

EXPLORING HEALTH IMPACTS

OF SHALE GAS DEVELOPMENT ON CHILDREN

FREE PROGRAM FOR HEALTH PROFESSIONALS Registration in advance preferred, walk-ins welcome. Dinner is included.



Allegheny County Medical Society 713 Ridge Ave, Pittsburgh, PA 15212

Ned Ketyer, MD, FAAP Pediatric Alliance, PC Editor, The PediaBlog AAP Council on Environmental Health SWPA Environmental Health Project (Consultant) Physicians for Social Responsibility PA (Board) Climate Reality Leadership Corps

Larysa Dyrszka, MD

Former Director of Pediatrics, Holy Name Hospital, NJ Physicians for Social Responsibility NY (Executive Board) Concerned Health Professionals of New York

Peggy Slota, DNP, RN, FAAN

Director, DNP Graduate Studies; Associate Professor Georgetown University MACCHE Council of Advisors Climate Reality Leadership Corps Franklin Park Environmental Advisory Council Women for a Healthy Environment Board Member

Irena Gorski, MPH PhD Student, Department of Environmental Health & Engineering Johns Hopkins Bloomberg School of Public Health APHA Environment Section Councilor

FRACKING AND HEALTH

POLICY AND PRACTICE IN NEW YORK

Larysa Dyrszka MD June 6, 2018



People and animals around gas exploration and production sites were getting sick, lighting their water on fire and watching their water turn brown

<u>https://</u> pennsylvaniaallianceforcleanwateran dair.wordpress.com/the-list/



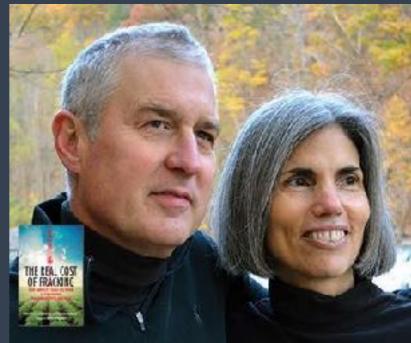
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http://lesstonepublishorperish.blogspot.com/

Dunkard Creek fish kill

Two CONSOL Energy mines upstream from a huge Monongalia County fish kill have violated permit limits for years. State regulators keep giving them extensions of time to comply.





Impacts of Gas Drilling on Human and Animal Health

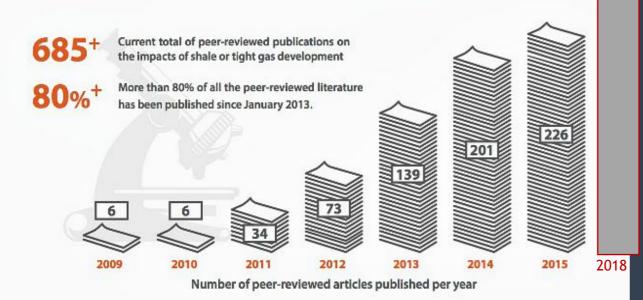


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THE SCIENCE ON SHALE GAS DEVELOPMENT

A Survey of the Environmental Public Health Literature

The scientific community is only beginning to understand the impacts of shale and tight gas development on human health and the environment. Many data gaps remain, but numerous hazards and risks have been identified.



http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0154164

- SOURCE: "Toward an Understanding of the Environmental and Public Health Impacts of Unconventional Natural Gas Development: A Categorical Assessment of the Peer-Reviewed Scientific Literature, 2009-2015", PLOS ONE. 2016.: http://dx.plos.org/10.1371/journal.pone.0154164
- ATTRIBUTIONS: Infographic by Yoonseo Cha. Some vector images in this infographic are based on free vector stocks available at following sources: http://www.vecteezy.com/; http://www.freevector.com; Icons made by Freepik from http://www.flaticon.com

<u> https://www.psehealthyenergy.org/our-work/shale-</u>

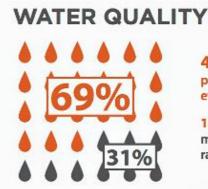




HEALTH

26 studies contain findings that indicate public health hazards, elevated risks, or adverse health outcomes

5 studies contain findings that indicate no significant public health hazards, elevated risks, or adverse health outcomes



AIR QUALITY

Healthy Energy

40 studies contain findings that indicate potential, positive association, or actual evidence of water contamination

18 studies contain findings that indicate minimal potential, no association or rare incidence of water contamination

40 studies contain findings that indicate elevated air pollutant emissions and/or atmospheric concentration.

6 studies contain findings that indicate no significantly elevated air pollutant emissions and/or atmospheric concentration

AAP NYS



American Academy of Pediatrics, District II, New York State Dedicated to the Health of All Children

Contact:

June 7, 2010

Elie Ward, Director of Policy & Advocacy eward@aap.net 518-441-4544

Memo of Support

A. 10490/S. 7592

An act to establish a moratorium on conducting hydraulic fracturing for extraction of natural gas or oil in New York State until 120 days after the Environmental Protection Agency issues a report on the effects of hydraulic fracturing on water quality, air quality and other public health impacts.

