Thanks to Mark Witmer, Michael Dineen and all of our Board of Directors for their careful attention to this important task.

RE: Comments on the Revised Draft SGEIS on Well Permit Issuance for Horizontal Drilling and High Volume Hydraulic Fracturing, and the High Volume Hydraulic Fracturing Proposed Regulations

Dear Commissioner Martens and Staff:

I am writing on behalf of the Cayuga Lake Watershed Network, a grassroots organization founded in 1998 to provide a central organization for the protection of Cayuga Lake and the 37 major creeks in its 870-square mile watershed, which spans 44 municipalities and extends into 7 counties. The 38 miles long, 435 feet deep Cayuga Lake is at the center of New York State’s majestic Finger Lakes, which drain to Lake Ontario.

continued on page 4
In the summer-fall 2011 issue of Network News, we reported that the invasive plant Hydrilla had been discovered at the south end of Cayuga Lake in the highly trafficked Cayuga Inlet – spotted thanks to the sharp eye of an intern working on the Floating Classroom.

In the following months, an unprecedented coalition of local, town, city, county, state, federal, law enforcement, academic and outside experts worked together to try and wipe out the Cayuga Inlet infestation before it could move into the lake.

The good news is that the autumn 2011 herbicide application killed off most the heavy growth of hydrilla near and at the water surface in the Inlet, reducing its ability to spread over the short term. However, the tubers embedded in the floor of the Inlet were not affected by the treatment, and the winter was not cold enough to kill off exposed plants as had been hoped. The hydrilla will soon start growing rapidly, slinking along the bottom of the Inlet and emerging at the surface in May. A longer-term 5 to 8 year eradication plan is now under development, necessitating repeated use of herbicides along with rigorous monitoring, surveying and reporting – by all of us.

While there might be temporary impacts to lake and lakeside biota from chemical treatments, these pale in comparison to the long-term devastation to lake fishes, turtles, birds, native plants, drinking water and human recreation uses if this northern-adapted hydrilla variety spreads. Untreated, *Hydrilla verticillata* would establish itself bank to bank, top to bottom, in the Inlet and creeks, and could grow in water up to thirty feet deep around the lake – and in any water body to which it is carried and discarded.

There are numerous case studies of this happening elsewhere. Also, concern and involvement are widening regionally as protectors of other lakes and water bodies realize that any water craft – and automobiles and other vehicles – could spread hydrilla fragments further.

Roxy Johnston, a long-time supporter of and volunteer with the Network, is Lab Director at the City of Ithaca Water Plant on Six Mile Creek, as well as Watershed

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**Cayuga Lake Watershed Network**

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The Cayuga Lake Watershed Network thanks Westhill Graphics of Ithaca and Pioneer Printing of Lodi for their support and excellence.

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Linderman Creek – August 6, 2011
Linderman Creek – August 28, 2011

Photos by Hydrilla Task Force of Tompkins County NY

Linderman Creek is a small stream draining to Cayuga Inlet through Cass Park. In the summer of 2011, it was at first found to be lightly impacted by hydrilla, with a channel remaining clear in the middle. These photos show that over a span of only three weeks, hydrilla grew to fill up the entire stream channel, from bank to bank. The Hydrilla Task Force predicts that, without eradication measures, Cayuga Inlet and the shallow south end of Cayuga Lake will be similarly overwhelmed within a few years.
It’s not JUST in Tompkins County!
Gas drilling bans and moratoria across NY State

In the summer-fall 2011 issue of Network News, we featured a map of Tompkins County, which surrounds the south end of Cayuga Lake, and listed the creeks protected from gas drilling impacts thanks to bans and moratoria approved by town governments in Ulysses, Dryden, Ithaca (City and Town) and Danby. Since then and in the wake of a bruising fall election in Tompkins County, active community movements for bans or moratoria have taken shape and moved forward in Caroline, Lansing, Enfield and Groton. The right of towns to take these protective actions has recently been upheld by legal decisions involving Dryden and Middlefield.

