UNCONVENTIONAL OIL AND GAS DEVELOPMENT
BIBLIOGRAPHY

October 2016 Monthly Update
“NEW” indicates entries that have been added since the previous update

This bibliography includes:

▶ Literature compiled by the Health Effects Institute Special Scientific Committee on Unconventional Oil and Gas Development as it developed its October 2015 Research Agenda on the Potential Impacts of 21st Century Oil and Natural Gas Development in the Appalachian Basin and Beyond. Given its specific charge, the Committee focused its literature review on information related to potential impacts of 21st century oil and natural gas development rather than the enormous literature about the technology that underlies it. In the Research Agenda and here, “21st century oil and natural gas development” refers to the onshore development and production of oil and natural gas from unconventional geologic resources as practiced today, recognizing that industry practices continue to change in response to evolving technologies, regulations, and other factors. The Committee gave priority to peer-reviewed articles from the scientific literature as well as to reports and data from nongovernmental research institutions and government agencies with knowledge of and expertise about oil and natural gas development and production in the Appalachian region. Despite this focus on the Appalachian region, much of this bibliography is relevant to other regions in the United States and around the world.

▶ Literature published since the Special Committee’s review that is primarily focused on potential human exposures and effects.

~ We welcome your suggestions of papers that should be included.
Please send to dvorhees@healtheffects.org ~
# TABLE OF CONTENTS

## STRESSOR AND EXPOSURE CHARACTERIZATION .............................................................................. 5

- STRESSOR IDENTIFICATION AND PROPERTIES .......................................................................... 5
  - Drilling Fluid Composition ........................................................................................................... 5
  - Hydraulic Fracturing Fluid Composition .................................................................................. 5
  - Wastewater Composition ........................................................................................................... 6
  - Solid Waste Composition ........................................................................................................... 9
  - Naturally Occurring Radioactive Material (NORM) ................................................................. 9
  - Air Quality Emission Inventories .............................................................................................. 10
  - Reviews and General Resources ............................................................................................. 11

- STRESSOR FATE AND TRANSPORT ............................................................................................. 11
  - Forensics/Tracers ....................................................................................................................... 11
  - Atmospheric Transport ............................................................................................................. 12
  - Surface Releases (Liquid and Solid Waste Products) .............................................................. 12
  - Subsurface Migration ............................................................................................................... 13
  - Hydraulic Fracturing Depth and Fracture Propagation (as it relates to Ground Water Quality) .............................................................................................................. 14
  - Reviews and General Resources ............................................................................................. 14

## AIR QUALITY ....................................................................................................................................... 15

- Methane .......................................................................................................................................... 15
- Ozone .............................................................................................................................................. 17
- Radiation ......................................................................................................................................... 18
- Monitoring Methods and Protocols ............................................................................................... 18
- Monitoring Data and/or Modeling ................................................................................................... 19
  - Appalachia ................................................................................................................................... 19
  - Colorado/Southwest ..................................................................................................................... 20
  - North Dakota ............................................................................................................................... 20
  - Texas .......................................................................................................................................... 21
  - Utah and Wyoming ..................................................................................................................... 21
  - U.S. Multi-Regional or National Scale ........................................................................................ 21
  - Reviews and General Resources ............................................................................................. 22

## WATER QUALITY AND USE ............................................................................................................. 23