The American Academy of Fediatrics, District II, NYS, representing more than 6,000 pediatricians and the millions of children we care for across the state, strongly supports A10910/S7592.

This legislation provides an opportunity for the EPA to study the potential public health impacts of hydraulic fracturing, and for New York State's leaders to have that information before it makes any decision about permitting hydraulic fracturing in our state.

AAP, District II, NYS membership is concerned about the potential negative impacts on water, air, soil contamination, increased traffic and possible spills of contaminated materials in areas where many children and families live. Allowing time for the EPA study will allow our state leaders to move forward on this issue fully informed about whether hydraulic fracturing is a good public policy for our state.

We urge the legislature to pass this legislation now, imposing the moratorium to provide the time to for our state leaders to have the latest EPA data to inform our decisions going forward.



alth Professionals of NY

The NY State medical community was among those raising concerns in this first letter to the NY State Health Commissioner

February 28, 2011

Nirav R. Shah, M.D., M.P.H. Commissioner, New York State Department of Health Corning Tower Empire State Plaza, Albany, NY 12237

Dear Dr. Shah:

Congratulations on your appointment as Commissioner of New York State's Department of Health. We wish you much success in this important position.

Physicians, researchers and other representatives of the undersigned organizations would appreciate the opportunity to meet with you on an issue we believe is the most pressing health issue confronting our State. This is the near-term prospect of massive unconventional gas drilling in upstate New York and its potential for significant adverse impacts on the health of citizens throughout the State. We would like to discuss this issue and the pivotal role that the DOH must play in the consideration and study of the health impacts of unconventional gas drilling-

The NYS Department of Environmental Conservation is in the process of revising its draft "Supplemental Generic Environmental Impact Statement" (the "dSGEIS") regarding the new technology of "high water volume horizontal fracturing" ("hydraulic fracturing"). The potential health impacts associated with the life-cycle of hydraulic fracturing were almost completely overlooked in the dSGEIS despite numerous reports of health-related concerns in other parts of the country where hydraulic fracturing is on-going (1). Over 13,000 comments were submitted to the DEC regarding the dSGEIS. Concerns about the health impacts of hydraulic fracturing were a recurrent theme as was the fact that no cumulative impact study has been undertaken. Our regional office of the EPA, for example, concluded that "poential impacts to human health and the environment...warrant further scientific and regulatory analysis," expressing nicular concern about local and regional air quality, water quality and radioactive materials disturbed during dp

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Community and Environmental Organizations

United for Action (Overn Crowley)

Medical and Scientific Societies, Organizations and Profe Alled Polistics of New York, U.C.Gary Mekin, MD, CEO (75+ poliatricized)

Advocates for Cherry Villey, Inc. (Lynne Manh) Advectates for Springfield (Hary Levise) Binghamton Regional Sestainability Coalition (Chris W. Berger) Catakill Otipens for Safe Energy (Bruce Fergmon) Catalill Norantable erger (Kath en Nilan, N.D., Mill Chemanga Community Action for Resemble Energy (Erin Heator) Chemanga Datawan Owaya Ga Dollary Opposition Group Olizens Bergg and Economics Counsil of Delawar County Coalition to Protect New York [Jack Ossant and Kate Bartholomew] Community Environmental Delense Council Inc. (David Shrtje, ID.) incernel Citizens of Ulysses Michele Banberge) Damancus Citizens for Sustainability (Barbars Avindell) Datawara Artine Group & Azardina Martina Permetep Datawara Artine Group & Azardina Martina Datawara Birechenpen Vertwerk (Trae) Carluccio) Earthwords Oli & Gas Accoundelity Irojact [Madia Steinase] Fod & Water Watch [Si: Weltman] Frack Action (Claire Sandberg) Frack Action Badalo (Patricia Sa Friends of Viestial (Sue Rapp) Ga Drilling AwarenessCoalition (Ton Juint, D.P.M.) Gin Drilling Awarenender Contand County ShellaCohen Ed.D.) HighlandConcerned Ottoren (Debra Conwa) Honesteid School Green Power Atlance (Price Construct) Landowneys Against Natural-gas Dvilling (Tenesa Weichesser) Lentrepton CompensationMarkee - Bulkin (Tre Barther) Lumberland Concernes Ottoess (Peter Comstock) Marsellur Accountability Project for Jompkits County (Bil and Sandy Pudulka) Neighbon of the Omendaga Nation (ack Ransden) New York Residents Against Dilling (Kevin Millar) Nimbeau Organis Far NIH2O (loe Levine) Otsee Late Presevuation Association Anita Williams Otequ County Conservation Association (Martha Garvor) Onego 2000 (Nicole Dillingham, I.D.) Faith Stope FoodLoop Dess Roomson; Pak Singe FoodLoop Inter Roomoon People for a Pachky Eviconement, Inc. (Pack Patterson) Roodente Opportug Visude Stale, Gui Estructuse (HI Podvlka) Sinea Cub Atlantic Chapter (Jackel Toteldin, LD.) Sinearateria Laik Association (Mary Menagaret) Sullivan Allance for Sociatinable Development (Dic) Riceling) Sullivan Area Citzens for Responsible Energy Development (Karen London, 3.D) Janaimathe Grange (Ron Britroy, Fh.E., CHG) The Bashs Kill Area Association, Inc. Paula Medley! The Connections to Disserve the Einger Tales (Melante Statohang) The Single Lakes Strong of the Atlantic Chapter of the Sector Club. (Size Rathalence a) Trage Peace and Jurisce (Cecile Lawrence, J.D. Ph.D.)

