



**“The Voice of Local Public Health in New York State”**

**January 12, 2012**

**NYSACHO Report  
To High-Volume Hydraulic Fracturing Advisory Panel of  
New York State Department of Environmental Conservation (NYSDEC)**

**NYSACHO’s MISSION:**

To support local health departments  
in their work to prevent disease, disability and injury  
and promote health and wellness  
throughout New York State.

NYSACHO is incorporated as a not-for-profit, non-partisan  
charitable organization with 501(c)(3) tax exempt status.

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## **I. NYSACHO & The Role of Local Health Departments**

The New York State Association of County Health Officials (NYSACHO) is the nonprofit 501(c)(3) organization that represents the 58 local health departments (LHDs) in New York State, including the New York City Department of Health and Mental Hygiene (NYCDOHMH) and 57 other counties. With an overarching goal of improving the health and well-being of residents and communities within their jurisdiction, local health departments provide essential, population-based health services that protect all New Yorkers, including but not limited to control of communicable disease, immunizations, maternal child health services, tobacco control efforts, chronic disease prevention, and public health emergency response.

Of the 58 LHDs in NYS, 36 have Environmental Health units with direct responsibility for a broad range of activities, including identification and abatement of lead hazards, restaurant and camp inspections, inspection of temporary housing and sewers to meet water quality standards, technical assistance for private wells and sewage handling, response to environmental emergencies such as chemical spills or gas explosions, and response to other hazards such as individual well water contamination, noise and other nuisances.

Nearly 75% (43 of 58) of local health departments in NYS cover territory within the boundaries of either the Marcellus or Utica Shales. Of these, 28 provide environmental health services; in an additional 15, Environmental Health Services are provided by NYSDOH District Offices.

LHDs also have a statutory responsibility to conduct Community Health Assessments every four years. According to guidance provided to LHDs by the New York State Department of Health (NYSDOH):

Community health assessment is a core function of public health agencies and a fundamental tool of public health practice. Its aim is to describe the health of the community by presenting information on health status including epidemiologic and other studies of current local health problems, community health needs, health care and community resources. It seeks to identify target populations that may be at increased risk of poor health outcomes and to gain a better understanding of their needs, as well as assess the larger community environment and how it can help play a role in addressing the health needs of individuals in the community... The process involves continuously scanning the local health environment for changes in conditions and emerging health issues.

Public health activities are critical to efforts to improve the quality of life in our communities, a cornerstone for economic and job development. But the local public health infrastructure in New York State (NYS) is becoming increasingly fragile as localities and the state face fiscal constraints and as state aid for some services provided by counties has been eliminated. Combined state and local funding reductions due to the fiscal crisis of recent years have required significant reductions in LHD programs, services and staff. In the face of these constraints, local government officials are reluctant to increase staffing and the related legacy costs, such as pension and health insurance, even if salary costs are reimbursed.

It is in this context that NYSACHO provides this input on resources to the High-Volume Hydraulic Fracturing Advisory Panel of the New York State Department of Environmental Conservation (NYSDEC).

## **II. Relationship Between NYSACHO and CEHD**

NYSACHO's members are defined as the top official in each local health department, i.e. the Commissioner of Health for counties with a population above 250,000, or where authorized by the State Health Commissioner, a Public Health Director for counties with a population of 250,000 or less. NYSACHO is incorporated as a nonprofit in New York State with tax-exempt status conferred by the IRS. It is governed by an elected Board of 11 members, including a President and Vice President who are elected each year. The Board hires an Executive Director who also serves as the corporate Secretary.

In the 36 LHDs in New York State that have an Environmental Health unit, the unit is led by an Environmental Health Director who serves the Public Health Director or Commissioner with specific expertise. The majority of these Directors meet twice a year for a series of educational and issue workshops as the Conference of Environmental Health Directors (CEHD). CEHD is not a legally structured entity, but its participants elect officers annually, and the conference meetings include participants from the NYS Department of Health.

For the purpose of these comments to the HVHF Advisory Panel, NYSACHO defers to the CEHD's technical expertise in matters of environmental health and supports the comments they and individual local health departments are providing to NYSDEC.

## **III. Public Health & Health Care Concerns Beyond Environmental Health**

NYSACHO's colleagues within the CEHD refer the Advisory Panel to the CEHD report and presentation on resource needs for Environmental Health units at the local level to address impacts CEHD has defined as Direct and Secondary. In this report, NYSACHO will focus on impacts that CEHD has defined as "Indirect."

The NYSDEC September 2011 SGEIS Fact Sheet on Community and Local Impacts rightly addresses community impacts on transportation, noise, visual character and increased traffic.

But missing are human health impacts – both to public health and medical care – reported, at least anecdotally, in other states with increased drilling activity, including:

- A February 2011 study, *Battlement Mesa Health Impact Assessment*, conducted by the Colorado School of Public Health, focuses on a correlation between hydraulic fracturing in that community and increased reports of respiratory problems and eye and skin irritation correlated with increases in volatile organic compound (VOC), nitrous oxide and ozone emissions; community suspicions of a correlation between cancers and environmental changes, with greatest concern focused on repeated benzene exposures and potential impacts on children and pregnant women; and mental health issues.

