

**NEW YORK STATE ASSOCIATION  
OF PROFESSIONAL LAND SURVEYORS**  
**Annual Surveyor's Conference & Exposition**



**Environmental and  
Ethical Issues in Land  
Development**

Thursday, January 14, 2010  
9:00am-12:00pm

*Presented by:*  
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## Environmental Issues in Land Development

New York State Association of  
Professional Land Surveyors  
Turning Stone Resort  
Verona, New York  
January 14, 2010



## REGULATORY FRAMEWORK

- I. State Environmental Quality Review Act
  - A. Applies to all but the smallest land development activities and virtually everything that requires a permit
  - B. Process
    1. Type Action
    2. Declare Lead Agency
    3. Determine Significance



## REGULATORY FRAMEWORK

### I. State Environmental Quality Review Act

#### B. Process


4. Negative Declaration Ends Process
5. Environmental Impact Statement
  - a. Scoping
  - b. DEIS
  - c. FEIS
  - d. Findings Statement




## REGULATORY FRAMEWORK

### II. National Environmental Policy Act (NEPA)

- A. Applies to “major” or “significant” actions involving a Federal Agency undertaking, permit or funding. Most developer involvement occurs because of wetlands (ACOE) or endangered species (Fish and Wildlife)
- B. Procedurally similar to SEQRA – the significance of the action determines the process: Categorical Exclusion, EIS, Finding of No Significant Impact (FONSI)

	<b>SPECIFIC ISSUES</b>
<p><b>I. Wetlands</b></p> <ul style="list-style-type: none"><li>A. State regulated wetlands</li><li>B. Federally regulated wetlands</li><li>C. APA regulated wetlands</li><li>D. Locally regulated wetlands</li></ul>	

	<b>SPECIFIC ISSUES</b>
<p><b>A. State Regulated Wetlands</b></p> <ul style="list-style-type: none"><li>1. Mapped and classified by NYSDEC; major remapping efforts are underway in the southern part of the State</li><li>2. 12.4 acres or more in size, except for special cases; DEC extending jurisdiction over unmapped wetlands connecting mapped wetlands</li><li>3. 100 foot buffer applies</li><li>4. Most development activities require a permit; permit standards tied to wetland classification</li><li>5. Avoid, minimize, mitigate</li></ul>	

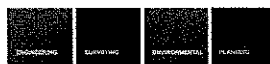


## SPECIFIC ISSUES

### A. State Regulated Wetlands – Possible Regulatory Changes

Legislation under consideration in New York would:

1. Reduce minimum size for regulation to one acre
2. Make wetlands maps educational rather than regulatory
3. No grandfathering



## SPECIFIC ISSUES

### B. Federally Regulated Wetlands

1. General non-regulatory maps exist, but boundaries must be established in field; there are strict survey and reporting requirements
2. No minimum size
3. Isolated wetlands are exempt
4. No buffer
5. No classification scheme
6. Nationwide Permit applies to impacts under ½ acre; other exemptions apply
7. Any impact to a regulated wetland requires notification; impacts greater than ½ acre require an individual permit; impacts between 1/10 and ½ acre may require mitigation
8. Scrutiny increases with size of disturbance; EPA becomes involved if impacts exceed 3 acres
9. Avoid, minimize, mitigate



## SPECIFIC ISSUES

### C. APA Regulated Wetlands

1. Mapped by APA, but they have jurisdiction over unmapped wetlands as well
2. Within the Park federal jurisdiction still applies, although they generally defer to the APA. DEC does not have jurisdiction.
2. One acre minimum size
3. 100 foot buffer
4. No classification scheme
5. Most development activities require a permit
6. Avoid, minimize, mitigate



## SPECIFIC ISSUES

### D. Locally Regulated Wetlands

1. Regulations vary widely
  - a. Different manuals
  - b. Different buffers
  - c. Different classification schemes
  - d. Different permitting standards



## SPECIFIC ISSUES

### E. General Permitting Standards

1. Rebut presumption that there's an off-site alternative without wetlands impacts
2. Demonstrate that project avoids/minimizes wetland impacts to maximum extent practicable
3. Demonstrate compliance with permitting standards, as applicable
4. Project must compensate for wetlands impacts
5. Project is in public interest (ACOE)