- Surface Water Quality Baseline Measurements .......................................................................... 23
- Surface Water Quality Monitoring and/or Modeling ..................................................................... 23
- Drinking Water Quality (sourced from groundwater or surface water) ........................................ 25
  - Arkansas ..................................................................................................................................... 25
  - Appalachia .................................................................................................................................. 26
  - Colorado ...................................................................................................................................... 28
  - Texas ......................................................................................................................................... 28
  - Wyoming ..................................................................................................................................... 28
- Ground Water Quality Baseline Measurements ............................................................................ 28
- Ground Water Quality Modeling and/or Monitoring ..................................................................... 30
  - Appalachia .................................................................................................................................. 30
  - Canada ........................................................................................................................................ 30
  - Colorado and Wyoming ............................................................................................................. 31
  - Montana ...................................................................................................................................... 31
  - Texas .......................................................................................................................................... 31
- Water Use ...................................................................................................................................... 32
- Reviews and General Resources ................................................................................................. 34
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOIL QUALITY</td>
<td>36</td>
</tr>
<tr>
<td>SEDIMENT QUALITY</td>
<td>36</td>
</tr>
<tr>
<td>FOOD QUALITY</td>
<td>36</td>
</tr>
<tr>
<td>CHEMICAL STRESSOR TOXICITY</td>
<td>36</td>
</tr>
<tr>
<td>Drilling Fluids</td>
<td>36</td>
</tr>
<tr>
<td>Hydraulic Fracturing Fluids</td>
<td>36</td>
</tr>
<tr>
<td>Wastewater</td>
<td>37</td>
</tr>
<tr>
<td>Solid Wastes</td>
<td>37</td>
</tr>
<tr>
<td>HUMAN EXPOSURE</td>
<td>37</td>
</tr>
<tr>
<td>Personal Exposure Monitoring</td>
<td>37</td>
</tr>
<tr>
<td>On-site and Fenceline Air Quality Monitoring</td>
<td>38</td>
</tr>
<tr>
<td>Outdoor Air Quality Monitoring (Beyond the Fenceline)</td>
<td>39</td>
</tr>
<tr>
<td>Indoor Air Quality Monitoring</td>
<td>40</td>
</tr>
<tr>
<td>Surface Water Quality Monitoring</td>
<td>40</td>
</tr>
<tr>
<td>Drinking Water Monitoring</td>
<td>41</td>
</tr>
<tr>
<td>Groundwater Monitoring</td>
<td>43</td>
</tr>
<tr>
<td>Soil and Sediment Monitoring</td>
<td>44</td>
</tr>
<tr>
<td>Biomonitoring</td>
<td>44</td>
</tr>
<tr>
<td>Exposure Pathway Reviews</td>
<td>44</td>
</tr>
<tr>
<td>HEALTH AND WELL-BEING</td>
<td>46</td>
</tr>
<tr>
<td>ECOLOGICAL HEALTH</td>
<td>47</td>
</tr>
<tr>
<td>PUBLIC HEALTH</td>
<td>54</td>
</tr>
<tr>
<td>Human Health Risk Assessment and Public Health Evaluation</td>
<td>54</td>
</tr>
<tr>
<td>Public Safety</td>
<td>55</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>55</td>
</tr>
<tr>
<td>Reviews of Potential Public Health Impacts and Recommendations for Future Research</td>
<td>56</td>
</tr>
<tr>
<td>Health and Stress</td>
<td>57</td>
</tr>
<tr>
<td>Community-Engaged Research (Perception, Symptoms, and Other Anecdotal Information)</td>
<td>58</td>
</tr>
<tr>
<td>General Resources and Guidance</td>
<td>59</td>
</tr>
<tr>
<td>OIL AND GAS WORKER HEALTH</td>
<td>61</td>
</tr>
<tr>
<td>INDIVIDUAL AND COMMUNITY WELL-BEING</td>
<td>64</td>
</tr>
<tr>
<td>MOST EFFECTIVE PRACTICES</td>
<td>74</td>
</tr>
<tr>
<td>WASTE MANAGEMENT</td>
<td>75</td>
</tr>
<tr>
<td>General Information</td>
<td>75</td>
</tr>
<tr>
<td>Transport</td>
<td>76</td>
</tr>
<tr>
<td>Treatment and Reuse</td>
<td>77</td>
</tr>
<tr>
<td>INDUCED SEISMICITY</td>
<td>78</td>
</tr>
<tr>
<td>WELLBORE INTEGRITY AND DIAGNOSTICS</td>
<td>81</td>
</tr>
<tr>
<td>Modeling</td>
<td>81</td>
</tr>
<tr>
<td>Well Material Performance under Simulated Conditions</td>
<td>82</td>
</tr>
<tr>
<td>Integrity Monitoring and Analysis of Barrier Failure Data</td>
<td>82</td>
</tr>
<tr>
<td>General Resources and Guidance – Wellbore Integrity and Diagnostics</td>
<td>82</td>
</tr>
<tr>
<td>ADDITIONAL INFORMATION</td>
<td>83</td>
</tr>
<tr>
<td>MULTI-TOPIC REVIEWS AND RESEARCH RECOMMENDATIONS</td>
<td>84</td>
</tr>
<tr>
<td>ECONOMICS</td>
<td>86</td>
</tr>
<tr>
<td>REGULATION</td>
<td>88</td>
</tr>
<tr>
<td>BACKGROUND MATERIAL</td>
<td>90</td>
</tr>
</tbody>
</table>

