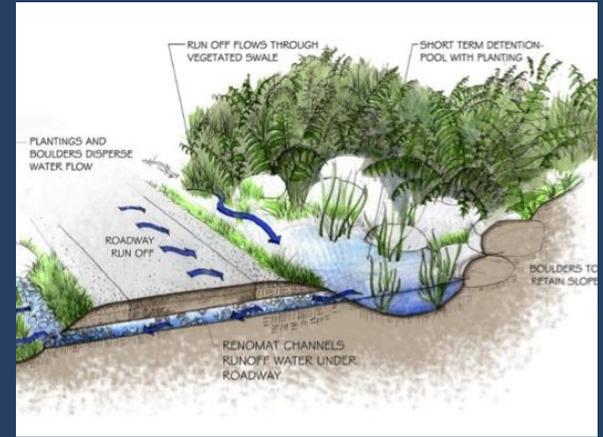


Cayuga County Planning Board  
Land Use Training Series

# Balance on a Steep Slope: How to Protect Sensitive Natural Features Without Stifling Development



Nick Colas, AICP   Gabriel Holbrow   Rima Shamieh

September 25, 2013

# Introduction to Environmental Protection

- **Definition and benefits**
- **Responsibility**
- **History**
- **Sensitive features**
- **Steep slopes**

# Environmental Protection

**The practice of conserving natural resources and preventing degradation of the natural environment for the benefit of both the natural environment and humans**



# Benefits

- **Resource supply extended**
- **Continued economic development enabled**
- **Community/aesthetic character maintained**
- **Provision of natural systems' ecological "services" continued**

Who's responsibility is it?



Environmental protection is  
*everyone's* responsibility.



"If everyone  
is responsible for everything...  
no one is responsible for  
anything."

# The Tragedy of the Commons

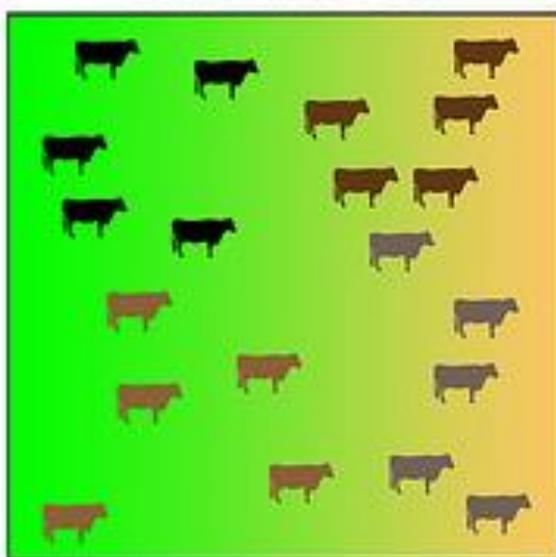
Imagine an open pasture shared by multiple cattle owners. Each owner increases their herd to maximize their benefit. With an unregulated resource this is "logical" since the benefit is enjoyed by the individual and the impacts are shared by all. This leads to the ultimate overgrazing of the pasture.

Shared Resource



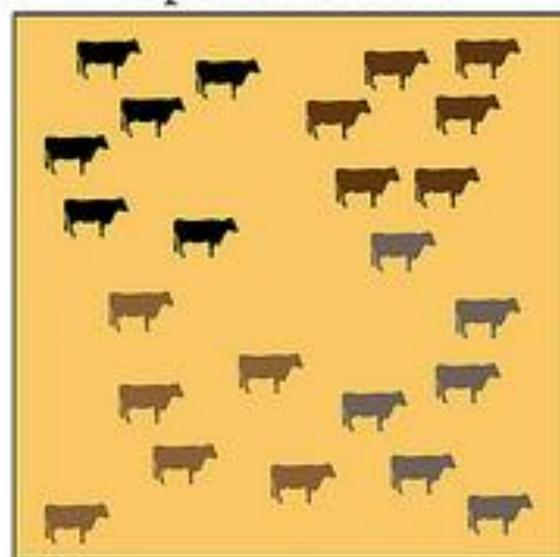
40 acres [16 hectares]  
1,320ft<sup>2</sup> [400m<sup>2</sup>]

Sustainable Use



20 Cows  
Carrying Capacity

Depleted Resource



20+ Cows  
Tipping Point



“Individuals locked into the logic of the commons are free only to bring on universal ruin; once they see the necessity of mutual coercion, they become free to pursue other goals.”

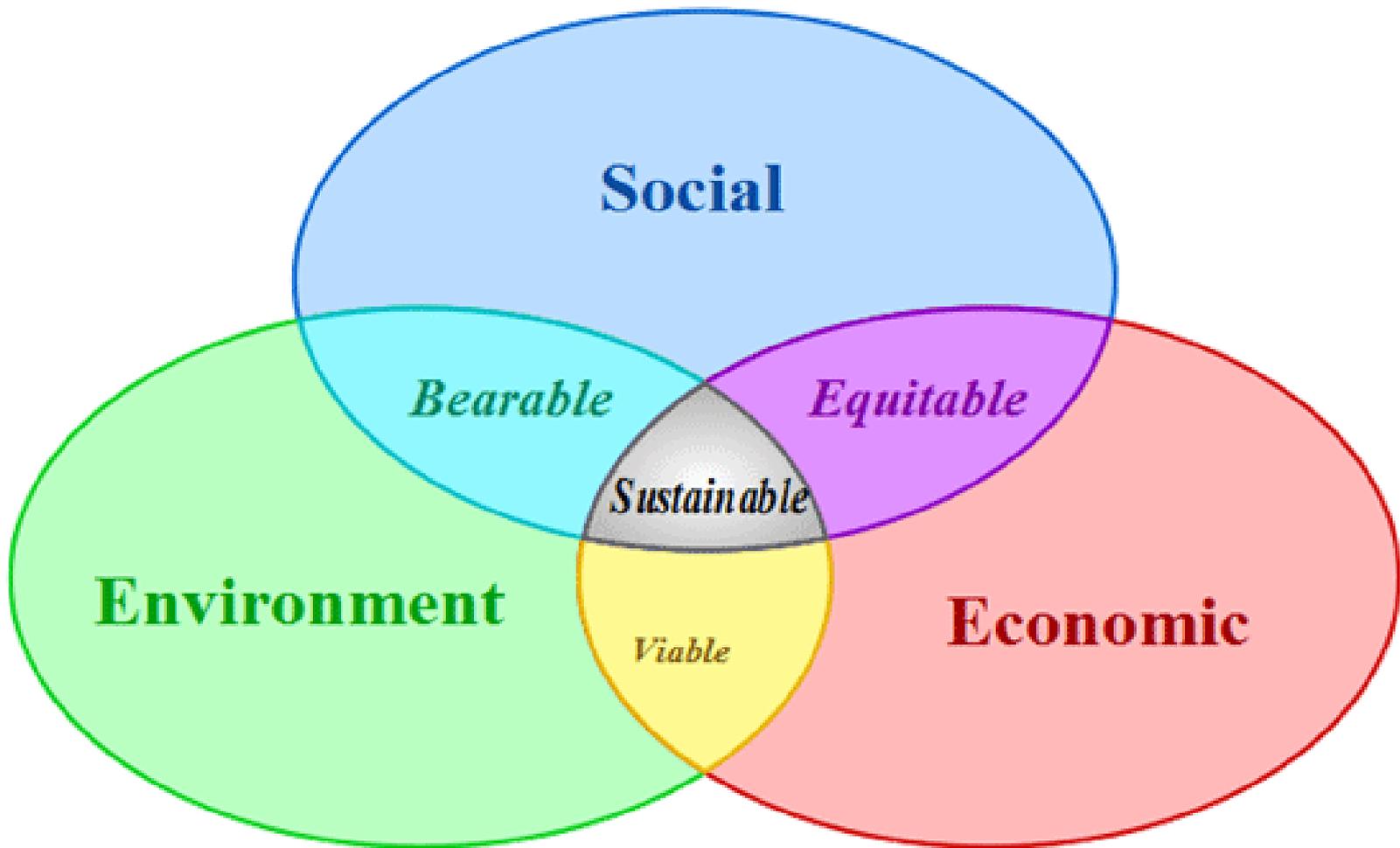
- Garrett Hardin

*The Tragedy of the Commons*, 1968



# REGULATION

# The Challenge:



## **Concerns about Environmental Degredation have been around for a long time.**

- Sumerian City State of Eridu, >3000 BC
- Sumerian City State of Ur, 3000 BC

“It is happening already; our poor earth, worn out, exhausted...our fields turn mean and stingy, underfed. And so today the farmer shakes his head, more and more often sighing that his work, the labor of his hands, has come to naught. When he compares the present to the past, the past was better, infinitely so....”

- Titus Lucretius Carus, 50 BC

Pressures of population and technology have caused accelerated degradation of the natural environment.



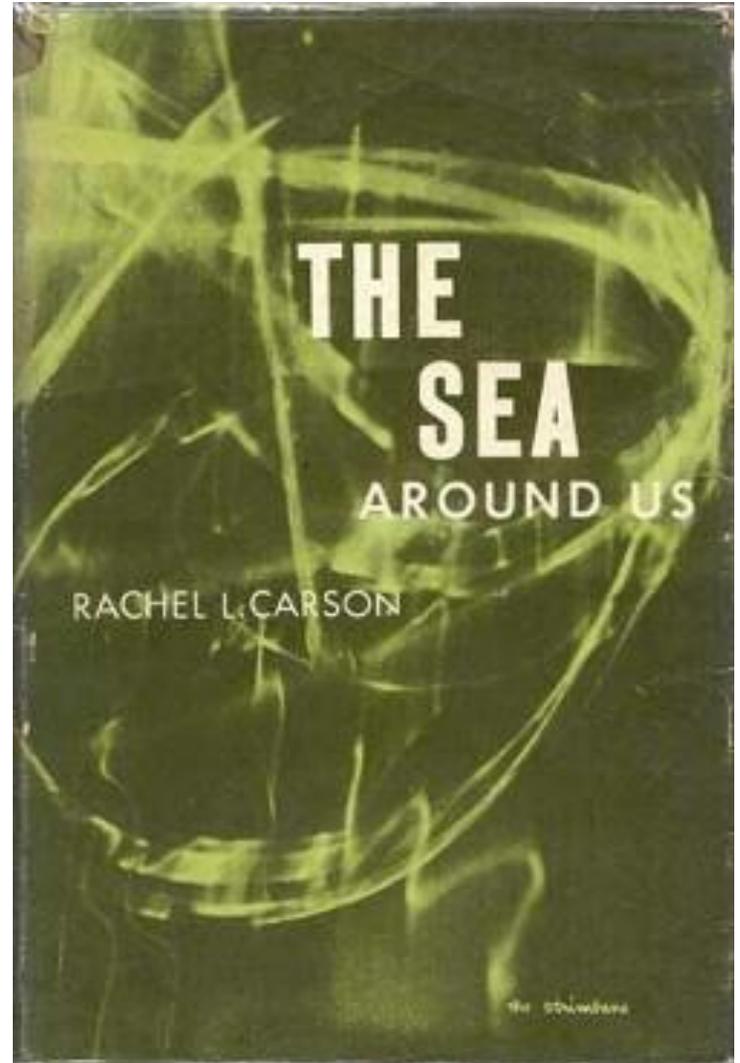
In the 1950s, 1960s, and 1970s, several events illustrated the magnitude of environmental damage caused by humans.



Rachel Carson



The Sea Around Us, 1951



# U.S. Supreme Court

---

**MURPHY v. BUTLER , 362 U.S. 929 (1960)**

**362 U.S. 929**

**Robert Cushman MURPHY et al., petitioners,**

**v.**

**Lloyd BUTLER, Area Supervisor, etc., et al.**

**No. 662.**

**Supreme Court of the United States**

**March 28, 1960**

Messrs. Roger Hinds and Frank C. Mebane, Jr., for petitioners.