Outside Tompkins County but still in the Cayuga Lake watershed, Fall Creek’s beautiful Como Lake headwaters are newly protected by a ban passed in the Town of Summerhill, situated in Cayuga County inland from the lake’s eastern shoreline. Far above the lake’s west shore in Schuyler County, a lively community group has emerged in the Town of Hector, working toward a ban or moratorium that would protect Taughannock Creek’s majestic highlands headwaters area in the Finger Lakes National Forest.

Hector’s western creeks drain to Seneca Lake, making this town’s efforts central to the protection of two central Finger Lakes from adverse gas drilling impacts.

While the Cayuga Lake watershed is increasingly well-protected, the bans and moratoria trend is statewide, as illustrated in the accompanying map, “Municipal anti-fracking movements in New York State.” Ludlowville-based GIS expert Karen Edelstein updates this map frequently to keep the public updated on the rising numbers of NY State towns voting to protect their land, air, water and communities from the adverse impacts of the full-scale industrial development that accompanies gas drilling and fracking activities.

Karen is the NYS liaison for FracTracker.org and can be reached at karen.edelstein@gmail.com. For specific how-to information about zoning bans and moratoria, go to www.cedclaw.org.
Our local water bodies define our region, providing clean water for drinking and bathing, as well as many recreational activities for residents and visitors, such as swimming, fishing, and boating in our lakes, ponds, and rivers, and hiking in our numerous gorges with their beautiful hanging waterfalls. Additionally, wine-making, farming and other clean-water dependent businesses thrive here. A strong sustainable development movement, locally-focused, characterizes our hopes for the future. This future depends on abundant clean water.

The Cayuga Lake Watershed Network’s mission is: to identify key threats to Cayuga Lake and its watershed, and it advocates for solutions that support a healthy environment and vibrant communities.

The current weight of evidence about unconventional gas development (hereafter, hydraulic fracturing) being proposed for our region and state leads us to conclude that hydraulic fracturing represents an unacceptable risk to our environment with dubious positive economic or greenhouse gas benefits.

Echoing US Representative Maurice Hinchey’s January 9, 2012 letter to Governor Cuomo, we call for a withdrawal of the present SGEIS and Regulations, and a re-start to the process. We support his ten points of concern about the present SGEIS, included in our specific numbered points below.

**Concerns regarding the SGEIS’ inadequate protections for our water resources**

High-volume slick-water hydraulic fracturing represents an especially serious threat to freshwater systems (Entrekin et al. 2011). Large volumes of fresh water are injected into wells (5 million gallons per well); this fresh water is amended with hazardous chemicals to enhance rock penetration and retard microbial growth (167 tons per well); and large volumes of water contaminated with fracking chemicals and radioactive material (including an estimated 20% of fracking fluid) return to the surface from flowback and production water. New York State does not currently have the means to cleanse or dispose of wastewater.

Our concerns are heightened by the thousand-plus cases of contamination of groundwater (e.g., Lustgarten 2008), serious adverse health effects in humans and livestock (Bishop 2011, Colborn et al. 2011, Lustgarten 2008), and the emerging science indicating systematic contamination of groundwater with methane and fracking chemicals (DiGiulio et al. 2011, Osborn et al. 2011).

**Questioning the wisdom of unconventional gas development**

We have grave doubts about the wisdom of unconventional gas development in our region and elsewhere. Unconventional gas development is often promoted as an economic opportunity for rural areas. The evidence shows that hydraulic fracturing is an energy intensive boom-and-bust industry that transforms rural lands into heavy industrial zones at the expense of existing rural enterprises. Natural gas has also been touted as a green energy source that will curtail greenhouse gas emissions.

But several recent studies have found that when a full accounting is made, the greenhouse gas emissions of unconventional gas are comparable to, or greater than, those of coal (Howarth et al. 2011, Hughes 2011, Wigley 2011). Recent assessments by atmospheric scientists are that immediate reductions in greenhouse gas emissions are needed to avoid uncontrolled global warming triggered by tipping-points (Hansen et al. 2007). Prominent scientists have recently spoken out on this issue (Howarth and Ingraffea 2011).

