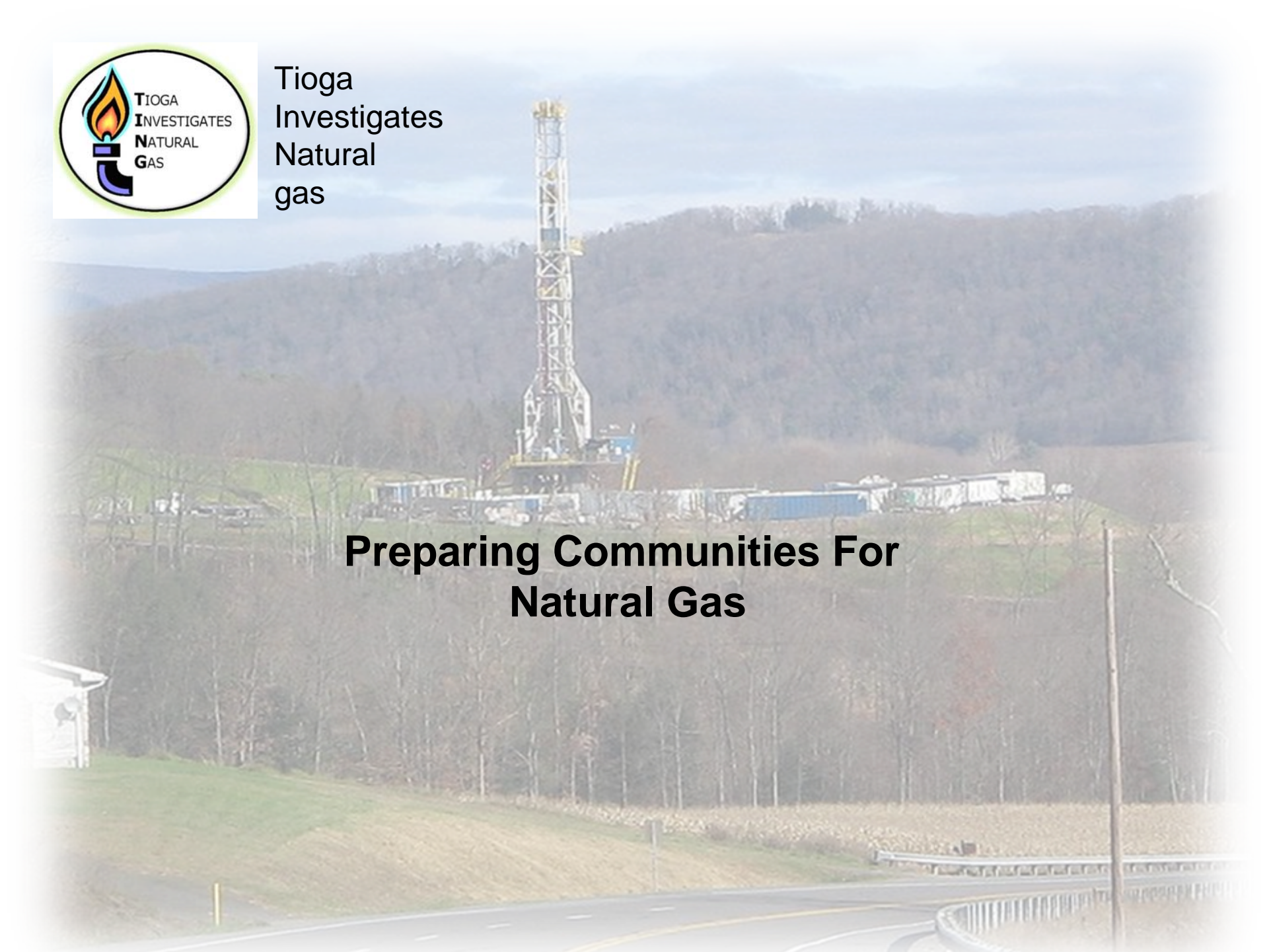




Tioga
Investigates
Natural
gas

Preparing Communities For Natural Gas



TING

- Tioga Investigates Natural Gas
- Formed in March 2009
- Mission:
 - Investigate Public Sector Impacts
 - Make Recommendations
 - To Prepare For
 - To Manage During Operations



Steering Committee

Planning	Elaine Jardine
Soil & Water	Wendy Walsh
Farm Bureau	Martha Goodsell
Legislature	Loretta Sullivan
Council of Governments	Barb Crannell
Environmental Mgmt Council	Brooke Eiche
Cornell Cooperative Extension	Andy Fagan
REAP	Darlene Cobler
GIS (Mapping)	Bill Ostrander
Town Board	John Schumacher
Business Representative	George Bowen
Members at Large	Ron Dougherty Drew Griffin

Impacts to the Public Sector

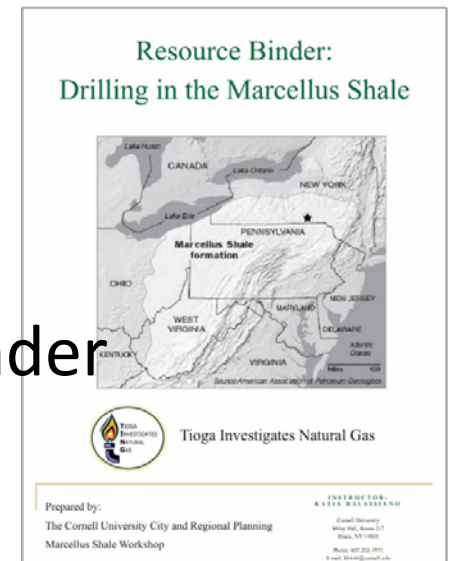
- Road usage
- Public Safety (Emergency Services and Law Enforcement)
- Water Quality
- Environmental Issues
- Workforce Opportunities
- Land Use
- Communications
- Business Opportunities

TING Sub-Committees

Road Usage	John Schumacher, Mark Dixson, Judy Quigley, Tioga County Municipal Attorneys Consortium, Highway Superintendents Association
Public Safety	Loretta Sullivan, Sheriff Gary Howard, Dick LeCount, John Scott
Water Quality	Wendy Walsh, Bill Ostrander, Hans Peeters, Erica Gifford, Justin Lewis
Environmental	Wendy Walsh, Brooke Eiche, Bill Ostrander, Martha Goodsell, Kevin Millar, Marty Borko, Susan Heavenrich, Carrie Kerr, John Lacey
Workforce	Andy Fagan, Sheri McCall, Ron Dougherty
Land Use	Elaine Jardine
Communications	Loretta Sullivan, Elaine Jardine, Wendy Walsh, Martha Goodsell, Barb Crannell
Business Opportunities	George Bowen, Martha Sauerbrey, Ron Dougherty