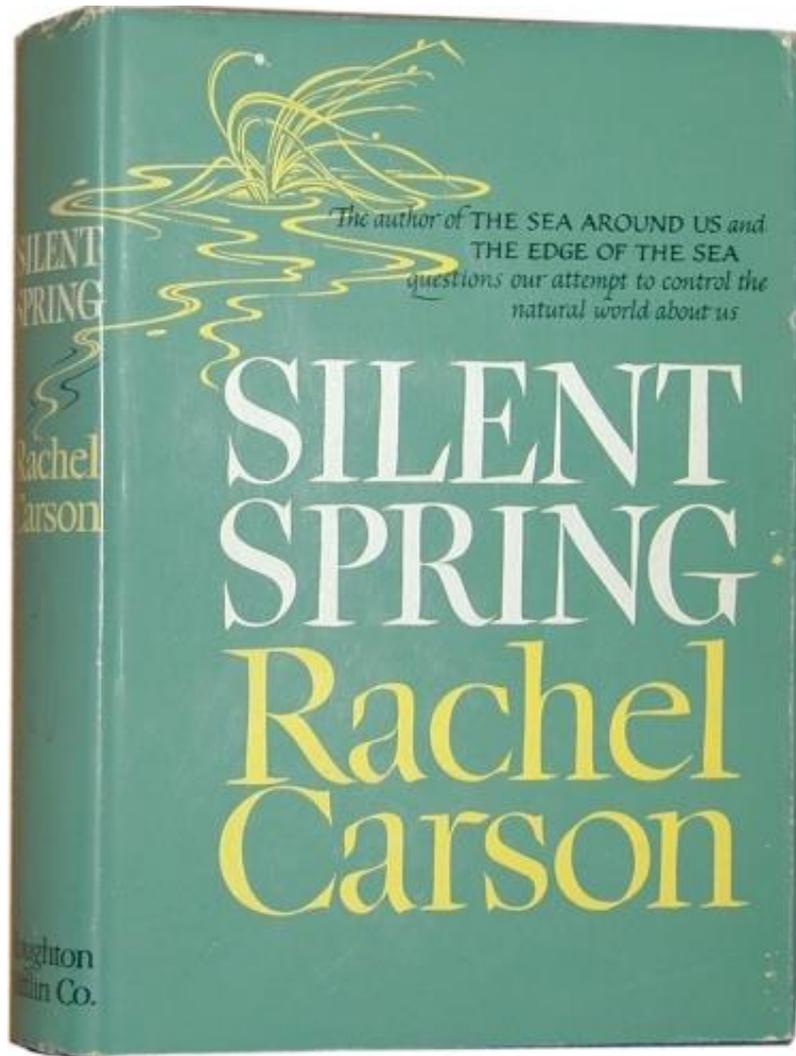
Solicitor General Rankin, Assistant Attorney General Doub and Mr. Alan S. Rosenthal for respondent Butler. Messrs. Louis J. Lefkowitz, Atty. Gen. of New York, and Paxton Blair, Sol. Gen. for respondent Commissioner of Agriculture and Markets of State of New York.

The motion to substitute a party respondent is withdrawn pursuant to stipulation of counsel. Petition for writ of certiorari to the United States Court of Appeals for the Second Circuit denied.

Mr. Justice DOUGLAS dissenting:

In my view the issues involved in this case are of such great public importance that I record my dissent to the denial of certiorari. The petitioners in this case are residents of a heavily populated suburban area in Long Island, New York, who brought an action in 1957 to enjoin respondents, federal and state officials, from carrying out a threatened program of aerial spraying of their lands, homes, gardens, and orchards with a mixture of DDT and kerosene designed to eradicate the gypsy moth, an insect injurious to forests. The program is part of a campaign embarked in 1956 by the Department of Agriculture to spray more than 3,000,000 acres of land in 10 States.

Silent Spring, 1962



1963



SS Torrey Canyon, 1967







## **Torrey Canyon disaster claims another victim**

45 years on and the Torrey Canyon oil tanker disaster is still claiming victims locally.

A Great Crested Grebe has become coated in crude oil which was washed up in Guernsey in 1967 and stored in a quarry.

110,000 tonnes of crude oil was spilled into the sea when the Torrey Canyon struck rocks off Cornwall.

The GSPCA first received a call on Sunday, but the charity was unable to get to the Grebe until Tuesday night.

The bird - now named Adele - will receive specialist cleansing to remove the oil from her plumage, but survival will depend on how much oil was ingested.



Great Crested Grebes are winter visitors and can be found in small numbers around the Guernsey coast at this time of year.

Anyone who finds an oiled bird is advised to put it in a well-ventilated cardboard box, keep it warm and call the GSPCA on 01481 257261 or take it to the Animal Shelter, or a vet, as soon as possible.

Cuyahoga River,  
Cleveland, Ohio, 1960s



# Cuyahoga River fires 1950s and 1960s



## Santa Barbara Oil Spill, 1969



80,000 to 100,000 barrels of crude oil spilled into the Channel and the beaches of Santa Barbara County in Southern California

Earth from Apollo 8  
December 22, 1968



Earthrise from Apollo 8  
December 24, 1968



NEPA enacted 1970



*Clean Air Act*

1970



The Clean Water Act

1972



1973

*Endangered  
Species Act*



# **Environmentally Sensitive Areas:**

- **Streams and Creeks**
- **Aquifers**
- **Wetlands**
- **Woodlands**
- **Hillsides**
- **Endangered or Threatened Species**
- **Etc...**

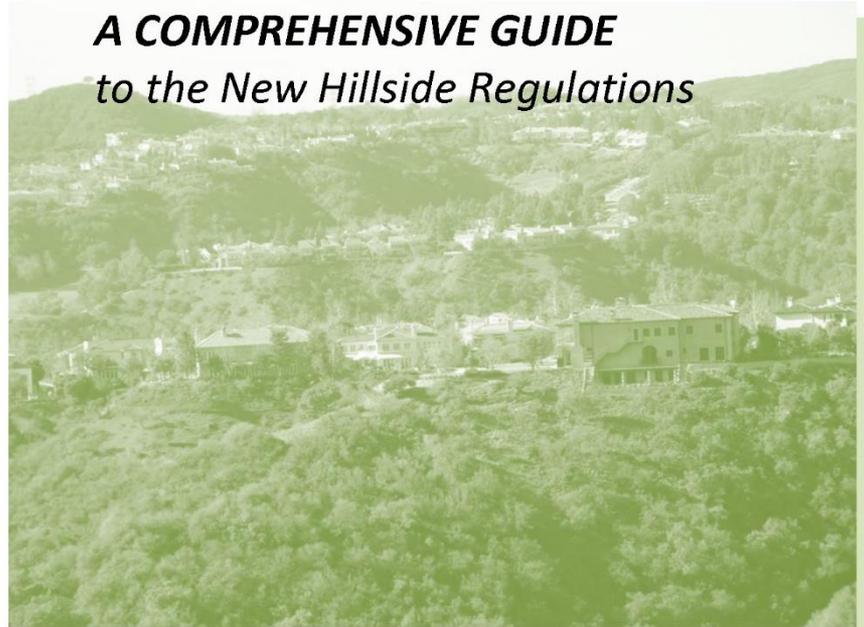


Los Angeles, California, 1952:  
The nation's first hillside  
development regulations -  
required soil and geological  
engineering studies

Strengthened through an  
amendment in 1963



**Baseline Hillside Ordinance**  
***A COMPREHENSIVE GUIDE***  
***to the New Hillside Regulations***



May 9, 2011

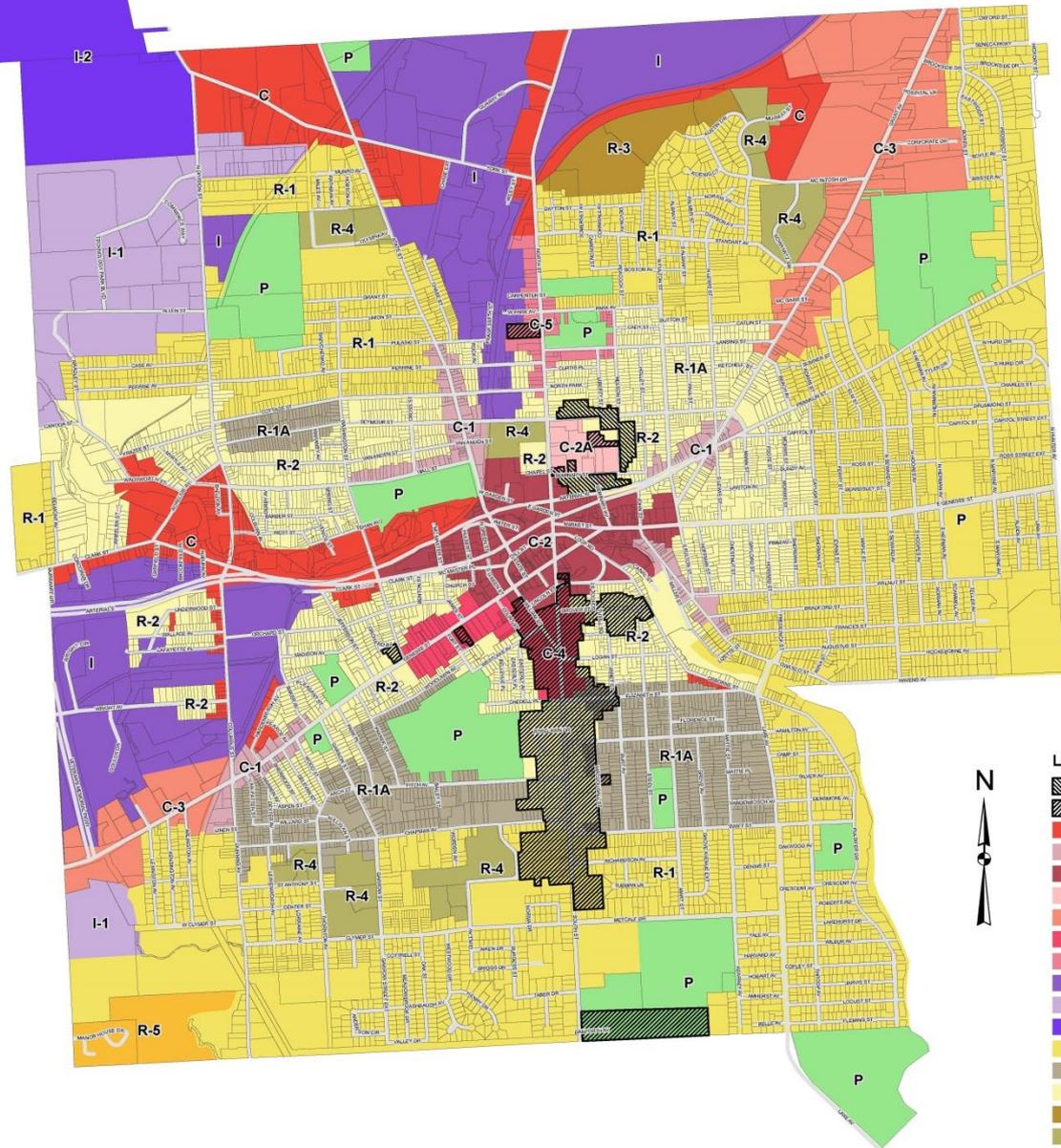


Los Angeles  
Department  
of City Planning

Regulation can help  
protect sensitive  
environmental features  
in many ways.

## Land use regulations

- Guide how people can use their land and property
- Can promote use of land in ways that are beneficial to the natural environment.