**Concern that NY DEC cannot handle the regulatory and monitoring burden**

A new report out of Pennsylvania describes the PA DEP’s inability to keep tabs on the rogue energy industry there. It is naive or cynical for DEC officials and others to state that they will be able to do a better job here. The investigation, carried out in recent weeks by the *Pittsburgh Post-Gazette* as part of its gas industry coverage, found that there are 495 more wells producing gas, or ready to produce gas, than DEP has recorded as ever being drilled, and 182 of those wells don’t show up on the state’s Marcellus Shale permit list. This 12 percent error rate is significant in terms of unmeasured and unregulated impacts. A major source for this error is that drilling companies self-report their actions and the type of wells they are drilling.

This troubling problem is only one of many indicators of the ungovernable nature of the energy industry, and its ability to exploit any weakness in the system designed to govern it, with little regard for consequences beyond the company’s bottom line (Hamill, 2012). At present, NY DEC is in no shape to take on this major responsibility with any hope of protecting our resources and communities from significant long-term negative impacts.

**Our Primary Concerns about the Revised SGEIS**

1. The SGEIS does not insure the “sanctity” of the waters of our watershed by using the best information available to evaluate proposed gas development. The SGEIS relies extensively on industry information and neglects critical new scientific findings and analyses strongly suggesting systematic contamination of underground water near active wells and indicating that greenhouse gas...
emissions associated with gas from hydraulic fracturing are at least as large as those of coal. The SGEIS’ designation of 100, 150, or 250 foot setbacks of drilling operations from water wells, aquifers, waterways, wetlands, homes, schools and communities is arbitrary, without scientific justification of adequacy of protection from environmental harm. Prior to gas development, it must be demonstrated that hydraulic fracturing poses a negligible risk to aquifers and surface waters, consistent with Governor Cuomo’s 2010 statement that “all watersheds are sacrosanct.”

2. The SGEIS does not consider potential impacts of hydraulic fracturing on public health, even though frack fluid contains a mixture of hazardous chemicals, hundreds of cases of ground and surface water contamination have been reported, and there is growing evidence of adverse health effects in humans and other animals from air and water pollution associated with shale gas development. This is an egregious omission because it is likely to significantly factor into judgment about whether hydraulic fracturing should proceed in New York, as well as costs associated with health care in the economic analysis.

3. The SGEIS does not include a cumulative impact analysis to understand the full impact of Marcellus gas development on our waters, air, local roads, and most importantly, local economies.

4. The SGEIS does not describe a plan for cleansing or disposing of flowback water and other drilling waste fluids.

5. The SGEIS does not outlaw the use of hazardous chemicals in drilling fluids, even though the document argues that “green” alternative to

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Creek & Lakefront Cleanups
Embrace the Lake!

Spring 2012 ushers in our third year of encouraging community groups to embrace our lake with creek and lakefront cleanups. What better way to show love for the creeks and lake at the center of our lives?

What: We are embracing and encircling Cayuga Lake with creek and lakefront cleanups, starting this spring and into early summer. Thirty-four major creeks drain to the lake, along with hundreds of small straight streams. The Network organizes a rolling schedule of weekend creek and waterfront cleanups around the lake. We invite individuals, families, schools, churches, Scouts and community groups to commit to a local cleanup. In 2011, twenty groups took part – almost completely encircling the lake!

A Spring Clean for the Network: If you would rather keep your feet dry, hold a garage sale for the benefit of the Cayuga Lake Watershed Network! Garage sales reuse and recycle, keeping waste out of the landfill. It’s a great complement to the stream clean-ups. Contact us for suggestions on how to do this.

When: Groups are already scheduling cleanups for mid- and late March. A rolling schedule will keep these cleanups going until the plants grow too high for effective cleanups, in early to mid-May.

Where: Anywhere in the Cayuga Lake Watershed, where waters are flowing in the direction of Cayuga Lake. Do you have a favorite neighborhood creek or wetland, where trash has built up? Here is your chance to get that cleaned up. Was your picnic spot or shoreline area along the lake marred by garbage, last fall? Let’s get that stuff out of there!

Who: Individuals, families, schools, churches, Scouts, community groups. You! As a group organizes for a cleanup, we’ll help pick a good spot along the chosen creek or waterfront area that is safe for all ages and approved by landowners, and get the word out via email, a press release to local newspapers, radio, etc. We are only asking for a couple of hours of volunteer time to pick up trash and clean up around a carefully-selected area.

