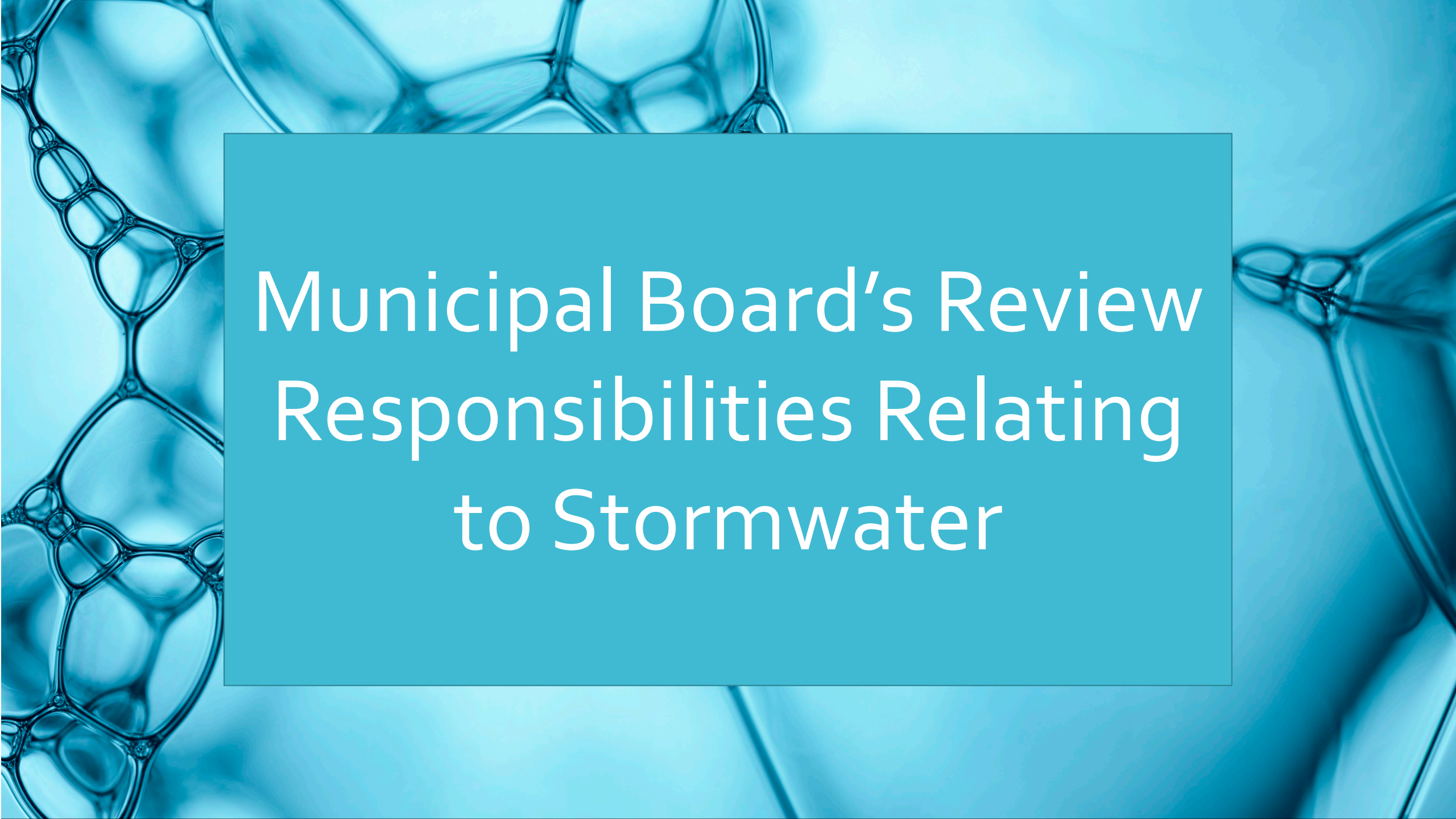


A background image showing a microscopic view of plant cells, likely from an onion skin, with clear cell walls and varying cell shapes. The image is tinted with a light blue color.

Municipal Board's Review Responsibilities Relating to Stormwater

Lindsay Buck, CPESC, CPMSM, CESSWI

Senior Town Planner, Stormwater Management Officer
Town of Stillwater

Floria Huizinga, NYSESCCP

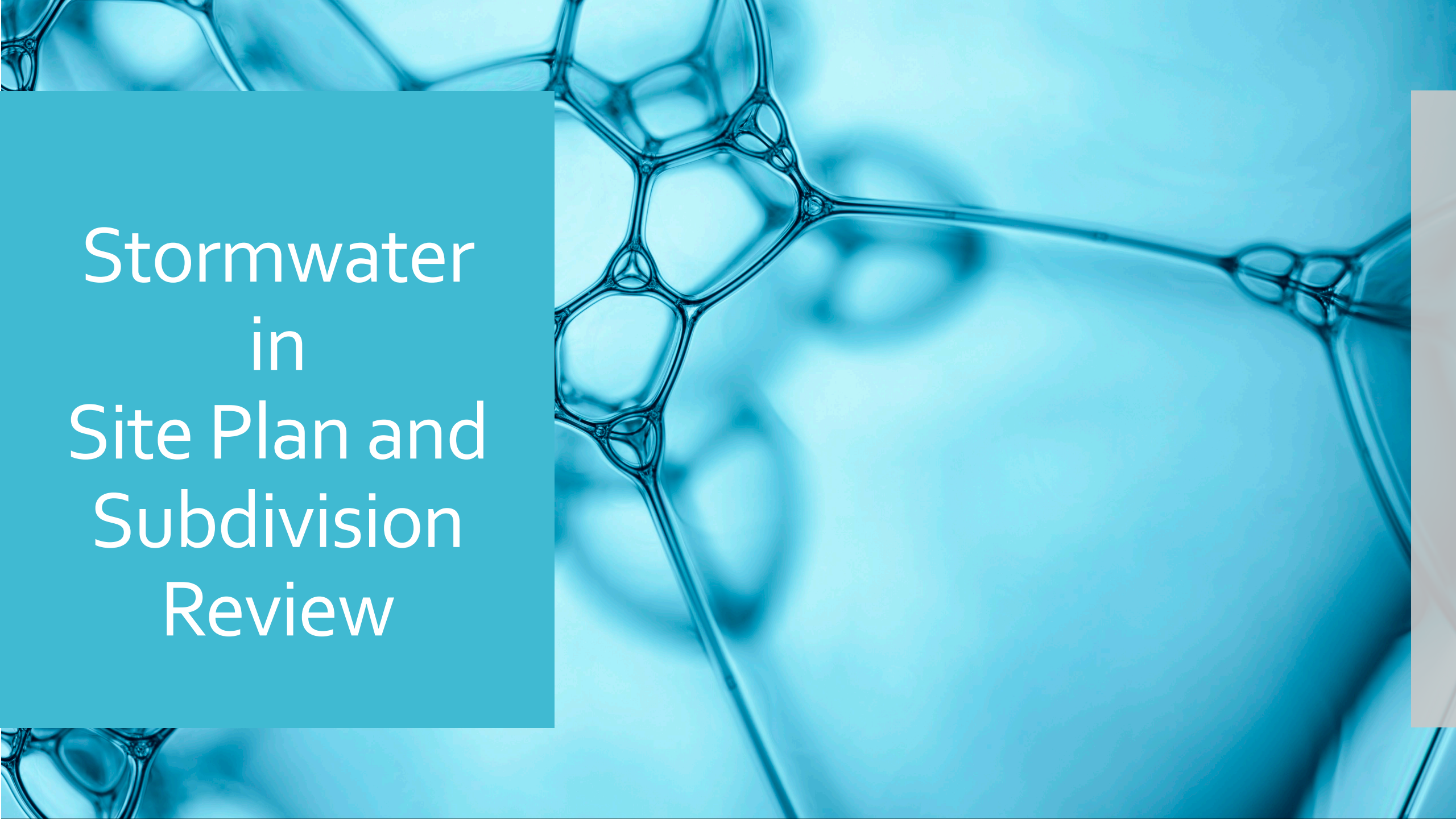
Senior Planner , Stormwater Management Officer
Town of Malta

Scott Reese

Zoning Administrator, Stormwater Management Officer
Town of Clifton Park

Course Outline

- I. Stormwater in Site Plan and Subdivision Review
- II. Role of Municipal Boards with Stormwater Review
- III. Maintenance Considerations
- IV. What To Expect With the New MS4 General Permit GP-0-24-001

The background of the slide is a light blue color with a complex, organic pattern of thin, dark blue lines that resemble the structure of soap bubbles or a network of veins. These lines form various sized polygons and irregular shapes, creating a textured, cellular appearance. The pattern is most prominent on the left side, where it overlaps with a darker blue rectangular area containing the text.

Stormwater in Site Plan and Subdivision Review

Municipal Separate Storm Sewer Systems

MS4s

The Municipal Separate Storm Sewer System Permit (MS4s)

- ❖ Issued by the NYS Department of Environmental Conservation and required for all municipalities
- ❖ Required for municipalities that contain “urbanized areas” defined as having a population density of 1,000 people per square mile
- ❖ While only required to cover the urbanized area, the NYSDEC encourages all covered entities to extend to their programs to cover the full municipal boundary

Stormwater Local Laws



All MS4s required to adopt Stormwater Local Laws

Two topics:

- ❖ **Illicit Discharges**

- ❖ Pollutants, failed septic systems, etc.

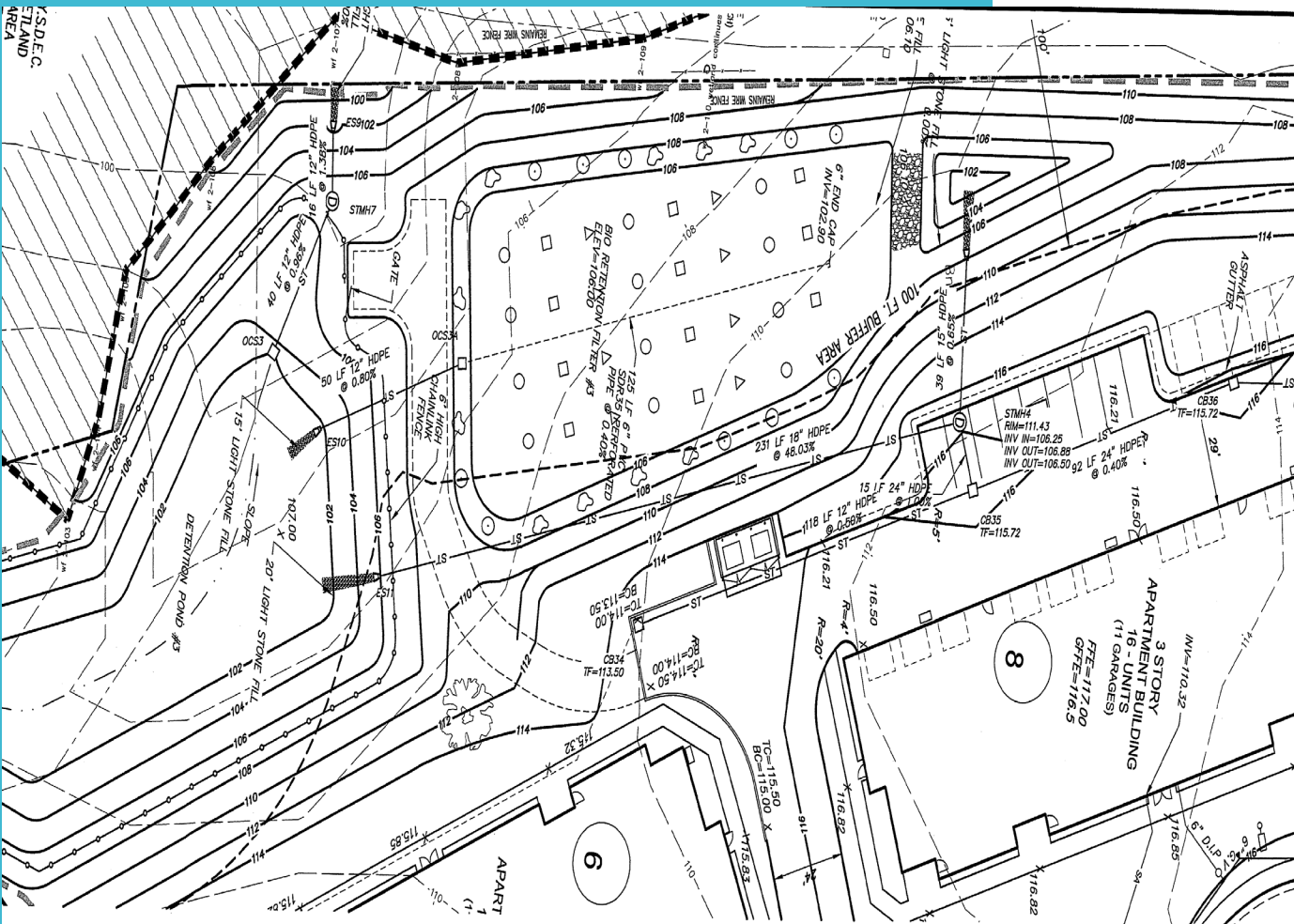
- ❖ **Erosion and Sediment Control**

- ❖ Sedimentation and erosion relating to land disturbance activities

- ❖ Purpose is to minimize increases in pollution caused by stormwater runoff

- ❖ Minimum Control Measures 4 and 5
Construction Site Runoff and Post Construction Control

...this is where you come in!