Partnership

- Cornell University: City and Regional Planning Workshop
 - Instructor: Katia Balassiano, AICP
 - Teaching Assistant: Meghan Jacquet, MRP 2010
 - Spring Semester 2010 – Marcellus Shale Workshop
 - 12 Students
 - Conducted Research and Interviews
 - Developed First Draft of Resource Binder

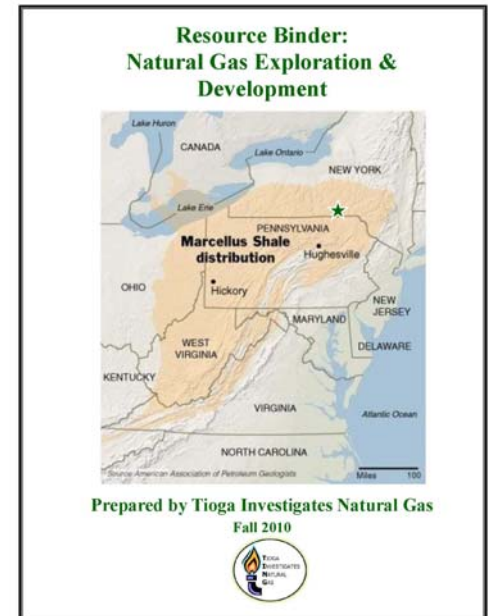


Resource Binder

Detail: Each area of impact (topic) has its own Chapter, which covers the topic in detail

Summary: Checklists have been provided which summarize the recommended steps to take

- Checklist by Topic – steps to take to prepare for / manage that topic
- Checklist by Phase - steps to take to prepare for / manage that phase
 - Now
 - Meet & Greet Meeting (and pre- and post-)
 - Permit Notice
 - Permit Application Meeting (and pre- and post-)
 - Construction & Drilling
 - Reclamation
 - Production



Sample Checklist

Water Quality					
Committee / Chapter	Required from	Delivered to	When	What	Attachment / Reference
Water Quality	DOH	Municipalities	NOW	Consider adopting wellhead protection ordinance	
Water Quality	DOH	County	NOW	Consider adopting aquifer protection ordinance	
Water Quality	DOH	Drilling Company	Meet & Greet	Discuss Wellhead and Aquifer Protection Ordinances and request that they follow them.	
Water Quality	DOH	Drilling Company	Meet & Greet	Inform company about countywide sole source aquifer designation and its meaning.	
Water Quality	CPOC	Drilling Company	Meet & Greet	Provide copy of regulatory agency list and roles	
Water Quality	Drilling Company	Municipalities	Permit Application Meeting	Request remediation plan for contaminated wells	
Water Quality	Drilling Company	DOH	Permit Application Meeting	Obtain certified laboratory name contracted for private well testing (if not known provide list again)	
Water Quality	Drilling Company	DOH	Post Permit	Request private well testing locations.	

The Future

- What we can do to prepare/manage, who should/could do it, when it can be done will change over time because:
 - We have yet to experience full-scale horizontal drilling
 - Gas development technology, processes continue to undergo change
 - TING will continue to research other areas of impacts (e.g. seismic, pipelines)

The Drilling Process

- Site Construction
- Drilling
- Hydraulic Fracturing
- Flowback
- Well Cleanup and Testing
- Reclamation
- Production
- Plugging



Communications

Communications

- Federal
 - EPA
 - Safe Drinking Water Act
 - Clean Water Act
 - National Environmental Policy Review Act
 - SRBC
- State
 - DEC
 - 1992 Generic Environmental Impact Statement
 - 2009 Draft Supplemental GEIS
 - DOH
- Local
 - DOH
 - Municipal Governments

Communications

- Central Point of Contact (CPOC)
- Natural Gas Coordination Team (NGC Team)
- Municipal Designated Contacts
- Tioga County Local Contacts

NGC Team

NAME	POSITION	PHONE	E-MAIL
Doug Barton	CPOC – EDP Director	607-687-8254	bartond@co.tioga.ny.us
Elaine Jardine	CPOC – Planning Director	607-687-8257	jardinee@co.tioga.ny.us
Hans Peeters	Public Health Department Director	607-687-8566	peetersh@co.tioga.ny.us
Ken DelBianco	Public Works Commissioner	607-687-0302	delbiancok@co.tioga.ny.us
Gary Howard	Sheriff	607-687-1010	howardg@co.tioga.ny.us
John Scott	Fire Coordinator	607-687-8466	scottj@co.tioga.ny.us
Dick LeCount	Emergency Management Officer	607-687-2023	tcemo@co.tioga.ny.us
Judy Quigley	County Attorney	607-687-8253	quigleyj@co.tioga.ny.us
Bill Ostrander	GIS Manager	607-687-8294	ostranderw@co.tioga.ny.us
Wendy Walsh	SWCD District Manager	607-687-3553	walshw@co.tioga.ny.us
TBD	Municipal Representative		