### Legend

- C-5A Overlay District
- Historic District
- C: General Commercial
- C-1: Neighborhood Commercial
- C-2: Central Commercial
- C-2A: Seminary Area Cen. Com.
- C-3: Highway Commercial
- C-4: Specialized Commercial - 1
- C-5: Specialized Commercial - 2
- I: General Industrial
- I-1: Industrial Park
- I-2: Resource Recovery
- R-1: Single Family Residential
- R-1A: Single Family Residential
- R-2: Single, Two, Multi Family Res.
- R-3: Planned Residential
- R-4: Est. Higher Density Res.
- R-5: Low Density Residential Park
- P: Public Use and Institution



### Scale

0 700 1,400 2,800 Feet



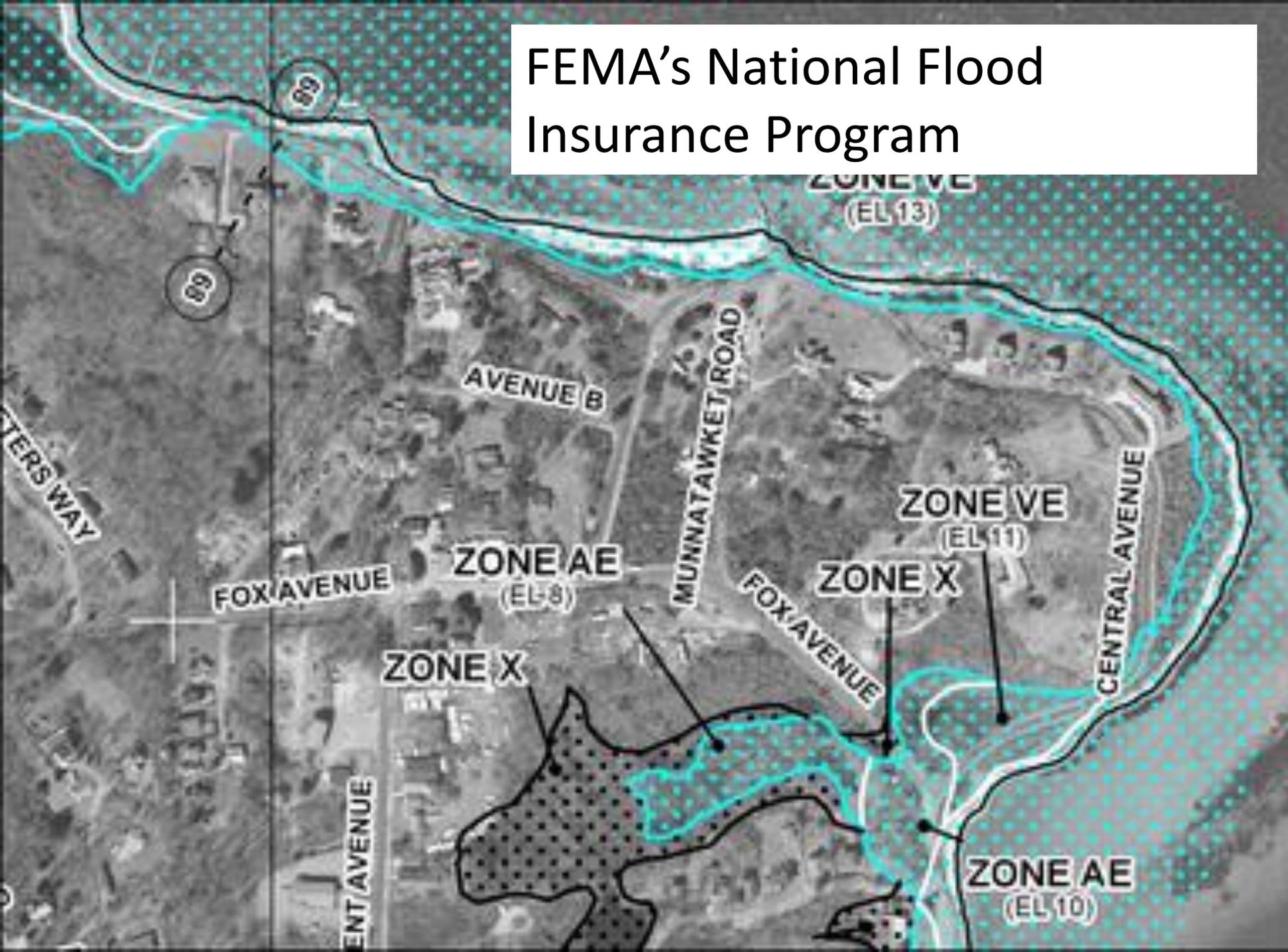
Map prepared by: City of Auburn  
Office of Planning and Economic Development  
June 22, 2006 (Rev. 7/30/06)

Based on data provided by Cayuga County Department of Planning and Development, City of Auburn Zoning Map (Jan. 1999), and Auburn City Council zoning map amendment resolutions.

There are  
environmental  
land use  
regulations at  
the federal  
level...



# FEMA's National Flood Insurance Program





Wetlands permit programs by  
the United States Army Corps  
of Engineers



There are also regulations at the state level...

A photograph of a wetland area. In the foreground, there is a dense patch of tall, green grasses. To the right, a body of water is visible, reflecting the sky. In the background, there are more green plants and a small, bare tree. The overall scene is a natural, marshy environment.

Wetlands permits  
from the DEC

SPDEC permits for stormwater discharge or construction over 1 acre



There is even regulation at the County level, including septic system standards administered by the county health department to protect water quality.

Federal, state, county... that sounds like a lot of different regulation. Does that mean that everything is taken care of?

**What is there left for towns and villages to do?**



**A lot!**

There are things that the DEC, the Army Corp and other state and federal agencies don't regulate. National, and even state regulation, is not necessarily going to be specific enough or apply to your local community. What might be suitable or acceptable in one community may not go far enough to protect environmental features in another.

Zoning Tool:  
Overlay District



You can also add a stand-alone law that applies to all areas of the town or village, rather than just to an identified overlay district. This is more useful when the feature you are trying to protect is not limited to a particular area. You can also use this method even if your town or village does not have zoning. The stand-alone law can set additional requirements, for example, to manage stormwater runoff during construction.

Under state law, you can designate a “Critical Environmental Area”.

A CEA works in coordination with SEQR. Identifies an area with particular environmental sensitivity, and identifies what that sensitivity is. For example: important habitat for an endangered species, or an important scenic view.

To be designated as a CEA, an area must have an exceptional or unique character with respect to one or more of the following:

- a benefit or threat to human health;
- a natural setting (e.g., fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality);
- agricultural, social, cultural, historic, archaeological, recreational, or educational values; or
- an inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any change.

# BMP

Best Management Practices

Local Laws can require extra review for certain types of projects



# SEQQR

## State Environmental Quality Review

- Part of the approval process
- Consider environmental concerns
- Identify what concerns might be affected by the project
- Make sure the project affects those concerns as little as possible

# Why protect Steep Slopes?

- **Erosion**

Steep slopes, especially without vegetation, can erode easily. Erosion and sediment can compromise the quality and health of streams and water bodies downstream.

- **Land subsidence**

Development on steep slopes can permanently alter natural landforms and geological features, compromising the aesthetic value and character of the community.

- **Visual Prominence**

Since steep slopes are often visually prominent, the development itself can compromise the aesthetic value and character of the community.

- **Drainage**

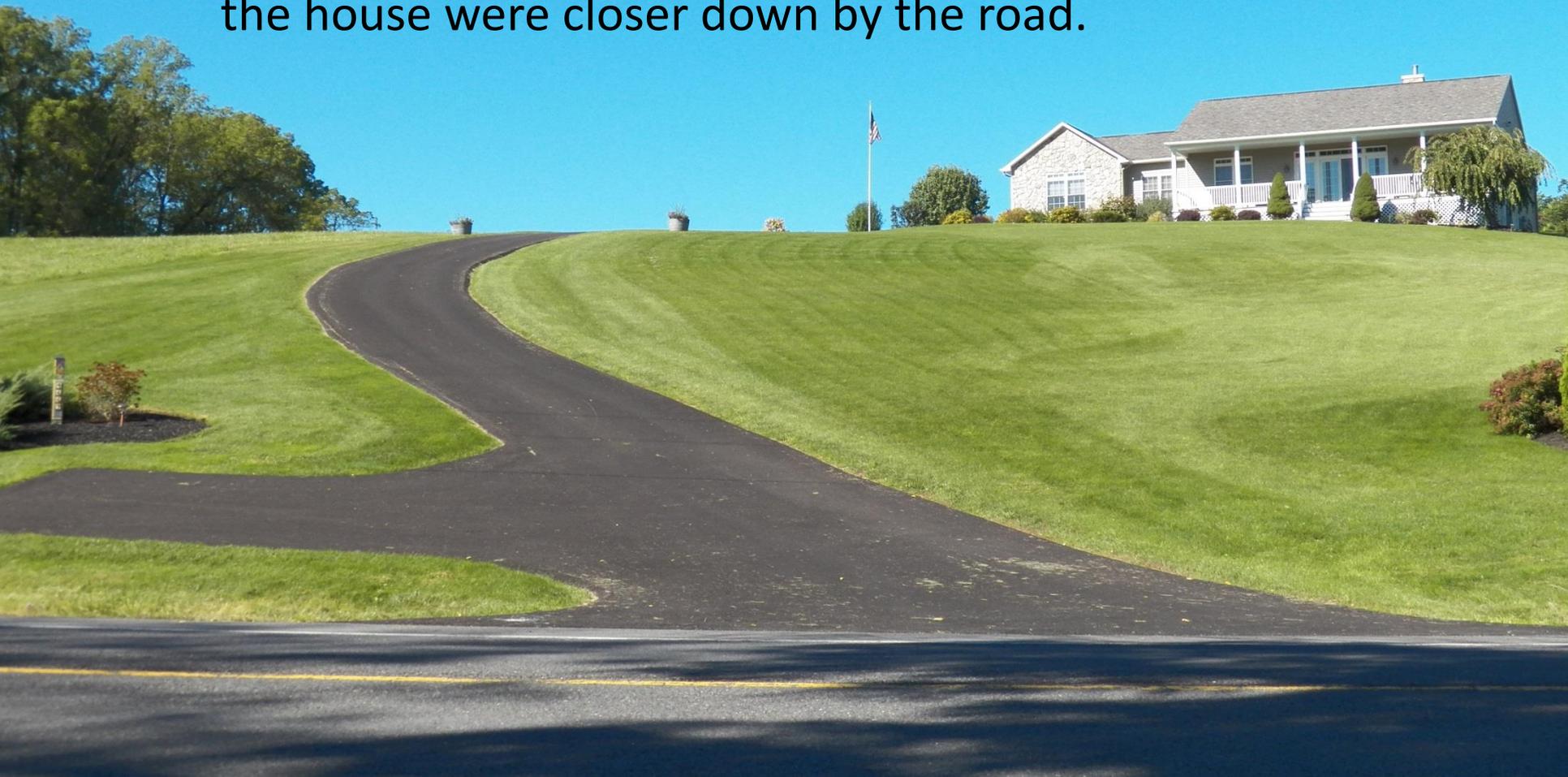
Development on steep slopes can alter drainage patterns and infiltration, with negative consequences for neighboring properties and the surrounding area.

# How should development preserve Steep Slopes?

- At its simplest: avoid developing on areas with slopes.

When development does occur on steep slopes, limit the area of the site to be disturbed.

Here is a house with a very long driveway. There are reasons why the homeowner might want to be up on the hill: views. But it would be better for the slope if the house were closer down by the road.



