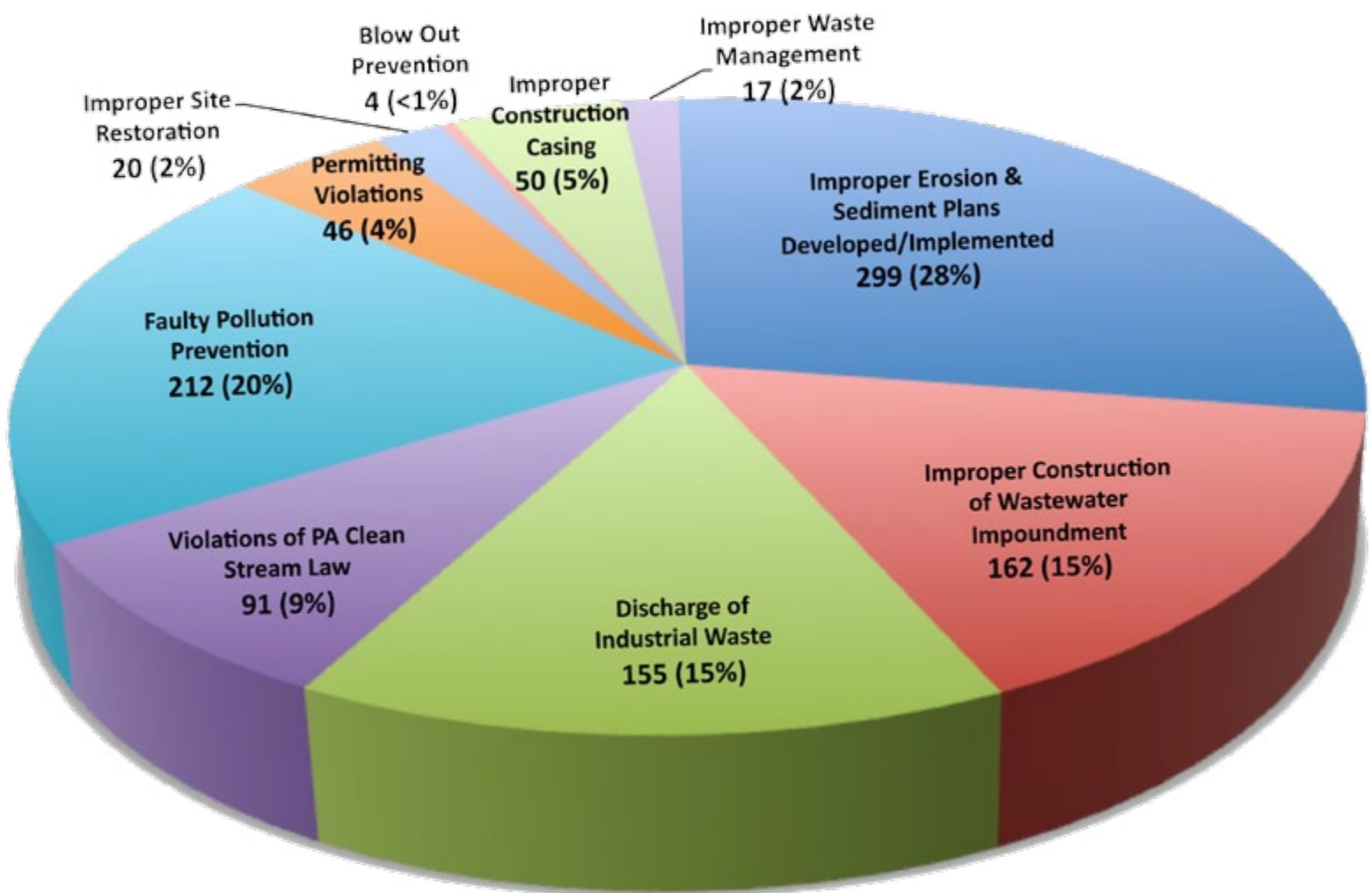


# Marcellus Shale Drillers in Pennsylvania Amass 1614 Violations since 2008

*1056 Identified as Most Likely to Harm the Environment*

The Pennsylvania Land Trust Association identified a total of **1614 violations** accrued by 45 Pennsylvania Marcellus Shale drillers between 1/1/2008 and 8/20/2010, using records obtained by the PA Department of Environmental Protection. Of these, the Association identified 558 where the violations seemed unlikely to directly endanger the environment and/or the safety of communities. This report focuses on the remaining **1056** violations which were judged as having the most potential for direct impact on the environment. These violations do not include violations incurred by drilling wastewater haulers. During a 3-day enforcement blitz in June 2010, **669 traffic citations** and **818 written warnings** were issued to trucks hauling Marcellus Shale drilling wastewater.



*1 Pennsylvania Department of Environmental Protection News Release (6/23/2010)*

For information on methodology, contact Elana Richman at 717.230.8560 or email [erichman@conserveland.org](mailto:erichman@conserveland.org).

