

## Unconventional Natural Gas Drilling Complaint Report - October 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 October 2016, 130 complaint investigations have been registered with 87% of these representing households. Individuals seen by a physician represent 22% 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 (34%), and air quality, (28%).

### Number of received complaints

	2011	2012	2013	2014	2015	October 2016	Year to date	Cumulative
<b>Individuals</b>	4	21	23	42	48	0	58	196
<b>Households</b>	4	16	16	25	24	0	28	113 (87%)
<b>Seen by Physician</b>	1	8 (38%)	9 (39%)	5 (12%)	13 (27%)	0	7	43 (22%)

**Notes:** Investigations were first recorded beginning March 31, 2011. The Cumulative column lists number of individuals (196) with a health-related complaint. This number differs from the total number of investigations (130), as one investigation may include more than one individual.

<b>Demographics</b>	2011	2012	2013	2014	2015	October 2016	Year to date	Cumulative
<b>Sex</b>								
<b>F</b>	2	12	12	20	23	0	29	98 (50%)
<b>M</b>	1	4	11	20	18	0	29	83 (42%)
<b>Unspecified</b>	1	5	0	2	7	0	0	15 (8%)
<b>Race</b>								
<b>White</b>	NR*	NR	NR	2	26	0	58	86
<b>Black</b>	NR	NR	NR	NR	NR	0	0	0
<b>Other</b>	NR	NR	NR	NR	NR	0	0	0
<b>Ethnicity</b>								
<b>Hispanic</b>	NR	NR	NR	NR	NR	0	0	0
<b>Non-Hispanic</b>	NR	NR	NR	2	26	0	58	86
<b>Age Groups</b>								
<b>0-17</b>	2	2	NR	3	5	0	12	24
<b>18-64</b>	1	3	1	4	18	0	42	65
<b>65+</b>	NR	1	NR	2	10	0	4	18

<b>Complaint type</b>	2011	2012	2013	2014	2015	October 2016	Year to date	Cumulative **
<b>Water</b>	4	7	9	9	15	0	22	66 (34%)
<b>Soil</b>	0	0	1	1	2	0	2	6 (3%)
<b>Air</b>	1	8	8	13	11	0	13	54 (28%)
<b>Noise</b>	0	1	2	6	4	0	12	25 (13%)
<b>Other</b>	1	0	1	11	3	0	8	24 (12%)

Reported symptoms	2011	2012	2013	2014	2015	October 2016	Year to date	Cumulative
Respiratory	2	2 (10%)	5 (22%)	14 (33%)	12 (25%)	0	29	65 (33%)
Headache	0	1 (5%)	0	6 (14%)	9 (19%)	0	12	29 (15%)
Nose bleed	2	1 (5%)	2 (9%)	2 (5%)	2 (4%)	0	11	20 (10%)
Throat	2	2 (10%)	0	2 (5%)	4 (8%)	0	21	32 (16%)
Rash	2	6 (29%)	6 (26%)	6 (14%)	8 (17%)	0	29	56 (29%)
Vision	1	0	1 (4%)	3 (7%)	3 (6%)	0	6	15 (8%)
Hearing	0	1 (5%)	2 (9%)	0	1 (2%)	0	2	6 (3%)
Cardiac	1	1 (5%)	1 (4%)	0	5 (10%)	0	2	11 (6%)
Anxiety/Stress	2	1 (5%)	0	4 (10%)	8 (17%)	0	38	52 (27%)
Comorbidities***	1	NR	2 (9%)	7 (17%)	14 (29%)	0	15	40 (20%)

Summary of Investigations by Oil & Gas District March 31, 2011 to October 31, 2016		Summary of Referrals March 31, 2011 to October 31, 2016	
Southwest	42	Referred from DEP to DOH	25
Northeast	39	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 125, 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 total 135. This number includes 10 investigations which were referred from the DOH and not Investigated as a health complaint.

#### Related Items

- As of October 31, 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 October 31, 2016, Pennsylvania has a total of 8,590 *active unconventional* gas wells. Washington County has the highest number of active wells, (1,381), followed by Susquehanna, (1,218) and Bradford, (1,098). Of the 67 counties, 35 have active unconventional gas drilling activities occurring.

\* Not Reported

\*\* Please note cumulative percentages for complaint type and symptoms are based on total number of individuals (196). In addition, a complaint investigation may include more than one reported type.

\*\*\* 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.