- The November 2011 study, “*Considering Shale Gas Extraction in North Carolina: Lessons from Other States*” conducted by Duke University’s Nicholas Institute for Environmental Policy Solutions and the Nicholas School of the Environment Impacts cites adverse effects on communities resulting from reuse of drilling wastewater on existing land uses. In NYS, this might include agriculture, tourism, and timber harvesting that may affect the availability and quality of locally grown foods, recreational sites, and jobs – all of which can have an impact on community health indicators. This study also cites increases in workplace accidents, including blowouts at drilling pads, and a correlation in several states between underground or deep well injection for disposal of flow-back hydraulic fracturing fluid and increased seismic activity in areas adjacent to the wells.
- A presentation by the Troy Community Hospital in Bradford County, Pennsylvania and anecdotal reports from Lisa Davis, Director, Pennsylvania Office of Rural Health, Pennsylvania State University Hospital have noted that high-volume hydraulic fracturing in parts of Pennsylvania appear to be correlated with reported increases in: outpatient volume, non-English speaking patients, industry-related injuries including foot and leg wounds and related workers’ compensation claims, traffic interference with access to hospital and home care services, EMS call volume and service burnout, lack of insurance for non-employee contract workers, questionable immunization status, lack of nearby family support, sexually transmitted diseases, substance abuse, bio-waste from accident sites, and homelessness when low-income residents are displaced from housing purchased by gas drilling companies.
- The December 2011 federal study, “*Draft Findings of Pavillion, Wyoming Ground Water Investigation,*” conducted by the U.S. Environmental Protection Agency, concluded that hydraulic fracturing in that area has resulted in the potential for human exposure to drinking water with increased levels of synthetic chemicals consistent with hydraulic fracturing fluids, benzene concentrations above Safe Drinking Water Act standards, and high methane levels.

#### **IV. Emergency Preparedness**

It is an axiom of emergency preparedness that all emergencies are local. First responders to explosions, chemical spills, floods, and other disasters will nearly always be those working in county and municipal public safety and public health departments.

While thoughtful planning, strong regulation, adequate enforcement resources, responsible private companies, and alert workers and community members can go a long way to mitigate against the worst disasters, we all know that accidents, mistakes, and unforeseen events such as natural disasters occur.

Resources for Public Health Emergency Preparedness and Response for NYSDOH and LHDs have been declining for nearly a decade. In August and September 2011, these resources were sorely tested and strained by dramatic flooding that resulted in the simultaneous operation of 36 Disaster Recovery Centers, whereas the most that had been open simultaneously in the past was six. Many people in flooded communities wondered how much worse these disasters would

have been if there had been numerous hydraulic fracturing operations in progress within communities that were hard hit by floods.

While resources for preparedness and response decline, impacts of climate change are on the rise. It is critical to consider these factors when mitigating against risks associated with increased natural gas drilling operations and the presence of hydraulic fracturing fluids.

In addition, studies in Arkansas, Ohio, Texas and New York have suggested a correlation between underground or deep well injection for disposal of flow-back hydraulic fracturing fluid and increased seismic activity in areas adjacent to the wells. After a series of earthquakes in northeastern Ohio, including the most recent that measured 4.0, that state has shut down hydraulic fracturing operations near the epicenter of the quake, awaiting further study of the relationship.

Hence, NYSACHO urges NYS to ensure the involvement of state and local Public Safety and Public Health Emergency Preparedness staff in the assessment of resource needs if new permits for gas drilling using high-volume hydraulic fracturing are allowed.

## **V. Resource Needs**

If New York State decides to proceed with the permitting of high-volume hydraulic fracturing, NYSACHO anticipates increased demands on a range of environmental health activities and public health and medical care services in counties where drilling will occur, adjacent counties, and any counties that handle waste water or other waste materials.

These demands and the resulting resource needs are difficult to quantify in the absence of a thorough study of the potential impacts and estimates of their associated costs.

### **LHD and/or NYSDOH Financial & Personnel Resources**

Listed below are the types of financial and personnel resources that NYSACHO has identified as necessary to address Direct, Secondary, and Indirect Impacts on local health departments related to environmental and public health in their communities:

1. Sufficient state and local resources to rigorously enforce the protections already outlined in the most recent SGEIS. The state needs to place an up-front emphasis on prevention and mitigation, or we will suffer dramatic costs in remediation and the potential for consequences that cannot be remedied.
2. Resource needs outlined by CEHD -- The Environmental Health Directors (EHDs) in local health departments are able to estimate the time and personnel costs related to their handling of specific types of complaints about private water wells, noise, and other investigations they currently handle. NYSACHO defers to their expertise and supports the comments provided by CEHD, LHDs, and other parties who have studied these specific activities.