POND #3
SCALE: 1" = 30'

Roles of Town Designated Engineers and Stormwater Program Coordinators

- ❖ Most municipalities utilize the services of an engineer for technical assistance relating to site plan and subdivision review.
- ❖ All MS4s are required to designate a Stormwater Program Coordinator as adopted in the local law.
- ❖ The municipality may rely on either or both for review of proposed plans
- ❖ SWPPPs (Stormwater Pollution Prevention Plans) are required for all projects that disturbs 1-acre or more. MS4s may reduce the area of disturbance requirement to areas under an acre.

Two Major Components of a SWPPP

Erosion and Sediment Control Plans

- ❖ Temporary practices to be implemented during the construction phase of a project that will control and reduce runoff.
 - ❖ May be required for any size development.

Post-Construction Practices

- ❖ Permanent practices that capture, treat, and release stormwater.
 - ❖ Required for all projects disturbing 1-acre or more.

Erosion and Sediment Control

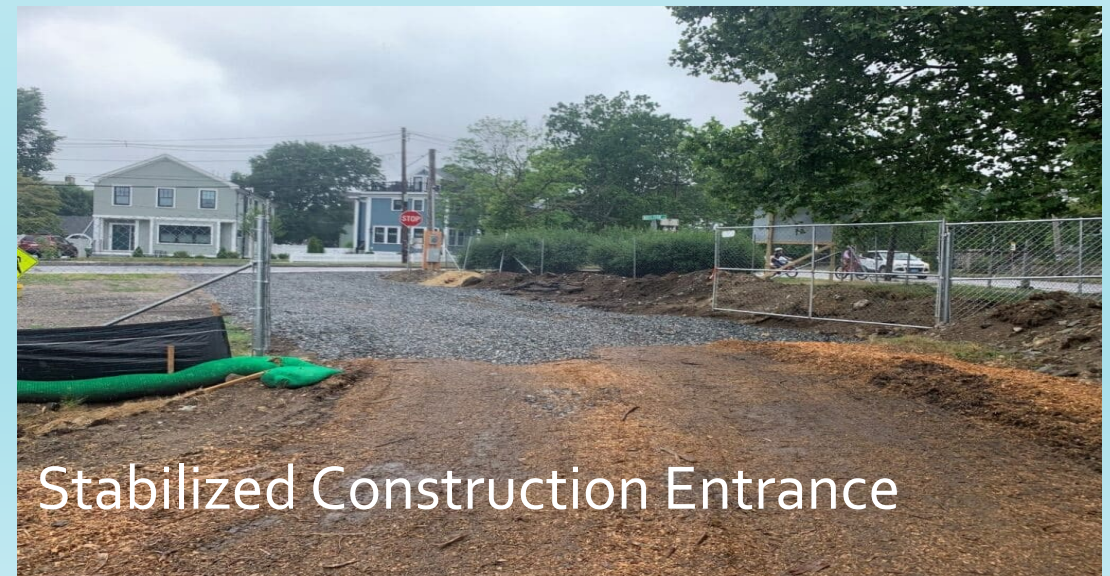
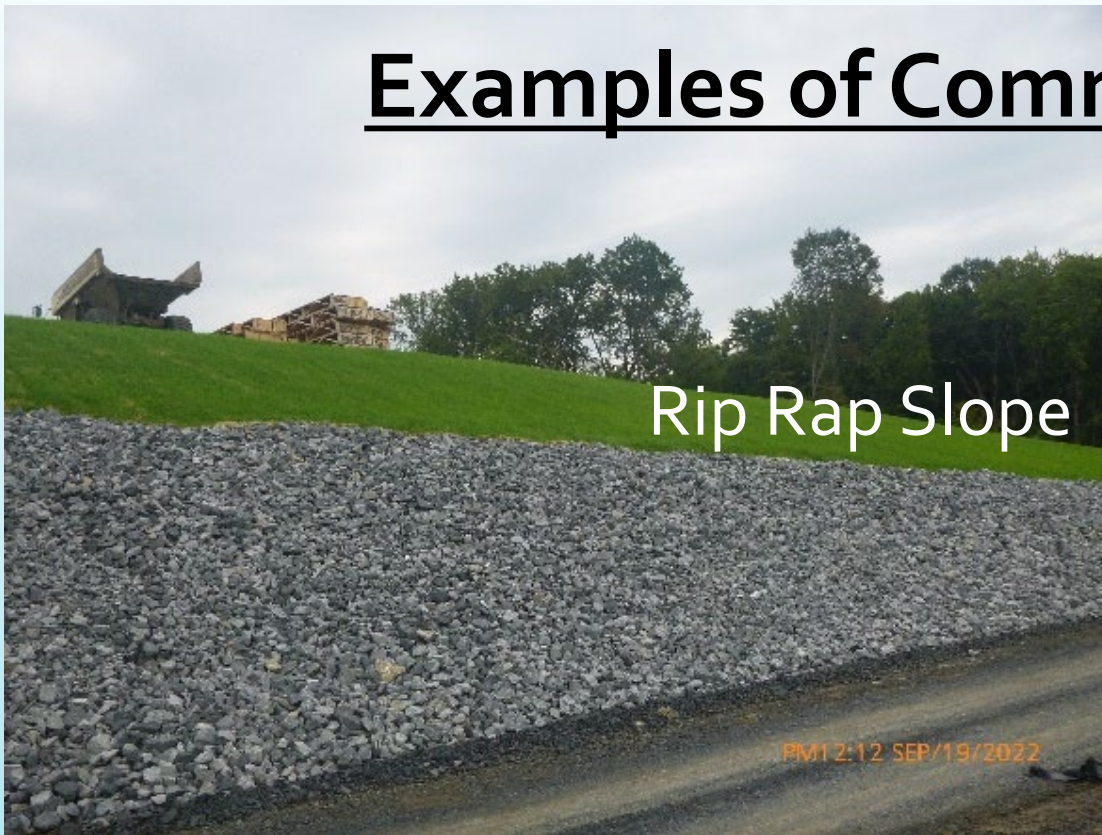
Consider Existing and Proposed Site Conditions

Consider:

- ❖ Slopes
- ❖ Proximity to waterbodies
- ❖ Lakes, rivers, streams
- ❖ Size of area to be cleared and quantity of water to be treated
- ❖ Grading required for development
- ❖ Other natural or historic resources
- ❖ Viewshed

The “Blue Book” also known as NYS Standards and Specifications for Erosion and Sediment Control provides design criteria for ES&C Practices.

Examples of Common ES&C Practices



What
happens
when
they
fail?







Post-Construction Practices

Types of Practices

Stormwater ponds

- ❖ Extended detention

Stormwater wetlands

- ❖ Wetland system that provides water quality treatment

Infiltration practices

- ❖ Stores water volume prior to infiltration

Filtering practices

- ❖ Treats stormwater by filtering out larger particles and sediment

Open channel practices

- ❖ Open drainage designed to detain or intercept stormwater and promote filtration

The NYS Stormwater Management Design Manual (2024) provides guidance for the design of Stormwater Management Practices



Vegetated Swale

When it
works



Stormwater Infiltration
Basin

Porous Pavement



Single-Family
Rain Garden

When It Doesn't



Overgrown and not maintained.
Cannot see perimeter, access, or
capacity

Not landscaped or visually
appealing. Capacity appears
compromised.



❖ Reduce Impacts

- ❖ Preservation of undisturbed areas
- ❖ Preserve buffers
- ❖ Reduce clearing and grading when possible
- ❖ Increase the number of trees

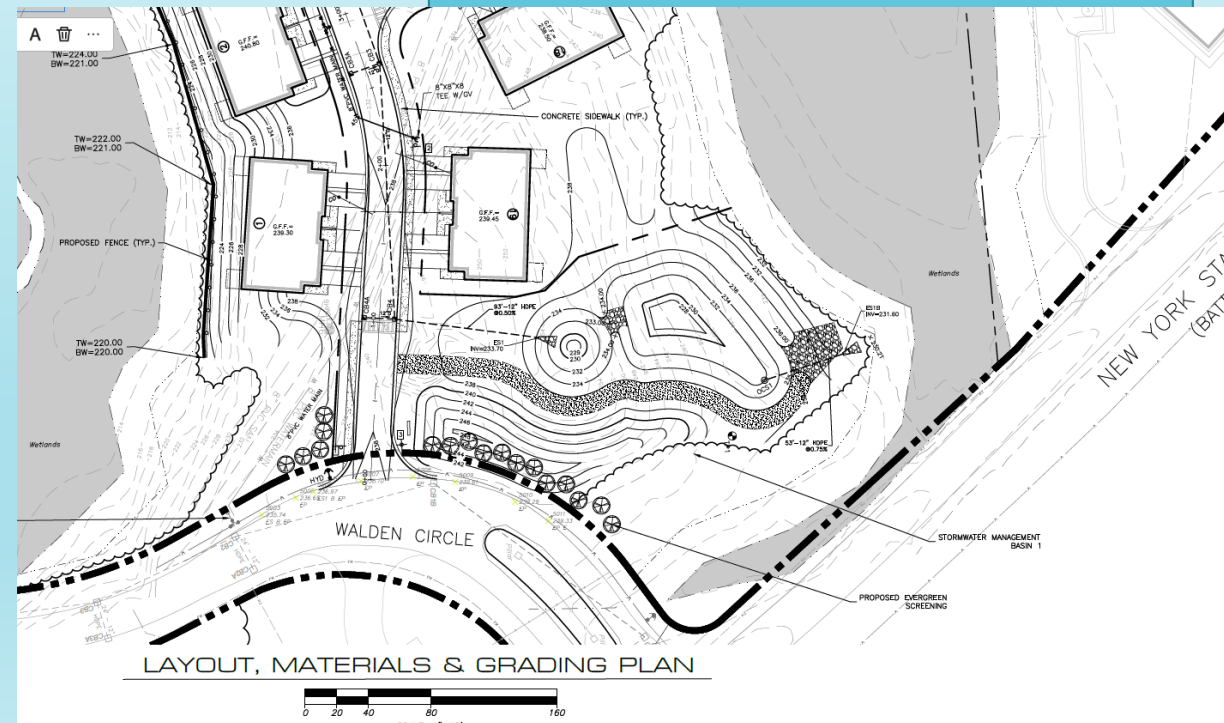
❖ Reduce new impervious surfaces

- ❖ Roadways, cul de sacs, parking
- ❖ Building footprints

❖ Consider infiltration practices when practical

- ❖ Raingardens
- ❖ Porous pavement
- ❖ Stormwater planters
- ❖ Green Roofs

What
should you
consider?



Location Is Key!