10/17/2016
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact Sheets and General Information</td>
<td>91</td>
</tr>
<tr>
<td>Technology</td>
<td>92</td>
</tr>
<tr>
<td>Oil and Gas Resource Assessments</td>
<td>92</td>
</tr>
<tr>
<td>Geology/Hydrogeology</td>
<td>93</td>
</tr>
<tr>
<td>Energy Outlooks</td>
<td>93</td>
</tr>
<tr>
<td>Guidance Documents</td>
<td>94</td>
</tr>
<tr>
<td>Data Availability, Transparency, and Community Engagement</td>
<td>95</td>
</tr>
</tbody>
</table>
STRESSOR AND EXPOSURE CHARACTERIZATION

STRESSOR IDENTIFICATION AND PROPERTIES

Drilling Fluid Composition


Hydraulic Fracturing Fluid Composition


**Wastewater Composition**


Akob DM, Cozzarelli IM, Dunlap DS, Rowan EL, Lorah MM. 2015. Organic and inorganic composition and


Solid Waste Composition


Naturally Occurring Radioactive Material (NORM)


Air Quality Emission Inventories


Reviews and General Resources


STRESSOR FATE AND TRANSPORT

Forensics/Tracers


**Atmospheric Transport**


**Surface Releases (Liquid and Solid Waste Products)**


**Subsurface Migration**


**Hydraulic Fracturing Depth and Fracture Propagation (as it relates to Ground Water Quality)**


**Reviews and General Resources**


Methane


Frankenberg C, Thorpe AK, Thompson DR, Hulley G, Kort EA, Vance N, Borchardt J, Krings T, Gerilowski K,


**Ozone**


Radiation


Monitoring Methods and Protocols


Monitoring Data and/or Modeling

Appalachia


Vinciguerra T, Yao S, Dadzie J, Chittams A, Deskins T, Ehrman S, et al. 2015. Regional air quality impacts of

West Virginia Department of Environmental Protection Office of Oil and Gas. 2013. Air Quality Impacts Occurring from Horizontal Well Drilling and Related Activities. Charleston, WV: West Virginia DEP.

West Virginia Department of Environmental Protection Office of Oil and Gas. 2013. Noise, Light, Dust, and Volatile Organic Compounds Generated by the Drilling of Horizontal Wells Related to the Well Location Restriction Regarding Occupied Dwelling Structures. West Virginia Department of Environmental Protection-Office of Oil and Gas. Charleston, WV.

**Colorado/Southwest**


Collett JL, Ham J. 2013. North Front Range Oil and Gas Air Pollutant Emission and Dispersion Study: A Proposal. Colorado State University,


**North Dakota**


Texas


Rich AL, Orimoloye HT. 2016. Elevated atmospheric levels of benzene and benzene-related compounds from unconventional shale extraction and processing: human health concern for residential communities. Environ Health Insights 10:75–82.


Utah and Wyoming


U.S. Multi-Regional or National Scale


Reviews and General Resources


HEI'S ENERGY RESEARCH PROGRAM

Literature Update


WATER QUALITY AND USE

Surface Water Quality Baseline Measurements


Surface Water Quality Monitoring and/or Modeling

10/17/2016


Drinking Water Quality (sourced from groundwater or surface water)


Arkansas

Appalachia


Colorado


Texas


Wyoming


Ground Water Quality Baseline Measurements


Ground Water Quality Modeling and/or Monitoring

Appalachia


Canada


**Colorado and Wyoming**


**Montana**


**Texas**


**Water Use**


Reviews and General Resources


HEI’s Energy Research Program

Literature Update


SOIL QUALITY

SEDIMENT QUALITY


FOOD QUALITY

CHEMICAL STRESSOR TOXICITY

Drilling Fluids


Hydraulic Fracturing Fluids


10/17/2016


Wastewater


Solid Wastes

HUMAN EXPOSURE ¹

Personal Exposure Monitoring


¹ Also see the air quality sections, which include numerous studies that are relevant to human exposure.
Hazard Subst Environ Eng 50:460–472.


