Regional Viewshed Inventory and Analysis

Appendices



Appendix A - Additional Resources

I-69 Scenic Corridor Management Plan, SmithGroup JJR, Michigan Department of Transportation, 2002

Keuka Lake Waterfront Scenic Viewshed Protection Plan, Cornell University, 2014, http://www.stcplanning.org/usr/Program Areas/Water Resources/KeukaLake/Waterfront%20Revitalization%20 and%20Scenic%20Viewshed%20Protection%20Plan opt.pdf

Landscape Aesthetics: A Handbook for Scenery Management, Appendix A, United States Department of Agriculture. 1995

Preserving New York State Scenic Roads: A Guide to Designation, New York State Department of Environmental Conservation, https://www.dot.ny.gov/content/engineering/Scenic-Byways/Byways-repository/Preserving%20 New%20York%20State%20Scenic%20Roads 001-030.pdf

Scenic Byways: A Design Guide for Roadside Improvements, U.S. Department of Transportation Federal Highway Administration, http://www.fs.fed.us/eng/pubs/pdf/fhwa02001.pdf

This guide was written as a follow-up to the actual designation of a scenic byway to assist planners, landscape architects, designers, and managers of scenic byways in the maintenance and enhancement of that corridor. It includes examples of improvements, descriptions of design principles, and an outline of the planning process.

Scenic Resources Inventory & Analysis, Town of Ithaca New York. Town of Ithaca Planning Department, 2014

Tennessee Valley Authority Visual Resources Scenic Value Criteria, Appendix F: Scenic Value Criteria for Inventory and Management and Appendix I: Scenic Value Criteria for Scenery Inventory and Management, 2001

The Roadscape Guide: Tools to Preserve Scenic Road Corridors. Champlain Valley Greenbelt Alliance for the Vermont Forum on Sprawl, 2007, http://vnrc.org/wp-content/uploads/2012/08/The-Roadscape-Guide.pdf

Vermont has been cataloging scenic roadsides since 1937.

Tompkins County New York, Scenic Resource Inventory, peter j. smith & company, inc., 2007, http://www.tompkins-co.org/planning/nri/documents/TCSRreportJan17.pdf

This study documented 593 scenic resources in Tompkins County and generated a digital database of information pertaining to these views. It identified 25 Distinctive Views, 30 Noteworthy Views, and 10 categories of Characteristic Views. It also developed a methodology enabling municipalities to perform more detailed scenic resource inventories relating to their unique locales. Online inventory: http://www.tompkins-co.org/planning/ScenicResources.htm

Tompkins County Protecting Our Scenic Resources Toolkit, 2010, http://www.tompkins-co.org/planning/nri/documents/ScenicResourcesProtectionDec2010.pdf *View to the Mountains: A Scenic Protection Manual*, Smart Growth Vermont, 2012, http://vnrc.org/wp-content/uploads/2012/08/view-to-the-mountains-1-60.pdf

Windshield Survey of Scenic Roads Designated by the New York State Department of Environmental Conservation in the Hudson River Valley, Scenic Byways Inventory, Greenway Conservancy for the Hudson River Valley, Inc. 1996

Appendix B - Regional Viewshed Inventory and Analysis Introductory Brief + Criteria and Site Identification Matrix

Introduction

A viewshed is defined as all that is contained in a view that you see from a given vantage point. Scenic resources are defined as areas of intense visual appeal. The purpose of this regional viewshed inventory and analysis Analysis was to work with the nine counties of the Genesee-Finger Lakes Region, the City of Rochester, and other stakeholders to identify and inventory selected priority example viewsheds. This includes a methodology that municipalities can use for future additional inventory, analysis and prioritization, consideration of strategies for protecting and preserving key scenic views and resources, and training for municipal officials on considerations, processes, practices, and methods of scenic resources and viewshed protection.

More specifically, this Viewshed Inventory and Analysis seeks to identify and inventory selected priority example viewsheds on the federal-aid roadway system within a specific geographic range in order to identify, catalog, and develop an analysis methodology and a matrix of regulatory and non-regulatory means of preserving views. This brief explains the criteria for identifying these viewsheds.

The Regional Viewshed Inventory and Analysis project includes three components: Inventory and Analysis, Tool Kit, and Training. The main component is Inventory and Analysis of up to six views from specific locations for each county are along the federal-aid roadway system which includes criteria development; identification of sites based on the criteria with input from county planners and municipalities; a windshield survey; site inventory, characterization and evaluation including identification of properties indispensable to the integrity of the viewshed; digital photographic record of key views; GIS base maps including ortho, topo, roads, municipal boundaries, property lines and ownership, zoning, prime agricultural soils, wetlands, floodplains, historic sites; and documentation of inventory and analysis methodology.

Inventory

This selection criteria is adapted to local conditions based on scenic evaluation methodology from New York Coastal Management Program due to our region's numerous coastal waters and inland waterways; New York Executive Article 42 § 912 specifically includes scenic character as a key resource protected by law. (New York State is also home to the first movements to recognize American scenic landscapes, including the mid-century work of the Hudson River School of painters and the American Romantic Landscape Movement.)

For identification of sites selectors could consider the following:

- Relevant publications (such as comprehensive plans, open space plans, and Local Waterfront Revitalization Plans)
- Historic photographs
- · Recent ortho-photographs
- · Local guidebooks and histories
- Mapping tools like Google Earth can be a useful resource for gathering information on the location and objective characteristics of the visual environment to advance to the next step of the process

To the greatest extent possible these should be included in the information provided with each selected site.