# Best Practices for Construction

- Phasing: Complete mass grading work in the dry season. Minimize the area exposed at any one time. Retaining as much existing vegetation as possible. Apply temporary cover (seeding or erosion control blanket) to bare areas that will be dormant as construction proceeds.
- Stockpile soil

# Temporary Devices and Practices for Construction

- Sediment trap
- Perimeter swale (for clean water diversion)
- Silt fence (or straw bales, or earth berm, or gravel berm)
- Site access pad (gravel)
- Regular street sweeping
- Drop inlet sediment barrier, drop inlet protection
- Temporary access culvert
- Erosion control blanket
- Vegetative stream bank protection (fascines, brush matting)

# Permanent Protections for Steep Slopes

- Protect existing natural vegetation
- Reseeding (seeding, mulch, tackifier)
- Tree planting
- Land grading
- Surface roughening
- Riprap
- Retaining wall
- Grassed waterway
- Permanent swale

# Applying Local Environmental Protections to Steep Slopes

Several Cayuga County  
communities already have  
environmental protections in  
place

# Applying Local Environmental Protections to Steep Slopes

- Model Law
- Sample Checklist
- Project Example



# Model Law

## Major Components

1. Purpose and Intent
2. Definitions
3. Regulated Actions and Exemptions
4. Permit
5. Overlay District
6. Erosion and Sediment Control Plan
7. Applying the Law:
  - a. Review Standards
  - b. Review Process

Tailor it to your  
own needs!

# First Things First: Purpose and Intent

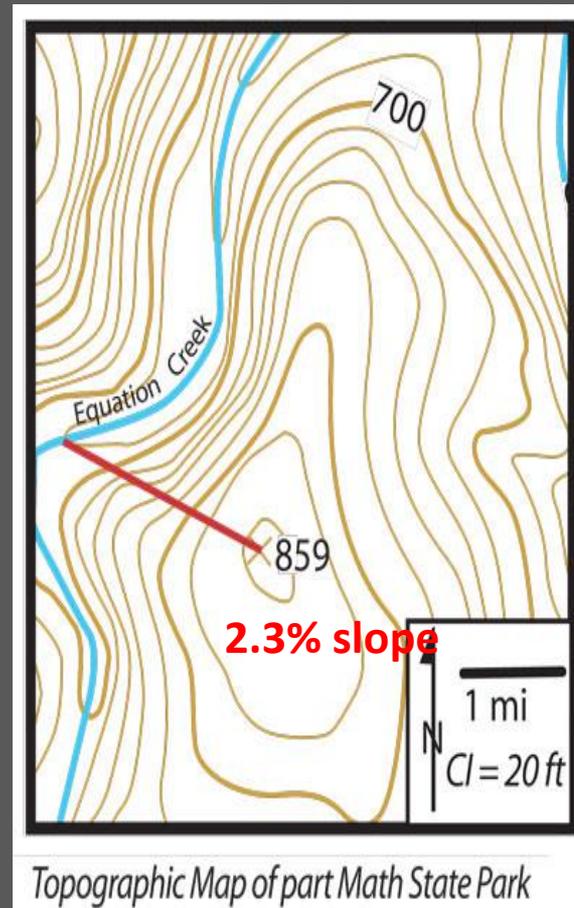
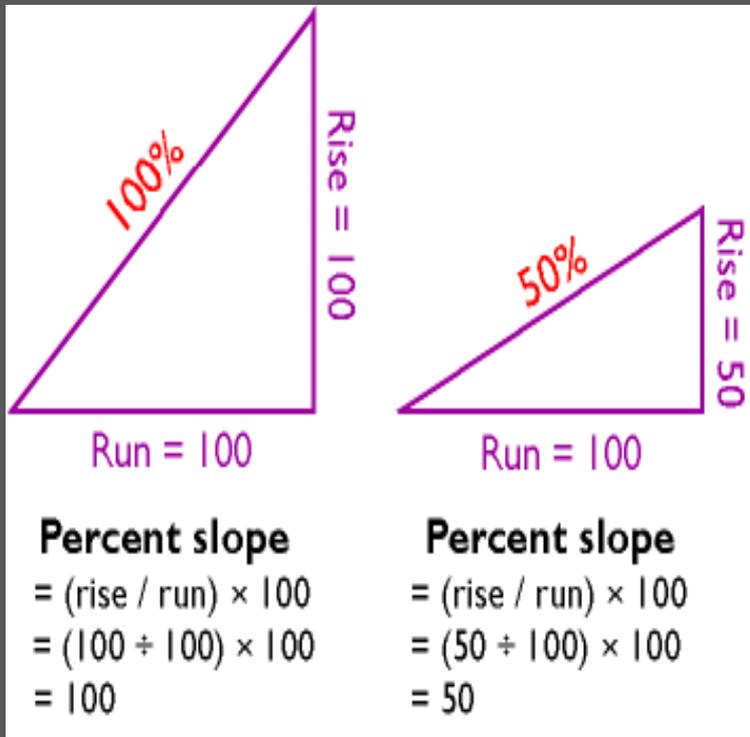
What are you protecting,  
and why?

What environmental features  
are present and at risk in your  
community?



# Definitions: Slope

How are slopes defined?



Grade school  
flashback!

# Slope Examples

**~9% slope**



Cayuga County

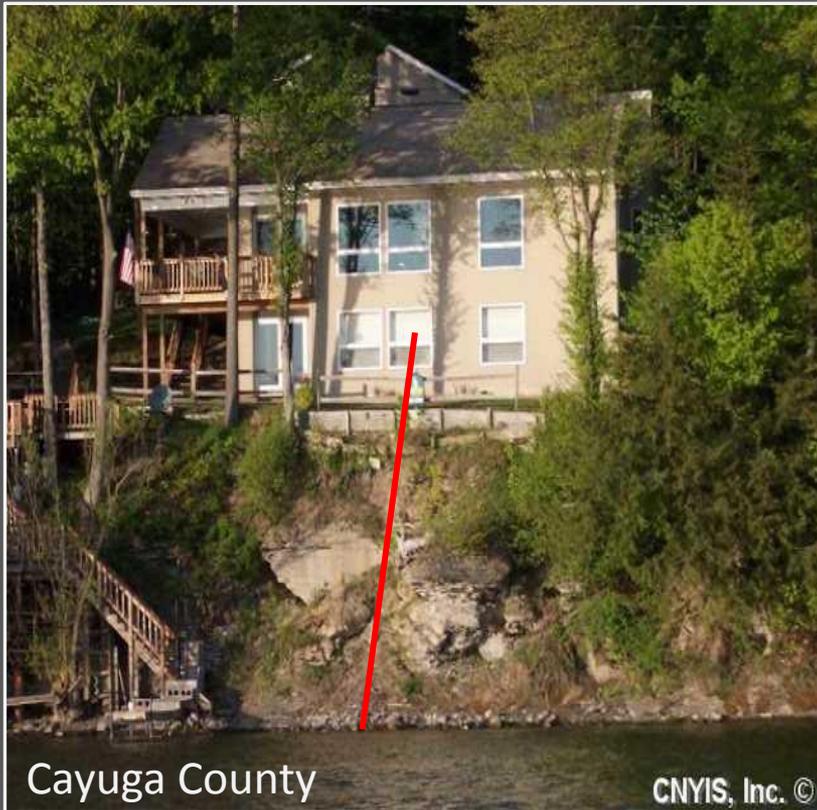
**~20% slope**



Cayuga County

# Slope Examples

**~44% slope**



**~24% slope**



# Slope Examples

**~16% slope**



**~38% slope**



# Definitions: Steep Slope

What is a **steep** slope?

15%?

25%?

35%?

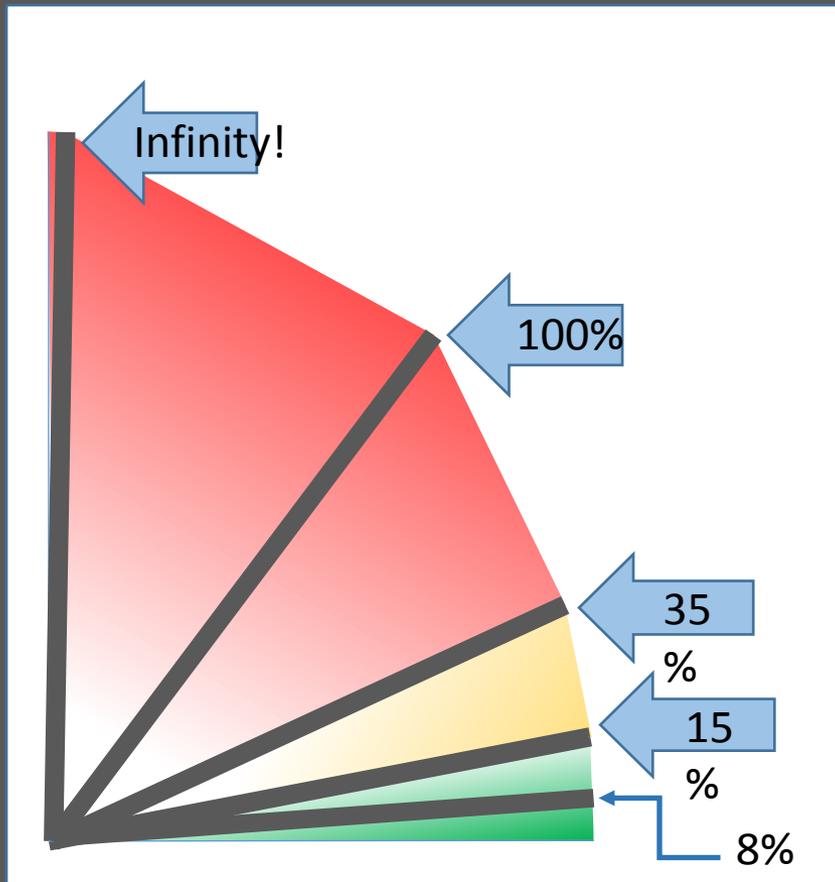
40%?

Something else?



Thankfully, this is  
NOT Cayuga County!

# Definitions: Steep Slope



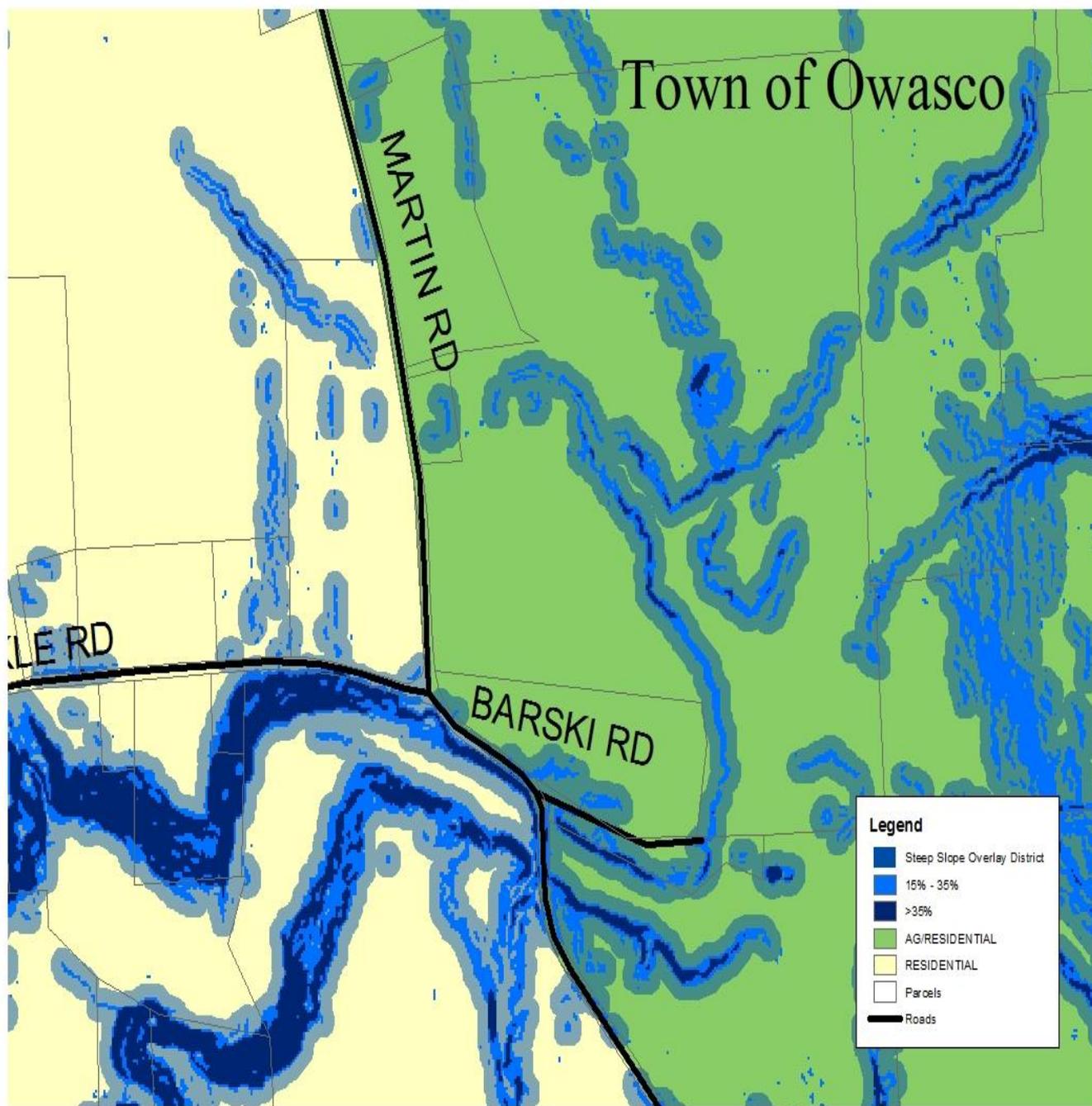
- Under 15% is **not regulated**
- 15% - under 35% is **regulated**
- Over 35% is **prohibited**