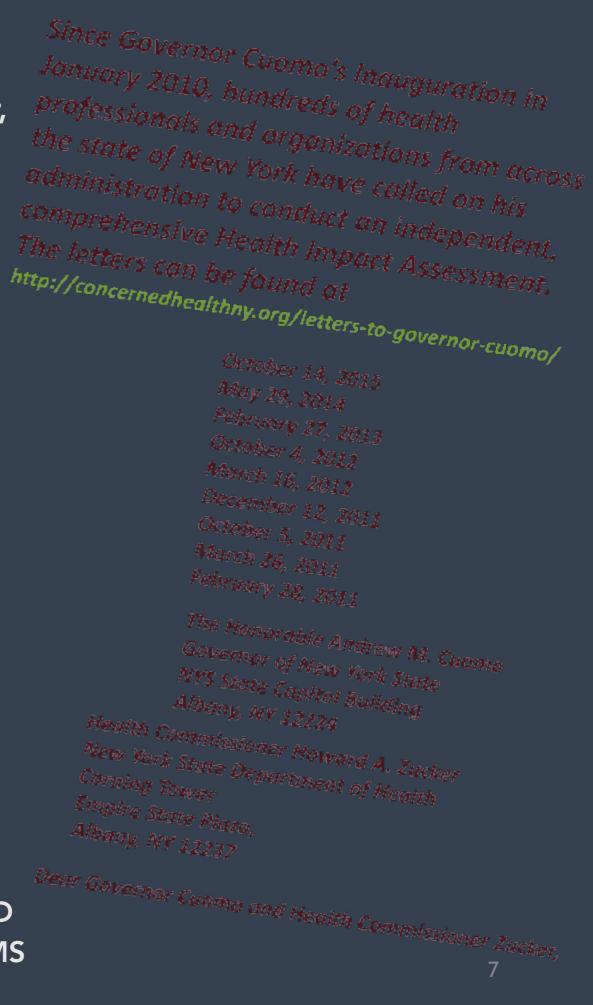
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Health professionals formed Concerned Health Professionals of New York and continued to write letters to NY's Health Commissioner and Governor, joined by health and environmental orgs, and maintained a presence in Albany to educate policymakers.





The first COMPENDIUM OF SCIENTIFIC, MEDICAL, AND MEDIA FINDINGS DEMONSTRATING RISKS AND HARMS OF FRACKING (UNCONVENTIONAL GAS AND OIL



MEDICAL SOCIETY OF THE STATE OF NEW YORK

99 WASHINGTON AVENUE, SUITE408, ALBANY, NY 12210 518-465-8085 • Fax: 518-465-0976 • E-mail: <u>albany@mssny.org</u>



Medical Society of the State of New York

High Volume Hydraulic Fracturing

New York State physicians have expressed concern about potential short term and long term health consequences of hydraulic fracturing. MSSNY's Preventive Medicine and Family Health Committee (PMFHC) was charged with studying the subject and forming MSSNY policy on hydraulic fracturing.

The MSSNY Council adopted a policy on December 9, 2010 (Position Statement # 90.992) to "support a moratorium on natural gas extraction using high volume hydraulic fracturing in New York State until valid scientific information is available to evaluate the process for its potential effects on human health and the environment.

Following the publication of the *Draft Supplemental Generic Environmental Impact Statement (draft SGEIS)* by the Department of Environmental Conservation (DEC) in September 2011, MSSNY responded to the request for comments on November 22, 2011. This letter reiterated MSSNY's concerns about human health consequences and the impact on the environment. In addition, MSSNY recommended ongoing monitoring and analysis, including a Health Impact Assessment which should be conducted by the New York State Department of Health or a different, non-governmental, health organization.

New York State NEW York State A S S O C I A T I O N Advocating for Patients. Advancing the Profession.

Hydraulic fracturing Health Impacts Assessment

The New York State Nurses Association (NYSNA), representing the interests of registered nurses and the patients they serve, strongly supports the requirement of a Health Impacts Assessment on gas exploration and production using high-volume, horizontal hydraulic fracturing, prior to the issuing of any drilling permits in New York State. The Assembly budget proposal has set aside \$100,000 for a study by a school of public health within the state university system to accomplish the assessment.