Municipal Designated Contacts

MUNICIPALITY	CONTACT	POSITION	PHONE 1	PHONE 2	e-mail
Town of Barton	Jim Marshall	Highway Superintendent	565-9476	343-5573	
	Joan Richards	Town Clerk	565-2261 x 1		bartonclerk@stny.rr.com
Town of Candor	Kevin Noble	Highway Superintendent			acandortowngar@twcny.rr.com
Town of Spencer	Arvo Rautine	Supervisor	589-6447		arvo1@htva.net
	Dick Smith	Highway Superintendent	589-6711		RESmith43@yahoo.com
	Patricia Decker	Town Clerk	589-4887		townofsp@htva.net
Town of Owego	John Schumacher	Town Council	687-3824		nmshoe@hotmail.com
	Don Castellucci	Supervisor	687-0123		dcastellucci@townofowego.com
Town of Tioga	Lew Zorn	Supervisor			lzorn@verizon.net
	Frank Catalano	Highway Superintendent			tiogahighway@htva.net
	Brenda Middendorf	Town Clerk			tiogatownclerk@htva.net
	Jerry Hyatt	Town Council			jlnnorthside@yahoo.com
Town of Nichols	Ron Traue	Highway Superintendent	699-3004		germanluver52@aol.com
Town of Newark Valley	Barbara Mock	Town Clerk	642-8746		nvtownclerk@stny.rr.com
Town of Berkshire	Mike Simmons	Town Supervisor	657-8678		bfd271@aol.com
Town of Richford	Judith Thurston	Town Clerk	821-7175		
Village of Owego	Ed Arrington	Village Mayor	687-1710		mayor-vofowego@stny.rr.com
	Cindy Motter	Village Office	687-1710		cmotter-vofowego@stny.rr.com
Village of Waverly	Michele Wood	Village Clerk	565-8106		mwood@waverlybarton.com
Village of Newark Valley	Morgan Inderwies	Village Trustee			morgan-inderwies@stny.rr.com
	Jim Torantore	Mayor	642-3543		jtornatore@stny.rr.com
Village of Spencer	Kevin Perry	Mayor	589-4310		insemn8r@aol.com

Communications Process

Six Key Trigger Points

1. Gas Company Initial Presence
2. Permit Application
3. Permit Approval
4. Drill Start Date (Spud Date)
5. Issues
6. Periodic Evaluation

Communications

- Recommended Communication Strategy
 - Designate a Municipal Point of Contact
 - Excellent Communication Skills
 - Regularly Uses Emails
 - CPOC/Municipal Liaison
 - Notify CPOC of Implementation Activities
 - Notify CPOC of Drill Start Dates within Municipality

Land Use



Land Use

- Noise Mitigation and Model Noise Ordinance
- Effective Lighting Principles
- Model Light Ordinance
- Site Plan Review Ordinance
- Local Floodplain Permitting
- Fees

155 dB - A .30 Caliber Rifle
Extreme Danger!

110 dB - Rock
Drill/Amplified Music

90 dB - Lawn Mower/Heavy
vehicle. Limit of exposure
for 8 hrs

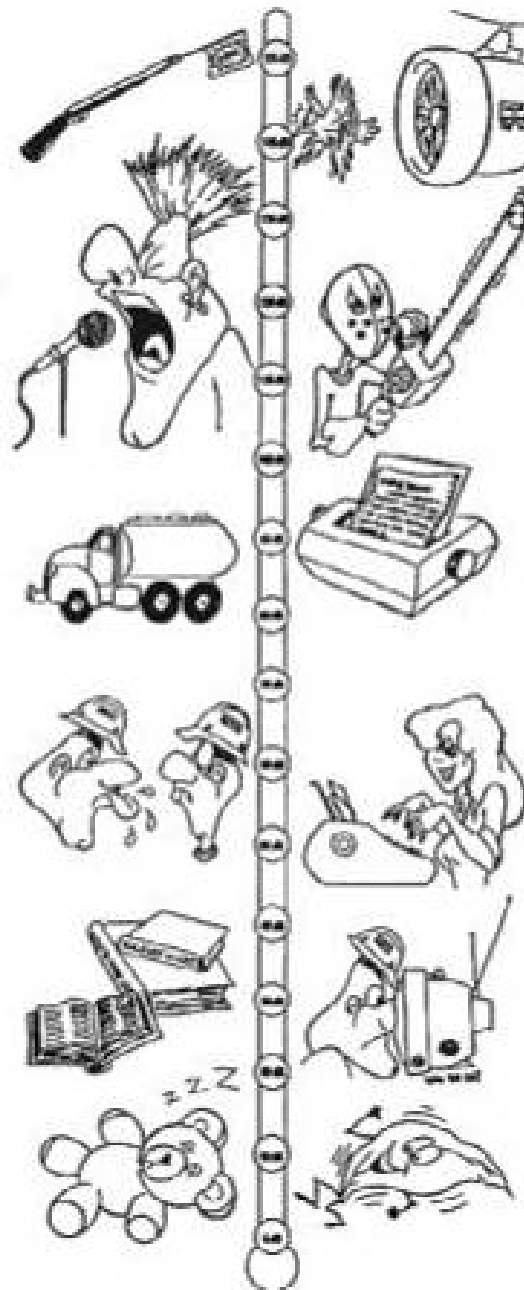
80 dB - Computer Print
Room

60 dB - Conversation -
moderate

40 dB - Quiet Office

30 dB - Quiet Whisper

0 dB - No sound
Threshold of Hearing



140 dB - A Shotgun
Blast/Jet Engine (at 30 m)
Extreme Danger!

120 dB - Propellor Aircraft
Threshold of Pain

130 dB - Riveting Hammer
Threshold of Feeling

100 dB - Chain
Saw/Subway Station

70 dB - Noisy Restaurant or
Heavy Traffic

20 dB - Buzzing Insect

10 dB - Rustle of a Leaf

Common Noise Levels

Common BG Noise	Noise Level (DBA)
Quiet Rural Area	40 dBA
Quiet Suburban Area	50 dBA
Car passing at 10ft	90 dBA
Truck passing at 10 ft	100 dBA

Noise Level (dBA) Increase	Human Perception
0 to 2	Not usually noticeable
3	Just noticeable
6	Clearly noticeable
10	Twice as loud
20	Four times as loud