## REGULATORY FRAMEWORK

### II. Stormwater Management

- A. The new SPDES General Permit for Stormwater Discharges from Construction Activity > 1 Acre (GP-0-08-001)
1. Preparation of Stormwater Pollution Prevention Plan (SWPPP)
  2. Preparation of an Erosion and Sediment Control Plan
  3. Submission of Notice of Intent (NOI)
  4. Construction site inspections
  5. Submission of Notice of Termination (NOT)



## REGULATORY FRAMEWORK

### II. Stormwater Management

#### B. Stormwater Pollution Prevention Plan (SWPPP)

1. NYS Stormwater Management Design Manual
2. Erosion and sediment control plan
3. Water quantity and quality controls
4. Construction phasing plan
5. Post-construction stormwater control practices
6. Post-construction vs. predevelopment runoff conditions
7. Maintenance schedule



## REGULATORY FRAMEWORK

### II. Stormwater Management

#### C. Erosion and Sediment Control Plan

1. NYS standards and specs for erosion and sediment control
2. Control erosion and then sediment
3. Temporary and permanent erosion and sediment control measures
4. Control on-site construction and waste materials
5. Phasing/Stabilization measures
6. Sequencing schedule
7. Maintenance schedule
8. Inspections



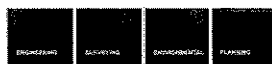
## REGULATORY FRAMEWORK

### II. Stormwater Management

#### D. Notice of Intent (NOI)

1. Five (5) business day coverage if project complies with NYSDEC technical standards
2. Sixty (60) business day coverage if project deviates from NYSDEC technical standards

E. Designated MS4 communities are responsible for approving SWPPPs



## REGULATORY FRAMEWORK

### II. Stormwater Management

#### F. Site Assessments & Inspections

1. Inspections by qualified professional
2. Initial site assessment
3. Weekly inspections (once every seven calendar days)
4. Inspection log book
5. Amend SWPPP if necessary
6. Final site inspection
7. Final Notice of Termination (NOT)



## REGULATORY FRAMEWORK

### II. Stormwater Management

#### G. Five acre waiver and inspection requirements

#### H. Notice of Termination (NOT)

1. Final site stabilization
2. Final site assessment and certification of stabilization
3. Stormwater management facilities inspection and certification of installation
4. Description of operation and maintenance practices



## REGULATORY FRAMEWORK

### II. Stormwater Management 2010 Permit

1. Takes effect 5/1/10
2. Construction standards take effect after 10/30/10
3. The Stormwater Design Manual will be updated to incorporate green management techniques
4. Volume mitigation will be required in most cases to replicate existing hydrology
5. Photos required with inspection reports
6. MS4's must sign off on the NOT if within an MS4



## REGULATORY FRAMEWORK

### III. Lakes, Streams and Floodplains

#### A. Lakes and Streams

1. Regulated by NYSDEC and classified according to best use (AA-D), with various special classifications (t), (ts)
2. Permits required for activities that disturb an area within 50' of the top of bank or bed of a stream or lake
3. Setbacks apply for sanitary and some other uses
4. Many agencies and municipalities have specific regulations



## REGULATORY FRAMEWORK

### III. Lakes, Streams and Floodplains

#### B. Floodplains

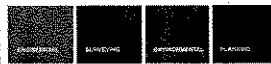
1. Floodway, 100 and 500-year floodplains mapped by FEMA
2. Development essentially prohibited in floodway
3. Development must be at or above base flood elevation or flood proofed within 100-year floodplain
4. Regulation is essentially insurance driven with DEC requiring municipalities to adopt conforming regulations



## REGULATORY FRAMEWORK

### IV. Rare/Threatened/Endangered Species

- A. Information sources include the US Fish and Wildlife Service, NYSDEC, Breeding Bird Atlas, municipalities, field investigation/survey in accordance with Federal and State protocol
- B. Reviewed during SEQRA process
- C. State and Federal permitting agencies have to consult with NYSDEC and/or USFWS during their permit review if a species is found