The study would include research into other states' experiences with hydraulic fracturing; estimated costs of any health impacts to the state, local governments, insurers, employers and the healthcare system; and a long-term plan for monitoring and mitigating health impacts. The purpose of this study is to inform New Yorker's of any and all potential public health impacts posed by hydraulic fracturing and to provide an analysis of those impacts. Analysis and information from this study will then be used to help facilitate informed decisions regarding actions to be taken with respect to such activities in the state.

The expansion of hydraulic fracturing is irresponsible until more research is done to ensure the safety of the water supply and the quality of the air in New York. Other states, including Pennsylvania and Wyoming, have found that hydraulic fracturing has contaminated groundwater with synthetic chemicals, some of which are known to cause genetic abnormalities and stillbirths. In a study conducted by the Environmental Protection Agency, chemicals associated with gas production and hydraulic fracturing fluids were found inside deep water wells in Wyoming (Dilouhy, 2011). Regulators in Pennsylvania also determined that gas drilling led to contaminated water and found an increased incidence of heavy metals toxicity among farm animals. (Griswald, 2011).

Citing Health Risks, Cuomo Bans Fracking in New York State



Members of New Yorkers Against Fracking celebrated the governor's decision outside his Manhattan office on Wednesday. Chang W. Lee/The New York Times

By Thomas Kaplan



A Public Health Review of High Volume Hydraulic Fracturing for Shale Gas Development

December 2014

Dr Zucker's review boiled down to a simple question: Would he want his family to live in a community where fracking was taking place?

His answer was no.

It "would be reckless to proceed [with HVHF] in New York until more authoritative research is done."

"We cannot afford to make a mistake," he said. "The potential risks are too great."





May 2, 2015 - The Medical Society of the State of New York adopted a resolution, "Protecting Public Health from Natural Gas Infrastructure," that recognizes the potential impact to human health and the environment of natural gas pipelines and calls for a governmental assessment of these risks.



June 9, 2015 -- The American Medical Association (AMA) adopted a resolution, "Protecting Public Health from Natural Gas Infrastructure," that states, "Our AMA recognizes the potential impact on human health associated with natural gas infrastructure and supports legislation that would require a comprehensive Health Impact Assessment regarding the health risks that may be associated with natural gas pipelines."







Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)

Fifth Edition





Fracking industry site near Greers Ferry Lake in Quitman, Arkansas in the Fayetteville Shale region. ©2014 Julie Dermansky

> 1,300 peer-reviewed studies & investigative reports.

- 90% published since 2013
- 25% published in 2017

"There is no evidence that fracking can operate without threatening public health directly or without imperiling climate stability upon which public health depends."

http://www.psr.org/assets/pdfs/fracking-compendium-5.pdf

JUST RELEASED

FRACKING SCIENCE COMPENDIUM 5th edition

concernedhealthny.org/compendium/

THE EVIDENCE IS IN: DRILLING AND FRACKING OPERATIONS ARE HARMING OUR HEALTH



THE EVIDENCE IS IN: FRACKING WASTE CONTAMINATES RIVERS AND AQUIFERS

(See footnotes 141, 144-47, 163, 177, 206, 210, 214)

FRACKING SCIENCE COMPENDIUM 5TH EDITION

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THE EVIDENCE IS IN: ABANDONED WELLS LEAK METHANE AND ALLOW FRACKING FLUID TO MIGRATE, PLACING CLIMATE AND GROUNDWATER AT RISK.



FRACKING SCIENCE COMPENDIUM 5TH EDITION

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(See footnotes 612-665)



FRACK SAND MINING POSES POTENTIAL EXPOSURE RISKS TO SILICA DUST, A KNOWN CAUSE OF SILICOSIS AND LUNG CANCER

(See footnotes 797-813)

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FRACKING THREATENS SOIL AND FOOD PRODUCTION

(See footnotes 667-698)

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Health Professionals of NY



(See footnotes 647-665)

EARTHQUAKES ARE A PROVEN CONSEQUENCE OF FRACKING-RELATED ACTIVITIES WHICH REGULATIONS CANNOT FIX



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(See footnotes 499-606)

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CJulie

THE EVIDENCE IS IN: LIVING NEAR FRACKING SITES RAISES the RISKS FOR PREGNANT WOMEN

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(See footnotes 434, 436, 450, 472, 1075, 1080, 1081)



CUSTON DISPOSAL 970-567-4780



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©Julie

LIVING NEAR FRACKING SITES HAS BEEN LINKED TO ASTHMA, RASHES, HEADACHES, AND CANCER

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(See footnotes 438-498, 1063-1064)



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THE EVIDENCE IS IN: FRACKING JOBS ARE KILLING JOBS

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(See footnotes 27, 28, 372-433)

THE EVIDENCE IS IN: FRACKING BRINGS NOISE POLLUTION, LIGHT POLLUTION, AND STRESS

1780

(See footnotes 480-498)

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OIL AND GAS WELLS LEAK, and REGULATIONS CAN'T FIX IT

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(See footnotes 634-635, 637-638, 729-30)



FRACKING ACCELERATES CLIMATE CHANGE

(See footnotes 29, 699-796, 848-850)