Land Use

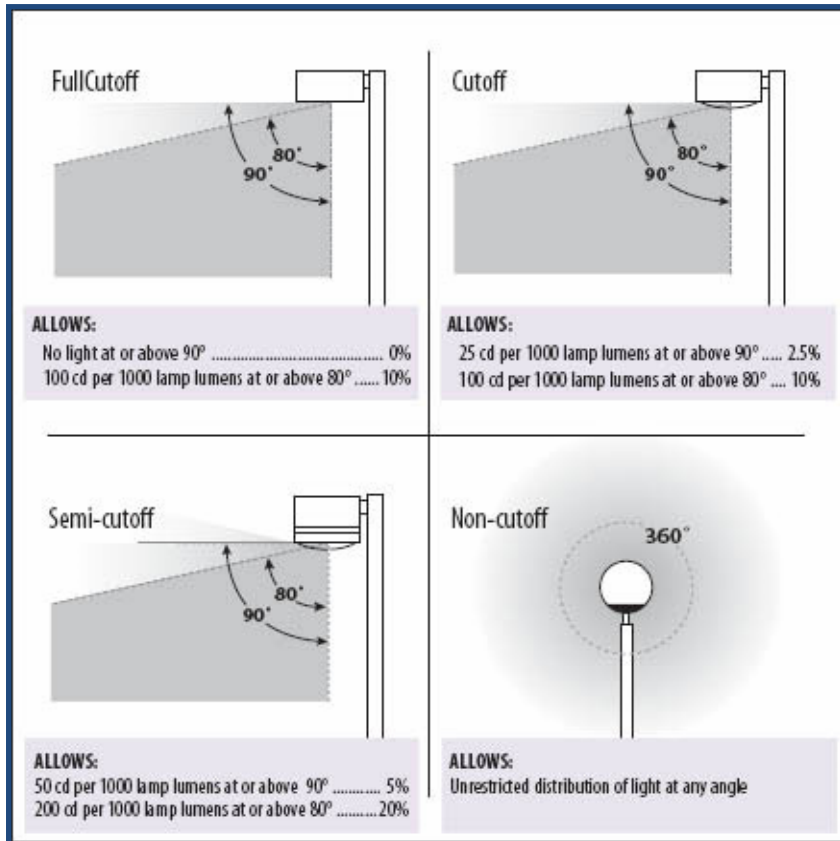
- NOISE CONTROL ORDINANCE
 - To protect and preserve the public health, peace, comfort, welfare and safety of the residents
 - Typical elements:
 - Unreasonably intrusive noise prohibitions - considerations
 - Enumeration of unreasonably intrusive noises
 - Methods of Measurement
 - Prohibition
 - Exceptions
 - Enforcement / Penalties

Land Use

- LIGHT CONTROL ORDINANCE
 - Designed to protect adjacent properties and motorists by prohibiting upward distribution of light (illumination above a 90° plane)
 - Lighting structures and fixtures should be either shielded or directed downward to minimize light spill and glare
 - Typical Elements:
 - Placement and type of fixtures
 - Illumination standards for residential and non-residential exterior lighting
 - Prohibitions
 - Applicability, non-conforming situations, exceptions
 - Application materials
 - Enforcement/Penalties

Land Use

LIGHT CONTROL - BAD vs. GOOD



BAD

Parking Lights



GOOD

BAD



Street Lights



GOOD

Land Use

- SITE PLAN REVIEW
 - A Site Plan shows the arrangement, layout and design of the proposed use of a single parcel of land
 - Site specific review that considers the following elements:
 - Traffic access, internal traffic circulation, parking, signage, lighting, landscaping, impact on adjacent land uses, drainage and grading, utilities, and any additional elements specified by the municipal governing body
 - Review is conducted by governing board or generally assigned to planning board
 - If within 500 feet of state or county property or agricultural district, Tioga County Planning Board must review and make recommendation before municipality votes on final action
 - Generally invoked by new land use or change in land use
 - Agricultural operations and low-density residential typically exempted