The criteria and eventual visual inventory should include the best examples from the following categories:

- Cultural
 - o farming and pasture landscapes, historic landmarks and monuments, heritage icons, hay fields, municipal uses, architecture, rare unique structures, settlements
- Natural
 - o views of open landscapes of water, meadows, fields, beaches
- Vegetation
 - o meadows, farmland, pasture land, low wetland vegetation, lawn, woodlots
- Landform
 - o flat, steep, hilly, rolling terrain, rocks, cliffs, valleys, gorges
- Water
 - o ponds, lakes, rivers, streams, wetlands, working waterfronts, shoreline residential, waterfalls and cascades
- Land Use
 - o parks, conservation easements, trails, airports, streets, rural roads, private parcels

Scarcity or uniqueness could be tied to the value of the site.

A visual inventory consists of observing and documenting the visual, physical and cultural characteristics of the landscape including views, landscape composition and public accessibility.

To be included in this inventory, the scenic resource should be on the federal-aid roadway system and should be accessible for inventory via public road and/or short public trail.

Up to 6 sites per county should be identified.

When identifying sites consideration should be given to the fact that following the initial identification of sites the following will be done:

- A windshield survey
- Site inventory, characterization and evaluation including identification of properties indispensable to the integrity of the viewshed; digital photographic record of key views
- GIS base maps including ortho, topo, roads, municipal boundaries, property lines and ownership, zoning, prime agricultural soils, wetlands, floodplains, historic sites

Regional Viewshed Inventory and Analysis Site Identification Matrix

Notes			
Public Value: Very high / high / moderate / low recognition or visibility			
Description: farm, meadow, valley, stream, etc.			
Category or Categories: Cultural, Natural, Vegetation, Landform, Water, Land Use			
Geographic Coordinates: (i.e.,42.4433°N, 76.5000° W)			
Location: Address or closest intersection			

, New York

County of

Plans), historic photographs, recent orthophotographs, and local guidebooks and histories. Mapping tools like Google Earth and Bing *Planners should consult relevant publications (such as comprehensive plans, open space plans, and Local Waterfront Revitalization Maps can be a useful resource for gathering information on the location and objective characteristics of the visual environment.

Contact Person, email/phone:

Appendix C - Presentation - Demystifying Viewsheds: How to Apply the Latest Tools and Research to Development Projects

Demystifying Viewsheds: How to Apply the Latest Tools and Research to Development Projects

Razy Kased, GISP, Genesee/Finger Lakes Regional Planning Council CJ Randall, LEED-ND, Genesee/Finger Lakes Regional Planning Council

Regional Local Government Workshop, May 14th 2015, Burgundy Basin Inn

Demystifying Viewsheds

How to Apply the Latest Tools and Research to Development Projects

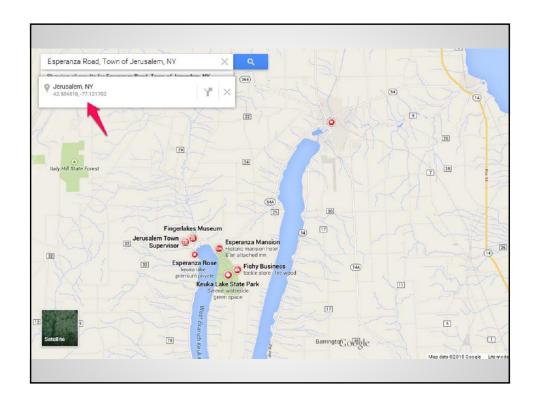


Genesee/Finger Lakes Regional Planning Council Spring 2015 Local Government Workshop May 14, 2015

3 Steps

- 1. Formulate criteria for determining the aesthetic value of a resource
- 2. Inventory and map selected scenic resources
- 3. Protect the quality of scenic resources through regulatory and non-regulatory means

County of	, New York				
Contact person, email/p	hone:				
Location: Address or closest intersection	Geographic Coordinates: (i.c., 42.4433° N, 76.5000° W)	Category or Categories: Cultural, Natural, Vegetation, Landform, Water, Land Use	Description: farm, meadow, valley, stream, etc.	Public Value: Very high / high / moderate / low recognition or visibility	Notes



Regional Viewshed Inventory and Analysis, UPWP 2014-2015

County of Genesee , New York

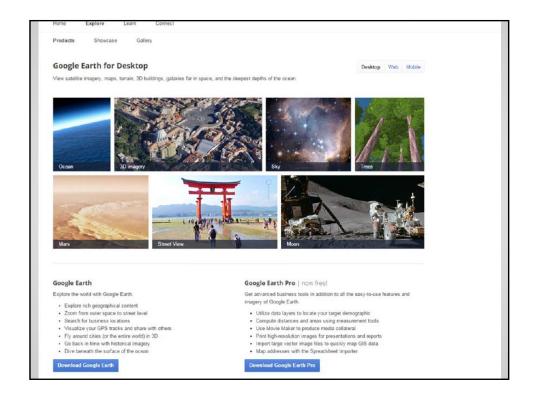
Contact person, email/phone:Felipe Oltramari, felipe.oltramari@co.genesee.nv.us, (585) 815-7901

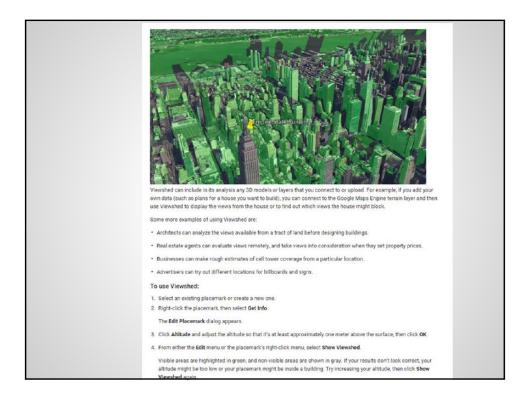
*Planners should consult relevant publications (such as comprehensive plans, open space plans, and Local Waterfront Revitalization Plans), historic photographs, recent orthophotographs, and local guidebooks and histories. Mapping tools like Google Earth and Bing Maps can be a useful resource for gathering information on the location and objective characteristics of the visual environment.