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THE EVIDENCE IS IN: FRACKING ATTRACTS VIOLENT CRIME AND SEX TRAFFICKING

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(See footnotes 439, 464, 465, 936, 956, 957, 960, 961, 964, 967, 970)





FRACKING IN CALIFORNIA COMPETES WITH AGRICULTURE FOR WATER

FRACKING SCIENCE COMPENDIUM 5TH EDITION

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Concerned Health Profe (See footnotes 32, 144, 145, 150, 670, 675-77)



THE EVIDENCE IS IN: FRACKING IN FLORIDA PUTS WATER AT RISK

FRACKING SCIENCE COMPENDIUM 5TH EDITION

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(See footnotes 33-38)



THE EVIDENCE IS IN:FRACKING IS A PROVEN THREATTO DRINKING WATER

412

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Concerned Health Professionals of

30

(See footnotes 141, 206, 210, and 214)

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50-1

THE EVIDENCE IS IN: AIR POLLUTION FOLLOWS FRACKING



(See footnotes 50-135, 333, 444-45)

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THE EVIDENCE IS IN: LNG IS A SECURITY THREAT AND SOURCE OF TOXIC POLLUTION

aritime.

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STILL TO STATE

Health Professionals of NY

(See footnotes 909-26)

Photo Credit: Dave R, Flickr creative commons



PIPELINES LEAK, CORRODE, SPILL, EXPLODE, INJURE, KILL, AND PROMPT EVACUATIONS

TRANS

RACKING SCIENCE COMPENDIUM 5TH EDITION

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(See footnotes 30, 816-868)



THE EVIDENCE IS IN: EMISSIONS FROM COMPRESSOR STATIONS ARE HIGHLY TOXIC



(See footnotes 816-17, 823, 826-28, 830-31, 838, 857)

FRACKING SCIENCE COMPENDIUM 5TH EDITION

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Health Effects Associated with Stack Chemical Emissions from NYS Natural Gas Compressor Stations: 2008-2014

A Technical Report Prepared for the Southwest Pennsylvania Environmental Health Project

D.O. Carpenter, MD and P.N. Russo

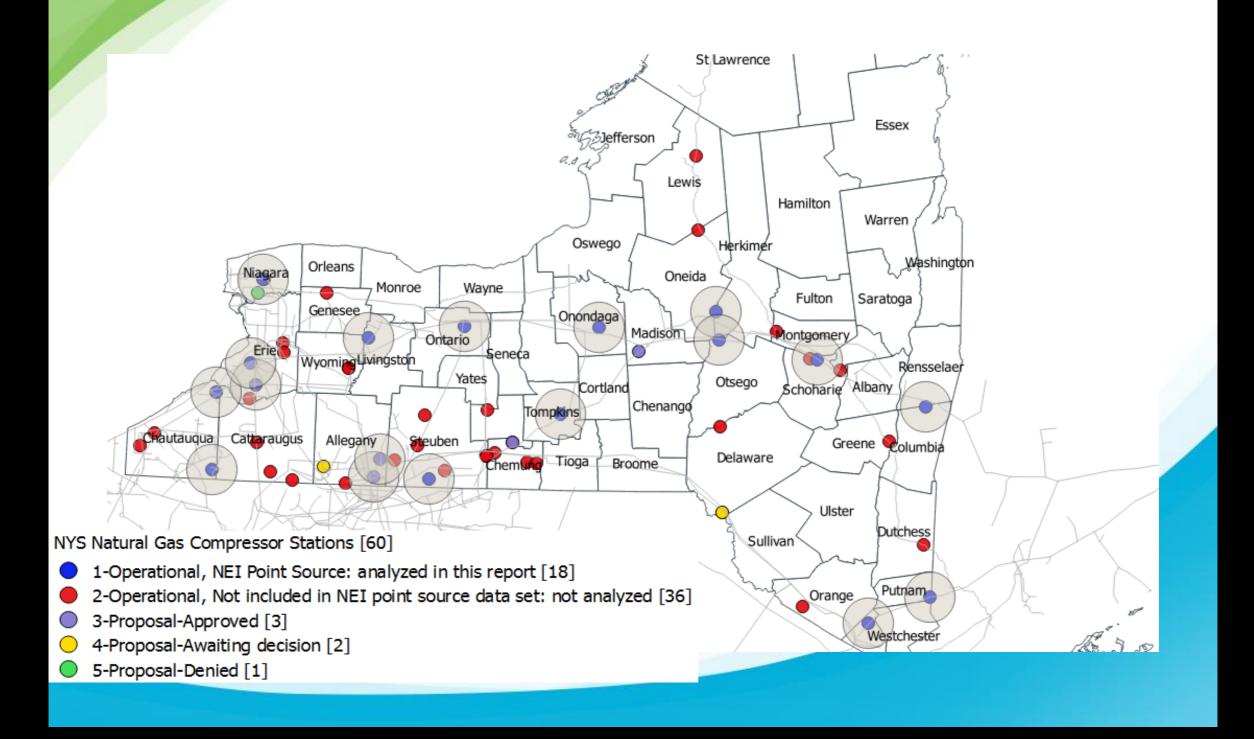
Funded by the Park Foundation

October 12, 2017

SWPA-EHP Presentation: David Brown, ScD Sujit Joginpally, MD, MBA, MPA, MAS Celia Lewis, PhD