Town of Tioga
Town of Nichols
NO SITE PLAN REVIEW

*Village of
Owego*

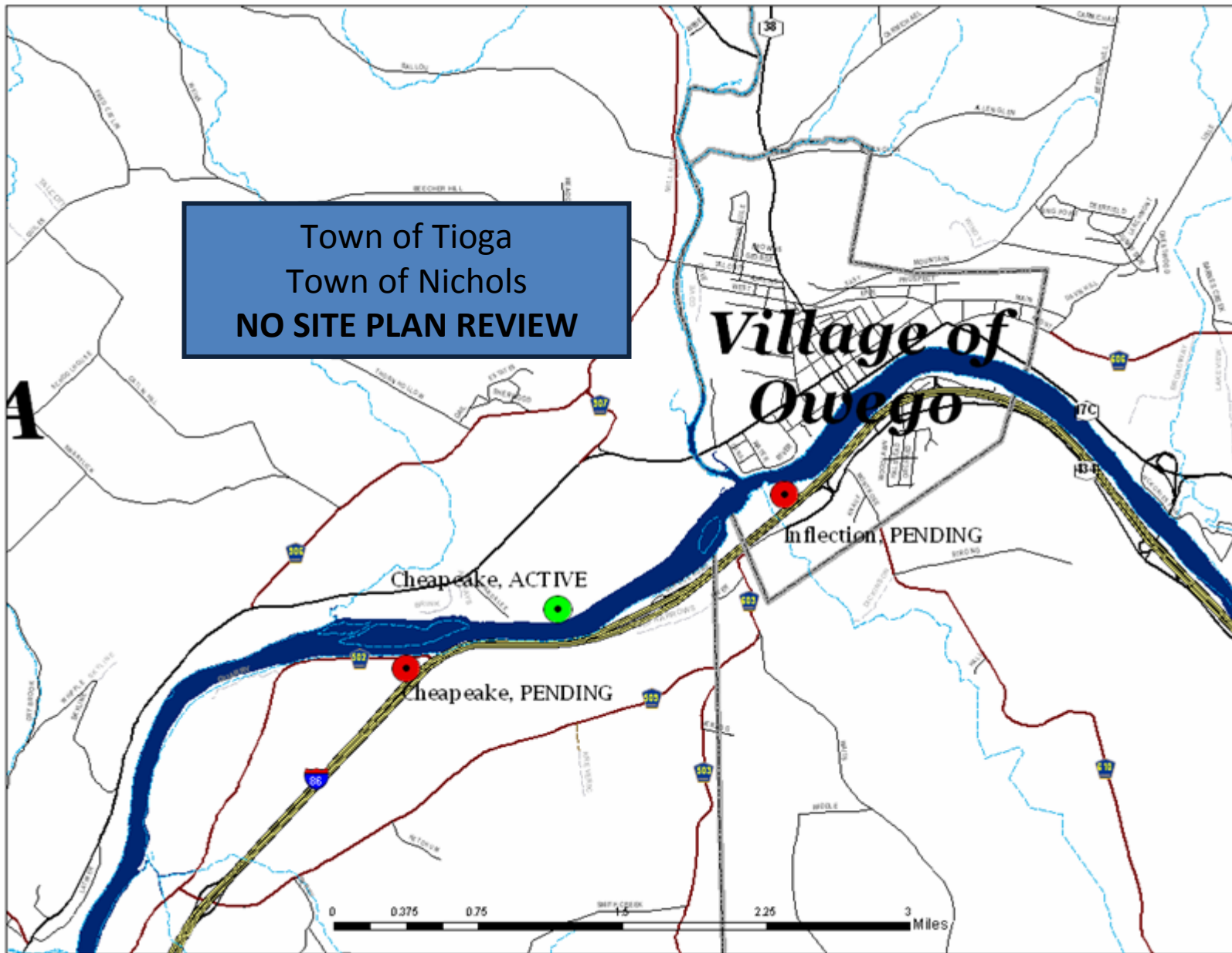
Inflection, PENDING

Cheapeake, ACTIVE

Cheapeake, PENDING

0 0.375 0.75 1.5 2.25 3 Miles

A



Land Use

- FLOODPLAIN ORDINANCE
 - Floodplain ordinances are the only local laws that must be followed during *drilling*!!!
 - Know who your Local Floodplain Administrator is!!!
 - In 100-year floodplain, Local Floodplain Administrator must determine that proposed development will not adversely affect (meaning physical harm) adjacent properties during flood
 - New non-residential structures must be elevated so lowest floor is at or above base flood elevation OR be floodproof so structure is watertight (impermeable to passing water) below base flood level

Floodplain Ordinance



Local Floodplain Administrators

MUNICIPALITY	FLOODPLAIN ADMINISTRATOR
TOWN OF BARTON	SUPERVISOR
TOWN OF BERKSHIRE	CODE ENFORCEMENT OFFICER
TOWN OF CANDOR	CODE ENFORCEMENT OFFICER
VILLAGE OF CANDOR	CODE ENFORCEMENT OFFICER
TOWN OF NEWARK VALLEY	CODE ENFORCEMENT OFFICER
VILLAGE OF NEWARK VALLEY	CODE ENFORCEMENT OFFICER
TOWN OF NICHOLS	CODE ENFORCEMENT OFFICER
VILLAGE OF NICHOLS	CODE ENFORCEMENT OFFICER
TOWN OF OWEGO	PLANNING ADMINISTRATOR / CODE ENFORCEMENT
VILLAGE OF OWEGO	CODE ENFORCEMENT OFFICER
TOWN OF RICHFORD	CODE ENFORCEMENT OFFICER
TOWN OF SPENCER	CODE ENFORCEMENT OFFICER
VILLAGE OF SPENCER	CODE ENFORCEMENT OFFICER
TOWN OF TIOGA	PLANNING BOARD / COUNCILMEN
VILLAGE OF WAVERLY	BUILDING INSPECTOR / CODE ENFORCEMENT OFFICER

Land Use Fees

- Municipalities can set fees appropriate for complexity of projects
- Municipalities should create or update a fee schedule relative to all local laws

Land Use

MUNICIPALITY	SITE PLAN REVIEW Chapter 4 Land Use	NOISE CONTROL ORDINANCE Chapter 4 Land Use	LIGHT CONTROL ORDINANCE Chapter 4 Land Use	FLOODPLAIN ORDINANCE Chapter 4 Land Use	WELL HEAD PROTECTION Chapter 6 Water Qual	AQUIFER PROTECTION Chapter 6 Water Qual	DRIVEWAY PERMIT Chapter 7 Roads	WEIGHT LIMITS / ROAD POSTING Chapter 7 Roads
Town of Barton	X	X		X			X	
Village of Waverly	X			X			X	
Town of Berskhire	X			X	N/A		X	
Town of Candor	X			X			X	
Village of Candor				X				
Town of Newark Valley	X			X			X	
Village of Newark Valley	X	X		X	X			
Town of Nichols		X		X			X	
Village of Nichols	X				X			
Town of Owego	X			X	X		X	X
Village of Owego	X	X		X				
Town of Richford	X			X	N/A		X	
Town of Spencer	X			X	N/A		X	
Village of Spencer	X			X	N/A			
Town of Tioga				X			X	
Tioga County	N/A	N/A	N/A	N/A	N/A		X	

Land Use

- Recommended Land Use Strategy
 - Develop and Adopt Noise Ordinance
 - Develop and Adopt Light Ordinance
 - Develop and Adopt Site Plan Review Ordinance
 - Evoke Site Plan Review related to SRBC Water Withdrawal Permits
 - Review and Enforce Floodplain Ordinance
 - Create or Update Fee Schedule

Environment



Environment

- Environmental Issues Reviewed by TING
 - Water Quantity
 - Runoff
 - Soil and Surface Concerns
 - Landscape Issues
 - Critical Environmental Areas
 - Wildlife
 - Pollution
 - Water Quality



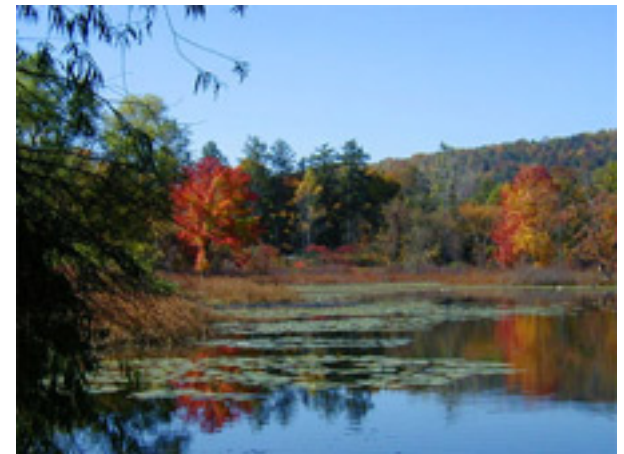
(Drilling fluid splashing past the liner, Dimock, PA, Spring 2009)

Environmental Resources

- Forestry
 - Consultants
 - Local Loggers
- Federal, State & Local Resources
 - SRBC
 - NYSDEC
 - NYSPSC
 - NYSDAM
 - SWCD
- Water: Usage and Disposal

Environment

- Recommended Environmental Strategy
 - Request Involvement in SEQRA Process
 - Interested Agency
 - Involved Agency (if within 100-yr floodplain)
 - Identify and Adopt Critical Environmental Areas (CEAs)
 - Criteria Used to Develop
 - Human Health
 - Socio-Cultural
 - Natural / Hydrologic