## REGULATORY FRAMEWORK

### IV. Rare/Threatened/Endangered Species

- D. Common Area Species Include:
  - 1. Karner Blue Butterfly
  - 2. Short-nosed Sturgeon
  - 3. Bog Turtle
  - 4. Indiana Brown Bat



## REGULATORY FRAMEWORK

### IV. Rare/Threatened/Endangered Species

#### E. Indiana Brown Bat

1. Winter Hibernacula
2. Summer Roosting Habitat
  - a. Exfoliating trees, Trees 5-9" DBH, dead trees, snags, broken limbs, vacant buildings
  - b. Hudson Valley focus
3. Currently experiencing severe population decline, which may impact management



## REGULATORY FRAMEWORK

### V. Cultural Resources

- A. Cultural resources review required by State and Federal agencies for any project with a State or Federal Agency permit
- B. Local agencies are inconsistent in their requirements for cultural resource review; they have to make their own determination



## REGULATORY FRAMEWORK

### V. Cultural Resources

- C. For local agencies review of sensitivity map may be adequate
- D. If State or Federal permits are required, a Cultural Resource Survey is likely to be required for all but the most disturbed sites



## REGULATORY FRAMEWORK

### V. Cultural Resources

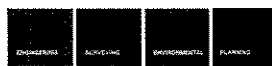
- E. Cultural Resource Surveys
  1. Phase 1A Survey is a literature review and more in-depth sensitivity analysis
  2. Phase 1B Survey involves field work
  3. Phase 2 survey determines extent of resource and whether it is significant
  4. Phase 3 survey involves data recovery as mitigation for unavoidable impacts to sites
- F. State agencies must consult with State Historic Preservation Office (SHPO) which must issue a "Determination of Effect" letter before project can proceed
- G. ACOE must consult with Native American tribes for impacts to pre-contact cultural resources, which can be a very long process (1-2 years). May also require consultation with the Advisory Council on Historic Preservation



## REGULATORY FRAMEWORK

### VI. Noise

- A. DEC provides guidelines for use in their permitting processes
- B. Municipalities have adopted a wide variety of regulations
- C. Regulations may be decibel based or time/nuisance based
- D. Review occurs during the SEQRA process
- E. Few municipalities have the technical expertise to review and understand this issue without the assistance of a consultant



## REGULATORY FRAMEWORK

### VII. Air Quality

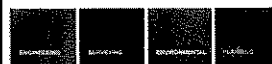
- A. Point sources are subject to a complex review and permitting scheme by DEC and EPA
- B. Non-point sources usually involve automobile air pollution
- C. NYSDOT and FHWA provides screening guidance
- D. Models are used to analyze situations where screening indicates the potential for a problem



## REGULATORY FRAMEWORK

### VIII. Visual Impacts

- A. DEC and APA provide guidance documents for assessing visual impacts



## REGULATORY FRAMEWORK

### VIII. Visual Impacts

- B. Methodology generally includes:
  - 1. Identify sensitive receptors
  - 2. Determine zone of visibility (1, 3 and 5-mile radii)
  - 3. Photograph site in leaf-on and leaf-off conditions from sensitive receptors
  - 4. Simulate appearance of project – the tools to do so are becoming increasingly sophisticated



## REGULATORY FRAMEWORK

### IX. Environmental Contamination

- A. Often a lender issue but best addressed up front to evaluate business risk, avoid unanticipated costs, project delays
- B. Type of contamination is dependent on site or adjoining site's historic use.
  - 1. Examples of historic uses with potential for substantive impacts include: former orchards, industrial sites, gas stations, strip plazas with dry cleaners;
  - 2. However, Seemingly simple sites like “undeveloped”, residential or farm properties can still have contamination which can affect site development



## REGULATORY FRAMEWORK

### IX. Environmental Contamination

- C. First step to identifying presence or absence of potential environmental impacts is to perform a Phase I Environmental Site Assessment (“Phase I ESA”)
  - 1. Methodology and scope of standard Phase I ESA is determined by ASTM E-1527, but scope can be tailored to address client-specific needs. Must be conducted by or under the supervision of an Environmental Professional (EP) meeting the education, training and experience requirements set forth in 40 CFR 312.10 (b).