**Residential
Subdivisions and
Residential
PDDs/PUDs
vs
Commercial Site
Plans and
Commercial
PDDs/PUDs**

Consider funding for future maintenance costs and entities

Residential Subdivisions and Residential PDDs/PUDs

- ❖ **HOA(s) Require Maintenance Agreement**
- ❖ **Drainage Districts (Local Law)**
- ❖ **Dedication to the municipality**

Commercial Site Plans and Commercial PDDs/PUDs

- ❖ **Usually privately owned**
- ❖ **Requires Maintenance Agreement**

Phasing

- ❖ Be sure that Plats contain clear and concise delineation of each phase for a project.
- ❖ Disturbance at each phase must remain under 5-acres at all times.
- ❖ Carefully consider any requests for a greater than 5-acre disturbance.
- ❖ Consider the length of time of each phase. Some projects are developed over many years and existing and surrounding site conditions may need to be reviewed.
- ❖ Phases can be sold! NOIs (Notices of Intent) are required to be updated when a project changes owners
- ❖ If your municipality allows Site Plan Renewals, SWPPPs may need to be updated

**Document
Everything
!!!!!!!!!!!!**

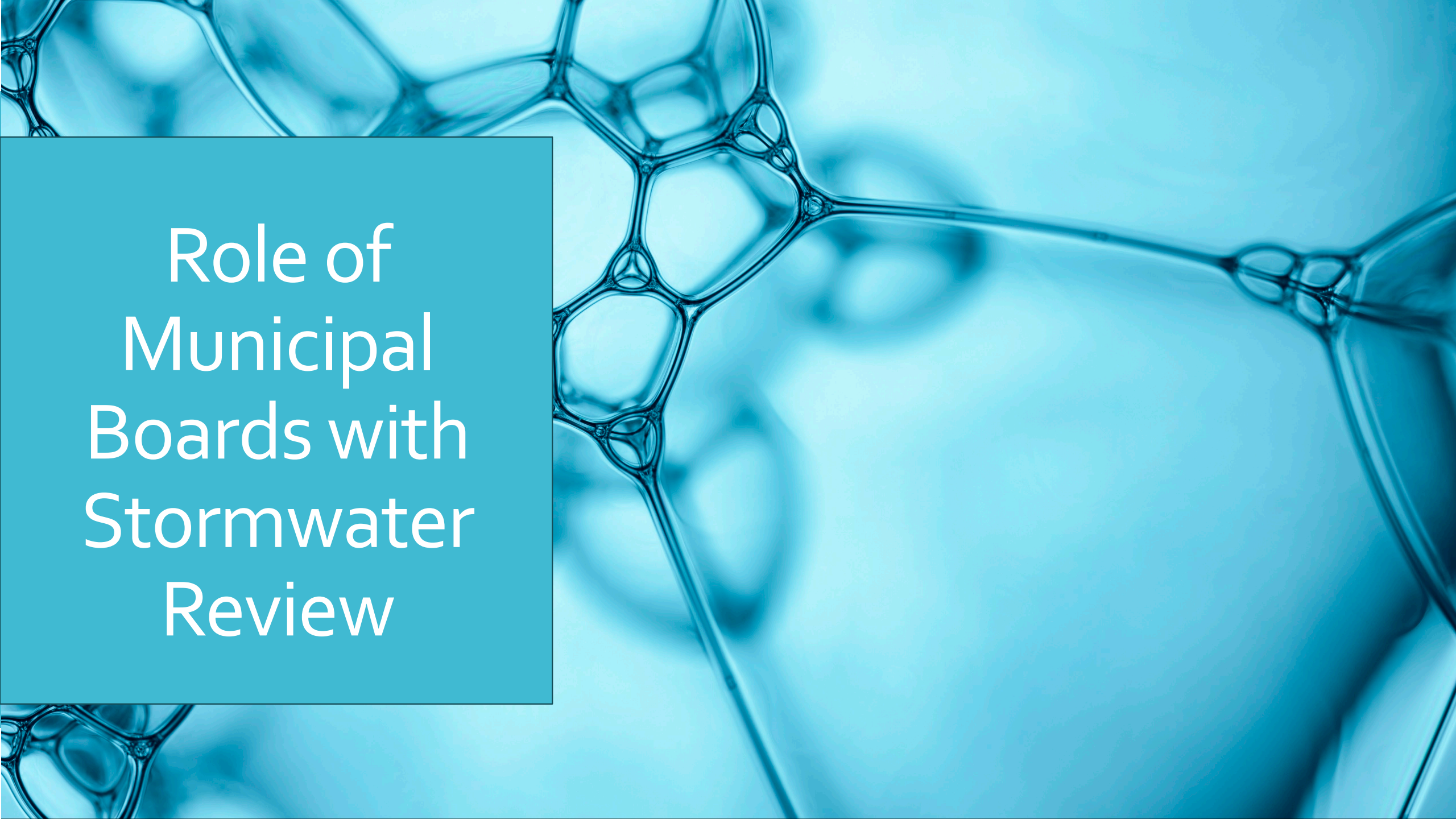
Resolutions with conditions such as:

“Conditioned on all comments in the Town Designated Engineers dated review letter” are not sufficient!

- ❖ Be sure to incorporate all final changes and conditions to the approved Site Plan and Subdivision Plats on the signed plats
- ❖ Use notes on the final plats to memorialize items like conditions placed at final approval, maintenance agreements, and requirements and timelines for the development of drainage districts



Know Your Developer

The background of the slide features a close-up, macro shot of water bubbles, creating a complex, interconnected network of thin, translucent lines and larger, rounded shapes. The color palette is dominated by various shades of blue, from light, airy tones to deeper, more saturated blues. Overlaid on the left side of this background is a solid teal-colored rectangle. Inside this rectangle, the title text is displayed in a clean, white, sans-serif font, arranged in five lines.

Role of Municipal Boards with Stormwater Review

Are you involved in Stormwater?

Local Government Agencies directly involved in stormwater management

- ❖ Building Department, Attorney, Environmental Committees, Engineering Departments, Highway Departments, Buildings and Grounds Departments, Public Works, Sewer Departments, County Soil and Water Conservation Districts.

Local Personnel whose duties include or relate to stormwater management

- ❖ Environmental Planners, County Planners, Financial Officers, Enforcement Personnel, Code Enforcers, Building Inspectors, Public Health Officers, Public Outreach Personnel, Site Plan Reviewers.

Municipal Governing Boards with roles promoting stormwater management

- ❖ Elected Officials, Zoning Board of Appeals and Planning Board Members.

Municipal Governing Boards Roles Regarding Stormwater Review

- 1. The proposed Stormwater Management Area (SMA) shall not be detrimental to the natural characteristics of the site or adjacent land uses.**
- 2. Will the SMA function singly and cumulatively and conform to accepted design principals?**
 - ❖ What are they and how to find them?
 - ❖ What do I need to know?
 - ❖ Examples
 - ❖ How does this apply to my role?

The proposed SMA shall not be detrimental to the natural characteristics of the site or adjacent land uses.

What are the natural characteristics to be aware of?

- ❖ Protected waterbodies
- ❖ Flood Zones
- ❖ Wetlands
- ❖ Zoning Overlay or Special Districts?

What do I need to know?

- ❖ Short & Long Environmental Assessment Form Review

How can I apply this to my role?

- ❖ Make sure it is on the plans.
- ❖ Does the project have to many conditions of approval?
- ❖ What happens if it is not on the plans?

What are the available Community Resources?

What are the available Community Resources ?

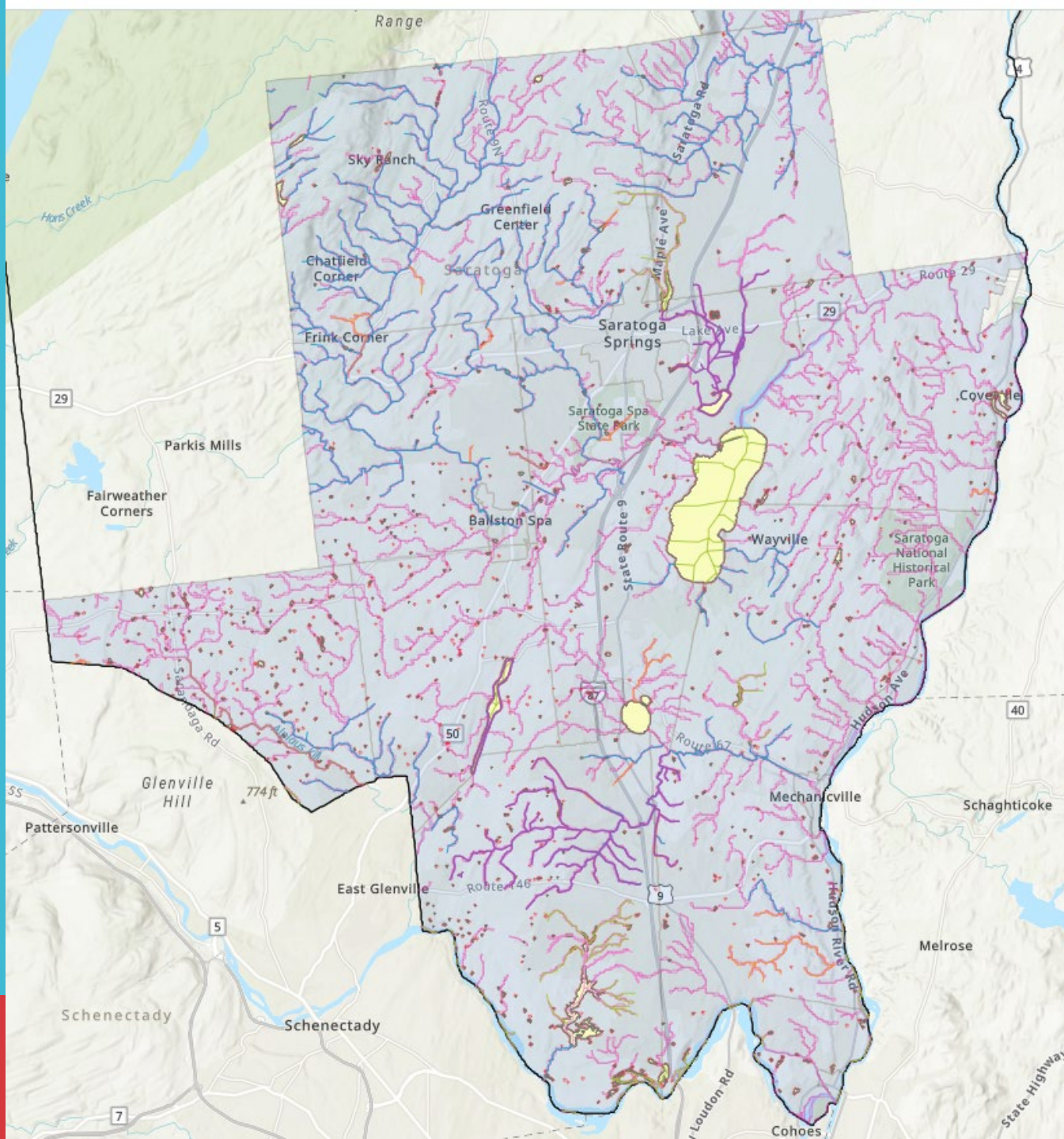
- ❖ Has your municipality prepared a natural resource inventory?
- ❖ Does your municipality have a citizen participation program?
- ❖ Does your municipality have a Comprehensive Plan or Master Plan?
- ❖ Does the plan assess and provide for stormwater needs?

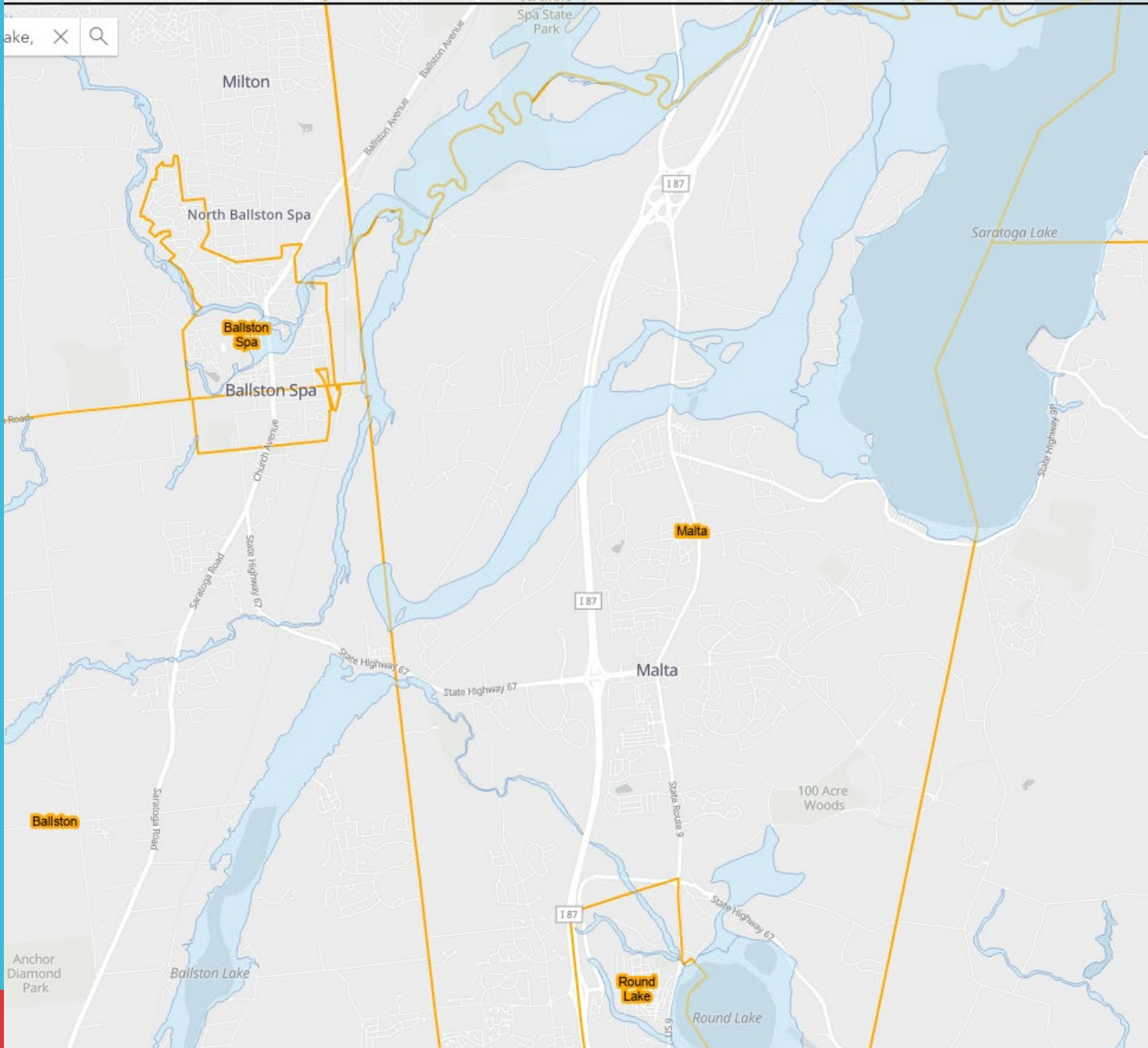
What are the available Outside Resources ?