(some exceptions apply)

## Minimum hill dimensions:

- 35 feet high
- 500 ft<sup>2</sup> horizontal area

# Steep Slope Overlay District



# Permit

Separate and distinct from other requirements.

# Exemptions

What **actions** should be subject to additional scrutiny?

“Site Disturbances” of 300 ft<sup>2</sup> or greater, with exceptions such as:

- Most landscaping and gardening activities
- Emergencies
- Farming and timber harvest
- Public utilities
- Others

# Erosion and Sediment Control Plan

Requires best practices  
and detailed information  
for a thorough evaluation

# Applying the Law

## Conducting a review:

1. Review Standards
2. Review Process
3. Using a checklist



# Review Standards

**Help answer questions such as:**

- Does the project go far enough to avoid or minimize negative impacts?
- Are there appropriate mitigation measures in place during AND after construction?
- Is the site design and building placement appropriate given the limitations of the site?

# A Handy Review Checklist

Cayuga County  
Sample Checklist for Model Steep Slope Regulation

*This document is intended to be a tool to assist in Planning Board review and is for internal Town/Village use only. Applicants are to refer to the steep slope law itself for guidance.*

**Erosion and Sediment Control Plan**

The application must contain the following, unless a waiver has been granted:

	Yes	No	Waived
1 All maps and plans include legend, scales, north arrow	_____	_____	_____
2 Narrative (see section Erosion and Sediment Control Plan B.1.)	_____	_____	_____
3 A 1:100 scale general location map (see section Erosion and Sediment Control Plan B.2.)	_____	_____	_____
4 Site plan of existing conditions including (see section Erosion and Sediment Control Plan B.3.)	_____	_____	_____
5 A grading plan and construction timetable that addresses the sequencing of the project including (see section Erosion and Sediment Control Plan B.4.)	_____	_____	_____
6 A site plan that depicts the location of all erosion and sediment control measures and a timetable that charts the sequence of all those measures (see section Erosion and Sediment Control Plan B.5.)	_____	_____	_____
7 Description of construction and waste materials storage and control (see section Erosion and Sediment Control Plan B.6.)	_____	_____	_____
8 Designation of responsibility for ESCP implementation (see section Erosion and Sediment Control Plan B.7.)	_____	_____	_____
9 Description of structural practices designed to divert flows from exposed soils (see section Erosion and Sediment Control Plan B.8.)	_____	_____	_____
10 Post-construction maintenance schedule (see section Erosion and Sediment Control Plan B.9.)	_____	_____	_____
11 Plan by a licensed engineer indicating drainage courses, calculated water runoff, geology, hydrology and infiltration (see section Erosion and Sediment Control Plan B.10.)	_____	_____	_____
12 Additional provisions that the Planning Board has requested (see section Erosion and Sediment Control Plan B.11.):	_____	_____	_____

Do you have all the information you need to make an informed decision?

# Apartment Complex Example

~24% slope



VIEW FROM THURSTON AVE - SITE VEGETATION 'GHOSTED'

(Narrative)

Topographic Map

Erosion and Sedimentation Plan

Stormwater Plan



VIEW FROM WALKING PATH



VIEW FROM DRIVEWAY



# Page 3: Erosion and Sediment Control

- SEQUENCING**
1. METAL STRIP PROTECTION SHALL BE INSTALLED AT ALL POINTS OF CONSTRUCTION VEHICLE EXCESS FROM DISTURBED AREAS.
  2. METAL SILT FENCE SHALL BE INSTALLED AT ALL POINTS OF CONSTRUCTION VEHICLE EXCESS FROM DISTURBED AREAS TO BE DISTURBED.
  3. METAL TOPSOIL PROTECTION SHALL BE INSTALLED AT ALL POINTS OF CONSTRUCTION VEHICLE EXCESS FROM DISTURBED AREAS TO BE DISTURBED.
  4. METAL LAMINATION SHIELDS AND/OR BARRIERS WHERE SHOWN AND UP-GRADE OF AREAS TO BE DISTURBED.
  5. INSTALL ROCK CHECK DAMS WHERE SHOWN.
  6. BEGIN BUILDING AND PREVENT EXCAVATION OPERATIONS. READY FROM ANY EXPOSED SOILS TO BE EXPOSED TO SEDIMENT TRAP, SILT FENCE OR OTHER APPROVED PRACTICE. REMOVE TEMPORARY PROTECTION SHIELDS AS NECESSARY TO PREVENT RUNOFF FROM EXISTING EXCAVATIONS.
  7. METAL BUILDING STORM SEWER, NEW DRAINAGE COLLECTOR AND PERVIOUS PREVENTER STORM IMPROVEMENTS IN CONJUNCTION WITH SOILS, PARKING AND BUILDINGS CONSTRUCTION. DETAIL STORM SEWER FROM PARKING LOT TO MAIN GARDEN STRUCTURE. METAL BUILDING STORM SEWER TO SEDIMENT TRAP. PROTECT PERVIOUS PREVENTERS. METAL SILT FENCE AT UP-GRADE EDGE OF PERVIOUS PREVENTERS. PREVENT VEHICLE TRAFFIC INTO PERVIOUS PREVENTER FROM DISTURBED AREAS OF SITE.
  8. INSTALL TOPSOIL, SEED, MULCH AND LANDSCAPING ADJACENT TO BUILDING ADDITION AND NEW PARKING FACILITIES.
  9. DEMOLISH AND REGRADE TEMPORARY PARKING PREVENTERS. PERFORM SOIL RESTORATION FOR SOILS DISTURBED BY PARKING FACILITY AND BY CURRENT CONSTRUCTION ACTIVITIES.
  10. REMOVE EXISTING CURBLES AND ENTRANCES WHERE SHOWN AND RESTORE ROADSIDE SHALE.
  11. METAL TOPSOIL, SEED, MULCH AND LANDSCAPING ON REMAINING DISTURBED AREAS OF SITE.
  12. AFTER FINAL STABILIZATION OF SITE REMOVE TEMPORARY SEDIMENT TRAP AND INSTALL MAIN GARDEN IMPROVEMENTS WITH UNDERDRAIN AND LANDSCAPING AS REQUIRED. EXTENSIVE VEGETATION AT MAIN GARDEN. INSTALL STORM OUTLET PROTECTION AT MAIN GARDEN.
  13. REMOVE ALL OTHER REMAINING TEMPORARY EROSION AND SEDIMENT CONTROLS AFTER FINAL STABILIZATION OF DISTURBED AREAS OF SITE HAS BEEN ADVISED.

**SOIL RESTORATION**

RESTORATION OF SOIL IS REQUIRED WHEN THE TEMPORARY PARKING AREA AND ALL OTHER LAW AREAS COMPACTED BY CONSTRUCTION ACTIVITY ON THE SITE. RESTORE ALL SUCH AREAS FOLLOWING REMOVAL OF THE TEMPORARY PARKING AND ESTABLISHMENT OF PLANTING SUBGRADE, AND IN ADVANCE OF FINAL LANDSCAPING WORK. RESTORATION OF SOILS SHALL INCLUDE THE FOLLOWING:

- APPLY 3 INCH DEPTH COMPOST OVER SUBSOIL.
- FILL COMPACT INTO SUBSOIL TO A DEPTH OF AT LEAST 12 INCHES USING A POWER ATTACHED TO TRACK MOUNTED EQUIPMENT. TRACKS MOUNTED OVER OR TILLED TO MIX AIR AND COMPOST INTO SUBSOIL.
- REMOVAL COBBLES AND STONE MATERIAL GREATER THAN 3-INCH SIZE.
- APPLY MINIMUM 6 INCH DEPTH TOPSOIL AND COMPLETE WORK PER LANDSCAPING REQUIREMENTS.

- GENERAL NOTES**
1. SILT FENCING TO BE INSTALLED ALONG CONTOURS, NOT CROSSING CONTOURS. SPACED CONTIGUOUSLY SHOWN.
  2. SURFACE RUNOFF FROM UPGRADE AREAS SHALL BE EXPOSED OR OTHERWISE PREVENTED FROM FLOWING THROUGH AREAS OF CONSTRUCTION ACTIVITY.
  3. RUNOFF FROM DISTURBED AREAS SHALL NOT BE DISCHARGED OFF-SITE WITHOUT FIRST TRAPPING THROUGH A PROPERLY INSTALLED AND MAINTAINED SEDIMENT CONTROL STRUCTURE.
  4. PERMANENT VEGETATION OR CHANNEL LININGS SHALL BE INSTALLED IMMEDIATELY FOLLOWING FINAL GRADING.
  5. ALL CONCRETE STRUCTURES SHALL BE PERIODICALLY INSPECTED AND MAINTAINED DURING CONSTRUCTION. REMOVE SEDIMENT AT SILT FENCE WHEN BULGES DEVELOP IN FENCE.
  6. MAINTAIN STABILIZED ENTRANCES FOR DURATION OF USE. REMOVE AND REPLACE AGGREGATE AND/OR TOP SOILS WITH ADDITIONAL AGGREGATE WHEN SURFACE BECOMES FACED WITH SEDIMENT.
  7. MAINTAIN BUILT PROTECTION ON ALL INLETS THROUGH ALL PHASES OF THE PROJECT.
  8. APPLY TEMPORARY OR PERMANENT SEED AND MULCH TO DISTURBED AREAS WITHIN 7 DAYS AFTER CLEARING.
  9. PLACE SILT FENCE AROUND TOPSOIL STOCKPILES AND TEMPORARILY SEED IF LEFT UNDISTURBED FOR GREATER THAN 7 DAYS.
  10. DISPOSE OF ALL FILL IN A MANNER THAT IS CONSISTENT WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

**CONSERVATION SEED MIX**

SPRING SEEDINGS	
(1) BARNYARD	0.70 LB/1000 S.F.
(2) SPRING GRASS	2.00 LB/1000 S.F.
(3) BARNYARD	1.00 LB/1000 S.F.
(4) SPRING GRASS	1.00 LB/1000 S.F.
(5) PERENNIAL MIXTURES	0.70 LB/1000 S.F.