Location: Address or closest intersection	Geographic Coordinates: (i.e., 42.4433° N, 76.5000° W)	Category or Categories: Cultural, Natural, Vegetation, Landform, Water, Land Use	Description: farm, meadow, valley, stream, etc.	Public Value: Very high / high / moderate / low recognition or visibility	Notes
Main St./Ellicott St. Batavia (Main Street Batavia)	42.997910, -78.187233	Cultural	Downtown historic buildings and monuments	Very high	Views of Old Courthouse, Upton Monument and other historic buildings
Wolcott St./Main St. LeRoy (Wolcott)	42.976572, -77.987700	Cultural, Natural, Water	historic buildings, water, dam, creek	Very high	Views of the bridge, churches, public buildings, former in Ingham University campus
Ellicott St./ Main St. Batavia (Tonawanda Creek)	42.997117, -78.188340	Cultural, Natural, Water	historic buildings, water, dam, creek	High	Views of Old Engine House, pedestrian bridge, dam and Tonawanda Creek
Mill St./ Main St. LeRoy (Mill LeRoy)	42.978340, -77.988839	Cultural, Natural, Water	historic buildings, water, waterfall, ereek	High	Mill Street falls, Oatka Creek
Richmond Ave. / Redfield Pkwy. Batavia (V.A. Hospital)	43.009897, -78.199435	Cultural	Historic grounds and buildings	Moderate	VA Hospital and grounds
Richmond Ave. / Ellicott Ave. Batavía (Richmond Ave)	43.005296, -78.186888	Cultural	Historic grounds and buildings, public park	Moderate	Centennial Park, School for the Blind, Historic buildings or Ellicott Ave.

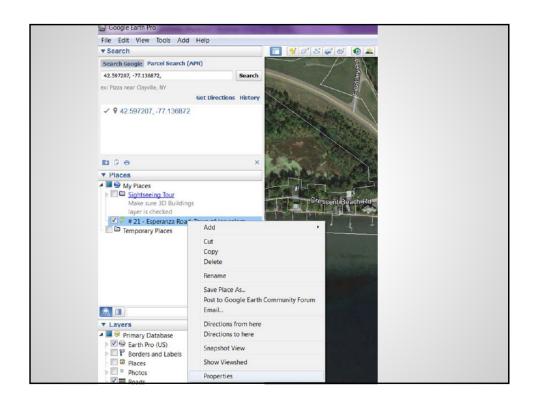




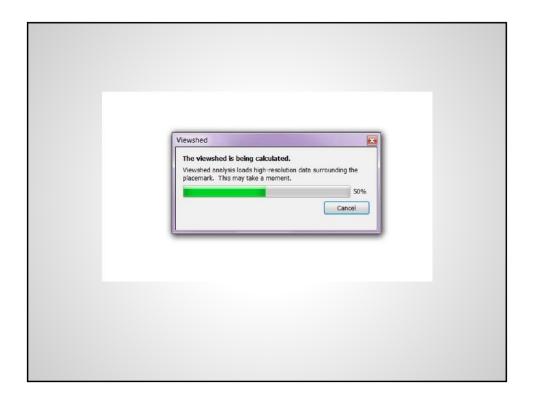




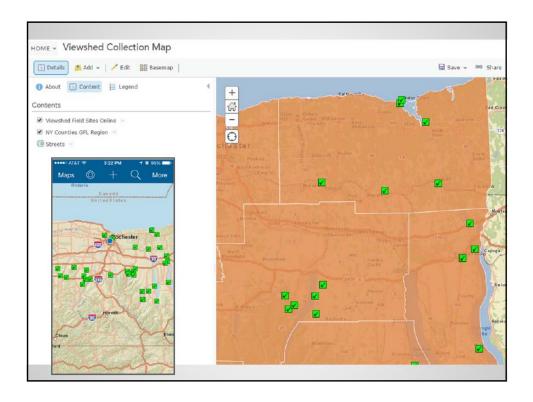












Digital Elevation Data

A Short Review

- ➤ Raster data (evenly spaced, gridded data)
- ➤ Cells hold values for the height of a feature or site referenced to a common vertical datum
- ➤ Resolution refers to the size of the pixels in the data
 - ➤ A DEM with 30 meter resolution is composed of all cells being 30 meters x 30 meters in the x and y directions and each cell holds a single elevation value (z)
- ➤ Elevation value (z) could be stored in a variety of units

MRCS

Helping People Help the Land USDA is an equal opportunity provider and employer.