- ❖ New York State Standards and Specifications for Erosion and Sediment Control.
https://extapps.dec.ny.gov/fs/docs/pdf/erosionsediment_bluebook.pdf
- ❖ United States Department of Agriculture Natural Resources Conservation Service – Web Soil Survey <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- ❖ Historic Aerials by Netronline - <https://www.historicaerials.com/viewer#>

Southern Saratoga County Construction Priority Waterbodies

- ❖ Stream Segments applicable to the GP-0-24-001
- ❖ Impaired Segments and Waterbodies applicable to GP-0-24-001.
- ❖ Lakes and Ponds with 100 Linear Foot Buffer
- ❖ Rivers and Streams with 50 Linear Foot Buffers.
- ❖ Every Town has them!





Saratoga County Flood Plains

- ❖ To prevent flood damage, most New York communities, urban and rural, have adopted local laws regulating the effects of development on the conveyance of runoff through areas of special flood hazard (as defined on the community's Flood Insurance Rate Map)

Municipal Roles Regarding Stormwater Review

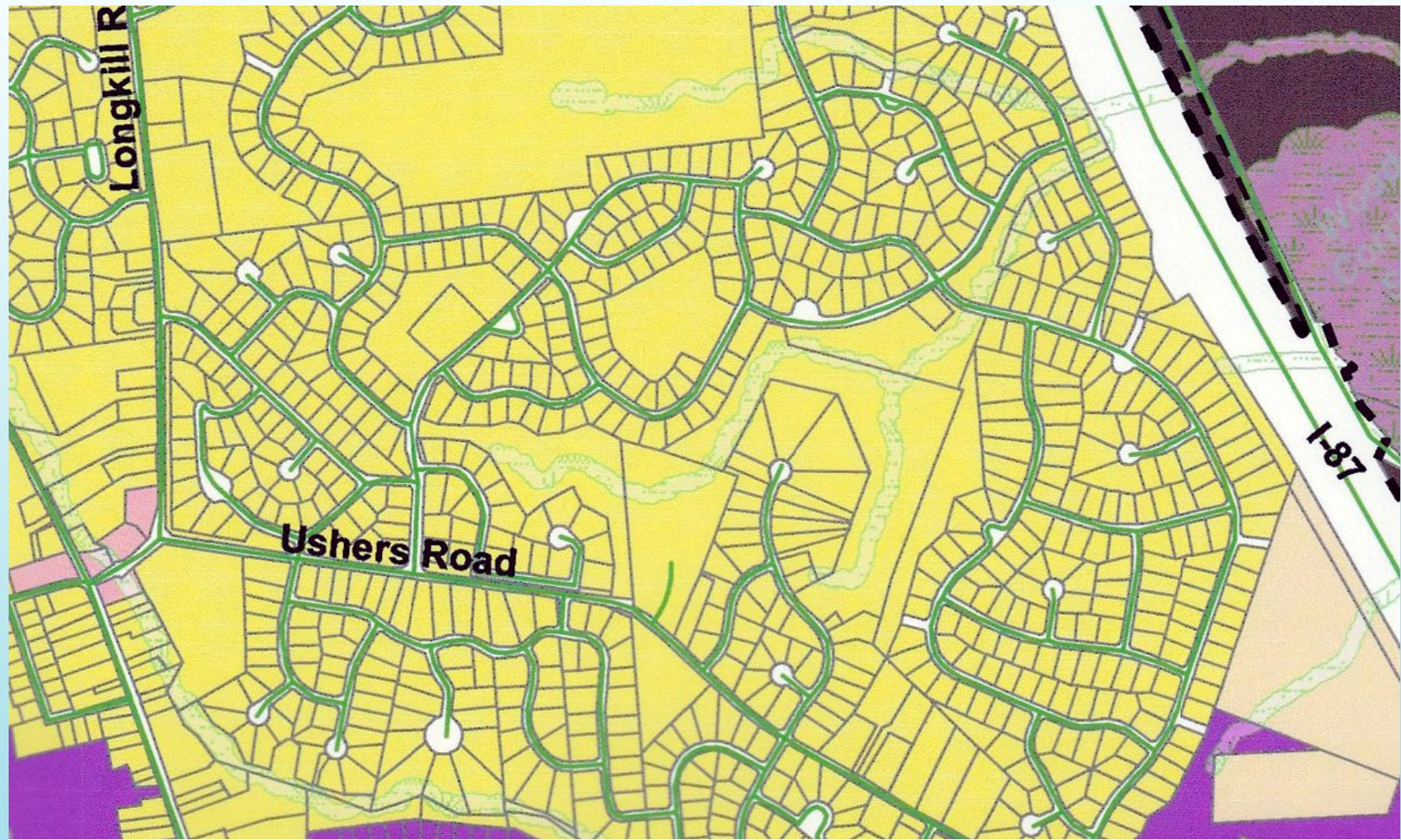
What role do Zoning Board Members have regarding Stormwater Review.

- ❖ Area Variances can impact the amount of greenspace available for stormwater management control
- ❖ Area Variances for building setbacks can have roof runoff directed onto neighboring properties.
- ❖ Area variances for parking reduction / impervious reduction can improve Green Infrastructure Practices.

Examples:
Development
Next to
Protected
Streams



Examples: Development Next to Protected Streams



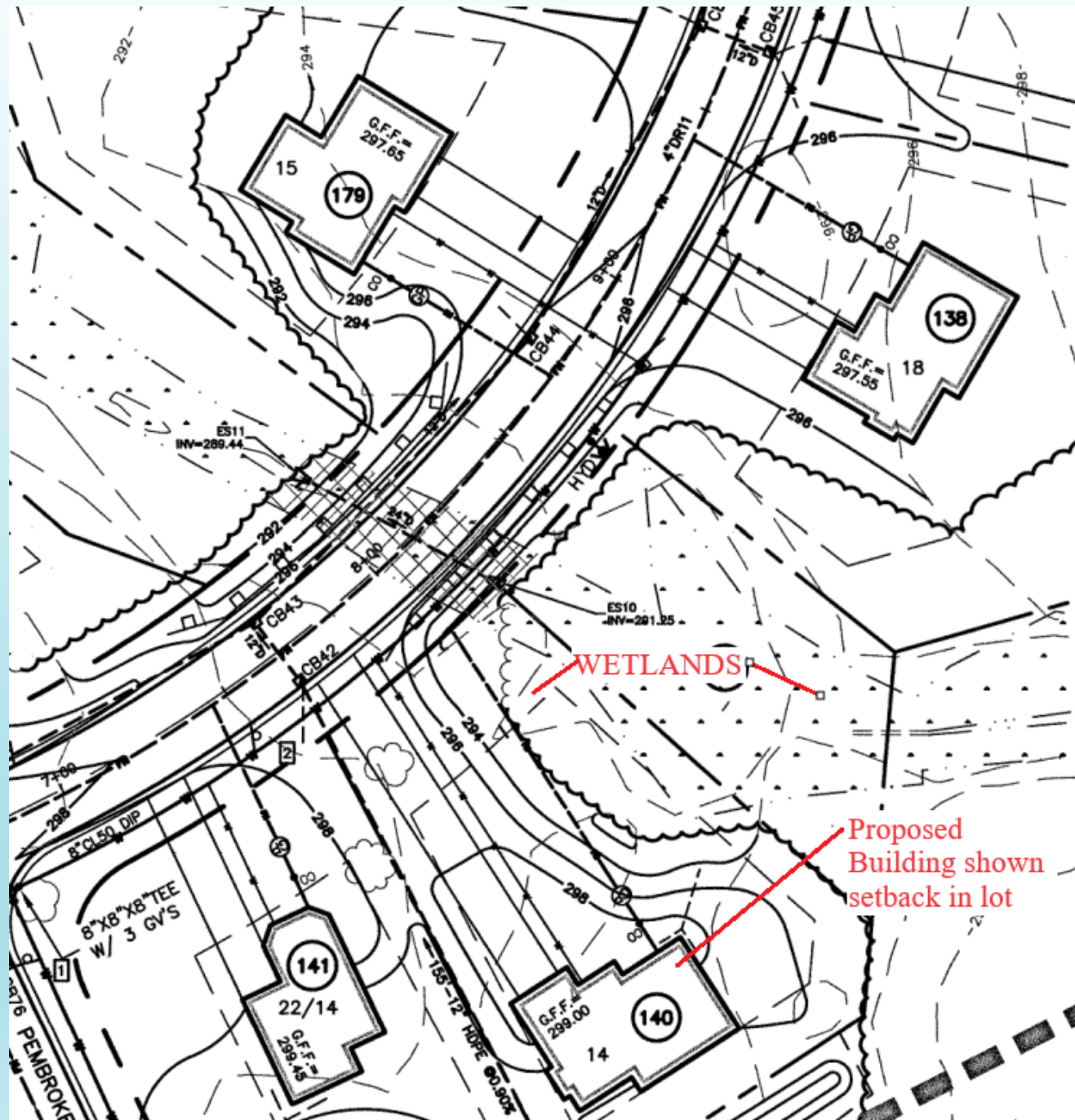
A. The locations and boundaries shall be as follows:

- (1) Freshwater wetlands. The L-C boundaries associated with wetlands consist of those freshwater wetlands inventoried and mapped by the New York State Department of Environmental Conservation pursuant to Article 24 of the Environmental Conservation Law and the one-hundred-foot adjacent area measured horizontally from the border of the wetland.
- (2) Stream. Classified streams located in the Town of Clifton Park that have been indexed and/or mapped by the New York State Department of Environmental Conservation, and a fifty-foot adjacent area (buffer) on each side of the outer bank of the high-water mark, except that:

Examples: Development Next to Wetlands



Examples: Development Next to Wetlands



Examples: Development Next to Wetlands



Examples: Development Next to Wetlands



Examples: Development Next to Wetlands

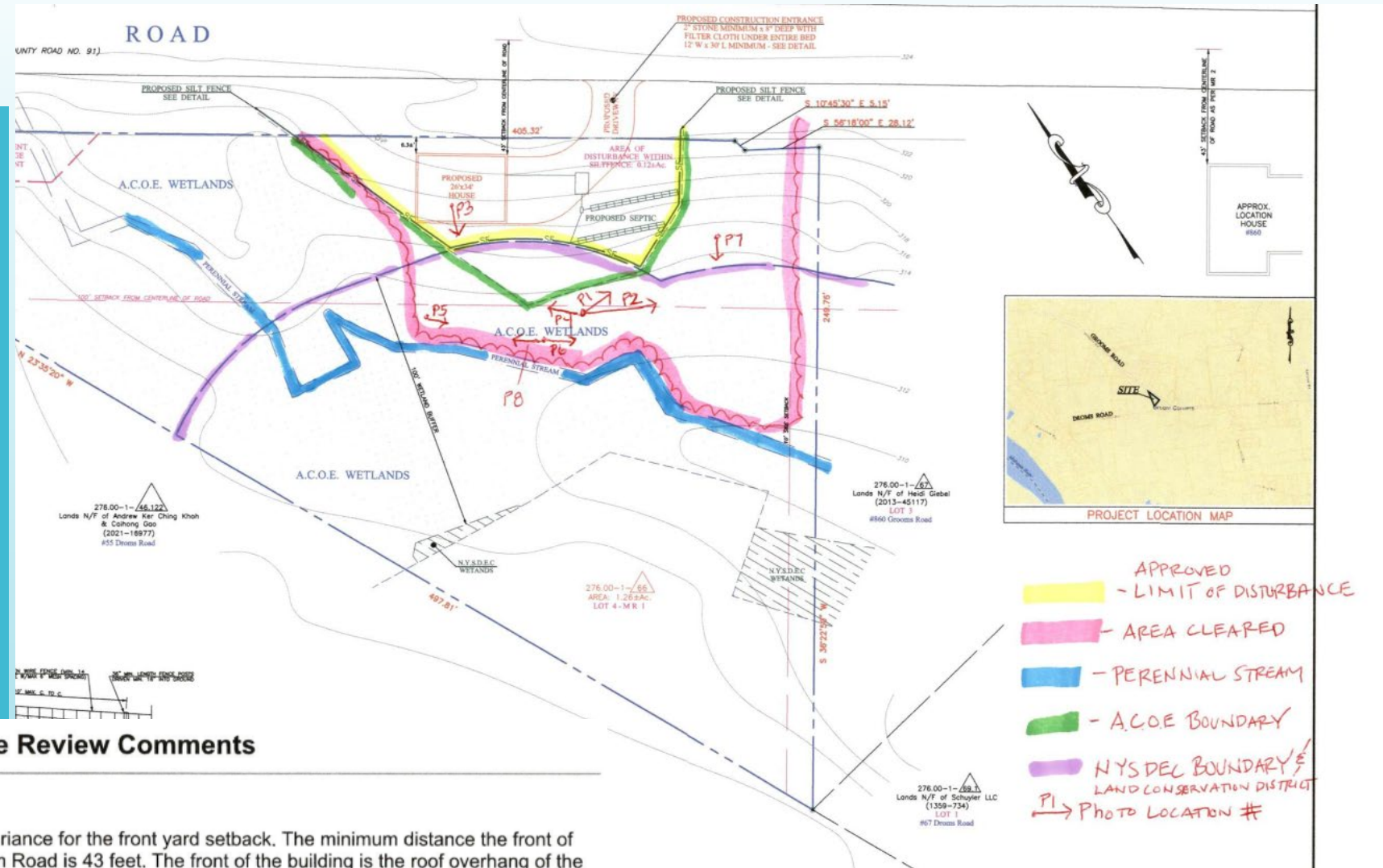


Wetland protection fence shall be installed along the perimeter of wetlands prior to the start of construction.

PARTICULAR MEASURES:

1. IMMEDIATELY FOLLOWING COMPLETION OF ANY AND ALL OF THE PROPOSED STORM DRAIN INLETS, STORM DRAIN INLET PROTECTION SHALL BE CONSTRUCTED.
2. DRAINAGE DITCH SEDIMENT FILTERS: UNTIL SUCH TIME AS FINAL SITE STABILIZATION IS COMPLETED, DITCHES SHALL RECEIVE TREATMENT WITH STONE CHECK DAMS SO AS TO EFFECTIVELY TRAP SEDIMENT AND MINIMIZE ITS RELEASE OFF-SITE. STONE CHECK DAMS SHALL BE CONSTRUCTED WITHIN EACH DITCH BEGINNING AT ITS DOWNSTREAM TERMINUS AND SHOULD NOT BE PLACED AT INTERVALS EXCEEDING 20 FEET.
3. TOPSOIL AND FILL THAT IS TO REMAIN STOCKPILED ON-SITE FOR PERIODS GREATER THAN 14-DAYS SHALL BE STABILIZED BY SEEDING AND MULCHING. PROVIDE SILT FENCE EROSION CONTROL DOWNGRADIENT OF SOIL STOCKPILE AREA.
4. IN NO CASE SHALL ERODIBLE MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM, OR OTHER SURFACE WATER BODY.
5. PERMANENT VEGETATIVE COVER: IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SOILS.
6. ALL HEALTHY TREES OF DESIRABLE SPECIES ARE TO BE PROTECTED FROM DAMAGE. ALL UNNECESSARY REMOVAL OF HEALTHY TREES SHALL BE AVOIDED.
7. THE CONTRACTOR IS TO ADHERE TO ALL REQUIREMENTS SET FORTH IN THE SWPPP.
8. WETLAND PROTECTION FENCE SHALL BE INSTALLED ALONG THE PERIMETER OF WETLANDS PRIOR TO THE START OF CONSTRUCTION.

Examples: Development Next to Wetlands



Variance Review Comments

1. Unresolved: This parcel was given an area variance for the front yard setback. The minimum distance the front of the building can be to the center line of Groom Road is 43 feet. The front of the building is the roof overhang of the second floor. Please updated the site plan to show that the roof overhang of the second floor meets the approved front yard setback.
2. Unresolved: Since the architectural drawings show a walkout basement and the site being very constrained, an accurate grading plan shall be provided for all the proposed site work, including stockpile locations. Protection of the area of the proposed septic field will need to be provided during construction.
3. Unresolved: Prior to issuing a building permit the silt fence shall be located and certified by a surveyor that it is located outside of the adjacent ACOE Wetlands and 100 foot NYSDEC Adjacent Area.
4. Unresolved: There are utility lines and utility poles traversing the front property line, verify if there are any utility easements that should be located. There may be minimum setbacks from power lines that should be shown on the site plan.

Wetland protection fence shall be installed along the perimeter of wetlands prior to the start of construction.

Examples: Development Next to Wetlands



Photo #1



Photo #3



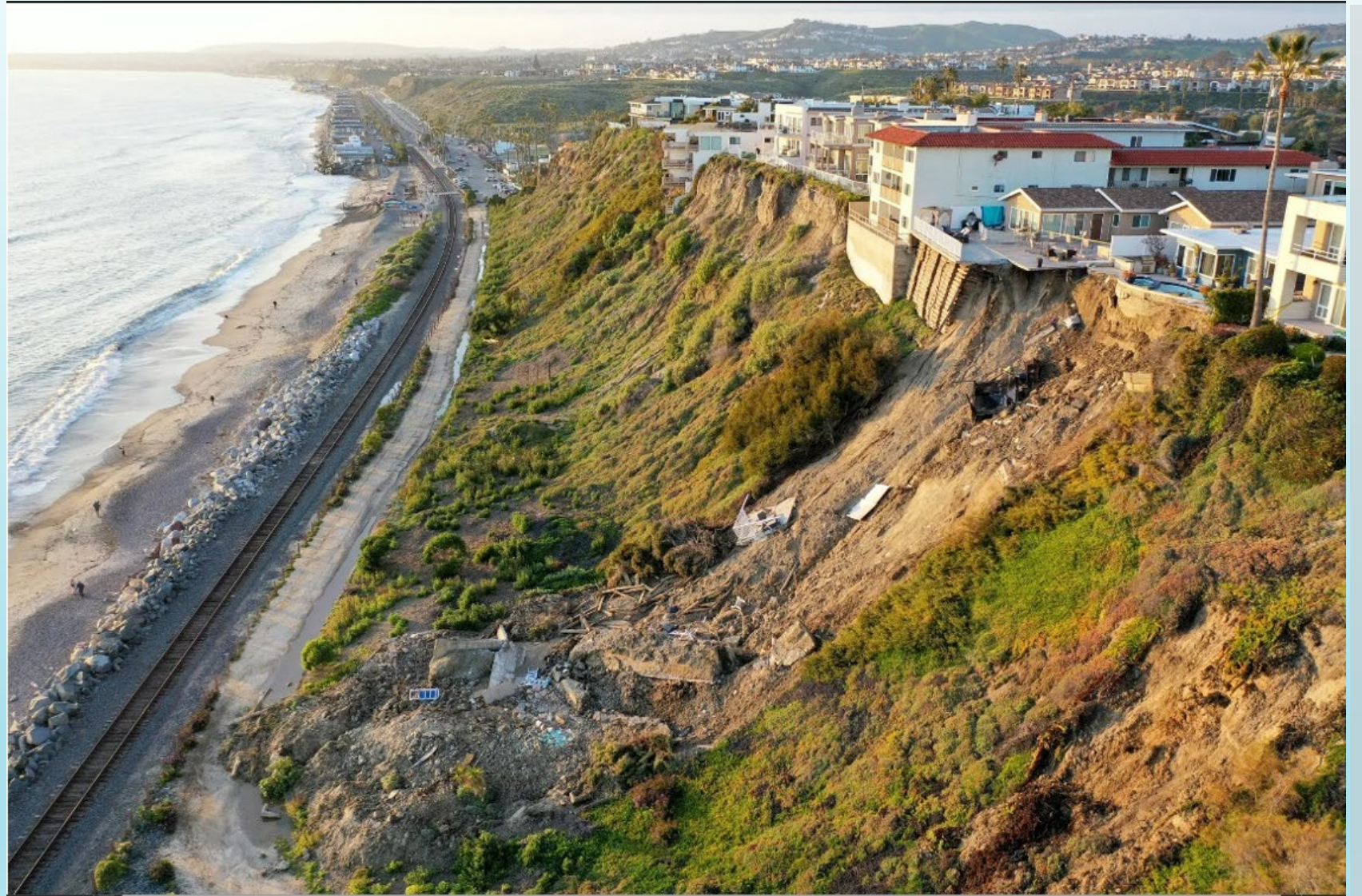
Photo #2



Photo #4



Examples: Development Next to Steep Slopes



Examples:
Will this
impact natural
features?



Examples:
Will this
impact natural
features?



Examples:
Will this
impact natural
features?



Phasing Plans



5. Is the proposed action,	NO	YES	N/A
a. <u>A permitted use under the zoning regulations?</u>	☐	☐	☐
b. <u>Consistent with the adopted comprehensive plan?</u>	☐	☐	☐
6. <u>Is the proposed action consistent with the predominant character of the existing built or natural landscape?</u>	NO	YES	
	☐	☐	
13. a. <u>Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?</u>	NO	YES	
	☐	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☐	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres:			
16. <u>Is the project site located in the 100-year flood plan?</u>	NO	YES	
	☐	☐	
17. <u>Will the proposed action create storm water discharge, either from point or non-point sources?</u>	NO	YES	
If Yes,	☐	☐	
a. Will storm water discharges flow to adjacent properties?	☐	☐	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☐	☐	
If Yes, briefly describe:			
18. <u>Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?</u>	NO	YES	
If Yes, explain the purpose and size of the impoundment:	☐	☐	

How can I apply this to my role?

Environmental Assessment Form Review

❖ SEQR requires all local, regional, and state government agencies to equally examine the environmental impacts along with the social and economic considerations for a certain project, or *action*, during their discretionary review. Agencies must follow the multi-step SEQR Decision Process, which requires them to assess the environmental significance of all actions they have the power to approve, fund, or directly assume.

❖ NYSDEC Environmental Resource Mapper

<https://gisservices.dec.ny.gov/gis/erm/>

Will the SMA function singly and cumulatively and conform to accepted design principals?

What are they and what does it mean?

- ❖ Stormwater Management Design Manual (July 31, 2024) 522 pages!
- ❖ Most municipalities have assistance with technical review by Town Designated Engineers
 - ❖ But don't rely solely on them. - Conditional Approvals – Make sure it is on the plans.

What do I need to know?

- ❖ Will this affect aesthetics?
- ❖ Will this impact neighbors?
- ❖ Will this cut off surface water to environmental protected areas?

What are the available Community Resources ?

- ❖ Has your municipality prepared an inventory of all the stormwater infrastructure?
- ❖ Has your municipality prepared an inventory of all the stormwater management areas?
- ❖ Has your municipality prepared an inventory of all the discharge locations to critical areas of Municipal Boundaries, Protected waterbodies, Flood Zones?