You can join a group that is already organized, or start your own.

To start your own group and cleanup event, we’ll help you organize the following details:

• A coordinator for your group – name, contact information (preferably both phone and email).
• You might want to come up with a fun name for your group and cleanup!
• A cleanup location – safe, easy-to-get-to with nearby parking, and landowner permission to be there. We’ll need clear directions to provide to volunteers who want to show up on the date.
• A time period for the cleanup (two to four hours at most) and raindate.
• Publicity – a short news release for local newspapers, radio stations, and other places you suggest (we’ll help write that and send it out).
• Garbage bags to fill, and someone to collect and dispose of them properly afterwards (we’ll help organize the pickup, and will provide garbage bags, and gloves to wear).

continued on page 8
Cayuga Lake Watershed - Major Subwatersheds
This beautiful map captures the lake and all the creeks that drain to it. Which creek is yours?

Legend
- Streams
- Cities and Towns
- Lake
- NYS Counties

Map Produced by Community Science Institute - 2011
Data Sources: National Hydrography Dataset, NYS GIS Clearinghouse, and CSI

Map credit: Community Science Institute
Coordinator for the City of Ithaca. Right now she is a sort of walking ground zero for hydrilla coordination, working non-stop with the various task force groups to ensure full communication and effective action. Her message for us is: “Hydrilla can grow in any water body! Let folks know that they don’t want to bring hydrilla from the Inlet up to their private pond, or creek headwaters, or anything like that on their kayak, canoe, fishing tackle, or dog :-).”

What you can do
Learn more at the web pages provided by Tompkins County Cornell Cooperative Extension and updated regularly by Sharon Anderson: http://ccetompkins.org/environment/invasive-species/hydrilla


Hydrilla hunters - let us know if you would like to help the Network and its partners, including the Floating Classroom, to protect the lake from a hydrilla takeover. In early May the Network is sponsoring two public information/training workshops in Ithaca (see Upcoming Events, back cover); there will be a presentation about hydrilla at our spring community conference (location and date still tba) in Seneca Falls. We will have a hydrilla display at Earth Day and need volunteers (Ithaca Farmers Market April 22); and need volunteers for regular weekend tabling at the Ithaca Farmers Market this summer; and can guide you to projects you can help with, including getting signs and informational cards printed and weed disposal boxes built for installation at boatyards and marinas. Contact: steward@cayugalake.org, phone (607) 319-0475.

Business Sponsorships: We are seeking donations from area businesses to help support this project. Please contact steward@cayugalake.org if you are interested.

How to Get Involved: Contact the Network at the following email addresses and let us know you want to get involved: abenning@wells.edu or steward@cayugalake.org. You can also leave us a message at (607) 319-0475. Watch for information on our Web site www.cayugalake.org and at our Facebook page by late March – we’ll list groups with contact information and can add yours.
current frack fluids must await a full evaluation. The SGEIS should explicitly require that gas operations in New York are subject to all of the nation's environmental statutes. We strongly endorse Rep. Hinchey’s call for banning the use of environmental toxins in drilling fluids.

6. The SGEIS does not hold companies exploiting gas resources for the marketplace accountable for the full costs of such activity. Gas companies must be held strictly financially liable for environmental monitoring and remediation.

7. The SGEIS does not unequivocally ban the spreading of flowback and production water on roadways. This is a critical omission.

8. The SGEIS does not address Home Rule and explicitly state the right of local governments to determine their own land uses, in accord with zoning ordinances and comprehensive plans developed under local democracy.

9. The SGEIS presents an inadequate analysis of the climate effects of hydraulic fracturing. Prior to gas development, it must be demonstrated that greenhouse gas emissions will be sufficiently curtailed to avoid a 1.5-2.0 degree C increase in global temperatures within the next 15-35 years.

Our position on unconventional gas development (hydraulic fracturing), SGEIS and Regulations

We oppose hydraulic fracturing in its current incarnation because it presents an unacceptable risk to the waters, lands, and livelihoods of our region and state. Furthermore, considering larger, global effects, development of shale gas would be a fool’s errand, failing to address the pressing issue of climate change under what we now know is a false promise of clean energy.