## Corporations with the Most Violations in PA (1/1/08-8/20/10)

Company Name	Total	# Wells
Chesapeake Appalachia LLC	149	190
Chief Oil & Gas LLC	110	63
East Resources MGT LLC	106	26
Talisman Energy USA Inc	104	181
Cabot Oil & Gas Corp	93	75
PA Gen Energy CO LLC	46	34
Seneca Resources Corp	42	45
Atlas Resources LLC	40	153
Ultra Resources INC	39	37
Range Resources Appalachia	32	240
Williams Production Appalachia	32	7
JW Operating CO	29	5
EOG Resources Inc	28	69
Anadarko E&P CO LP	25	75
XTO Energy INC	25	19
Citrus Energy Corp	18	2
Energy Corp of Amer	16	11
Southwestern Energy Prod CO	15	16
Phillips Exploration INC	10	9
EQT Production CO	9	45
Stone Energy Corp	9	5
Guardian Exploration LLC	7	1
Exco Resources PA INC	6	12
MDS Energy LTD	6	3
Novus Operating LLC	6	6
Penn Virginia Oil & Gas Corp	6	1

## Number of Average Violations per Well Drilled

Company Name	Avg#
Citrus Energy Corp	9.0
Guardian Exploration LLC	7.0
Penn Virginia Oil & Gas Corp	6.0
JW Operating CO	5.8
Samson Res CO	5.0
Williams Production Appalachia	4.6
East Resources MGT LLC	4.1
Anschutz Exploration CORP	2.0
Antero Resources Apalachian	2.0
Carrizo Oil & Gas Inc	2.0
MDS Energy LTD	2.0
Stone Energy Corp	1.8
Chief Oil & Gas LLC	1.7
Tanglewood Expl LLC	1.7
Energy Corp of AMER	1.5
PA Gen Energy CO LLC	1.4
Burnett Oil CO INC	1.3
XTO Energy INC	1.3
Cabot Oil & Gas CORP	1.2
Phillips Exploration INC	1.1
Ultra Resources INC	1.1
Baker Gas Inc	1.0
Interstate Gas MKT INC	1.0
Novus Operation LLC	1.0
Southwestern Energy Prod CO	0.9
Seneca Resources Corp	0.9

*These numbers are based on the subset of 1056 violations identified as most likely to harm the environment.*

# Total Violations by Marcellus Drilling Companies in PA

## 91 Violations of PA Clean Stream Law

Pennsylvania's Clean Stream Law gives the state the right to protect streams from pollution. The goal of the law is to preserve and improve the purity of the waters of the Commonwealth for public health, animal and aquatic life, recreation, and industrial use. It includes the ability to regulate discharges of sewage and industrial wastes.

## 50 Improper Well-Casing Construction

Well casings and cementing are vital to protecting groundwater supplies from the gas and drilling chemicals that travel through the deep underground drill wells. Marcellus wells are drilled through groundwater supplies, and metal casing and cement are used to form a barrier between ground water and the drilling chemicals, wastewater and natural gas that flow through the well.

## 162 Improper Construction of Waste Water Impoundments

After fracturing a well, about 20 percent of the fluid used returns to the surface where it is stored in tanks or open pits on the well site for later transport to disposal facilities. In addition to the fracturing chemicals, this wastewater also contains heavy salts and minerals picked up during the fracturing process. Violations in this category include improperly lining the pits and the impoundments not being structurally sound.

## 299 Improper Erosion & Sediment Plans Developed/Implemented

Marcellus Shale natural gas well construction involves extensive earth disturbance that can speed erosion, including building roads, drilling pads and installing pipelines. Proper implementation of carefully developed erosion and sediment plans minimize erosion that could cause harm to our streams and rivers. Violations in this category include inadequate erosion and sediment plans and failure to implement an erosion and sediment plan.

## 20 Improper Restoration of Extraction Site

Once a well is no longer producing, the operator must plug the well and restore the site within nine months of plugging the well. Improperly plugged wells can cause health, safety, and environmental problems and non-restored sites leave Pennsylvania's landscape scarred and plant and wildlife habitat damaged.

## 155 Discharge of Industrial Waste

Violations in this category include discharge of industrial waste onto the ground; pollution of Commonwealth waters; and drill cuttings, brine and oil discharged into streams. Of the hydraulic fracturing chemicals the Endocrine Disruption Network was able to analyze, it found that over 94% can cause skin, eye and respiratory harm, 93% can harm the gastrointestinal system and 83% have brain and nervous system effects. Over 40% can affect the kidneys, over 40% can affect the immune system and over 20% are endocrine disruptors. (The Endocrine Disruption Exchange: "Products and Chemicals Used in Fracturing" February 2009).

## 46 Permitting Violations\*

The DEP permit review process allows state regulators to ensure that drilling activities are done in a manner that best protects the environment. Violations in this category include drilling, altering or operating a well without a permit; drilling close to a wetland or body of water without a permit; and failure to comply with the terms and conditions of a permit. (\*These include only those violations the Association has identified as likely having direct impact on the environment. 109 other permitting violations were also identified.)

## 212 Faulty Pollution Prevention Practices

Each step of the drilling process involves opportunities for the toxic chemicals used for gas extraction to pollute land, surface and ground water, and the air. Specific precautions must be taken by drillers to prevent pollution. Violations in this category include exceeding the level of wastewater in the impoundment that is needed to prevent wastewater overflow when it rains and failure to take all necessary measures to prevent spills.

## 17 Improper Waste Management

The drilling process produces many harmful waste products, which must be carefully disposed of to avoid environmental contamination. Violations in this category include improperly burying drill cuttings, which can cause ground water pollution.

## 4 Blowout Prevention

Inadequate blowout prevention led to the June 3rd well blowout in Clearfield County in which 1 million gallons of gas and water polluted with drilling chemicals to shot 75 ft into the air over a 16 hour period. Violations in this category include inadequate or improperly installed blowout preventers, no certified blowout preventer on site, and hazardous well venting.