Department of
Environmental
Conservation

STORMWATER MANAGEMENT DESIGN MANUAL

July 31, 2024

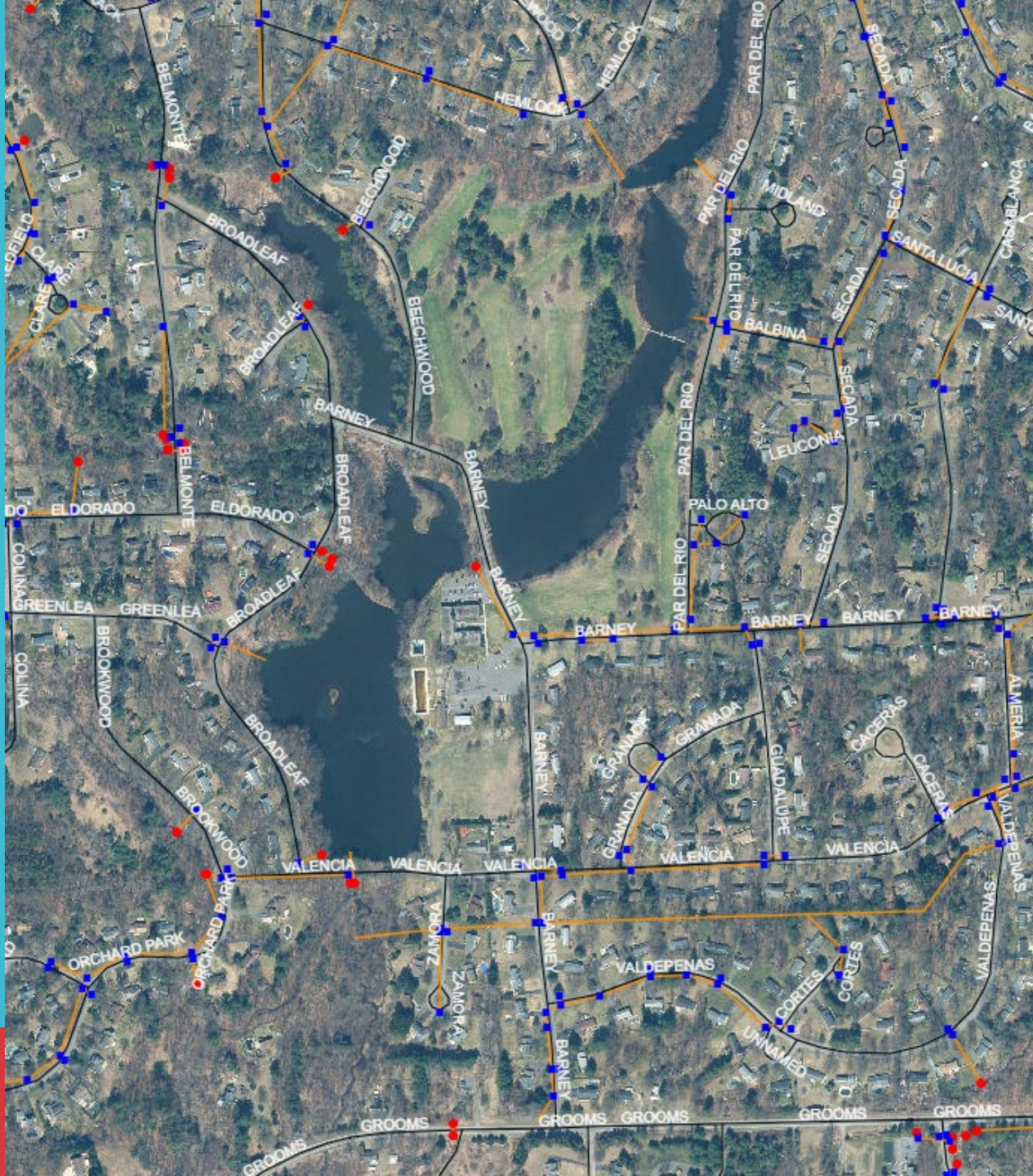


Kathy Hochul, Governor

Sean Mahar, Interim Commissioner

NYSDEC Stormwater Management Design Manual

- ❖ The 2024 Design Manual includes new Stormwater Management Practices (SMPs), clarifies calculations for designing SMPs, provides enhanced guidance for implementing several SMPs, updates precipitation data criteria, improves document organization, provides enhanced guidance for addressing pollutants of concern, adds green infrastructure SMPs for poor site conditions, and provides guidance on addressing climate change.
- ❖ https://dec.ny.gov/environmental-protection/water/water-quality/stormwater/construction-stormwater-toolbox#Design_Manual

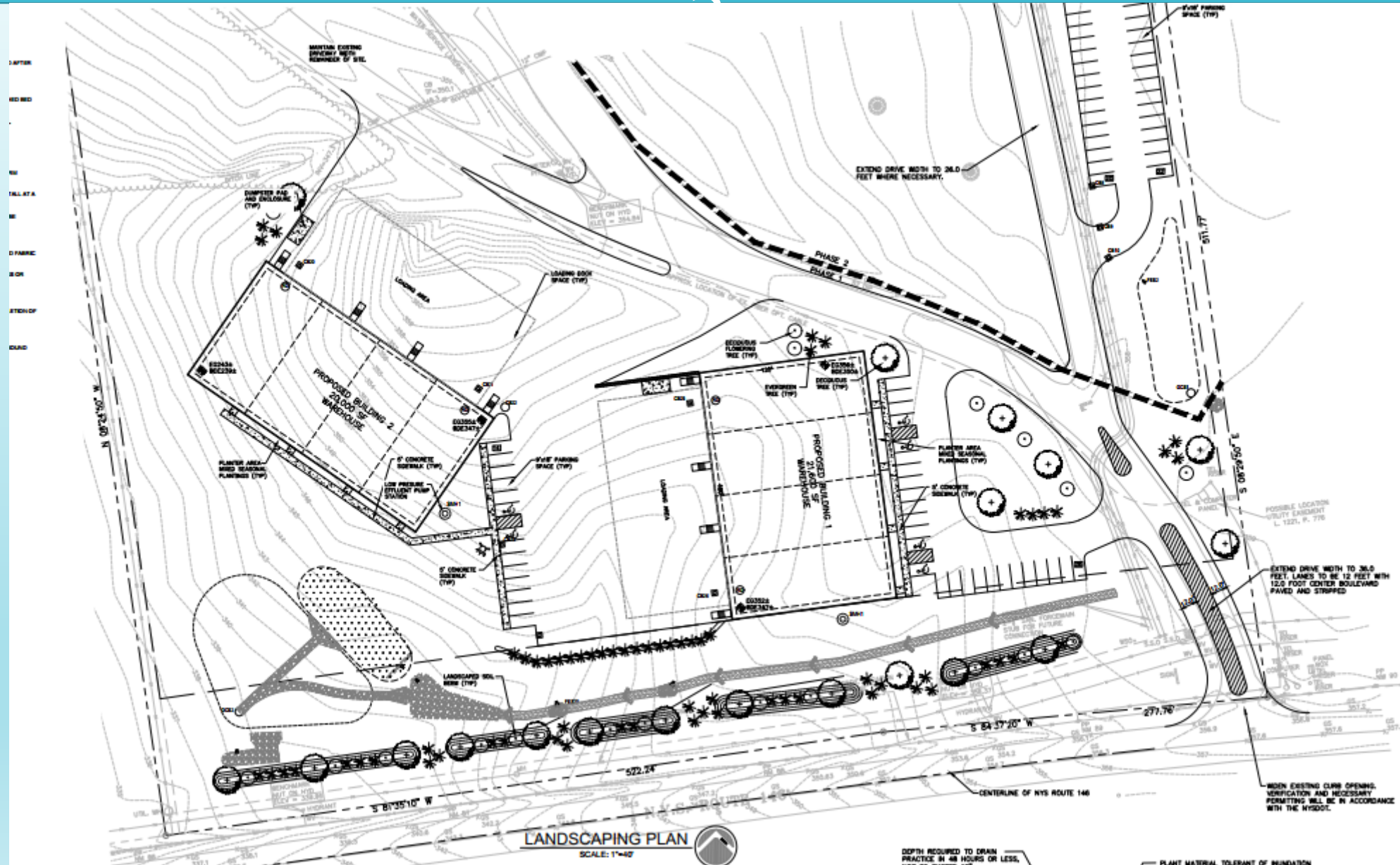


Be aware of what the existing infrastructure is and where it drains to.

- ❖ The applicant will be disturbing more than one acre of land and therefore will have to meet all NYS DEC stormwater regulations. However, the Planning Board also felt that removal of vegetation along the stream along with changes due to stormwater coming off the parking lot were not mitigated in the project application, and that this could potentially have significant adverse impacts on the stream and thus the associated wetland.
- ❖ As a result of this analysis, the Planning Board decided that of the impacts identified from Part 3, the impact on flooding, stormwater, erosion, and natural resources were not mitigated and needed further analysis. They decided that an environmental impact statement would be required and that the scope of that would be limited to these topics.
- ❖ <https://www.arcgis.com/home/webmap/viewer.html>
- ❖ The SMO should have access to this site.

Examples:
Know your
infrastructure





Examples: Aesthetics

OVERALL PLANTING SCHEDULE					
KEY	QTY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE
TREES					
AB	26		ABIES BALSAMEA	BALSAM FIR	5-6' HT. BBB
AS	16		ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2.5-3" CAL. BBB
AXM	10		AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	10-12' HT. BBB
BN	14		BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	10-12' HT. BBB
CAC	7		CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2-2.5" CAL. BBB
CEC	12		CERCIS CANADENSIS 'ROYAL WHITE'	ROYAL WHITE REDBUD	2-2.5" CAL. BBB
JV	20		JUNIPERUS VIRGINIANA 'EMERALD SENTINEL'	EMERALD SENTINEL EASTERN REDCEDAR	5-6' HT. BBB
PS	13		PINUS STROBUS	EASTERN WHITE PINE	7-8' HT. BBB
QP	7		QUERCUS PALUSTRIS	PIN OAK	2.5-3" CAL. BBB
TO	23		THUJA OCCIDENTALIS 'NIGRA'	DARK AMERICAN ARBORVITAE	7-8' HT. BBB
TA	6		TILIA AMERICANA X EUCHLORA 'REDMOND'	REDMOND LINDEN	2.5-3" CAL. BBB
SHRUBS					
AM	114		ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND BLACK CHOKEBERRY	5 GAL. CONT. 15-18" HT.
CA	42		CLETHRA ALNIFOLIA 'SIXTEEN CANDLES'	SIXTEEN CANDLES SUMMERSWEET	5 GAL. CONT. 15-18" HT.
CP	41		COMPTONIA PEREGRINA	SWEETFERN	5 GAL. CONT. 24-30" HT.
CS	45		CORNUS SERICEA 'KELSEY'	KELSEY REDTWIG DOGWOOD	5 GAL. CONT. 18-24" HT.
HQ	52		HYDRANGEA QUERCIFOLIA 'PEE WEE'	PEE WEE OAKLEAF HYDRANGEA	5 GAL. CONT. 18-24" HT.
IG	90		ILEX GLABRA 'GEM BOX'	GEM BOX INKBERY HOLLY	5 GAL. CONT. 18-24" HT.
IVJ	8		ILEX VERICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY HOLLY	5 GAL. CONT. 18-24" HT.
IVR	64		ILEX VERICILLATA 'RED SPITE'	RED SPITE WINTERBERRY HOLLY	5 GAL. CONT. 15-18" HT.
JC	25		JUNIPERUS CHINENSIS VAR. SARGENTI	SARGENT'S JUNIPER	5 GAL. CONT. 15-18" SPRD
MP	41		MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	5 GAL. CONT. 18-24" HT.
PO	65		PRUNUS SP. 'SWEET CHERRY TEA'	SWEET CHERRY TEA NINEBARK	5 GAL. CONT. 15-18" HT.
PERENNIALS / GRASSES / SEDGES					
CB	88		CALAMAGROSTIS BRACHYTRICHA	KOREAN FEATHER REED GRASS	2 GAL. CONT. 18-24" O.C.
SS	427		SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	LITTLE BLUESTEM	1 GAL. CONT. 12" O.C.
MEADOW MIX TYPE A					
			ERNM477 EASTERN ECOTYPE NATIVE GRASS MIX	SEED	OR APPROVED EQUAL
			ERNM483 NATIVE DETENTION AREA MIX	SEED	OR APPROVED EQUAL



Examples: Aesthetics



How can I apply this to my role?

What questions can I ask?

Questions to the TDE?

- ❖ Will this development impact downstream resources?
- ❖ Do the proposed green infrastructure practices / SMA's coincide with the current town's capacity, and environmental concerns?

Questions to the Highway Department?

- ❖ Is the current receiving system adequate to accept the proposed runoff?
- ❖ Does the Highway Department have the adequate means to maintain the proposed infrastructure / SMA's?

Questions during public hearing for the general public?

- ❖ Does your property experience flooding issues?
- ❖ Is the stormwater impacts coming from road runoff, neighbors yard runoff, stream overbank flooding, new development, backup of sump pump connections?

Maintenance Considerations



MS4 Permit Requirements

Post Construction Stormwater Management

- MS4 must develop and implement a program to ensure proper operation and maintenance of all SMPs
 - Applicable SMPs – installed per Construction GP-covered or Individual Construction Permitted sites/projects including:
 - Any SMP built on/after 03/10/2003
 - All new SMPs required under Part VI.D. i.e. MCM 4
 - All SMPs owned by the MS4

Future Maintenance Considerations

Long term Operation and Maintenance (O&M) procedure.
SWPPP must include O&M.

- Inspection and maintenance schedules and actions to ensure continuous, effective operation of SMPs.
- Cost estimate for long term maintenance.
 - Why? Important for owner to budget maintenance and repairs.
- Easements to the municipality for access and repairs (if not owned by the municipality).
- Stormwater management agreements.