Digital Elevation Data

Common Resolutions, locally (not all resolutions are available in all areas)

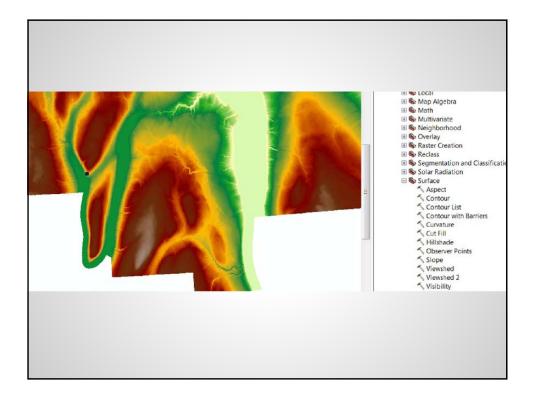
➤USGS primarily 30 meter, 10 meter; some 3

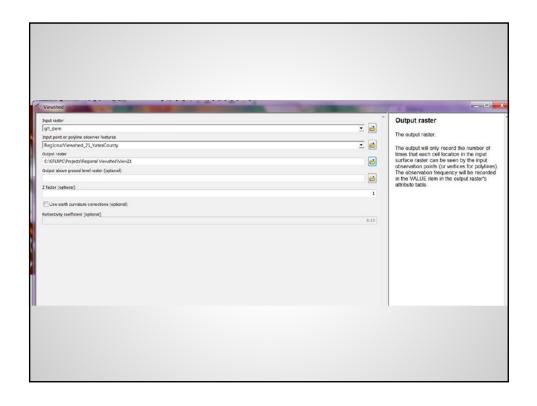
meter

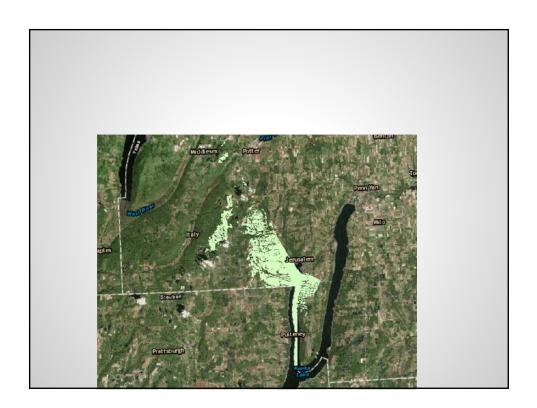


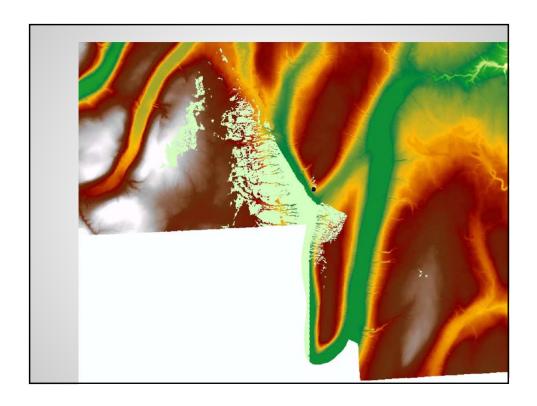
SO ◆NRCS

Helping People Help the Land USDA is an equal opportunity provider and employer.



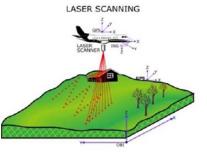






LiDAR Data

- ightharpoonupLiDAR = Light Detection And Ranging
- ➤ Uses an active sensor to emit energy (light) and detect returned energy
- ➤ Can be collected day or night)



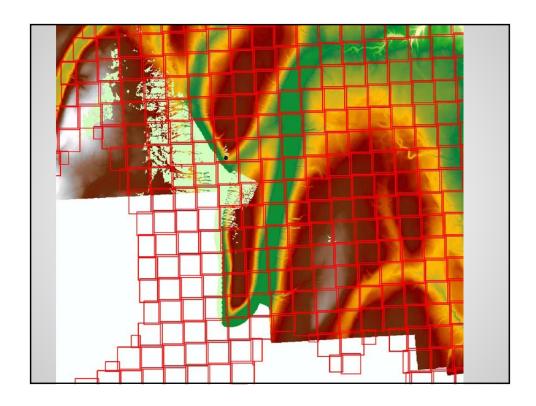
 $Image \ from \ State \ of \ Indiana \ Orthophotography \ and \ LiDAR \ Program, \ presentation \ by \ R.N. \ Wilkinson$

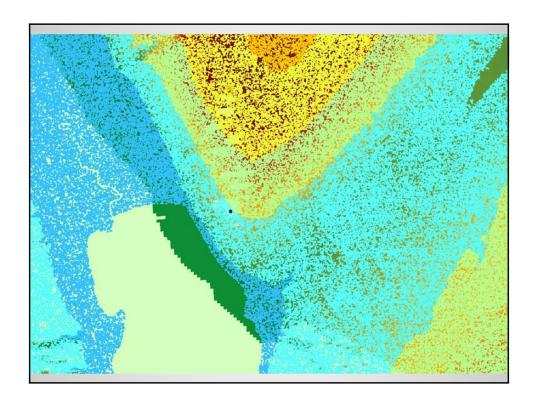
LiDAR Data

- ➤ Airborne and Terrestrial capabilities
- ➤ Combines GPS and an Inertial Measurement device to compute x,y,z positions
- \triangleright Every point recorded has an x,y,z, and intensity value

LiDAR Data

- ➤ All reflections of emitted energy are returned, generating a point cloud of the data
- The point cloud contains data points for scan hits at multiple heights on objects, as well as some noise due to atmospheric conditions.
- These hits are referred to as returns and are referenced in ascending order from highest elevation to lowest elevation for a set of returns
 - ➤ Top of a building or tree is the 1st return
 - Canopy of a tree or side of a building is 2nd or 3rd return, and so on as the returned hits descend in elevation