Title V Compressor Stations



56 operational natural gas compressor stations in NY State



Five major chemical emissions from New York Compressor stations

- Nitrogen oxides (45%)
- Carbon monoxide (31%)
- Formaldehyde (3%)
- PM 2.5 particulate matter (3%)
- Volatile Organic Hydrocarbons (12%) (28 compounds)

18 of these compressor stations emitted more than 40 million pounds of toxic pollutants between 2008-2014.



Major Chemicals released from Title V Compressor

<u>Stations</u>

NO₂

- Sources: cars, trucks, power plants, off road equipment and compressor stations.
- Health effects:
 - Short term: irritate airways, can aggravate respiratory diseases, particularly asthma and may lead to coughing, wheezing or difficulty breathing.
 - Longer exposures: Development of asthma and increase susceptibility to respiratory infections.

• CO

- Sources: Cars, trucks, gas stoves, compressor stations, etc.,
- Health effects:
 - Replaces O₂ on Hemoglobin -> decrease O₂ to brain and heart
 - High levels, possibly indoors, -> dizziness, confusion, unconsciousness and death
 - Very high levels: Less likely outdoors, however elevated outdoor CO levels concerning for people with heart disease.
- VOC's:
 - Health effects -> Eyes, nose and throat irritation, headaches and nausea, damage to liver, kidney and CNS.
 Some are known to cause to cause cancer in humans.
 - Key signs or symptoms associated with exposure to VOCs include: Conjunctival irritation, nose and throat discomfort, headache, allergic skin reaction, dyspnea, decline in serum cholinesterase levels, nausea, epistaxis, fatigue and dizziness.
- Formaldehyde:
 - Short term health effects: levels exceeding 0.1 ppm. Watery eyes, burning sensation in eyes, nose and throat, cough, wheezing, nausea and skin irritation. EPA classified formaldehyde as a probable carcinogen at high or prolonged exposure.

70 chemicals were identified in compressor station emissions that are linked to 19 of 20 major categories of human disease.



Major Health Effects

- Respiratory problems
- Skin irritation
- Cardiovascular
- Neurological
- Anxiety, stress and sleep deprivation
- Long term health issues: Maybe Cancer

"Adding 40.2 million pounds of 70 contaminants to air already contaminated makes the air we breathe more contaminated and, by extension, increases the potential for human disease."

FACT: One in five underground gas storage wells in the U.S. is similar in design to the well that failed at Aliso Canyon which prompted the evacuation of 8,000 families

CEarthworks

(See footnotes 31, 869-908)



DOWNLOAD at: concernedhealthny.org/compendium/



Health Professionals of NY



THE EVIDENCE IS IN: FRACKING AND ITS INFRASTRUCTURE DISPROPORTIONATELY IMPACTS NON-WHITE AND/OR LOW-INCOME COMMUNITIES.

Photo Credit: Sarah Craig/Faces of Fracking

(See footnotes 42-49)

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THE EVIDENCE IS IN: FRACKING RELEASES RADON, A LEADING CAUSE OF LUNG CANCER.



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Health Professionals of NY



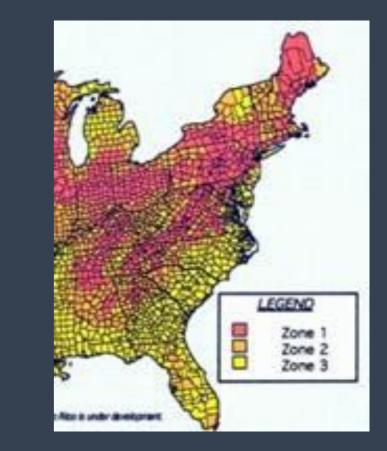


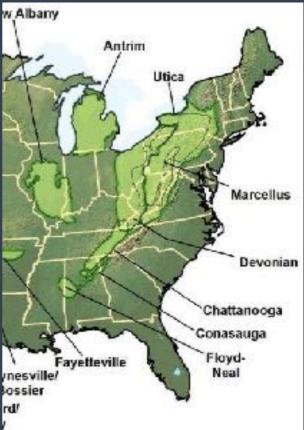
Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations



U.S. Envtl. Prot. Agency, Office of Solid Waste, EPA530-K-01-004, Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations (2002)

> https://yosemite.epa.gov/oa/eab_web_docket.nsf/ Attachments%20By%20ParentFilingId/ 945EF425FA4A9B4F85257E2800480C65/\$FILE/28%20-%20RCRA%20E%26P%20Exemption.pdf