Nichols Park, Spencer, NY.
Source: visittioga.com

Environment

- Recommended Environmental Strategy Continued:
 - Review finalized Supplemental Generic Environmental Impact Statement (sGEIS) for High Volume Hydrofracking once released by NYSDEC.
 - Become familiar with Federal, State and Local Resources that can be utilized during natural gas exploration. (SRBC, NYSDEC, NYSDAM, NYSPSC, TCSWCD, TCDOH)



Water Quality

Suggested Water Testing Parameters for Municipal and Private Wells

Total Coliform	Total Dissolved Solids
pH	Chlorides
Lead	Carbonates
Nitrate	Bicarbonates
Nitrite	Sulfate
Iron	Barium
Manganese	Strontium
Iron plus Manganese	Arsenic
Sodium	Surfactants (Detergents)
Total Hardness (includes Calcium & Magnesium)	Methane
Alkalinity	Hydrogen Sulfide
Turbidity	EPA 524.2 Volatile Organic Compounds (Benzene)
Total Suspended Solids	Gross Alpha/Gross Beta

Water Sources

- Surface Water
 - Monitoring Efforts
 - SRBC (<http://www.srbc.net/programs/remotenetwork.htm>)
 - Sonde Locations:
 - » Apalachin Creek – Town of Owego
 - » Catatonk Creek – Town of Spencer
 - Local Water Quality Monitoring Efforts
 - Cayuta – Catatonk Water Watch
 - Others???

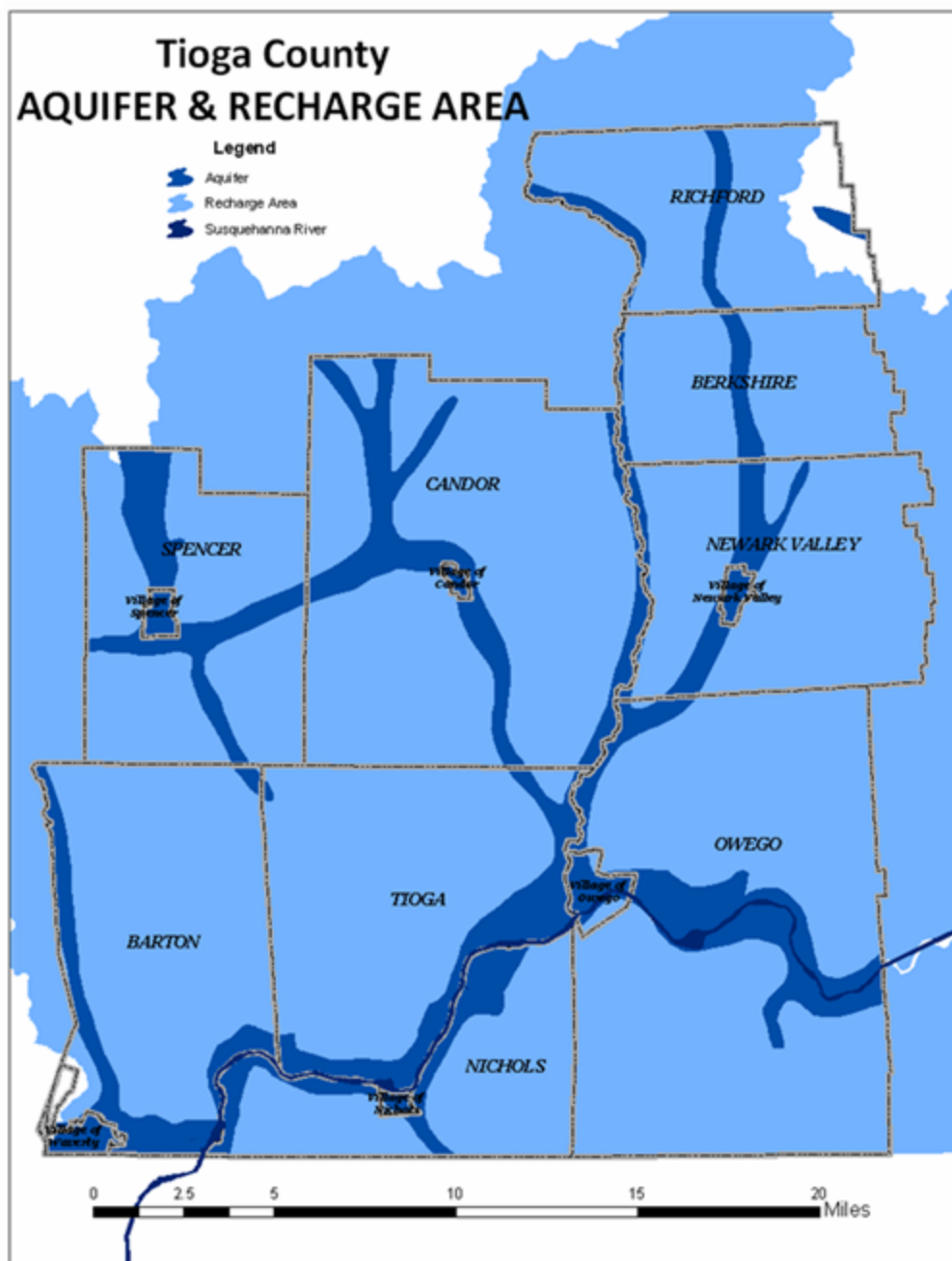
Water Sources

- Groundwater
 - Source for ALL drinking water in Tioga County is groundwater
 - Clinton Street Ball Park Aquifer follows Susquehanna River and major tributaries
 - EPA has designated all of Tioga County a sole source aquifer
 - Sole source aquifer designation protects drinking water supplies in areas with few or no alternative sources to the ground water resource, and where if contamination occurred, using an alternative source would be extremely expensive. Streams are a major recharge source of the aquifer.
 - Recharge Areas
 - Areas that replenish freshwater to our unconsolidated and consolidated aquifer systems