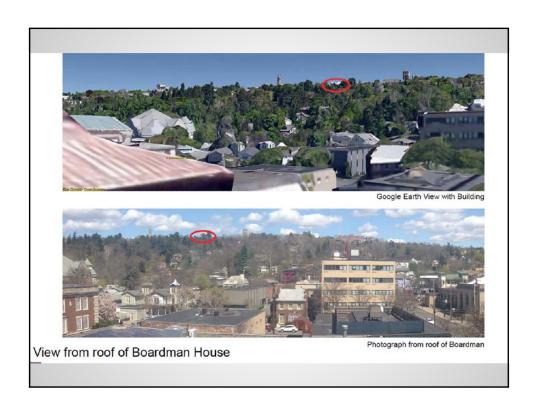


Protecting the views

- ➤ Comprehensive Plan: articulate intent
- ➤ <u>SEQR</u>: figures into determining significant impact
- ➤ <u>Site Plan Review</u>: include impact analysis and visual impact mitigation strategies
- ➤ Zoning: Scenic Protection Overlay
- ➤ <u>Subdivision</u>: cluster development
- ➤ Conservation Boards and Councils: develop conservation objectives, assist in negotiating easements, TDR, PDR











Appendix D - Presentation - Protecting Scenic Resources

Protecting Scenic Resources I: Conducting a Scenic Resources Inventory

Protecting Scenic Resources II: Tools to Safeguard Important Scenic Resources

Andrew Schrauth, Peter J. Smith & Company, Inc. Joan Jurkowich, Tompkins County Planning Department

Regional Local Government Workshop, May 14th 2015, Burgundy Basin Inn





Quick Definitions

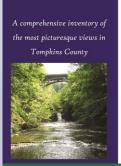
- Scenic Resources natural & cultural assets, unique to place, enriching, valuable, combination of features that give identity to a community/place
- Viewshed the environment visible from one or more viewpoints





Views / Viewsheds

- Why Protect? it defines who we are & is economically and aesthetically important
- Various ways to identify, describe, rank, map viewpoints/viewsheds
- Be consistent & objective
- USFS 1995 Scenery Management Handbook
- Example Tompkins **County Scenic Resources**



TOMPKINS COUNTY SCENIC RESOURCES INVENTORY

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Methodology

- Find, describe, analyze & rank views/viewsheds
- Inventory evaluation form to systematically examine public views, public outreach
- Scenic Characterization gauge values, public input
- Analysis public/private evaluations
- Compilation sorting & ranking

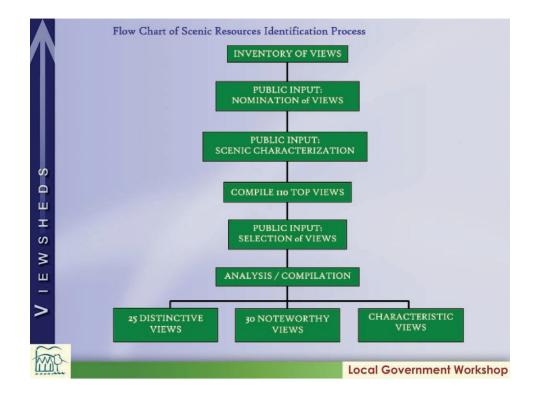


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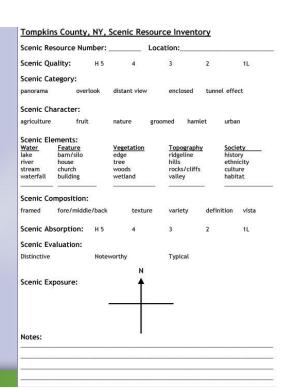
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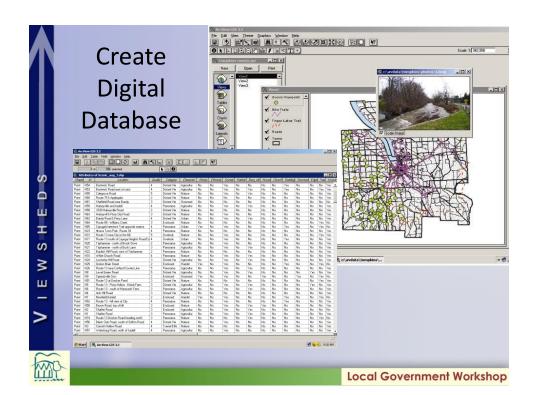


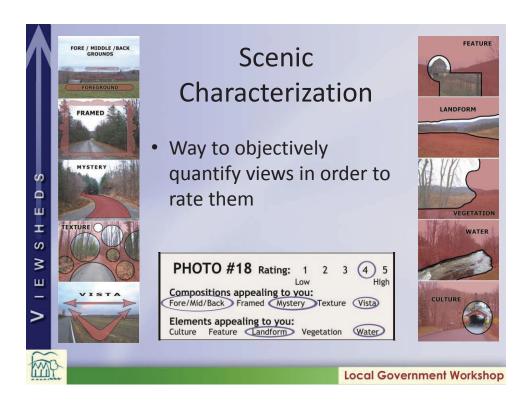
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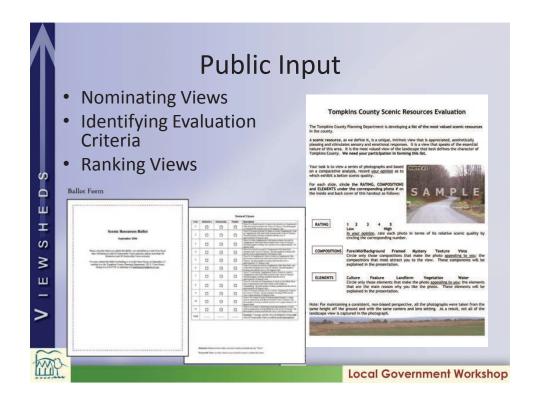
Inventory

