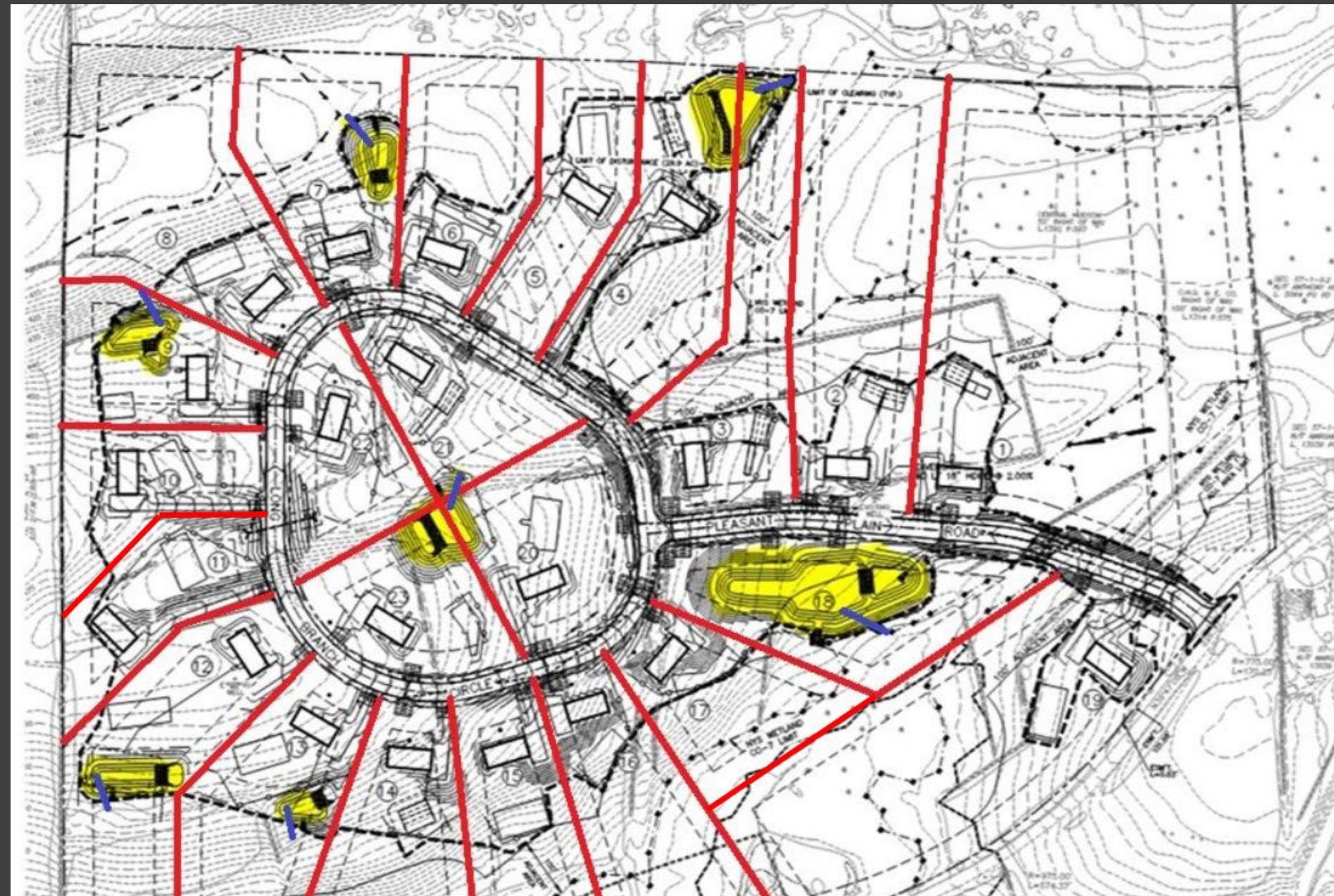
2008 – THERE ARE TWO
STORMWATER BASINS



2016 - ONLY ONE BASIN
REMAINS

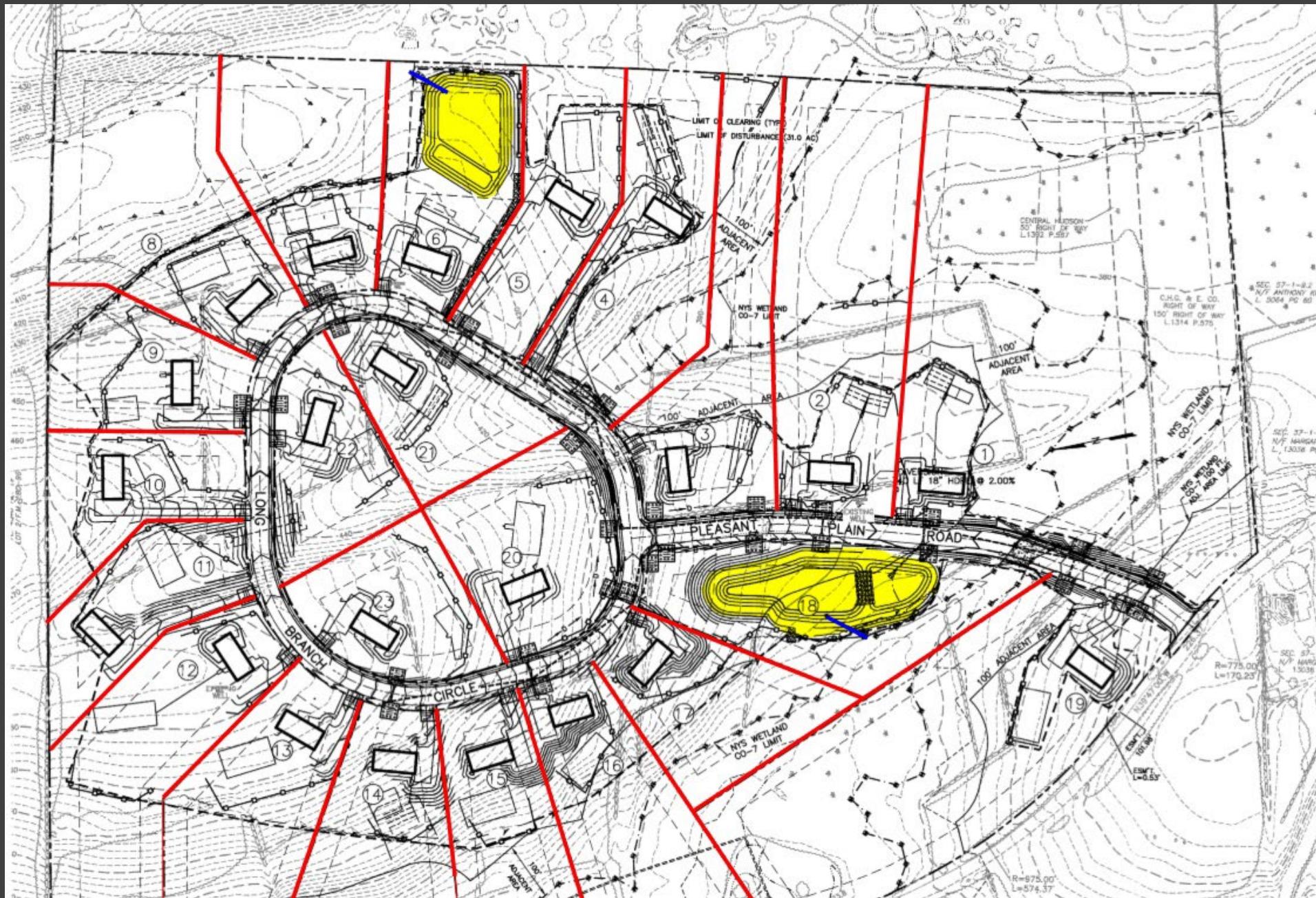
Recently Submitted Subdivision

What potential problems do you see with this layout?



Revised Subdivision

Benefits of working with developer & design engineer.



QUESTIONS



THANK YOU!

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