The Cayuga Watershed Network recommends a thorough reevaluation be undertaken that incorporates new independent (non-industry) information, especially bearing on water contamination and climate change. Toward this end, we recommend that the NYSDEC solicit the input of leading scientists in the areas of hydraulic fracturing, sedimentary geology, environmental science, and climate change. We also urge that the State of New York await the results of a comprehensive study of hydraulic fracturing’s risks to water resources by the U.S. Environmental Protection Agency (EPA) that are expected in late 2012.

In addition to requesting that you withdraw the present SGEIS and begin anew, we call for the withdrawal and rewriting of the associated Regulations, so that they reflect the analysis of an honest SGEIS and adhere to democratic principles of due process and public input.

NYSDEC’s mandate to “prevent and abate water, land, and air pollution” should require due diligence in insuring that our waters are not irreparably harmed. ✤

Respectfully submitted,
Hilary Lambert, Steward
On behalf of our Board of Directors,
our members, Cayuga Lake and its watershed.

**Literature Cited**


Network Receives Sustainability Recognition

Thanks, Sustainable Tompkins! Last December, Network Board members, Steward and family members attended the annual Signs of Sustainability Awards ceremony in Ithaca, at which the Network and 210 others were recognized for their 2011 efforts to support community sustainability.

The concept of sustainability falls flat if only a few support it, so it is truly a sign of sustainability to have 211 community members of every type — public, private, individual and group, artistic, scientific, entrepreneurial, industrial, agricultural — working toward this common goal.

The Network was specifically recognized for its Embrace the Lake campaign, which coordinated an impressive series of cleanups and other events this year that spanned the entire length and both sides of Cayuga Lake.

Here is additional information about the Signs of Sustainability program, from the Sustainable Tompkins website: “Since 2006, Sustainable Tompkins’ board members have tried to spot individuals and organizations emerging on the local scene, all doing their part to help advance community sustainability. At its annual holiday party, Sustainable Tompkins honors these new activists in order to connect them with others involved in similar endeavors. Awardees are celebrated for their contributions and receive a “Sign of Sustainability” certificate for their initiative.” For more information and a full list of 2011 awardees: http://sustainabletompkins.org/2011-SOS.pdf

Judy Pipher: Thank you!

A brief tribute from Steward Hilary Lambert

Our long-time board member and champion volunteer Judy Pipher has told us that we’re on our own – she has served the Network and protected our lake and creeks for over a decade and is moving on to focus on other interests, including the National Women’s Hall of Fame in Seneca Falls. Network Chair Deb Grantham recently gave Judy a book of Finger Lakes photos in partial thanks for her wonderful, sustained efforts.

Dr. Pipher obtained her Ph.D. from Cornell in 1971 and joined the University of Rochester’s Department of Physics and Astronomy, where she retired as Professor Emeritus in 2002. A lakeside resident in Seneca Falls, she has worked tirelessly on Cayuga Lake’s behalf through her involvement in the Network.

When I first joined the Network as Steward in early 2009, Judy came to my rescue by pulling together all aspects of our Spring 2009 community conference. She did almost every part of the speaker, location and publicity arrangements, with an eye to detail all the way down to making sure that I brought several kinds of sweeteners to serve with coffee. Until last fall, Judy was central to organizing and recruiting speakers for our semi-annual conferences at the north and south ends of the lake – along with maintaining our Website and listserv!

Judy is also responsible for ensuring that our 2011 fundraiser, Sunset on Cayuga, was such a rip-roaring success. As Chair of our Sunset Committee last year, she scheduled regular, rigorous phone conference calls during which we reported on and planned every aspect of putting together what was, for us neophytes, a complicated event with numerous moving parts.

The high point for me was the comprehensively determined way in which Judy went about ensuring a more than plentiful supply of wines for every table, as she personally contacted wineries around the lake to request full cases as donations – and then drove around to pick them up! Judy showed us all how to do it right and also have fun. We hope to be able to at least approximate her high standards in future. We also hope to see Judy at our events for a long time to come.
Please Renew Your Membership, Join or Donate to the Network

Your active participation in volunteer efforts such as fracking meetings and hearings, stream clean ups, and monitoring aquatic weed threats to Cayuga Lake demonstrates the love we share for our lake and creeks.