- Drive Public Roads/Selected City **Streets**
- Walk public trails
- Photograph view (min. of 2) & GPS **Locate Viewpoint**
- Fill Out Scenic **Resource Evaluation** Form for each view









Nominating Views

- General public outreach
- Special outreach to arts community
- 77 nominations received examples
 - "the view of the city at night from City Lights on Route 79"
 - "most everyone knows that the view on from the top floor of the Johnson Museum is spectacular"
 - "view looking north ...this is mostly a farm view, showing the precise geometry and differing textures, colors and patterns of fields worked by four generations of Smiths."



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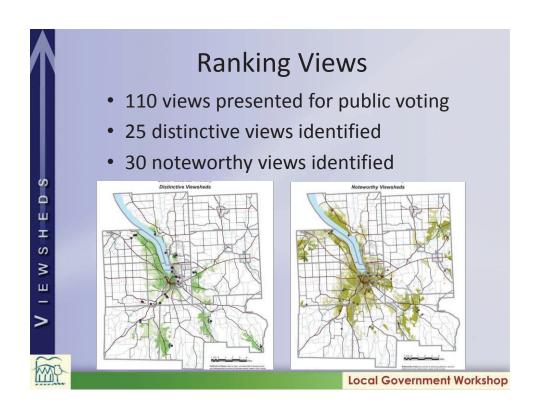
Identifying Evaluation Criteria

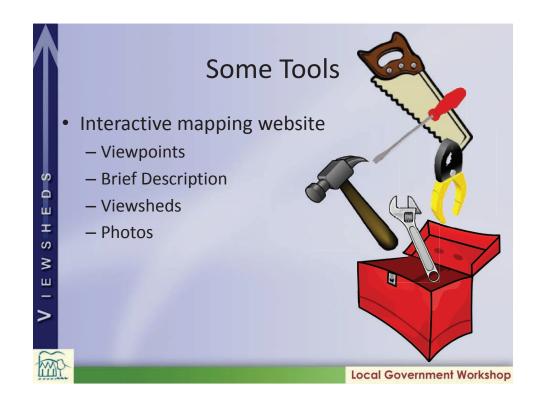
- Public rating of 35 different types of views
 - Mix of types of scenic character
 - Mix of types of scenic categories
- Most valued by public:
 - Scenic Elements
 - Scenic Compositions

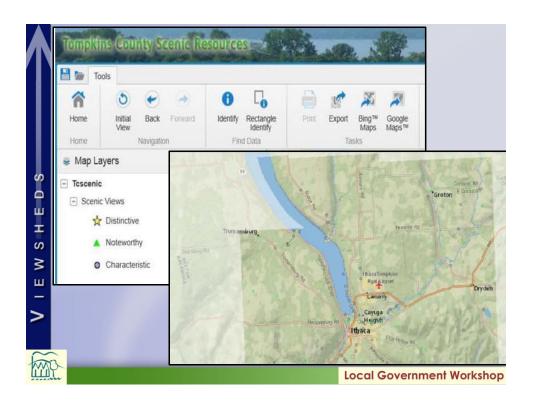
SHARPEN YOUR PENCILS Now open up your handout ... 40 photographs of representative scenic resources 30 seconds to circle your answers for each view. An Example:

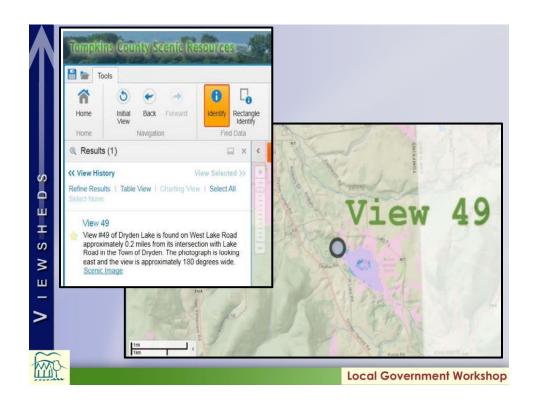


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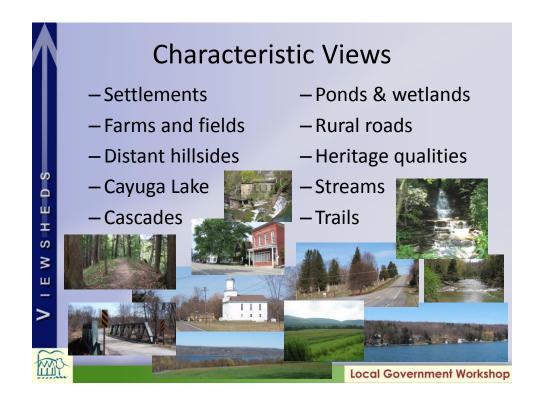


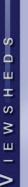












Protecting Scenic Resources II:

Tools to Safeguard Important Scenic Resources



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Define Terms

- Scenic Absorption the amount of development a landscape can manage without losing integrity
- Visual Compatibility built/natural forms that co-exist without conflict
- Building Massing a building's proportions