LATE SPRING & SUMMER SEEDINGS	
(1) BARNYARD	1.00 LB/1000 S.F.
(2) BARNYARD	0.70 LB/1000 S.F.
(3) PERENNIAL MIXTURES	0.70 LB/1000 S.F.

LATE SUMMER & FALL SEEDINGS	
(1) BARNYARD	0.70 LB/1000 S.F.
(2) BARNYARD	2.00 LB/1000 S.F.
(3) BARNYARD	1.75 LB/1000 S.F.
(4) PERENNIAL MIXTURES (PLOWING)	0.70 LB/1000 S.F.

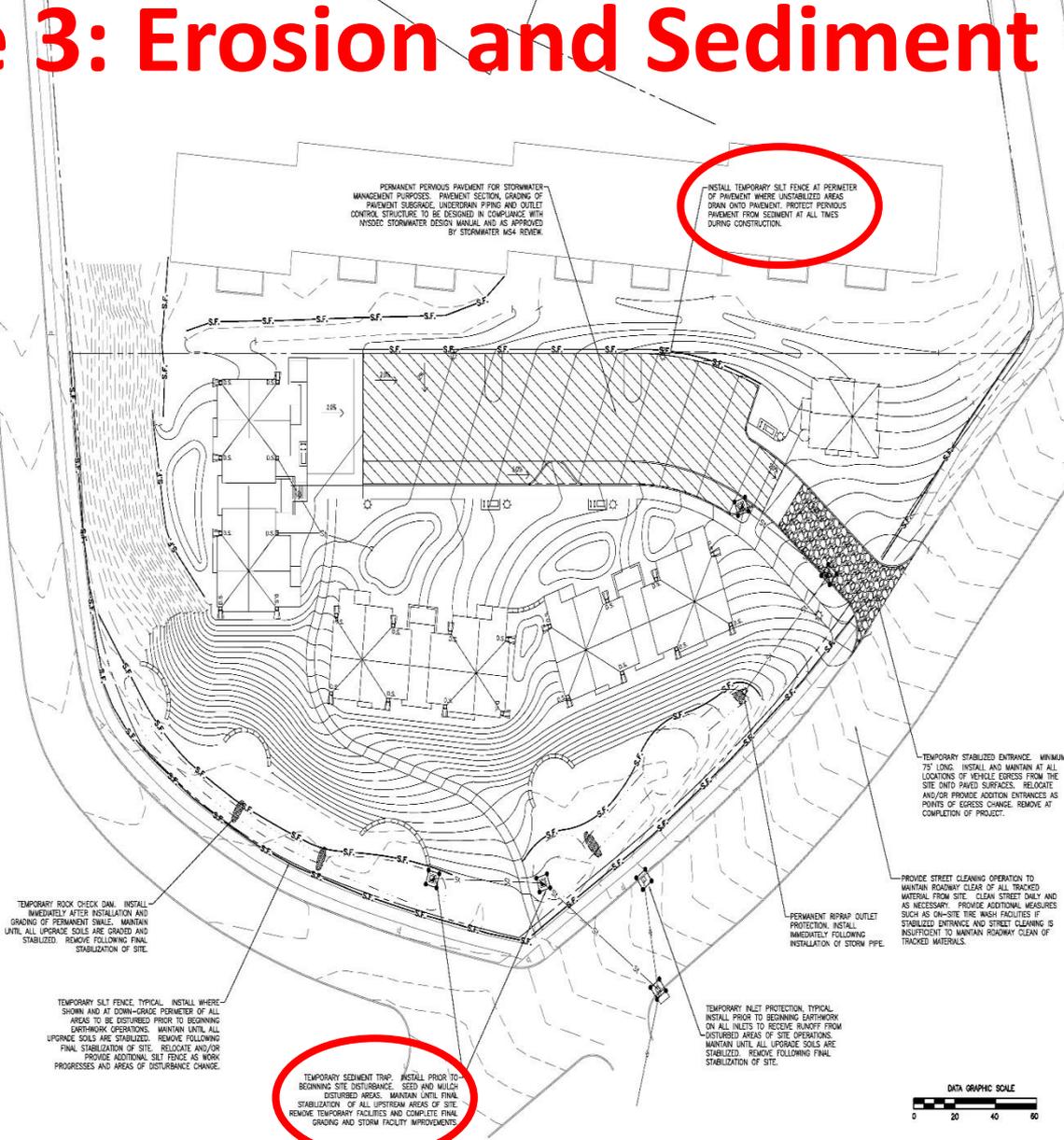
**MULCH**

MINIMUM 1/2" DEEP MULCH

APPROXIMATE 100 LB (2-3) BALE/5000 S.F.

MULCH SHALL BE APPLIED OVER TEMPORARY OR PERMANENT SEEDING AND SHALL BE APPLIED LONG ONE OF THE FOLLOWING OPTIONS:

- A. 2 INCH DEEP MULCH OVER TOPSOIL AND SEED WITH STRIPES PLANTED PARALLEL TO THE CONTOUR.
- B. 2 INCH DEEP MULCH OVER TOPSOIL AND SEED TO GET MULCH IN TO THE MULCH IS TOGETHER AND TO GET MULCH IN TO THE MULCH IS TOGETHER AND TO GET MULCH IN TO THE MULCH IS TOGETHER.
- C. 2 INCH DEEP MULCH OVER TOPSOIL AND SEED WITH STRIPES PLANTED PARALLEL TO THE CONTOUR.
- D. 2 INCH DEEP MULCH OVER TOPSOIL AND SEED WITH STRIPES PLANTED PARALLEL TO THE CONTOUR.



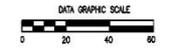
INSTALL TEMPORARY SILT FENCE AT PERIMETER OF PARKING WHERE UNDISTURBED AREAS DRAIN ONTO PAVEMENT. PROTECT PERVIOUS PREVENTER FROM SEDIMENT AT ALL TIMES DURING CONSTRUCTION.

TEMPORARY SEDIMENT TRAP. INSTALL PRIOR TO BEGINNING SITE DISTURBANCE. SEED AND MULCH DISTURBED AREAS. MAINTAIN UNTIL FINAL STABILIZATION OF ALL UPSTREAM AREAS OF SITE. REMOVE TEMPORARY FACILITIES AND COMPLETE FINAL GRADING AND STORM FACILITY IMPROVEMENTS.

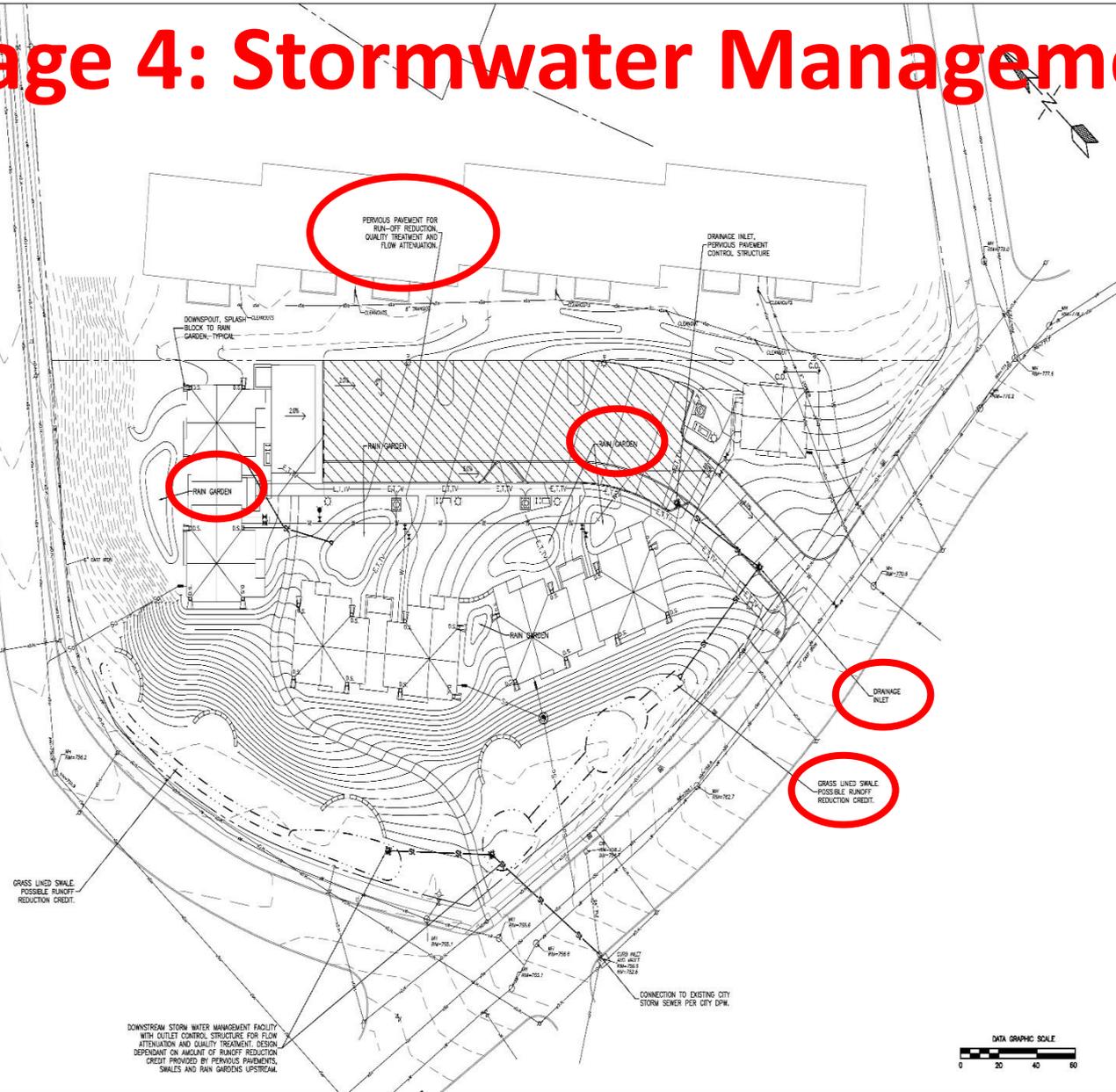
TEMPORARY STABILIZED ENTRANCE. MINIMUM 75' LONG. INSTALL AND MAINTAIN AT ALL LOCATIONS OF VEHICLE EXCESS FROM THE SITE (ONTO PAVED SURFACES). RELOCATE AND/OR PROVIDE ADDITION ENTRANCES AS POINTS OF EXCESS CHANGE. REMOVE AT COMPLETION OF PROJECT.

PROVIDE STREET CLEANING OPERATION TO MAINTAIN ROADWAY CLEAR OF ALL TRACKED MATERIAL FROM SITE. CLEAN STREET DAILY AND AS NECESSARY. PROVIDE ADDITIONAL MEASURES SUCH AS ON-SITE TIRE WASH FACILITIES IF STABILIZED ENTRANCE AND STREET CLEANING IS INSUFFICIENT TO MAINTAIN ROADWAY CLEAN OF TRACKED MATERIALS.

TEMPORARY INLET PROTECTION. TYPICAL. INSTALL PRIOR TO BEGINNING EARTHWORK ON ALL INLETS TO RECEIVE RUNOFF FROM DISTURBED AREAS OF SITE OPERATIONS. MAINTAIN UNTIL ALL UPGRADE SOILS ARE STABILIZED. REMOVE FOLLOWING FINAL STABILIZATION OF SITE.