Our lake and watershed are facing historic changes from proposed gas drilling and associated land-use impacts. We have been in the forefront of the fight to prevent gas drilling from having adverse impacts, here in our watershed and across the Finger Lakes region. Other challenges, such as the invasive Hydrilla crisis that engulfed the southern end of the lake in August, have kept us – your Steward, Interns and Board – very busy and in the forefront of action to protect your lake and creeks.

Help!
During 2011 we saw a sudden drop in donations and member renewals.

These are tough times, but that is all the more reason to support a strong, effective organization working to protect your lake, creeks, streams, wetlands, surrounding landscapes and communities that we all enjoy in this incomparable region. Without clean water, everything else loses value.

Facing big challenges in the Cayuga Lake watershed, we need to respond effectively. Your membership adds strength. Joining or donating is easy to do!

MAIL: Fill out the information below, select a donation level, and mail the form with your check to Cayuga Lake Watershed Network, P.O. Box 348, Aurora, NY 13026

PAYPAL: Join or donate via your PayPal/credit card online at www.cayugalake.org.

AS A MEMBER, YOU’LL RECEIVE four issues of Network News, information about upcoming events, trainings and volunteer opportunities, and the satisfaction of knowing that you are supporting a local organization that is making a real difference.

☐ I am joining the Cayuga Lake Watershed Network with the enclosed contribution.
☐ I am renewing my membership with the enclosed contribution.
☐ Please accept the enclosed donation to support lake and watershed protection.

Name ______________________________________________________________________________________

Address _____________________________________________________________________________________

Email ________________________________________________ May we add you to our listserv? ☐ Yes ☐ No

Please Select the Support Level You Prefer:

☐ $500 Watershed Benefactor ☐ $250 Lake Sponsor
☐ $100 Headwater Donor ☐ $50 Farm/Small Business
☐ $50 Organization or Agency ☐ $35 Family
☐ $25 Individual ☐ $10 Student/Senior
☐ Other____________________________

Your Contributions to the Cayuga Lake Watershed Network are Tax Deductible.
UPCOMING EVENTS
in the Cayuga Lake Watershed

SPRING CONFERENCE IN SENeca FALLS:
The Network’s free spring community conference will be held in Seneca Falls later this spring. The Network’s free spring community conference will be held in Seneca Falls later this spring. Final details are being arranged. It will offer speakers on the topics of hydraulic fracturing and community response, gas well leasing, and the hydrilla challenge around Cayuga Lake. We’ll send out an announcement via our website, Facebook, listserv and local events calendars.

CORKS N MORE INFORMAL CONVERSATIONS ON HYDRILLA IN CAYUGA INLET: 5:00-6:00 pm

HYDRILLA FREE COMMUNITY MEETING, ITHACA: April 12, 4:30-6 pm, Nevin Welcome Center, Cornell Plantations (1 Plantations Road, in the Forest Home neighborhood, Ithaca. Hosted by the Tompkins County Environment Management Council, Cornell Plantations, Hydrilla Task Force and CCE-Tompkins. Will need to pay 50 cents for the first half hour of parking.

EARTH DAY ITHACA: April 22, noon to 5:00 pm.
Displays, music, eco and sustainability information, free of charge. Ithaca Farmers Market, Steamboat Landing, 545 Third Street.

HYDRILLA FREE PUBLIC INFORMATIONAL WORKSHOPS/TRAININGS, ITHACA:
Thursday May 3, 9 am – noon; Sunday May 6, 3:00-6:00 pm at the Merrill Family Sailing Center, 1000 East Shore Drive. Same presentation both days: How to indetify hydrilla, eradication planning, and how you can help. Contact steward@cayugalake.org to register and learn more. A time commitment to help this summer will be requested of participants.

HYDRILLA INFORMATION, UPDATES, LINKS, EVENTS: http://ccetompkins.org/environment/invasive-species/hydrilla

Please send details about interesting upcoming events in the Cayuga Lake Watershed to steward@cayugalake.org.

The Mission… The Cayuga Lake Watershed Network identifies key threats to Cayuga Lake and its watershed, and it advocates for solutions that support a healthy environment and vibrant communities.