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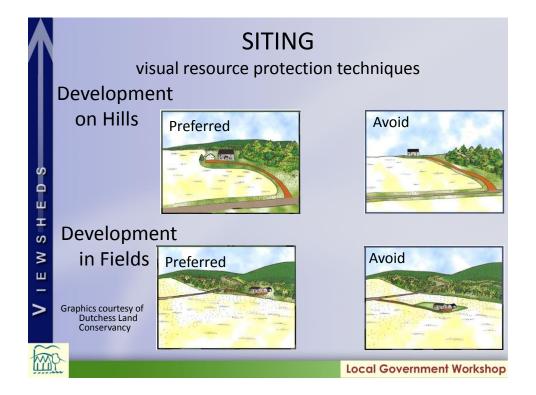
Views / Viewsheds

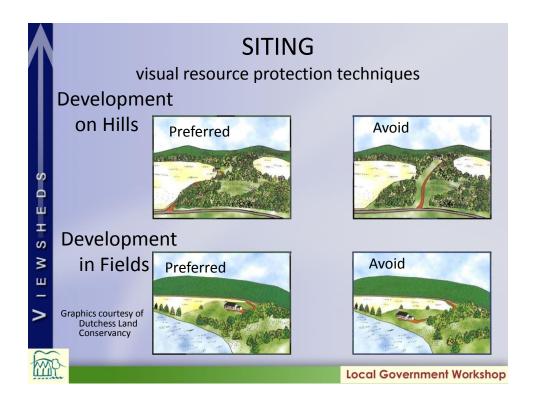
- What to protect, what is critical, what is extent of protection?
- What triggers protection mechanisms?
- Community education
- Visual Resource
 Protection Techniques





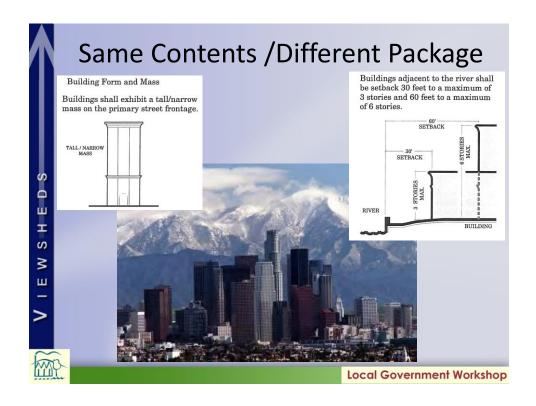
Local Government Workshop



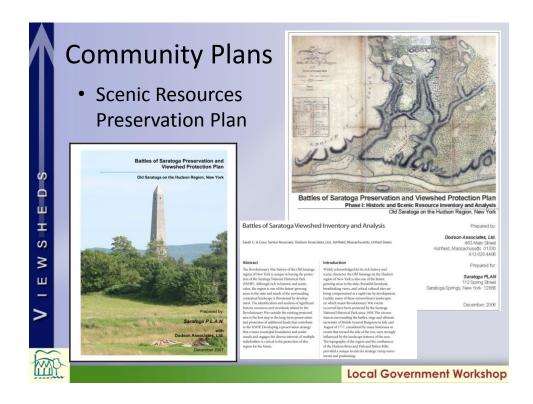




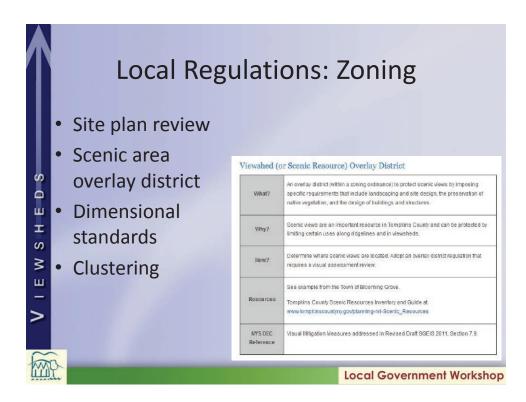


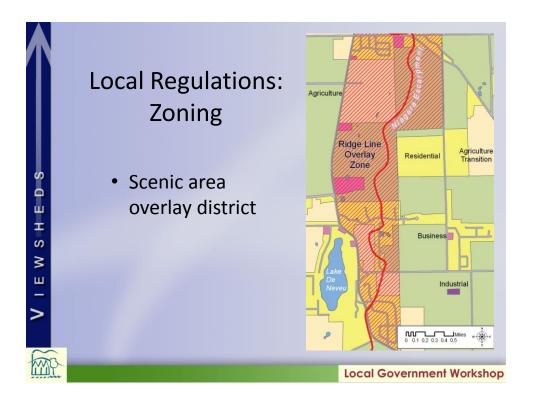


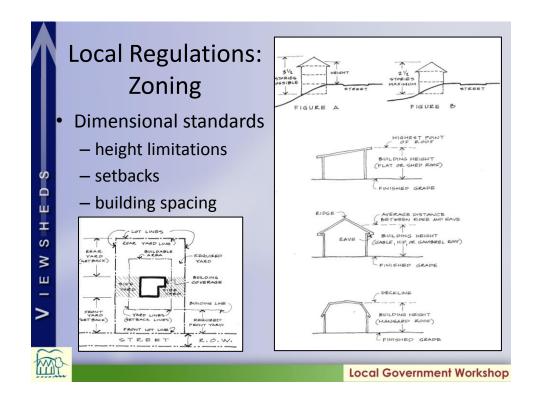


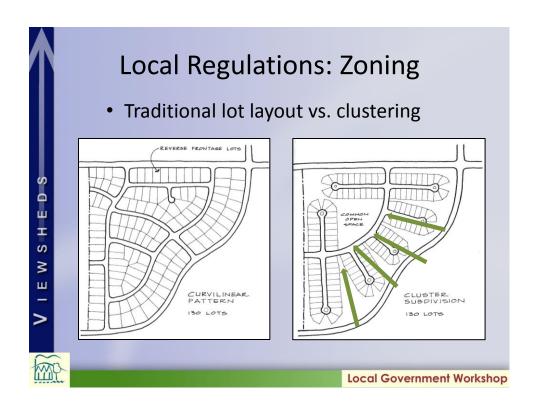












Local Regulations: Subdivision Review Siting and Design considerations Characteristic Views - Farms and fields