Why?

Stormwater
Management
areas are not
maintained
according to the
O&M



How can the municipality avoid this?



Regular Maintenance

- O&M included in the SWPPP
- Mow Stormwater Management Areas 1-2 times a year
- Structural repairs as needed
- Other



Municipal costs for not maintaining Stormwater Management Areas

- 💰 Manpower
- 💰 Time
- 💰 Equipment
- 💰 Repairs
- 💰 Financial



How much did it cost the Town of Malta in 2023? (4 SMAs not maintained for 13 years)

Day one of maintenance

➤ Skidsteer: \$85.42 x 10 hours	\$854.20
➤ Brush hog: \$30.84 x 10 hours	\$308.40
➤ Trailer: \$9.50 x 10 hours	\$95.00
➤ F550 Truck: \$26.82 x 10 hours	\$268.20
➤ Man hours: \$31.31 x 10 hours	\$313.10
Total Cost Day 1:	\$1,838.90

Inflationary cost estimate for 2025	\$2,452.10
--	-------------------

Costs for four (4) additional days:

➤ Truck #307: \$79.62 x 40 hours	\$3,184.80
➤ Quadcab: \$57.70 x 40 hours	\$2,308.00
➤ Chipper: \$35.38 x 40 hours	\$1,415.20
➤ Saws: \$2.48 x 3 = \$7.44 x 40 hours	\$ 297.60
➤ Man hours: averaged \$26.10 x 5 x 40 hours	\$5,220.00
Total (4 days)	\$12,425.60

5 Day Total to clear vegetation:	\$14,264.50
---	--------------------

2025 Inflationary cost estimate total	\$16,997.20
--	--------------------

Before and After

Oct. 2022 Overgrown/not maintained



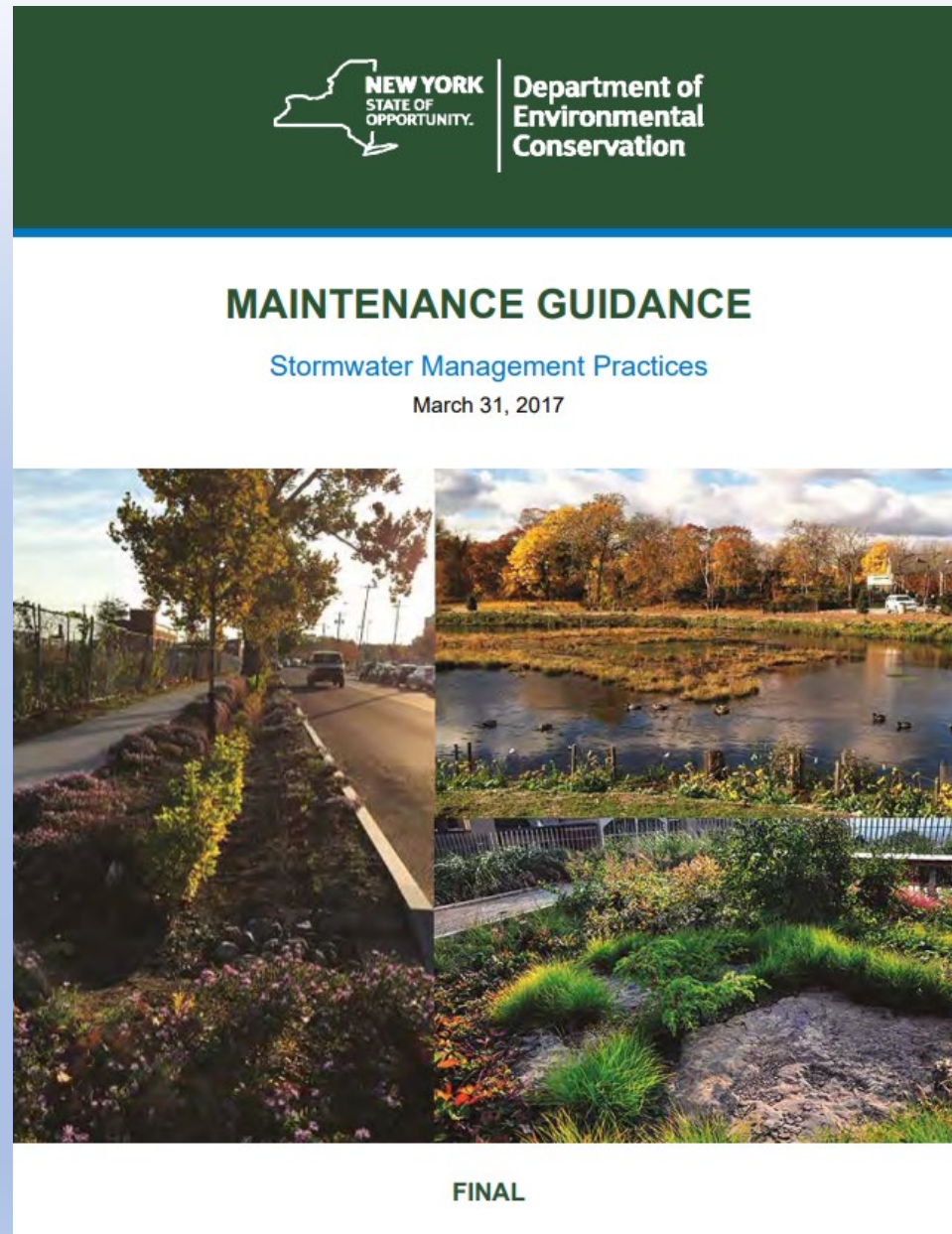
Jan. 2024



January 2024



You will need
this...



https://www.dec.ny.gov/docs/water_pdf/smpmaintguidance.pdf

Future Ownership

Who will own the stormwater management practices (SMPs)?

HOA, Municipality, or other private entity?

Town dedication?

- Dedication process (if dedicated to the Municipality). When?
- Road Dedication vs SMA dedication – Know your developer
- Include cost estimate for long term maintenance.
- Letter of credit

Future Ownership

Private Ownership / HOA's

- HOA Agreements, Declaration of Covenants, Considerations, Restrictions must include ownership and maintenance responsibility language:
 - Who is responsible for maintenance?
 - How often to perform maintenance i.e. mow and clean?
 - How often to inspect.
 - Send inspection report to the Town.
- Cost estimate for long term maintenance (include inflation costs \$\$\$)
- A map of the SMPs with easements and map notes of who will maintain and own the SMPS.
- Easements to the Town/municipality for access and emergency repairs.
- Maintenance agreement

Maintenance Agreements

When is a Maintenance Agreement required?

- Privately owned post construction stormwater management practices (Commercial and HOAs).



Underground Infiltration System



Stormwater Basin



Stormwater Basin

What should be included in the Maintenance Agreement and how should they be memorialized?

- Maintenance responsibility: “clean, repair, and continue the SW control practice to ensure optimum performance to design specifications.”
- Owner is responsible for all expenses related to maintenance.
- Owner shall inspect and provide inspection report to the Town
- No alterations, abandonment, modification or discontinuation to the SMP
- Clause authorizing Town to undertake steps for preservation, continuation or maintenance of SWM practices and to affix the expenses thereof as a lien against property.
- Map of SMPs (Appendix)
- Record/file agreement with the Saratoga County Clerk’s Office.

[Maintenance Agreement sample Town of Malta](https://www.malta-town.org/DocumentCenter/View/562) (https://www.malta-town.org/DocumentCenter/View/562)

Town of Malta Stormwater Program

STORMWATER CONTROL FACILITY MAINTENANCE AGREEMENT



Made the ____ day of _____, 20____.

Tax map Parcel Number(s) of the Property: _____.
Property Address: _____.
Source Deed(s) of Property: Instrument (Book/Page) _____ of Recording.

Whereas, the Town Code of the Town of Malta and the laws, rules and regulations of the State of New York require the establishment and proper maintenance of stormwater management practices; and

Whereas, the Town of Malta and _____ ("Facility Owner") want to enter into a Stormwater Control Facility Maintenance Agreement (hereinafter "Agreement") to provide for the long term maintenance and continuation of stormwater management practices approved by the Town of Malta for the facility referenced herein at the property identified above ("Property"); and

Whereas, the Town of Malta and the Facility Owner desire that the stormwater management control practices be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, the Town of Malta and the facility owner agree as follows:

1. This Agreement binds the Town of Malta and the Facility Owner, its successors in interest to the Property, to the maintenance provisions depicted in the approved project plans and Stormwater Pollution Prevention Plan (hereinafter "SWPPP") which are on file with the Town. Attached as Schedule A of this Agreement is a depiction of the stormwater facilities and instructions for maintenance (including, but not limited to the O&M portion of the SWPPP and plans showing facility locations.)
2. The Facility Owner shall maintain, clean, repair, replace and continue the stormwater management control practices depicted in **Schedule A** as necessary to ensure optimum performance of the measures to design specifications. The stormwater management control practices shall include, but shall not be limited to all collection, conveyance, treatment and/or stormwater runoff management facilities and infrastructure as detailed in Schedule A.
3. The Facility Owner shall be responsible for all expenses related to the maintenance of the stormwater management control practices and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.
4. The Facility Owner shall provide for the periodic inspection of the stormwater management control practices, not less than once each period of time set forth in the SWPPP, to determine the condition and integrity of the measures. Such inspection shall be performed by a professional engineer licensed by the State of New York. The inspecting professional engineer shall prepare and submit to the Town of Malta within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater management control practices.
5. The Facility Owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater management control practices without written approval of the Town of Malta Stormwater Management Officer or Town Designated Engineer.
6. The Facility Owner shall undertake necessary repairs and replacement of the stormwater management control practices at the direction of the Town of Malta or in accordance with the recommendations of the inspecting engineer and in consultation with the Town of Malta.
7. This Agreement shall be recorded in the Saratoga County Clerk's Office as a covenant and restriction against the Property as reflected in the approved site plan. Any future offering plan or prospectus filed with the Secretary of State relative to this Property shall include this Agreement. In the event the Property is subdivided,

the Deeds to each subdivided lot shall reference this Agreement.

8. If ever the Town of Malta determines that the Facility Owner has failed to construct or maintain the stormwater management control practices in accordance with the project plan or has failed to undertake corrective action specified by the Town of Malta or by the inspecting engineer, the Town of Malta is authorized to undertake such steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater management control practices and to affix the expenses thereof as a lien against the property.

9. This Agreement is effective upon signature of both parties.

10. The Facility Owner shall disclose this Agreement to all successors in interest in to the Property.

11. This Agreement is binding upon the Facility Owner while the Facility Owner has any ownership interest in the Property. Upon conveyance of all ownership interests in the Property, the Facility Owner's performance obligations under this Agreement shall cease and such obligations will simultaneously become those of its successors in interest to the Property. With the exception of the foregoing circumstance, the Facility Owner may not assign its obligations under this Agreement.

12. This Agreement may not be altered except in writing, signed by all parties.

Town of Malta

Entity/Facility Owner

Signature: _____

Signature: _____

Printed Name: _____

Printed Name: _____

STATE OF NEW YORK)
) ss.:
COUNTY OF SARATOGA)

On the ____ day of _____, in the year 20____, before me, the undersigned, a Notary Public in and for the State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person on behalf of which the individual(s) acted, executed the instrument.

Notary Public

STATE OF NEW YORK)
) ss.:
COUNTY OF SARATOGA)

On the ____ day of _____, in the year 20____, before me, the undersigned, a Notary Public in and for the State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person on behalf of which the individual(s) acted, executed the instrument.

Notary Public

Adopt a Local Law to allow Stormwater Maintenance Agreement



Example Town Code:

Malta §167-42 Maintenance and Repair of Stormwater Facilities:

D. Maintenance agreements. The Town of Malta shall approve a formal maintenance agreement for stormwater management facilities binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property prior to final plan approval. The maintenance agreement shall be consistent with the terms and conditions of Schedule B, entitled Sample Stormwater Control Facility Maintenance Agreement. The Town of Malta, in lieu of a maintenance agreement, as its sole discretion may accept dedication of any existing or future stormwater management facility, provided such facility meets all the requirements of this article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

Drainage Districts

- Special Tax District
- Generally used for Subdivisions and PDDs/PUDs
- Requires the creation and adoption of a local law to allow drainage districts in your municipality by the Town Board.
- Act as a funding source for future maintenance

Town of Stillwater, NY

Chapter 89

DRAINAGE DISTRICTS

§ 89-1.	Title.	§ 89-4.	Qualifying criteria.
§ 89-2.	Legislative authority; intent and purpose.	§ 89-5.	Procedure.
§ 89-3.	Establishment of drainage district in qualifying subdivisions and PDDs.	§ 89-6.	Fees and deposits.
		§ 89-7.	Funding of drainage district; notice to subsequent grantees.