# Page 4: Stormwater Management



# Cost

Costs vary widely

Can require developer to pay for outside assistance

Put sureties in place to safeguard completion and maintenance of project

# Additional Resources

New York Guidelines for Urban Erosion & Sediment Control ([link](#))

Stormwater Management Guidance Manual for Local Officials  
([link](#))

**Cayuga County  
Model Steep Slope Regulation**

**TOWN/VILLAGE OF \_\_\_\_\_  
ARTICLE \_\_\_\_\_ - STEEP SLOPE REGULATION**

**Title.**

Steep Slope Regulation and Overlay District - Amendment to the Zoning Ordinance of the Town/Village of \_\_\_\_\_.

**Purpose and Intent.**

- A. The purpose of the Steep Slope Overlay District established in this article is to provide special controls over land development located in these sensitive environmental areas within the Town/Village of \_\_\_\_\_. This district and the regulations associated within it are designed to preserve, protect and manage sensitive steep slope features with grades of fifteen percent (15%) or greater in order to:
  1. Minimize erosion, pollution and environmental damage;
  2. Reduce soil, pavement and building subsidence;
  3. Ensure proper emergency access; and
  4. Preserve and enhance, to the extent practicable, public scenic views as identified in the Comprehensive Plan for the Town/Village of \_\_\_\_\_. *Include this point only if the municipality has identified such views.*
- B. This regulation is not intended to be substituted for other general zoning district provisions, but can be superimposed over such district provisions and should be considered as additional requirements to be met by the applicant prior to project approval. The purpose of the steep slope overlay district is to provide the Town/Village with an additional level of review and regulation that controls how land development permitted by the Town's/Village's primary zoning districts should occur on slopes of fifteen percent (15%) grade or greater and within a fifty (50) foot zone at the top and bottom of such slopes.

**Definitions.**

1. **Site Disturbance:** Any activity that removes the vegetative cover from the land surface.
2. **Vegetative Cover:** Grasses, shrubs, trees, and other vegetation which holds and stabilizes soils.
3. **Steep Slope:** A ground area with a 15% gradient or greater (a ratio of 15 feet or greater of vertical distance to every 100 feet of horizontal distance) for a vertical height of 35 feet or more and covering a minimum horizontal area of 500 square feet.
  - a. **15% slope:** A ground area with a 15% gradient (a ratio of 15 feet of vertical distance to every 100 feet of horizontal distance) for a vertical height of 35 feet or more and covering a minimum horizontal area of 500 square feet.
  - b. **35% slope:** A ground area with a 35% gradient (a ratio of 35 feet of vertical distance to every 100 feet of horizontal distance) for a vertical height of 35 feet or more and covering a minimum horizontal area of 500 square feet.

**Steep Slope Overlay District.**

- A. **District.** The Steep Slope Overlay District encompasses all steep slopes within the Town/Village of \_\_\_\_\_ and includes a fifty (50) foot zone along the top and bottom of such slopes. The Town/Village has the authority to amend or add to the District as necessary. Field investigations and/or other environmental analyses may be required in order to determine whether a proposed regulated activity is included within the District. Determination of the status of a particular activity in terms of its presence within or near a steep slope of 15% or greater shall be made by

the Code Enforcement Officer (CEO)/Zoning Enforcement Officer (ZEO). The District is divided into two categories:

1. Areas with steep slopes equal to or greater than fifteen percent (15%) but less than thirty-five percent (35%) including a fifty (50) foot zone along the top and bottom of such slopes
2. Areas with steep slopes that are equal to or greater than 35% including a fifty (50) foot zone along the top and bottom of such slopes

B. **Map.** Approximate boundaries of the Steep Slope Overlay District are shown on the Steep Slope Overlay District Map, which shall be used for reference purposes only and shall not be used to delineate exact boundaries.

#### **Steep Slope Permit.**

- A. A Steep Slope Permit is required for any regulated activity as defined in Section \_\_\_\_\_ within the Steep Slope Overlay District. Steep Slope Permits shall be issued by the Town/Village CEO/ZEO.
- B. If the site is subject to the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) permitting process, the applicant shall submit verification of compliance with those requirements before the Steep Slope Permit is granted.

#### **Regulated Activities and Exemptions.**

- A. No construction, grading, excavation or other activity that results in site disturbance is permitted on any land with a slope of thirty-five percent (35%) or greater, or within a fifty (50) foot transition zone at the top and bottom of slopes with a 35% grade or greater, unless such activity is a non-structural and non-tillable farming activity or a timber harvesting activity using NYS Forestry Best Management Practices for Water Quality.
- B. Any construction, grading, excavation or other activity that results in site disturbance that takes place on a slope equal to or greater than fifteen percent (15%) but less than thirty-five percent (35%) or within a fifty (50) foot transition zone at the top and bottom of these slopes shall conform to these Steep Slope Regulations, unless exempted by this section. The following activities are exempted by this section:
  1. Any planting or installation of landscape materials which does not require disturbance of existing terrain;
  2. Emergency situations, as determined by the Town/Village CEO/ZEO, where the disturbance of steep slopes is required to protect persons or property from imminent danger;
  3. Farming activities using sound management practices in accordance with the Sound Agricultural Practices Guidelines of the New York State (NYS) Department of Agriculture and Markets;
  4. Timber harvesting using NYS Forestry Best Management Practices for Water Quality;
  5. Routine repair and maintenance of an existing driveway, but not to include reconstruction;
  6. Construction, maintenance, and repair of public utilities;
  7. Routine and emergency construction, maintenance or repair of public highways by authorized municipal or New York State personnel;
  8. Town/Village water and sewer installations;
  9. Site disturbance that totals an area of less than three hundred (300) square feet.
- C. No driveway, vehicular access lane, or private road may be constructed that exceeds 15% slope for more than 5% of its total length.

#### **Erosion Sediment Control Plan.**

- A. Applicants for Steep Slope Permits shall submit an Erosion and Sediment Control Plan (ESCP) that will enable the reviewing body to evaluate the appropriateness of the steep slope site design and the proposed erosion and sediment control measures.

- B. **Contents.** The ESCP shall contain provisions to control erosion and sedimentation and reduce the impacts of stormwater, stormwater infiltration and runoff from the site during construction and post-construction based on best management practices. The objective of such practices is to minimize soil erosion and sedimentation and ensure slope stability.
1. A complete ESCP shall contain the following: A narrative that provides background information about the scope of the project, site characteristics such as location, type and size of the project, and describes the plans and maps described in this section. The narrative should highlight the erosion and sedimentation control measures, and measures to maintain slope stability, and why they will be effective.
  2. A general location map that shows the proximity of the site to any surface water bodies, wetlands, roads, property boundaries, and other features, and shall include a USGS map as well as a map at a minimum 1:100 scale.
  3. An existing condition site plan that shows the grading features as they currently exist, soils, existing vegetation, drainage patterns and stormwater runoff, and the locations and names of the receiving waters.
  4. A grading plan and construction timetable that shows the proposed finished contours and drainage patterns, and addresses sequencing of the project and construction activities including clearing, grubbing, excavation, grading, utility and infrastructure installation and any other activity on the site that results in soil disturbance. The plan will also show locations of off-site material, waste, borrow or equipment storage areas, and locations of stormwater discharges. The timetable shall show how each phase of the project relates to the others and how the applicant has taken steps to minimize the amount of exposed soil at all times.
  5. A site plan and timetable that depicts the location of all erosion and sediment control measures and a timetable that charts the sequencing of control measures. The plan shall include:
    - a. Temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out.
    - b. The dimensions, material specifications and installation details for all erosion and sediment control practices including the siting and sizing of any temporary sediment basins.
    - c. Temporary practices that will be converted to permanent control measures.
    - d. Description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in stormwater runoff.
    - e. An implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and duration that each practice should remain in place.
    - f. A maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practice.
    - g. The names of the receiving waters of new drainage patterns.
  6. A description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.
  7. The designation of responsibility for ESCP implementation for each part of the site and phase of the project.
  8. A description of structural practices designed to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable.

9. Maintenance schedule to ensure continuous and effective operation of each post-construction stormwater management practice.
10. A plan prepared by a licensed professional engineer showing and certifying the following:
  - a. All existing and proposed natural and artificial drainage courses and other features for the control of drainage, erosion and water.
  - b. The calculated volume of water run-off from slopes 15% or greater and from the lot in question, as unimproved and improved, during a two-year, twenty-four hour storm event.
  - c. The existence, location, and capacity of all natural and artificial drainage courses and facilities within five hundred feet (500') of the regulated activity, which are used, or will be used, to carry or contain the water runoff from slopes 15% or greater.
  - d. A description of the effect of any increased water run-off on all adjacent properties and any other property which will be materially affected by increased water run-off and infiltration.
  - e. Subsurface geology and hydrology that would impact the proposed development, adjacent properties, or areas downstream of impacted water flows.
11. Any additional provisions, methods or procedures the Planning Board deems necessary in order to do a proper review of the regulated activity.

*Note to Towns/Villages adopting these regulations: Sites that are one acre or larger are subject to the NYDEC State Pollutant Discharge Elimination System (SPDES) permitting process in addition to these regulations.*

**Content Waiver.**

The Planning Board may waive any information requirements contained within [*Erosion and Sediment Control, Subsection C, Plan Contents*], with respect to an application for a Steep Slope Permit, so long as a fully informed determination, consistent with the intent of this chapter, can be made without the information.

**Technical Standards.**

- A. For the purpose of these regulations, the following documents shall serve as the official guides and specifications for slope protection and erosion and sediment control:
  1. *New York Standards and Specifications for Erosion and Sediment Control*, (Empire State Chapter of the Soil and Water Conservation Society, 2004, most current version or its successor, hereafter referred to as the Erosion Control Manual).
  2. *The New York State Stormwater Management Design Manual* (New York State Department of Environmental Conservation, most current version or its successor, hereafter referred to as the Design Manual).
- B. Alternative methods that are not outlined within this section may be used with prior approval of the Town/Village Board based upon a favorable recommendation from all of the following: 1) Town/Village Engineer (staff)/Town/Village's Consulting Engineer; 2) County Soil and Water Conservation District; 3) Owasco Lake Watershed Inspector, where applicable.

**Review Standards.**

- A. **Considerations.** In granting, denying or conditioning any application for a Steep Slope Permit, the Planning Board shall consider the following:
  1. The effect that the proposed regulated activity will have on the public health, safety and welfare and on the protection or preservation of steep slope areas;
  2. The compatibility of the proposed regulated activity with the preservation, protection and conservation of the steep slope and surrounding area;
  3. The degree to which the proposed activity conforms to the standards and criteria of the Steep Slope Overlay District, as noted elsewhere in this article.

B. **Conditions.** No permit to undertake a regulated activity within any area of steep slopes shall be issued unless the applicant can demonstrate that the following standards are met to the satisfaction of the Planning Board.