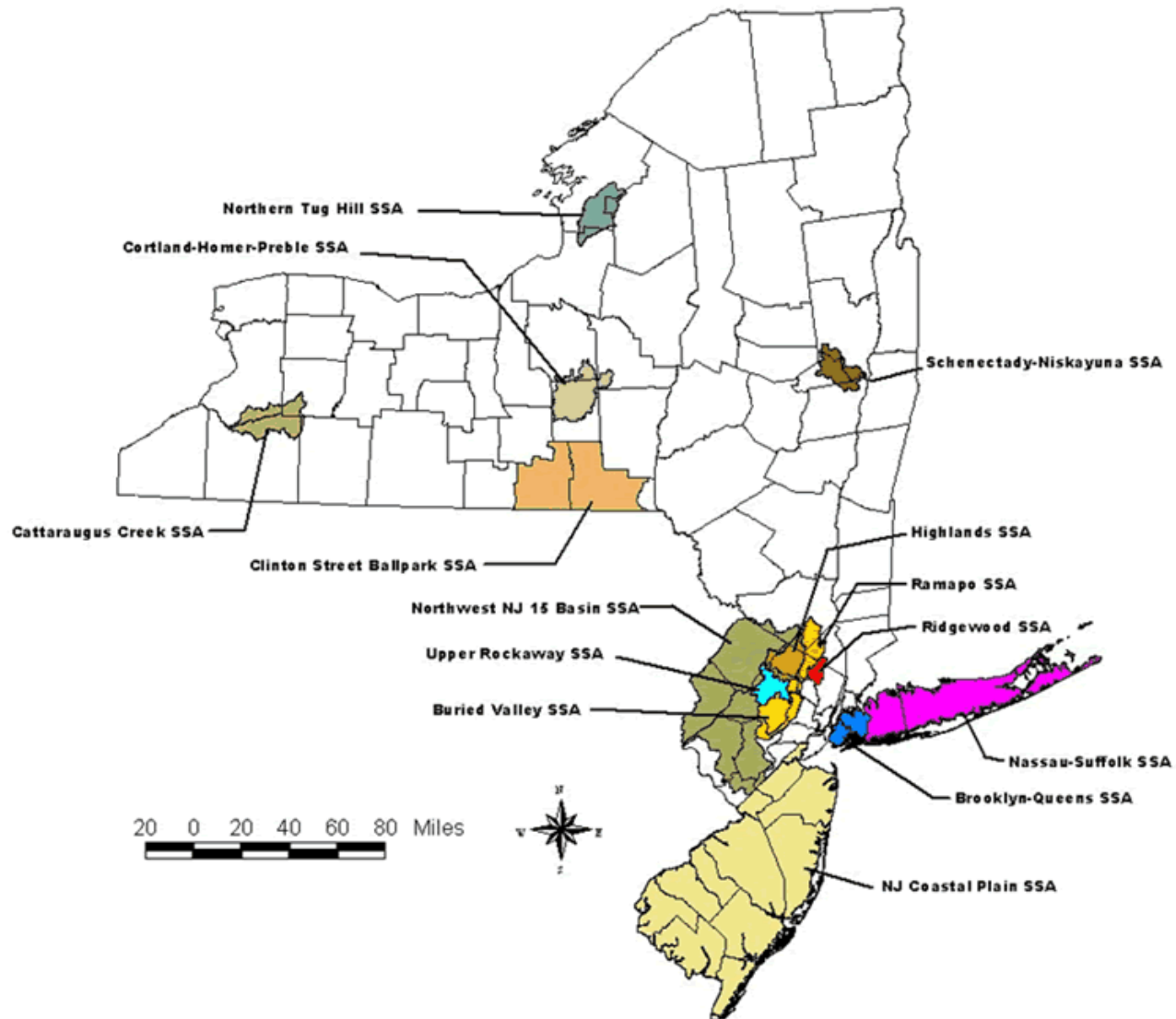
Tioga County AQUIFER & RECHARGE AREA

Legend

- Aquifer
- Recharge Area
- Susquehanna River



NYS Sole Source Aquifer Map



Water Quality:

Wellhead Protection Ordinance

- Recommendation for adoption at municipal level:
 - To protect a municipal drinking water supply from surface or subsurface contamination
- Aspects of ordinance:
 - Regulate by performance or substance – not by use
 - Typical Elements:
 - Prohibited materials
 - Multiple zones of protection around well heads
 - Permit Requirements
 - Enforcement

Water Quality: Aquifer Protection Ordinance

- Recommendation for Adoption Countywide
 - With general protections to protect this countywide resource that does not follow political boundaries
 - Local Health Department is the Lead
 - Aspects of Ordinance:
 - Two Zones
 - Aquifer
 - Recharge Area
 - Typical Elements:
 - Establishment of areas
 - Designation of CEAs
 - Prohibited Uses and Activities
 - Restricted uses and activities
 - Special permits and applications for special permits
 - Enforcement and Penalties

Water Quality: Agency Roles

- NYSDEC
- NYSDOH
- Local Health Department (LHD)
- TCSWCD

Water Quality

- Recommended Water Quality Strategy
 - Review and Compare Current Municipal Water Supply Parameters with Recommended Testing Parameters
 - Encourage Private Water Testing and Post Information for Residents
 - Adopt Municipal Wellhead Protection Ordinance
 - Support County Aquifer Protection Ordinance
 - Encourage Volunteer Groups to Conduct Surface Water Monitoring

Roads



Tractor trailer and water tank (PA)

http://www.marcellus-shale.us/road_damage.htm



Road damage on secondary blacktop.

Mt. Pleasant, PA

http://www.marcellus-shale.us/road_damage.htm

Roads

- Impacts of Natural Gas Development On Roads
- Roads Inventory & Assessment Options
- Road Use Agreements
- Road Preservation Ordinance
- Model Driveway Permit / Ordinance
- Road Preservation Strategy
- Further Points of Consideration

Roads

- Impacts

Drilling Rig Mobilization, Site Preparation and Demolition	
Drill Pad and Road Construction Equipment	10 – 45 Truckloads
Drilling Rig	30 Truckloads
Drilling Fluid and Materials	25 – 50 Truckloads
Drilling Equipment (casing, drill pipe, etc.)	25 – 50 Truckloads
Completion Rig Mobilization and Demobilization	
Completion Rig	15 Truckloads
Well Completion	
Completion Fluid Materials	10 – 20 Truckloads
Completion Equipment (pipe, wellhead)	5 Truckloads
Hydraulic Fracture Equipment (pump trucks, tanks)	150 – 200 Truckloads
Hydraulic Fracture Water	400 – 600 Tanker Trucks
Hydraulic Fracture Sand	20 – 25 Trucks
Flow Back Water Removal	200 – 300 Truckloads
Well Production	
Production Equipment	5 – 10 Truckloads