3. In addition, CEHD has identified a need for a new resource – a database for private well water monitoring that will be accessible to property owners, LHDs, NYSDOH and other relevant public authorities.
4. Based on experiences reported in other states, LHDs are likely to face increased demands on numerous other services, some of which are mandated in NYS, including but not limited to:
  - Essential public health services such as immunizations, STD treatment and TB treatment, due to increases in new uninsured populations in segments of the workforce related to the gas drilling industry
  - Increased handling of respiratory complaints and public concerns (whether well founded or not) over exposure to chemicals
  - Health education that provides known factual information about the health impacts of gas drilling
  - Any costs associated with incorporating community impacts into Community Health Assessments, Community Health Improvement Plans, and the financing of related preventive and treatment-oriented public health programs and medical care.
  - Any additional Special Needs children that may accompany an influx of new families and require Early Intervention services and Pre-School programs from LHDs and providers.
5. To ensure that we are able to track the impacts of permits for High-Volume Hydraulic Fracturing, there is a need for resources at either the state or local levels, or both, to gather extensive baseline data on water and air quality and more geographically targeted data than are currently available on community health indicators such as numbers and/or rates of asthma and other respiratory complaints, immunization compliance, emergency room (ER) use, sexually transmitted infections (STIs), substance abuse, industrial accidents and other relevant indicators to enable careful ongoing monitoring of health impacts in the communities directly impacted and adjacent to drilling sites.
6. Public health experts have identified social determinants of health as critical to community health improvement, a goal of local health departments. NYSACHO believes that such social determinants should be considered and monitored in relation to increased gas drilling, to weigh the promise of benefits against the risks, including:
  - Economy – Actual rates of local economic growth
  - Employment – Jobs created and whether they employ local residents
  - Education – Local elementary, middle, and high school population; rate of high school graduation, college entrance or other educational opportunities for local residents
  - Political and Governmental – adequacy of established state and local regulatory frameworks; stability and integrity of state and local governance
  - Housing – homelessness, housing quality, housing starts, home ownership

Medical – numbers of uninsured, ratio of health care providers to population, access to medical care and facilities

Psychosocial & Behavioral – Changes in mental health system demands related to community tensions over increased drilling

Transport – How increased road use affects other community transportation needs, including emergency medical response

7. Increased costs of Public Health Emergency Preparedness (PHEP) to be ready to respond to chemical spills, explosions, natural disasters in drilling zones, or significant water contamination that could lead to mass casualties, evacuations of medical facilities, emergency sheltering of medical needs populations, or other PHEP activities.

Since it is difficult to know precisely what resources will be needed and when, NYSACHO believes that increased Article Six funding may be necessary to reimburse counties for increases in core public health services. However, we believe that the financing of this additional state aid should come from the private interests that seek to profit from drilling and the sale of natural gas.

In addition, a Public Health Contingency Fund should be established in advance through a combination of permit fees, taxation, and fines on the private parties in the gas drilling and related industries that are in a position to profit from the extraction and sale of natural gas. A mechanism should be established that allows counties to document and fully recover the county share of increased environmental health activities and public health services related to increased gas drilling activity in their communities.

### **Non-financial Resources -- Clarity of Roles & Responsibilities**

Currently there is insufficient clarity of the roles and responsibilities for mitigation, response and remediation related to natural gas drilling between state and local authorities, NYSDEC and NYSDOH, and LHDs and NYSDOH regional or district offices. Clarification is necessary to better characterize and quantify staff and other resource needs and to ensure that any inter-agency disagreements are resolved in the public's interest.

It is likely that there will also be a need to clarify roles and responsibilities for public health impacts that are beyond those handled by Environmental Health Units.

In addition, we need assurance through legislation, regulation, contracts, and enforcement that those who profit shall pay their fair share for mitigation, response, and remediation, including but not exclusively for related expenses of adequate regulatory oversight of drilling, well construction and development, gas production, waste disposal operations, related materials transportation, as well as impacts on environmental health and public health services in communities that are affected, as discussed above.



## **Health & Public Health Impact – Baseline, Monitoring, Planning**

New York State has the opportunity to be a national leader with respect to Horizontal Drilling and High-Volume Hydraulic Fracturing. We must heed lessons learned by Pennsylvania and other states that did not ensure good baseline data from which to measure the environmental and health impacts of this activity.

Resources will be needed at both the state and local levels to meet these goals:

- **Enforce disclosure** of the detailed chemical composition of hydraulic fracturing fluids
- **Determine baselines and conduct ongoing measurement** of water and air quality for chemicals, radioactivity, methane gas and other known risks
- **Determine baselines and conduct ongoing assessment of public health impacts**
- **Incorporate** these impacts into Community Health Assessments and Improvement Plans
- **Plan adequate financing** of related environmental and public health programs and medical care

We must also ensure that we can determine the likely long-term public health impacts and estimate their associated costs.

Hence, NYSACHO urges the state to ensure that the private parties who stand to profit from gas drilling and sales will finance an expert, independent, and evidence-based study of potential public health impacts, preventive approaches to mitigate human health risks, and estimated related costs *prior* to lifting the moratorium on permits, with results available to NYSDOH, LHDs, the public and private medical care community, and the medical and public health research community.

Furthermore, we urge the state to develop an efficient mechanism for full reimbursement of county and LHD costs to ensure there are no unreimbursed county costs related to this new drilling activity.

Thank you for this opportunity to present our input.