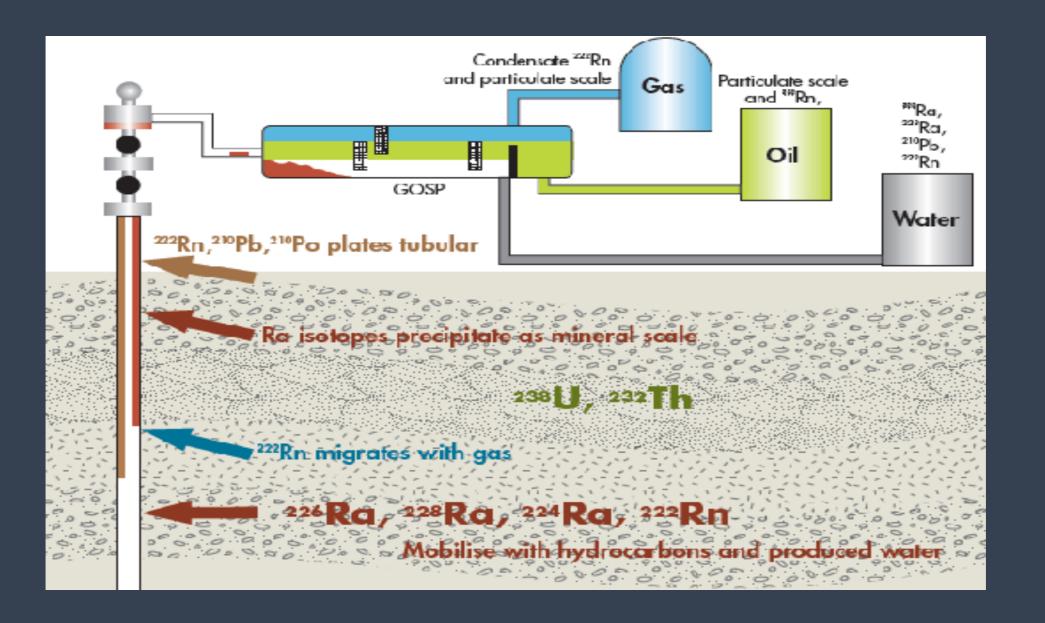




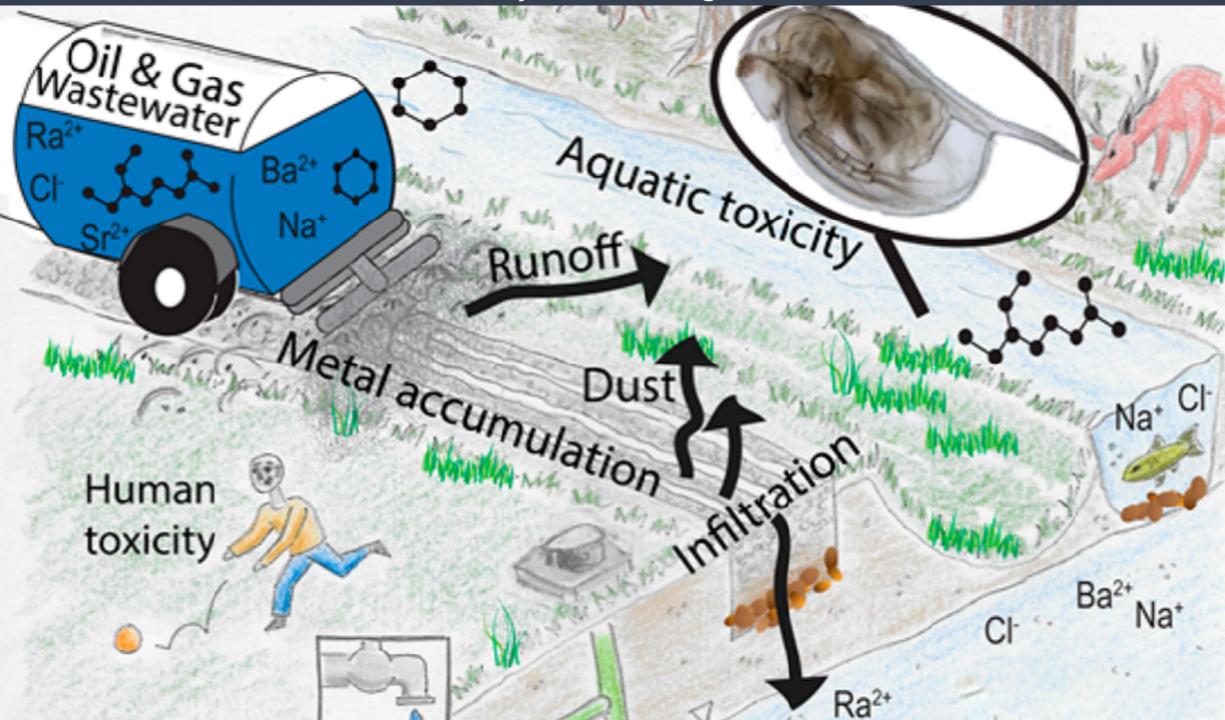
- The radioactive elements found in Marcellus shales include uranium, thorium, radium, polonium and radon.
- Federal exemption for radioactive waste exists.
- Radon travels with methane through the pipelines.
- Radium and radon levels from the Marcellus shale are significantly elevated.
- Radionuclides, the decay products of radon, such as Lead-210 and Polonium-210 can be found in pipeline scrapings as well as sludge accumulating in tank bottoms, gas/oil separators, dehydration vessels, compressor facilities, liquid natural gas (LNG) storage tanks and in waste pits.