[HISTORY: Adopted by the Town Board of the Town of Stillwater 7-21-2016 by L.L. No. 2-2016 . Amendments noted where applicable.]

GENERAL REFERENCES

Flood damage prevention — See Ch. 103.

Zoning — See Ch. 210.

When and where to create drainage districts

- Generally required as part of subdivision or residential PDD/PUD
- Not usually used for Commercial Site Plans as post-construction practices are usually maintained by the owner
- Can be required as a condition of planning board approval.
- Because it is new taxing district, Drainage District approval is required by the Town Board
 - Formation request documents and a Map, Plan, and Report are required
 - A Public Hearing is required
- Must be established prior to any grading / site work

How are they created?

- When required by local law should be a condition of planning board approval.
- Requirements:
 - Because it is new taxing district, Drainage District formation approval is required by the Town Board
 - Formation request documents and a Map, Plan, and Report are required
 - A Public Hearing is required
- Best practice is to create the district prior to building permits being issued and prior to any grading or site work as a petition executed by the owner(s) of taxable real property owning at least half of the value of taxable real property within the proposed drainage district is required

NYSDEC
FINAL
PERMIT MS₄
GP-024-001



Department of
Environmental
Conservation

FINAL
PERMIT

for

NEW YORK STATE

DEPARTMENT OF ENVIRONMENTAL
CONSERVATION

SPDES GENERAL PERMIT

for

STORMWATER DISCHARGES

from

MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

Permit No. GP-0-24-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Issuance Date: December 13, 2023

Effective Date: January 3, 2024

Expiration Date: January 2, 2029

Scott Sheeley

Chief Permit Administrator

DECEMBER 13, 2023

Authorized Signature

Date

Address: NYS DEC

Division of Environmental Permits

625 Broadway, 4th Floor

Albany, NY 12233

NYSDEC FINAL PERMIT

MS4s GP-024-001

- ❖ An MS4 Operator is eligible for coverage under this SPDES general permit if the MS4 is automatically or additionally designated.
- ❖ https://dec.ny.gov/sites/default/files/2023-12/Permit_Final%20MS4%20GP-0-24-001_13Dec2023_Signed.pdf



Almost two years in!

- New Permit in effect since January 3rd 2024.

**Get to know your MS4 Operator and
Stormwater Permit Coordinator**



Appendix B. Designation Criteria for Identifying Regulated Municipal Separate Storm Sewer Systems (MS4s), January 2010, revised January 2023

The universe of small *municipal* separate storm sewer systems (MS4s) is quite large. However, only a sub-set of small MS4s, referred to as “regulated” small MS4s, are covered by the Federal *stormwater* regulations. A small MS4 can be designated as a regulated MS4 through *automatic designation* by the USEPA or by meeting designation criteria developed by the NPDES permitting authority, the New York State Department of Environmental Conservation (*Department*) in New York State.

Automatic Designation Criteria Required by USEPA

The USEPA’s automatic designation criteria are based strictly on population and density. An area is *automatically designated* if the population is at least 50,000 and has an overall population density of at least 1,000 people per square mile based on the 2000 and 2010 censuses.

Additional Designation Criteria

The USEPA requires the *Department* to develop a set of criteria for *additionally designated areas*. The following criteria, using a combination of population and environmental factors, have been adopted to designate additional MS4s in NYS.

Criterion 1: MS4s *discharging* to waters for which an USEPA-approved Total Maximum Daily Load (TMDL) requires reduction of a *pollutant of concern* beyond what can be achieved with existing programs (and the area is not already covered under automatic designation).

Criterion 2: MS4s, contiguous to *automatically designated areas* (municipal lines), that *discharge* to sensitive waters classified as AA-Special (fresh surface waters), AA (fresh surface waters) with filtration avoidance determination or SA (saline surface waters).

Criterion 3: *Automatically designated areas* are extended to town, village, or city boundaries, but only for town, village or city implementation of minimum control measure 4 construction site stormwater runoff control and minimum control measure 5 post-construction stormwater management in development and redevelopment. This additional designation may be waived, by written request to the *Department*, where the *automatically designated area* is a small portion of the total area of the town, village or city (less than 15 %) and where there is little or no *construction activity* in the area outside of the *automatically designated area* (less than 5 disturbed acres per year).

Minimum Control Measures

- The MCMs for traditional land use MS4 Operators are listed in Part VI. while those for traditional non-land use control MS4 Operators and non-traditional MS4 Operators are listed in Part VII. Parts III.B, Part VIII, and Part IX. list additional requirements for all MS4 Operators discharging to impaired waters.

- d. *MS4* infrastructure (as required for *MS4 Operators* continuing coverage from previous iterations of this *SPDES* general permit that were subject to Part IX.A. or Part IX.D.), including:
 - i. Conveyance system
 - a) Type (closed pipe or open drainage);
 - b) Conveyance description for closed pipes (material, shape, dimensions);
 - c) Conveyance description for open drainage (channel/ditch lining material, shape, dimensions); and
 - d) Direction of flow;
 - ii. Culvert crossings (location and dimensions)
 - iii. Stormwater structures
 - a) Type (drop inlet, *catch basin*, or manhole); and
 - b) Number of connections to *catch basins*, and manholes;
- e. Basemap information:
 - i. *Automatically*³ and *additionally designated areas* (based on criterion 3 of Additional Designation Criteria in Appendix B);⁴
 - ii. Names and location of all *surface waters of the State*, including:
 - a) Waterbody classification;⁵
 - b) Waterbody Inventory/Priority Waterbodies List (WI/PWL);⁶
 - i) Impairment status; and
 - ii) *POC*, if applicable;
 - c) *TMDL* watershed areas;⁷
 - iii. Land use, including:
 - a) Industrial;
 - b) Residential;
 - c) Commercial;
 - d) Open space; and
 - e) Institutional;
 - iv. Roads; and
 - v. Topography.⁸

Comprehensive System Mapping

- Within six (6) months of the EDC, the comprehensive system mapping must include the following information:
- Saratoga County Stormwater Inter-Municipal Stormwater Management Program.

Table 4. Examples of possible educational topics to use for target audiences.

Educational Topic	Target Audience					
	Residents	Commercial business: Owners and staff	Institutions: Managers, staff, and students	Construction: Developers, contractors, and design professionals	Industrial: Owners and staff	Traditional MS4 Operator and Non-Traditional MS4 Operator: Municipal Staff
General stormwater information	X	X	X	X	X	X
Pet and other animal waste	X	X	X	X	X	X
Lawn maintenance	X	X	X	X	X	X
Illicit discharges	X	X	X	X	X	X
Disposal of household hazardous waste	X	X	X		X	X
Proper maintenance of septic systems	X	X	X			X
Litter generation	X	X				X
Proper disposal of swimming pool water	X		X			
Stormwater management practices	X			X		
Building maintenance and the use of detergents	X	X				X
Proper application of salt		X	X		X	X
Material Storage		X	X		X	X
Proper management of solid waste and dumpsters		X	X		X	X
Proper management of parking lot surfaces		X	X		X	X
Vehicle fluid changing and maintenance		X	X			X
Proper erosion and sediment control				X		X
Requirements for coverage under the CGP				X		X
Requirements for coverage under the MSGP					X	X

Table 4 is not exhaustive but can help MS4 Operators with implementation of the final GP-0-24-001. Educational topics may vary between MS4 Operators based on their

MCM 1 - Public Education

- ❖ **Public Education and Outreach Program** The MS4 Operator must develop and implement an education and outreach program to increase public awareness of pollutant generating activities and behaviors.
- ❖ **Development a. Focus Areas Within three (3) years of the EDC**, the MS4 Operator must identify and document the focus areas in the SWMP Plan.
- ❖ **Target Audiences and Associated Pollutant Generating Activities Within three (3) years of the EDC**, the MS4 Operator must identify and document the applicable target audience(s) and associated pollutant generating activities that the outreach and education will address for each focus area identified by the MS4 Operator in Part VI.A.1.a. in the SWMP Plan.
- ❖ **Distribution Method of Educational Messages** Once every five (5) years,
- ❖ **Updates to the Public Education and Outreach Program** - annually, by April 1,



MCM 2 - Public Involvement

- ❖ Annually, the MS4 Operator must provide an opportunity for public involvement/participation in the development and implementation of the SWMP.
- ❖ Citizen advisory group on stormwater management; ii. Public hearings or meetings; iii. Citizen volunteers to educate other individuals about the SWMP; iv. Coordination with other pre-existing public involvement/participation opportunities; v. Reporting concerns about activities or behaviors observed; or vi. Stewardship activities. Which could include stewardship activities.



MCM 3 - Illicit Discharge Reporting

- ❖ Monitoring outfalls / interconnections inventory. Pg 23-24 by January 2027, the MS4 Operator must develop and maintain an inventory of the monitoring locations in the SWMP Plan.
- ❖ By January 2027, the MS4 Operator must prioritize monitoring locations which are included in the monitoring locations inventory
- ❖ By January 2026, the MS4 Operator must develop and implement a monitoring locations inspection and sampling program

Section 1: Background Data

Subwatershed:		Monitoring Location ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
☐ Industrial ☐ Ultra-Urban Residential ☐ Suburban Residential ☐ Commercial		☐ Open Space ☐ Institutional Other: _____ Known Industries: _____	
Notes (e.g., origin, if known):			

Section 2: Monitoring Location Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
☐ Closed Pipe	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Single ☐ Elliptical ☐ Double ☐ Box ☐ Triple ☐ Other: _____ ☐ Other: _____ ☐ Other: _____	Diameter/Dimensions: _____ _____ _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Earthen ☐ Rip-Rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
☐ In-Stream	(applicable when collecting samples)			
Flow Present?	☐ Yes ☐ No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING MONITORING LOCATIONS				
PARAMETER		RESULT	UNIT	EQUIPMENT
☐ Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐ Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stopwatch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

MCM 3 - Illicit Discharge Inspection / Training

- ❖ During dry weather, one (1) inspection of each monitoring location identified in the inventory (Part VI.C.1.c.) every five (5) years following the most recent inspection
- ❖ The training provisions for the MS4 Operator's monitoring locations inspection and sampling procedures
- ❖ For existing staff, training on the MS4 Operator's monitoring locations inspection and sampling procedures (Part VI.C.1.e.i.) must be given prior to conducting monitoring locations inspections and sampling and once every five (5) years,



MCM 6 – Pollution Prevention and Good Housekeeping

- ❖ The MS4 Operator must develop and implement a pollution prevention and good housekeeping program for municipal facilities and municipal operations to minimize pollutant discharges.
- ❖ Best Management Practices (BMPs) for Municipal Facilities & Operations by January 2027
 - a. Minimize Exposure pg 39.
 - b. Follow a Preventive Maintenance Program
 - c. Spill Prevention and Response Procedures
 - d. Erosion and Sediment Controls pg 42.
 - e. Manage Vegetated Areas and Open Space on Municipal Property
 - f. Salt Storage Piles or Pile Containing Salt
 - g. Waste, Garbage, and Floatable Debris



MCM 6 – Pollution Prevention and Good Housekeeping

- ❖ Municipal Facilities -Municipal Facility Program by January 2027,
- ❖ Municipal Facility Inventory i. by January 2026,
- ❖ Municipal Facility Prioritization i. by January 2027
- ❖ High Priority Municipal Facility Requirements i. Municipal Facility Specific SWPPP by January 2029, MS4 Operators must develop and implement a municipal facility specific SWPPP for each high priority municipal facility (Part VI.F.2.c.i.a)) and retain a copy of the municipal facility specific SWPPP on site of the respective municipal facility.
- ❖ Municipal Facility Assessments a) Wet Weather Visual Monitoring i) Once every five (5) years, the MS4 Operator must conduct wet weather visual monitoring of the monitoring locations
- ❖ a) Low priority municipal facilities are not required to conduct wet weather visual monitoring.



MCM 6 – Pollution Prevention and Good Housekeeping

- ❖ Municipal Operations & Maintenance Municipal Operations Program Municipal operations are: street and bridge maintenance; winter road maintenance; MS4 maintenance; open space maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; or hydrologic habitat modification. By January 2027, the MS4 Operator must develop and implement a municipal operations program. Municipal Facility Inventory by January 2026,
- ❖ Catch basin inspection and maintenance requirements Catch Basin Inspection and Maintenance by January 2027,
- ❖ Roads, bridges, parking lots, and right of way maintenance requirements Roads, Bridges, Parking Lots, & Right of Way Maintenance Sweeping by July 2024.
- ❖ Maintenance by January 2029,

Thank
You!

Questions?