

## Unconventional Natural Gas Drilling Complaint Report - July 2016

PADOH responds to all citizen health concerns related to natural gas drilling activities by providing health-focused information including any response necessary to protect public health. These concerns are reported through the DOH web portal by phone, fax, physician, healthcare facility or referrals from State and Federal agencies. From March 2011 through July 2016, 127 complaint investigations have been registered with 87% of these representing households. Individuals seen by a physician represent 21% of all complaints. Complainants are primarily female (50%) with the primary age group being 18-64 years. The most often reported sources are well water (33%), and air quality, (27%).

### Number of received complaints

	2011	2012	2013	2014	2015	July 2016	Cumulative
<b>Individuals</b>	4	21	23	42	48	4	193
<b>Households</b>	4	16	16	25	24	2	110
<b>Seen by Physician</b>	1	8 (38%)	9 (39%)	5 (12%)	13 (27%)	0	41 (21%)

**Notes:** Investigations were first recorded beginning March 31, 2011. The cumulative column lists number of individuals (191) with a health-related complaint. This number differs from the total number of investigations (127), as one investigation may include more than one individual.

Demographics	2011	2012	2013	2014	2015	July 2016	Cumulative
<b>Sex</b>							
<b>F</b>	2	12	12	20	23	2	97 (50%)
<b>M</b>	1	4	11	20	18	2	81 (42%)
<b>Unspecified</b>	1	5	0	2	7	0	15 (8%)
<b>Race</b>							
<b>White</b>	NR*	NR	NR	2	26	4	83
<b>Black</b>	NR	NR	NR	NR	NR	0	0
<b>Other</b>	NR	NR	NR	NR	NR	0	0
<b>Ethnicity</b>							
<b>Hispanic</b>	NR	NR	NR	NR	NR	0	0
<b>Non-Hispanic</b>	NR	NR	NR	2	26	4	83
<b>Age Groups</b>							
<b>0-17</b>	2	2	NR	3	5	0	24
<b>18-64</b>	1	3	1	4	18	1	64
<b>65+</b>	NR	1	NR	2	10	1	17

Complaint type	2011	2012	2013	2014	2015	July 2016	Cumulative**
<b>Water</b>	4	7	9	9	15	2	63 (33%)
<b>Soil</b>	0	0	1	1	2	0	6 (3%)
<b>Air</b>	1	8	8	13	11	0	53 (27%)
<b>Noise</b>	0	1	2	6	4	0	24 (13%)
<b>Other</b>	1	0	1	11	3	0	23 (13%)

Reported symptoms	2011	2012	2013	2014	2015	July 2016	Cumulative
Respiratory	2	2 (10%)	5 (22%)	14 (33%)	12 (25%)	1	63 (33%)
Headache	0	1 (5%)	0	6 (14%)	9 (19%)	1	28 (15%)
Nose bleed	2	1 (5%)	2 (9%)	2 (5%)	2 (4%)	0	20 (11%)
Throat	2	2 (10%)	0	2 (5%)	4 (8%)	1	31 (16%)
Rash	2	6 (29%)	6 (26%)	6 (14%)	8 (17%)	1	55 (28%)
Vision	1	0	1 (4%)	3 (7%)	3 (6%)	1	14 (7%)
Hearing	0	1 (5%)	2 (9%)	0	1 (2%)	0	6 (3%)
Cardiac	1	1 (5%)	1 (4%)	0	5 (10%)	1	10 (5%)
Anxiety/Stress	2	1 (5%)	0	4 (10%)	8 (17%)	2	49 (26%)
Comorbidities***	1	NR	2 (9%)	7 (17%)	14 (29%)	1	39 (20%)

Summary of Investigations by Oil & Gas District March 31, 2011 to July 31, 2016		Summary of Referrals March 31, 2011 to July 31, 2016	
Southwest	40	Referred from DEP to DOH	22
Northeast	38	Referred to DEP from DOH	2
Northcentral	29	DEP/DOH collaborating	23
Southeast	7	State Legislators to DOH	4
Northwest	5	Direct from complainant to DOH	24
Southcentral	3	Referral unknown/other	57

**Notes:** Summary of investigations by district shows a total of 122, however, this number *does not* include 5 investigations which did not identify a county, district, or other identifier to determine the location.

Summary of referrals includes complaint investigations (45%) which did not list a referral source or how the complaint was received by the DOH.

#### Related Items

- As of July 2016, no pattern can be determined for seasonality.
- Comorbidities are primarily respiratory and cardiac related.
- Multiple symptoms are most often reported. The most common grouping include rash, respiratory and stress.
- As of July 31, 2016, Pennsylvania has a total of 8,485 *active unconventional* gas wells. Washington County has the highest number of active wells, (1,366), followed by Susquehanna, (1,193) and Bradford, (1,092). Of the 67 counties, 35 have active unconventional gas drilling activities occurring.

\* Not Reported

\*\* Cumulative percentages for complaint type and symptoms are based on total number of individuals (193), however, 21 out of 193 individuals (11%) did not have a complaint type reported.

\*\*\* Comorbidities are health conditions that co-occur and are often associated with worse health outcomes. For this report, a comorbidity is counted only if diagnosed by a physician.