PIGS
Pipeline Inspection or Intervention
Gauge/Gizmo/Gadget



Study: "Environmental and Human Health Impacts of Spreading Oil and Gas Wastewater on Roads" shows that radium has been widely spread on Pennsylvania roadways without regulation



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In the United States, Vermont and New York have banned fracking, while Maryland has a moratorium in place through 2017.

Fracking was banned in France in 2011, and the ban was upheld in 2012. Bulgaria followed similarly in 2012. Germany first enacted a ban on fracking in 2012, re-affirming it in 2014. Scotland passed a ban in January of 2015.

The following countries have issued moratoriums until more is known about the environmental and health effects:

•UK

•Romania

•Denmark

•Ireland

•South Africa

FRACKING SCIENCE COMPENDIUM 5TH EDITION



1 2	Adopted as amended	RESOLUTION 16-206
3		
4		(Referred to Reference Committee B)
5	(
6	Subject:	Pennsylvania Medical Society Support for a Moratorium on Fracking
7	Introduced by:	Michael DellaVecchia, MD, on behalf of the Philadelphia County Medical Society
8	Author:	Walter Tsou, MD, Philadelphia County Medical Society
9		
10	WHEREAS, As physicians of Pennsylvania, we care first and foremost about the health of our community	
11	and believe that when an activity raises potential harm to human health, precautionary measures should	
12	be taken until cause and effect relationships are fully established scientifically; and	
13		
14	WHEREAS, Act 13 (Impact Fee) of 2012 includes a provision that allows disclosure of proprietary chemicals	
15	after a physician places a request in writing, but prohibits further disclosure of the chemicals to other	
16	doctors or written into medical records, even if needed to properly care for a patient ¹ ; and	
17		
18	WHEREAS, Hydraulic fracturing, or fracking, is a method of oil and gas removal that involves blasting	
19	between 4-6 million gallons of water, sand and chemicals under high pressure deep into the earth to break	
20	up the Marcellus Shale to allow oil and gas extraction; and	
21		
22	WHEREAS, The Marcellus Shale covers about 60% of Pennsylvania and much of the mineral rights have	
23	been leased to gas drill	ing companies; and
24		
25	WHEREAS, The gas drilling industry has identified around 60 chemicals regularly used in fracking and hundreds that could potentially be used ² ; and	
26	hundreds that could po	itentially be used; and
27 28	WHEREAS The gas drill	ling industry has many "proprietary" chemicals which are trade secrets so there is
29		eir toxicity, but fracking routinely employs numerous toxic chemicals, including
30	,	atile organic compounds ³ and can also expose humans to harm from lead, arsenic,
31		the back to the surface with fracking flowback fluid; and
32	and facioactivity broug	in back to the surface with macking nowback huid, and
33	WHEREAS. The gas indu	ustry has lobbled to exempt their industry from federal regulations of many
34		tal laws, including the Safe Drinking Act, the Clean Air Act, the Clean Water Act,
35	National Environmental Policy Act, Resource Conservation and Recovery Act, and CERCLA (the	
36		ring any federal oversight of the industry ⁴ ; and
20	- per an a rice (numper	
37	WHEREAS, Many fracki	ing chemicals and the radioactive isotopes of flowback fluid are known
38	carcinogens and evidence is mounting throughout the country that these chemicals are making their	
39	way into aquifers and d	Irinking water ⁵ , and

RESOLVED, That the Pennsylvania Medical Society urge and support a moratorium on new natural gas extraction using high-volume hydraulic fracturing in Pennsylvania; and be it further RESOLVED, That the Pennsylvania Medical Society urge the state legislatureCommonwealth of Pennsylvania to fund an

independent health registry and commission research studies on the health effects of fracking.

OCTOBER 2016



Pennsylvania Constitution Article I Section 27

"The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment.

Pennsylvania's public natural resources are the common property of all the people, including generations yet to come.

As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

COMPREHENSIVE SOURCES OF HEALTH INFORMATION



PSE for Healthy Energy PSE STUDY CITATION DATABASE on Shale Gas & Tight Oil Development http://www.psehealthyenergy.org/site/view/1180#sthash.CHp8vErJ.dpuf

Concerned Health Professionals of NY Compendium http://concernedhealthny.org/

- Southwest Pennsylvania Environmental Health Project www.environmentalhealthproject.org 724.260.5504 info@environmentalhealthproject.org
- Physicians for Social Responsibility www.psr.org
 Fracktracker
 Alliance