## REGULATORY FRAMEWORK

### IX. Environmental Contamination

#### 2. Phase I ESA Scope includes:

- a. Site walkover
- b. Interviews (previous owners, occupants, employees, user/purchaser, local government officials)
- c. Ownership Records –Assessor’s Office property cards
- d. Historic Resources –Assessor’s Office, Building Department, (possibly Planning Department), Fire Department, historic aerial photographs, Sanborn Fire Insurance Company Maps, City Directories, Historic Topographic Maps
- e. Review of State, Federal and Tribal regulatory agency records to radii specified in ASTM 1527-05



## REGULATORY FRAMEWORK

### IX. Environmental Contamination

3. Other add-ons often requested by clients: asbestos survey, lead-based paint survey, radon sampling, indoor air quality (vapor intrusion), mold assessments, etc.
4. Performance of ASTM 1527 Phase I ESA will identify “Recognized Environmental Conditions” (RECs) as defined by ASTM, and significant data gaps that affect the ability to identify a REC.
5. Phase I ESA may also identify other non-RECs of importance to client (e.g., presence of asbestos-containing materials, vapor intrusion issues) that can impact development



## REGULATORY FRAMEWORK

### IX. Environmental Contamination

#### D. Phase II Investigations

1. Scope of Phase IIs can vary widely (examples: additional research or review of regulatory agency records, soil or groundwater sampling, GPR, subsurface soil sampling, surface soil sampling)
2. Primarily intrusive investigations (i.e., requires some degree of impact to the site to collect samples for analysis)
3. Initial Phase II findings may require supplemental Phase IIs or Phase III to delineate nature and extent of impacts



## REGULATORY FRAMEWORK

### IX. Environmental Contamination

#### E. Site Remediation

1. May or may not require development of remediation plan in consultation with regulatory agencies
2. Develop and implement remediation plan in consultation with DEC and/or USEPA – sometimes lengthy process
3. Remediation can sometimes be incorporated into site development
4. Often very costly



## REGULATORY FRAMEWORK

### X. Infrastructure

#### A. Sewer Evaluation

1. Analyze conveyance capacity, WWTP capacity, flow characteristics, legal ability to connect

#### B. Water Evaluation

1. Analyze supply capacity, conveyance capacity, adequate pressure, legal ability to connect



## REGULATORY FRAMEWORK

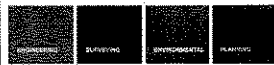
### X. Infrastructure

#### C. Storm Sewer Evaluation

1. Analyze conveyance capacity, flow characteristics, legal ability to connect

#### D. Private Utility Evaluation

1. Natural gas, telecommunications, electric



## REGULATORY FRAMEWORK

### XI. Transportation

- A. Traffic Impact Study
  - 1. Identify affected roads/intersections
  - 2. Count traffic during peak hours affected by project
  - 3. Calculate Levels of Service
  - 4. Identify background growth at design year, including other projects
  - 5. Calculate trip generation
  - 6. Evaluate impacts
  - 7. Propose mitigation



## REGULATORY FRAMEWORK

### XI. Transportation

- B. Assess pedestrian and bicycle resources
- C. Assess use of mass transit
- D. Tends to be the most contentious issue because it is the most noticeable – engineering standards are not consistent with peoples perceptions of “too much traffic”



## REGULATORY FRAMEWORK

### XII. Socio-Economic Impacts

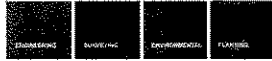
- A. Fiscal Impact Analysis compares tax revenues from project with municipal and school costs
  - 1. Residential projects often net losers
  - 2. Commercial projects often net winners



## REGULATORY FRAMEWORK

### XII. Socio-Economic Impacts

- B. School Impact Analysis
  - 1. Estimates generation of school children
  - 2. Assigns to schools
  - 3. Good data often difficult to obtain



## REGULATORY FRAMEWORK

### XII. Socio-Economic Impacts

#### C. Job and Secondary Economic Impact Analysis



## DISCUSSION

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