Roads

- Road Inventory & Assessment Options
 - Structural
 - Engineering Consultants (e.g. Delta)
 - Visual
 - Cornell Local Roads Guidance
 - STERPDB



Roads

- Road Use Agreements
 - Voluntary
 - Should include:
 - Apply to Contractor and all subcontractors
 - Establish Truck Haul Route
 - Inventory & Assess highway infrastructure on routes pre-post drilling
 - Means of covering repair costs
 - How to value cost of road repair
 - Insurance Requirements
 - Hours of day for trucks on road
 - Timeframe of Agreement
 - 911 Address

Roads

- Weight Restriction Ordinance
 - Enabled by Article 41, Section 1660 of the NYS Vehicle & Traffic Law
 - Temporary Road closures to traffic exceeding 4 tons as dictated by the Highway Superintendent
 - Most effective when used in conjunction with road use agreements or road preservation local laws

Roads

- Road Preservation Ordinances
 - Enabled by Section 383(15) of NYS Vehicle and Traffic Law
 - Mandatory permitting to use roads
 - Applies to all truck traffic over stated weight limit
 - Can include Road Use Agreement and weight restrictions

Roads

- Model Driveway Permit
 - Establish Classes by Use – commercial and industrial
 - Establish fees per class

Roads

- Recommended Road Preservation Strategy
 1. Inventory & Assess Roads, Culverts and other vital Highway Infrastructure
 2. Identify Infrastructure in poor, vulnerable condition
 3. Develop Weight Restrictions local law
 4. Develop Road Use Agreement
 5. Develop Road Preservation Local Law
 6. Develop Driveway Permit Ordinance with classes

Workforce



Training Opportunities

- Pennsylvania College of Technology - Natural Gas Training Center
- Lackawanna College - Natural Gas Technology Program

Job Opportunities

- Tioga Employment Center:
www.broometiogaworks.com
- Employment Agencies: S.O.S. Staffing, Manpower
- Natural Gas Company website search
 - Natural Gas Industry Directory can be found on Tioga County's Department of Economic Development & Planning website:
www.developtioga.com/planning.htm
 - <http://shalezonejobs.jobamatic.com/a/jobs/find-jobs>

Public Safety



A dump truck hauling waste from a gas pad in Troy, PA crashed on a steep road in March 2010. The waste spilled and the truck caught fire as a result.

Source: Towanda Daily Review,

3/9/10

Public Safety: Issues

- Explosions / Fire
- Personal Injury (on-site)
- Increased Traffic, Violations and Accidents
- Crime
- Spills

Public Safety: Preparations

- Sheriff, EMO, Co. Fire Coordinator all members of NGC Team
- Meet/Communicate with Gas Companies
 - Exchange Contact Information
 - Obtain Company Development Plan
 - Obtain Company Emergency Plans
 - Discuss:
 - Chemicals: Storage Locations and Transport Routes
 - Law Enforcement Agencies and Ground Rules
 - EMS & Fire Equipment Needs
 - EMS & Fire Training Needs and Opportunities

Public Safety:

Town and Village Steps

- Emergencies
 - In the Event of an Incident: Call 911 Dispatch
- Non-Emergencies
 - Drinking Water Issues: Call Local Health Dept
 - Forestry, Streams, Wetlands, Ag, Pipeline Issues: Call SWCD
 - Repeated Traffic Infractions: Call Sheriff's Office

Public Safety

- Recommended Public Safety Strategy
 - Encourage Local Ordinance Adoption to Allow for Law Enforcement
 - Post Hotline Numbers on Websites and in Municipal Buildings

Additional Impacts

- Economic Impacts
- Land Value
- Housing
- Taxation
- Public Sector Capacity
- Municipal Fees
- Seismic Testing
- Brine Usage

Maps

- Hard Copies in Binder
- Also Available in PDF format

Next Steps For TING

- Updates to Resource Binder (CPOC)
- Individual Meetings with Municipalities
- Press Release & Sharing of Document
- Finalize Landowner's Guide

Next Steps For Municipalities

- Review Resource Binder with Town Officials
- Identify Municipal Needs and Formulate Questions
- Schedule Work Session with TING (CPOC)
- Begin Implementing “NOW” Checklist Items
- Arrange Drill Site Tours

Conclusion

- Resource Binder contains tools and resources for municipal officials to help them prepare for gas activities.
- Municipality determines which tools to use
- TING is available for assistance.

Recognition of TING Members

- Steering Committee Members

- Loretta Sullivan
- John Schumacher
- Elaine Jardine
- Brooke Eiche
- Bill Ostrander
- Martha Goodsell
- Drew Griffin
- Darlene Cobler
- Barb Crannell
- Andrew Fagan
- Ron Dougherty
- Wendy Walsh
- George Bowen

- Subcommittee Members

- Hans Peeters
- Erica Gifford
- Justin Lewis
- Kevin Millar
- Marty Borko
- Susan Heavenrich
- Carrie Kerr
- John Lacey
- Sheriff Gary Howard
- Dick LeCount
- John Scott
- Sheri McCall
- Martha Sauerbrey
- Tioga Co. Highway
Superintendents Association
- Tioga Co. Municipal Attorney's
Consortium

Bradford County Experiences



03/19/2010 3:17 pm

Bradford County Experiences

- 2007 – 11 permits vs. 2010 1400 permits
- 25 Different Companies Drilling
- Pads Changing from open system to closed loop system
- Costs \$3 to \$5 million to drill a well
- Utica Shale is next big play being talked about
- 15,000 tons of aggregate material / well pad – aggregate permits increasing in county (2 new permits per month)
- Pipe and Supply yards popping up all over county
- No Warehouse space available
- 24 Water withdrawal sites; 12 pending applications; 4 public water supplies

Bradford County Experiences

- Hotels full and booked for next 2 years
- Surplus of housing needs to housing shortage
- Rentals \$500-\$600/month to \$1500/month
- 911 calls 1000-1200/week increased to 2400/week
- Unemployment rate was 20-30% higher than rest of state now has the least unemployment rate in the State.
- Stable population at 60,000, estimate 30,000-60,000 transient population moving thru County due to gas activity in years to come.
- In 2010 Chesapeake rebuilt 110 miles of road in Bradford Co. alone for \$50 million