



Oil and Gas Management



# DEP Webinar

March 27, 2012



Oil and Gas Management

# AGENDA

1. Welcome
2. Review of the Act
3. Questions & Comments

**Note:** WebEx Technical Support is available at 866-229-3239

# Marcellus Charts and Graphs

# Shale Gas Plays, Lower 48 States



Source: Energy Information Administration based on data from various published studies.  
 Updated: March 10, 2010



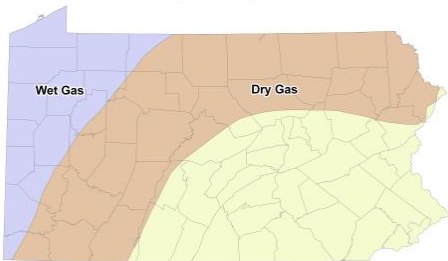


# Black Shale Formations

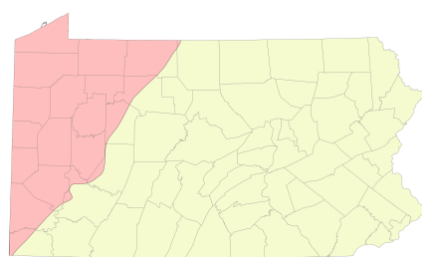
## Generalized Stratigraphic Section for Oil and Gas Region

- **Marcellus**
  - **Utica**
  - **Rhinestreet**
  - **Huron**
- **Upper Devonian**
    - **Dunkirk**
    - **Pipe Creek**
    - **Middlesex**
    - **Geneseo**
    - **Burket**

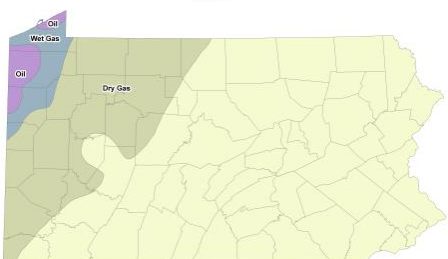
Marcellus



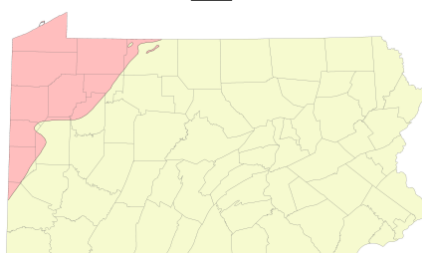
Rhinestreet



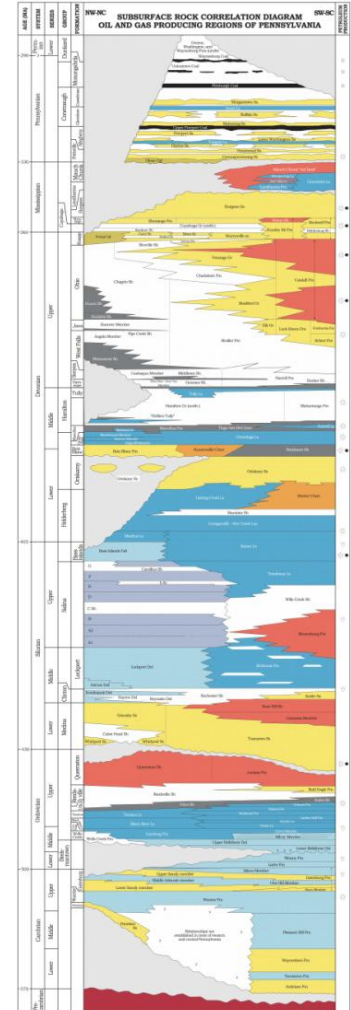
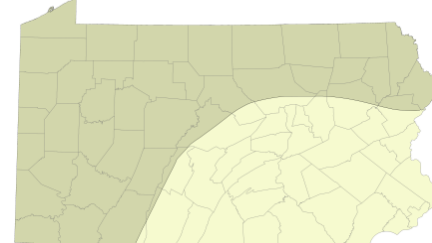
Utica



Huron



Miscellaneous Upper Devonian Formations  
(Dunkirk, Pipe Creek, Middlesex, Geneseo, Burket)

