

## Unconventional Natural Gas Drilling Complaint Report - March 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 March 2016, 121 complaint investigations have been registered with 86% 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 (31%) and air quality (28%).

### Number of received complaints

	2011	2012	2013	2014	2015	March 2016	Cumulative
<b>Individuals</b>	4	21	23	42	48	29	181
<b>Households</b>	4	16	16	25	24	15	104
<b>Seen by Physician</b>	1	8 (38%)	9 (39%)	5 (12%)	13 (27%)	2	39 (22%)

**Notes:** Investigations were first documented beginning March 31, 2011. The cumulative column lists number of individuals (**181**) with a health-related complaint. This number differs from the total number of investigations (**121**), as one investigation may include more than one individual.

Demographics	2011	2012	2013	2014	2015	March 2016	Cumulative
<b>Sex</b>							
<b>F</b>	2	12	12	20	23	15	91 (50%)
<b>M</b>	1	4	11	20	18	14	75 (41%)
<b>Unspecified</b>	1	5	0	2	7	0	15 (8%)
<b>Race</b>							
<b>White</b>	NR*	NR	NR	2	26	29	71
<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	29	71
<b>Age Groups</b>							
<b>0-17</b>	2	2	NR	3	5	6	24
<b>18-64</b>	1	3	1	4	18	20	55
<b>65+</b>	NR	1	NR	2	10	3	16

Complaint type	2011	2012	2013	2014	2015	March 2016	Cumulative**
<b>Water</b>	4	7	9	9	15	9	57 (31%)
<b>Soil</b>	0	0	1	1	2	2	6 (3%)
<b>Air</b>	1	8	8	13	11	9	51 (28%)
<b>Noise</b>	0	1	2	6	4	11	24 (13%)
<b>Other</b>	1	0	1	11	3	6	23 (13%)

Reported symptoms	2011	2012	2013	2014	2015	March 2016	Cumulative
Respiratory	2	2 (10%)	5 (22%)	14 (33%)	12 (25%)	20	58 (32%)
Headache	0	1 (5%)	0	6 (14%)	9 (19%)	6	27 (15%)
Nose bleed	2	1 (5%)	2 (9%)	2 (5%)	2 (4%)	10	20 (11%)
Throat	2	2 (10%)	0	2 (5%)	4 (8%)	15	30 (17%)
Rash	2	6 (29%)	6 (26%)	6 (14%)	8 (17%)	18	52 (29%)
Vision	1	0	1 (4%)	3 (7%)	3 (6%)	5	13 (7%)
Hearing	0	1 (5%)	2 (9%)	0	1 (2%)	2	6 (3%)
Cardiac	1	1 (5%)	1 (4%)	0	5 (10%)	1	9 (5%)
Anxiety/Stress	2	1 (5%)	0	4 (10%)	8 (17%)	16	39 (22%)
Comorbidities***	1	NR	2 (9%)	7 (17%)	14 (29%)	7	37 (20%)

Summary of Investigations by Oil & Gas District March 1, 2011 to March 31, 2016		Summary of Referrals March 1, 2011 to March 31, 2016	
Southwest	36	Referred from DEP to DOH	17
Northeast	37	Referred to DEP from DOH	2
Northcentral	28	DEP/DOH collaborating	18
Southeast	7	State Legislators to DOH	4
Northwest	5	Direct from complainant to DOH	23
Southcentral	3	Referral unknown/other	57

**Notes:** Summary of investigations by district shows a total of 116, however, this number *does not* include 5 investigations which did not identify a county, district or any identifier to determine the location.

Summary of referrals includes complaint investigations (47%) which did not list a referral source or how the complaint was received by the DOH.

#### Related Items

- 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 3/31/2016, Pennsylvania has a total of 8470 active unconventional gas wells. Washington County has the highest number of active wells at 1339. Of the 67 counties, 34 have active unconventional gas drilling activities occurring.

\* Not Reported

\*\* Cumulative percentages for complaint type are based on total number of individuals (181), however, 21 out of 181 individuals (12%) 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.