1. There is no reasonable alternative for the proposed regulated activity on that portion of the site not containing steep slopes;
2. There shall be no more than nominal degradation to or loss of steep slopes and surrounding areas;
3. Lot layouts are designed so that sanitary sewage disposal systems entirely avoid all areas within the Steep Slope Overlay District and are in compliance with all standards and regulations of the Cayuga County Health Department;
4. Wherever possible, erosion shall be prevented by minimizing disturbance to the existing vegetative cover;
5. The planning, design and development of buildings and site improvements limits the rate of stormwater runoff to a zero increase with overflow to a municipal drain system where practicable and provides the maximum in structural safety, slope stability, and human enjoyment while adapting the affected site to, and taking advantage of, the best use of the natural terrain and aesthetic character;
6. The terracing of building sites is kept to a minimum;
7. Roads and driveways follow the natural topography to the greatest extent possible in order to minimize the potential for erosion, and they are consistent with other applicable regulations of the Town/Village of \_\_\_\_\_ and current engineering practices;
8. Habitat is quantified and protected, no endangered species of flora or fauna are adversely impacted and any replanting shall be maintained by the applicant for two years and shall consist of indigenous vegetation that at a minimum replicates the original vegetation on the site, in kind;
9. Any re-grading blends in with the natural contours and undulations of the land;
10. Cuts and fills are rounded off to eliminate sharp angles at the top, bottom, and sides of re-graded slopes;
11. The angle of cut and fill slopes does not exceed a slope of one vertical to three horizontal except where retaining walls, structural stabilization, or other methods acceptable to the Town Engineer are used;
12. Disturbance of rock outcrops is by means of explosives only if labor and machines are not effective and only if rock blasting is conducted in accordance with all applicable regulations of the Town/Village of \_\_\_\_\_ and the State of New York. The rock shall be effectively stabilized;
13. Disturbance of slopes is undertaken in workable units in which the disturbance can be completed and stabilized in one construction season so that areas are not left bare and exposed during the period from December 15 through April 15;
14. Disturbance of existing vegetative ground cover does not take place more than seven (7) days prior to grading and construction;
15. Temporary soil stabilization, including, if appropriate, temporary stabilization measures such as netting or mulching to secure soil during the grow-in period, is applied to an area of disturbance within two days of establishing the final grade, and permanent stabilization is applied within seven (7) days of establishing the final grade;
16. Soil stabilization is applied within two days of disturbance if the final grade is not expected to be established within 60 days;
17. All proposed disturbance of slopes is undertaken with consideration of the soil limitation characteristics, in terms of recognizing the limitations of certain soil types on slopes for development and application of all mitigating measures, and as deemed necessary by the Planning Board or Town/Village Engineer;

18. Structures are designed to fit into the hillside rather than altering the hillside to fit the structure, employing methods such as reduced footprint design, step-down structures, stilt houses, and minimization of grading outside the building footprint;
19. Development is sited on that portion of the site least likely to impact the natural landforms, geological features, and vegetation;
20. The construction equipment has adequate access so as not to disturb anything outside the approved limit of disturbance that shall be shown on the plan drawings and, when approved, staked in the field.

### **Review Process.**

To the extent practicable, Steep Slopes Permit reviews shall run concurrently and be coordinated with other local approvals.

- C. **Pre-application Erosion and Sediment Control Sketch Plan.** The applicant is encouraged to present a sketch plan of the proposal to the Planning Board for informal review and discussion. The Planning Board is not authorized to and shall not take any formal action on sketch plans.
- D. **Submissions.** An application, Erosion and Sediment Control Plan and any requests to waive specific ESCP requirements shall be submitted to the Town/Village of \_\_\_\_\_ Planning Board. All of these materials must be submitted before the application can be reviewed.
- E. **External Review.** The Town/Village of \_\_\_\_\_ Planning Board may refer the ESCP to a qualified consultant and/or to the County Soil and Water Conservation District for professional advice concerning compliance of the plan.
- F. **Final Decision.** Findings of fact shall be made by the Planning Board for all decisions to permit, not permit, or permit with conditions the regulated activity. "Findings" is a written description of facts relevant to and in support of the decision made and shall be made part of the public record. No Steep Slopes Permit shall be granted unless it is consistent with these regulations.
- G. **Provisions for Inspection.** A Steep Slopes Permit may be approved only after physical inspections of the property have been made by the Town/Village at the times and in the manner described below. The applicant shall arrange with the Town/Village CEO/ZEO for scheduling of the following inspections:
  1. An initial inspection prior to final approval of the requested Steep Slopes Permit.
  2. An erosion control inspection to ensure erosion control practices are in accordance with the approved plan.
  3. A burial inspection prior to backfilling of any underground drainage or stormwater conveyance structures.
  4. A final inspection when all work, including construction of stormwater management facilities, has been completed.
  5. The CEO/ZEO retains the right to inspect permanent post-construction stormwater facilities on an on-going basis and to request records of its maintenance.

### **Enforcement.**

- A. **Appeals.** Applicants may appeal the determination of Steep Slope Overlay District boundaries in the same manner as appeals of Zoning Enforcement Officer interpretations under the Town/Village Zoning Code.
- B. **Operation and Maintenance of Facilities.** The owner or operator of permanent stormwater management practices installed in accordance with this law shall ensure they are operated and maintained to achieve the goals of this law. Proper operation and maintenance also includes, as a minimum, the following:
  - a. A preventative/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the owner or operator to achieve the goals of this law.

- b. Written procedures for operation and maintenance and training of new personnel, if applicable.
- c. Discharges from the stormwater management practices shall not exceed design criteria or cause or contribute to water quality standard violations in accordance with state law.

**C. Sureties.**

- 1. **Completion of Work.** To ensure compliance with all requirements of an approved permit, the Town/Village Board may require the applicant to provide a performance guarantee or surety, prior to construction in the form of a performance bond, escrow account certification, or irrevocable letter of credit from an insured financial institution. The guarantee shall be for the full cost of all work to be performed on the property subject to the permit and shall be payable solely to the Town/Village of \_\_\_\_\_. The Town/Village Board shall determine the amount based on the final design plans and actual construction costs.
- 2. **Maintenance of Facilities.** Where stormwater management and erosion control facilities are to be operated and maintained by the developer, or by a corporation that owns or manages the development, the Town/Village Board shall require the developer to provide the Town/Village of \_\_\_\_\_ with a performance guarantee/surety in the form of a performance bond, escrow account certification, or irrevocable letter of credit from an insured financial institution, payable to the Town/Village of \_\_\_\_\_ to ensure maintenance of all stormwater management and erosion control facilities which have been approved for the Steep Slopes Permit during the life of the facility.
- 3. **Duration.** Sureties will remain in force until the Town/Village of \_\_\_\_\_ releases the responsible party from liability. All accrued interest in any surety account shall be reinvested to the benefit of the account and may be applied only to the purposes originally established for the surety until the Town/Village of \_\_\_\_\_ releases the responsible party from liability.
- 4. **Failure to Comply.** If the developer or owner fails to perform as required under the permit, the Town/Village of \_\_\_\_\_ may draw any portion of the amount guaranteed for the purpose of work in default under the permit. If the developer, owner or other named responsible party fails to maintain facilities as required, the Town/Village of \_\_\_\_\_ may draw any portion of the amount guaranteed to pay the costs of operation and maintenance of permitted facilities.

**D. Stop Work Orders.**

- 1. The CEO/ZEO shall issue, or cause to be issued, a stop work order for any regulated activity found ongoing without a Steep Slope Permit. Disregard of a stop work order shall subject the violator to the penalties described in *[Enforcement Subsection F, Penalties]*.
- 2. The CEO/ZEO shall issue, or cause to be issued, a stop work order for any steep slope development found non-compliant with the provisions of this law and/or the conditions of the Steep Slope Permit. Disregard of a stop work order shall subject the violator to the penalties described in *[Enforcement Subsection F, Penalties]*.

**E. Certificate of Compliance.**

- 1. In areas within the Steep Slope Overlay District it shall be unlawful to occupy or to permit the use or occupancy of any building or premises, or both, or part thereof hereafter created, erected, changed, converted or wholly or partly altered or enlarged in its use or structure until a certificate of compliance has been issued by the CEO/ZEO stating that the building or land conforms to the requirements of this local law.
- 2. A certificate of compliance shall be issued by the CEO/ZEO upon satisfactory completion of all development in areas within the Steep Slope Overlay District.
- 3. Issuance of the certificate shall be based upon the inspections conducted as prescribed in *[Review Process Subsection G, Provisions for Inspection]*.

**F. Penalties.** A violation of a section of this article is hereby declared to be an offense, punishable by a fine not exceeding \$350 or imprisonment for a period not to exceed six months, or both, for

conviction of each offense. Each section that is violated shall constitute a separate offense and each day that a violation continues shall constitute a separate offense.

**Fees.**

The application shall be accompanied by:

- A. An application fee in an amount to be determined by resolution of the Town/Village Board.
- B. Fees for services provided by site inspectors, engineers, planners, attorneys and outside agencies in an amount determined by the Town/Village Board as sufficient to defray the estimated costs of such services rendered to the Town/Village in connection with the application. The applicant shall deposit with the Town/Village Clerk the amount estimated to reimburse the Town/Village for such costs. Any amount remaining after payment for services rendered shall be returned to the applicant upon final approval or upon withdrawal if the application is withdrawn.

**Cayuga County**  
**Sample Checklist for Model Steep Slope Regulation**

*This document is intended to be a tool to assist in Planning Board review and is for internal Town/Village use only. Applicants are to refer to the steep slope law itself for guidance.*

**Erosion and Sediment Control Plan**

The application must contain the following, unless a waiver has been granted:

	Yes	No	Waived
1 All maps and plans include legend, scales, north arrow	_____	_____	_____
2 Narrative (see section Erosion and Sediment Control Plan B.1.)	_____	_____	_____
3 A 1:100 scale general location map (see section Erosion and Sediment Control Plan B.2.)	_____	_____	_____
4 Site plan of existing conditions including (see section Erosion and Sediment Control Plan B.3.)	_____	_____	_____
5 A grading plan and construction timetable that addresses the sequencing of the project including (see section Erosion and Sediment Control Plan B.4.)	_____	_____	_____
6 A site plan that depicts the location of all erosion and sediment control measures and a timetable that charts the sequence of all those measures (see section Erosion and Sediment Control Plan B.5.)	_____	_____	_____
7 Description of construction and waste materials storage and control (see section Erosion and Sediment Control Plan B.6.)	_____	_____	_____
8 Designation of responsibility for ESCP implementation (see section Erosion and Sediment Control Plan B.7.)	_____	_____	_____
9 Description of structural practices designed to divert flows from exposed soils (see section Erosion and Sediment Control Plan B.8.)	_____	_____	_____
10 Post-construction maintenance schedule (see section Erosion and Sediment Control Plan B.9.)	_____	_____	_____
11 Plan by a licensed engineer indicating drainage courses, calculated water runoff, geology, hydrology and infiltration (see section Erosion and Sediment Control Plan B.10.)	_____	_____	_____
12 Additional provisions that the Planning Board has requested (see section Erosion and Sediment Control Plan B.11.):	_____	_____	_____

	Yes	No	Waived
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Missing Items:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Review Standards**

	Yes	No
1 Do the proposed site design and erosion and sediment control measures reflect best management practices for controlling environmental impacts (see section Review Standards A., B.5., B.17., B.12., B.20.)?	_____	_____
2 Is there a reasonable alternative for the proposed development on the portion of the site that does not contain steep slopes (see section Review Standards B.1.)?	_____	_____
3 Is the development sited on that portion of the site least likely to result in degradation to or loss of steep slopes, geological features and vegetation (see section Review Standards B.2., B.19.)?	_____	_____
4 Are sanitary sewage disposal systems located entirely outside the Steep Slope Overlay District (see section Review Standards B.3.)?	_____	_____

		Yes	No
5	Will terracing and the disturbance to the existing vegetative cover be avoided or minimized (see section Review Standards B.4., B.6.)?	_____	_____
7	Do the roads and driveways follow the natural topography to the greatest extent possible (see section Review Standards B.7.)?	_____	_____
8	Will any endangered or threatened species be impacted by this project (see section Review Standards B.8.)?	_____	_____
9	If any re-grading or cut-and-fill slopes are proposed, do they blend in with the natural contours of the land (see section Review Standards B.9., B.10., B.11.)?	_____	_____
10	Is the timeframe and phasing of the project such that seasonality and the length of time between grading and construction have been taken into account (see section Review Standards B.13., B.14., B.15., B.16.)?	_____	_____
11	Are any proposed structures designed to fit into the hillside rather than altering the hillside to fit the structure (see section Review Standards B.18.)?	_____	_____

**Notes and Comments:**

**Recommend Approval or Disapproval:**

**Permit Conditions, if Approval is Recommended:**

**Plan reviewed by:**