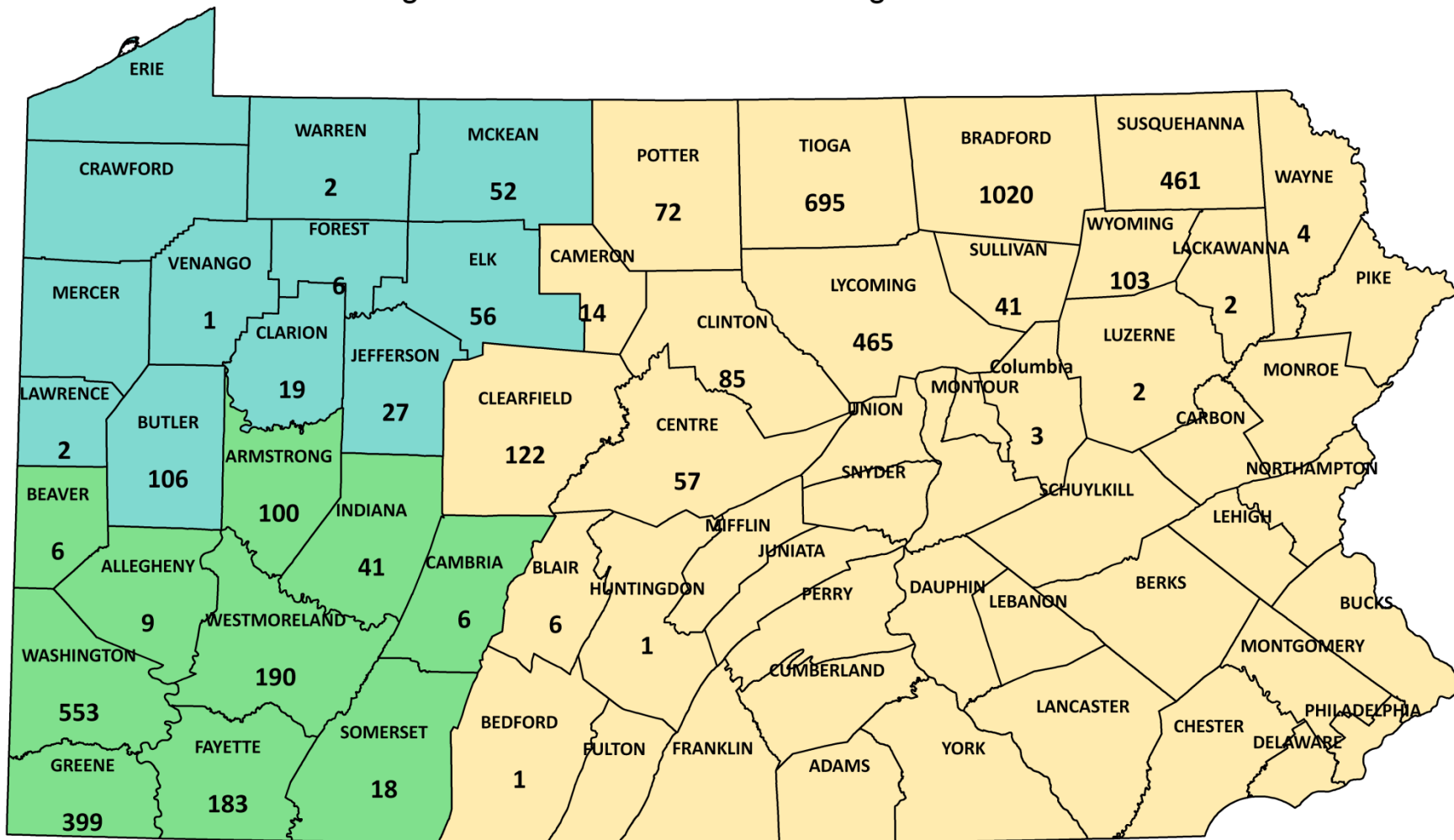


Modified from Higgins, L.A., 1978, Subsurface rock correlation diagram, Allegheny Plateau, Pennsylvania, Pennsylvania Geological Survey, 40 p., Open-File Report OF-79-1.