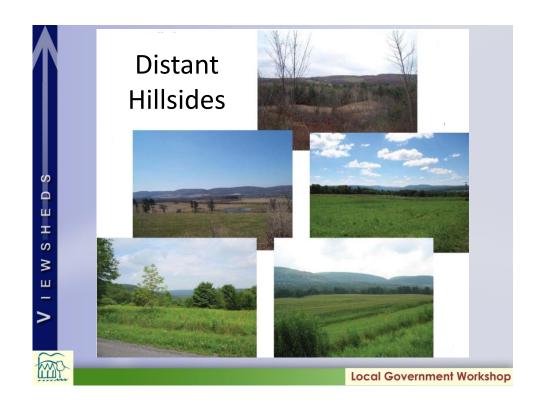
- Forested landscapesDistant hillsides
- Streams and lakes





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Appendix E - Historic Sites Within Viewsheds

Genesee County Viewsheds	
View ID	Historic Sites Within Viewsheds
G3	Genesee County Courthouse
G3	Genesee County Courthouse Historic
	District
G6	US Post Office-Le Roy

Monroe County Viewsheds	
View ID	Historic Sites Within Viewsheds
M1	Braddock Bay State Park
M2	Genesee Lighthouse
M3	Seneca Park East and West
M4	Irondequoit Bay Marine Park
M5	Arcade Mill
M5	Campbell-Whittlesey House
M5	Central Trent Bank Building
M5	Chamber of Commerce
M5	City Hall Historic District
M5	Court Exchange Building-National
	Casket Company
M5	Court Street Bridge
M5	Cox Building
M5	Eastman Historic District
M5	Edwards Building
M5	Erie Barge Canal
M5	Erie Canal: Second Genesee Aque-
	duct
M5	First Universalist Church
M5	Gannett Building
M5	Granite Building
M5	H. H Warner Building
M5	Lehigh Valley Railroad Station
M5	Lindsay & Curr Sibley Building

M5	Main Street Bridge
M5	National Company Building
M5	Naval Armory-Convention Hall
M5	Nazareth House
M5	Old Stone Warehouse
M5	Powers Building
M5	Reynolds Arcade
M5	Reynolds Arcade
M5	Rundel Memorial Library
M5	South Wedge Historic District
M5	St. Mary's Roman Catholic Church
	and Rectory
M5	The Times Square Building
M5	Third Ward Historic District
M5	Wilder Building
M5	Yawman and Erbe Building
M6	Andrews Street Bridge
M6	Brown's Race Historic District
M6	Chamber of Commerce
M6	German United Evangelical Church
	Complex
M6	Reynolds Arcade
M6	St. Paul-North Water Streets Historic
	District
M6	State Street Historic District

Orleans County Viewsheds	
View ID	Historic Sites Within Viewsheds
Or3	Cobblestone Historic District
Or4	Erie Barge Canal
Or4	North Main/Bank Streets Historic
	District
Or4	Orleans County Courthouse Historic
	District
Or4	US Post Office-Albion
Or5	Erie Barge Canal
Or5	Mt. Albion Cemetery

Seneca County Viewsheds	
View ID	Historic Sites Within Viewsheds
S1	Erie Barge Canal
S2	Erie Barge Canal
S2	Seneca Falls Village Historic District
S3	Erie Barge Canal
S3	Hutchinson Homestead
S4	Christopher Willis House
S4	Crooked Lake Outlet Historic District
S4	Miles Raplee House
S4	Robert Ingersoll Birthplace
S4	Young-Leach Cobblestone Farmhouse and Barn Complex
S5	Dr. Henry Spence Cobblestone Farmhouse and Barn Complex
S5	John Noyes House
S5	Queen's Castle
S5	Starkey Corners Methodist Church
S5	Thomas Bennett Curtis House

Wayne County Viewsheds	
View ID	Historic Sites
Wa3	Erie Barge Canal
Wa5	Lotus - Trestle Landing Marina
Wy2	Thomas Coverdale Cobblestone
	House
Wy4	Letchworth State Park
Wy4	Letchworth State Park
Wy5	Silver Lake State Park
Wy5	Silver Lake State Park

Yates County Viewsheds	
View ID	Historic Sites Within Viewsheds
Y2	Esperanza - John Rose House
Y2	Keuka Lake State Park
Y2	Rose Beddoe Family Cemetery
Y3	Abraham Wagener House
Y3	Cottages at Central Point
Y3	Garrett Memorial Chapel
Y3	Gold Seal Winery
Y3	Western New York Wine Co. (Philip
	Argus House & Winery)
Y4	Allen H. Wagener House
Y4	George Hays House
Y4	Sherman Williams House and Fruit
	Barn
Y4	Uriah Hanford House
Y4	William Swartout Farm
Y6	Sampson State Park

Appendix F - Viewshed Properties Ownership

Available upon request. Contact G/FLRPC for detailed tables showing all of the parcels included in each view, which include: parcel IDs, acres, and property class type.