On-site and Fenceline Air Quality Monitoring


Rich AL, Orimoloye HT. 2016. Elevated atmospheric levels of benzene and benzene-related compounds from unconventional shale extraction and processing: human health concern for residential communities. Environ Health Insights 10:75–82.


West Virginia Department of Environmental Protection Office of Oil and Gas. 2013. Air Quality Impacts Occurring from Horizontal Well Drilling and Related Activities. Charleston, WV: West Virginia DEP.

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Outdoor Air Quality Monitoring (Beyond the Fenceline)


**Indoor Air Quality Monitoring**


**Surface Water Quality Monitoring**


Drinking Water Monitoring


**Groundwater Monitoring**


Soil and Sediment Monitoring


Biomonitoring


Exposure Pathway Reviews


HEALTH AND WELL-BEING

Ecological Health
Public Health
Oil and Gas Worker Health
Individual and Community Well-Being
ECOLOGICAL HEALTH


Pennsylvania Wilds Planning Team. 2011. Marcellus Shale Resource Guide and the Implications to the PA Wilds-


Shank MK. 2013. The Pennsylvania State University,


PUBLIC HEALTH

Human Health Risk Assessment and Public Health Evaluation


Sexton K, Linder SH. 2011. Cumulative risk assessment for combined health effects from chemical and


Public Safety


Epidemiology


Gulland A. 2016. Fracking is linked to asthma increase, study finds. Bmj-British Medical Journal 354.


development in the Marcellus shale and asthma exacerbations. JAMA Internal Medicine.


**Reviews of Potential Public Health Impacts and Recommendations for Future Research**


**Health and Stress**


Community-Engaged Research (Perception, Symptoms, and Other Anecdotal Information)


Rabinowitz P, Slizovskiy I. 2014. Proximity to natural gas wells and reported health status: results of a household


General Resources and Guidance


Finkel ML, Hays J. 2015. Environmental and health impacts of ‘fracking’: why epidemiological studies are necessary. J Epidemiol Community Health


Goldstein B. 2012. The Public Health Implications of Unconventional Gas Drilling: For presentation to the Energy...


### OIL AND GAS WORKER HEALTH


**INDIVIDUAL AND COMMUNITY WELL-BEING**


---

2This category excludes articles that are explicitly health related (e.g., community perceptions of health impacts), which can be found in the “General Health” Section.


Fernando FN, Cooley DR. 2016. Socioeconomic system of the oil boom and rural community development in Western North Dakota. Rural Sociol; doi: 101111/ruso12100.


MOST EFFECTIVE PRACTICES

Waste Management
Induced Seismicity
Wellbore Integrity and Diagnostics
WASTE MANAGEMENT

(LAST UPDATED OCTOBER 2015)

General Information


**Transport**


Rahm BG, Bates JT, Bertoia LR, Galford AE, Yoxtheimer DA, Riha SJ. 2013. Wastewater management and


**Treatment and Reuse**


**INDUCED SEISMICITY**


### WELLBORE INTEGRITY AND DIAGNOSTICS

(LAST UPDATED OCTOBER 2015)

**Modeling**


Well Material Performance under Simulated Conditions


Integrity Monitoring and Analysis of Barrier Failure Data


General Resources and Guidance – Wellbore Integrity and Diagnostics


ADDITIONAL INFORMATION

Multi-Discipline Reviews and Research

Recommendations

Economics

Regulation

Background Material
MULTI-TOPIC REVIEWS AND RESEARCH RECOMMENDATIONS


**ECONOMICS**


HEI'S ENERGY RESEARCH PROGRAM
Literature Update


REGULATION

Agency SABUEP. 2016. SAB Review of the EPA’s draft Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources. 1-180.


United States District Court (W.D. Pa.). 1980. United States v. Minard Run Oil Co. 9570:


Fact Sheets and General Information


Technology


Oil and Gas Resource Assessments


Guidance Documents


Data Availability, Transparency, and Community Engagement