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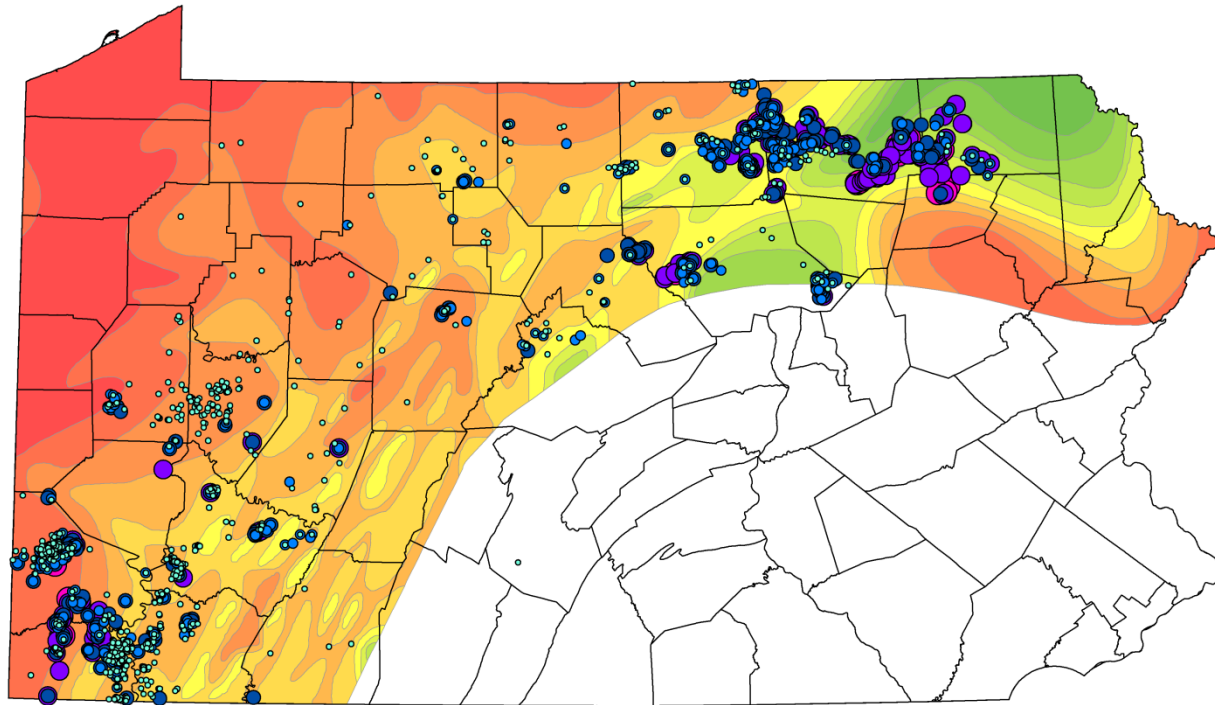
PUC Unconventional Well Numbers  
Including Available Historical Data through December 2011



Total: 4930



# Marcellus Shale Production Data (Base Map Depicts Thickness of Organic Rich Material in Target Formation)



## Legend

Production Data (7/11 to 12/11)

Mcfpd (n = 2112 wells)

- >0 - 1000 (38.2%)
- >1000 - 2000 (23.3%)
- >2000 - 4000 (23.2%)
- >4000 - 8000 (14.3%)
- >8000 - 15,000 (1.0%)

Marcellus Shale Net Organic Rich

Thickness (Feet)

- >250
- 225-250
- 200-225
- 175-200
- 150-175
- 125-150
- 100-125
- 75-100
- 50-75
- 25-50
- 0-25

# Statutory Overview



# Laws and Regulations

- Oil and Gas Act
  - 25 Pa. Code Chapter 78 (relating to Oil and Gas Wells)
- Oil and Gas Conservation Law
- Coal and Gas Resource Coordination Act
- Clean Streams Law
  - 25 Pa. Code Chapter 91 (relating to General Provisions)
  - 25 Pa. Code Chapter 93 (relating to Water Quality Standards)
  - 25 Pa. Code Chapter 95 (relating to Wastewater Treatment Requirements)
  - 25 Pa. Code Chapter 102 (relating to Erosion and Sediment Control)

# Laws and Regulations (continued)

- Dam Safety and Encroachments Act
  - 25 Pa. Code Chapter 105 (relating to Dam Safety and Waterway Management)
- Waterway Resources Planning Act
  - 25 Pa. Code 110 (relating to Water Resources Planning)
- Solid Waste Management Act
- Storage Tank and Spill Prevention Act
- Air Pollution Control Act
- Environmental Laboratory Accreditation Act

# Overview of Recent Regulatory Changes

- Well Permit Fee Increase
- Act 15 of 2010
- Chapter 78 Well Construction Standards
- Chapter 95 Regulation Revisions
- DEP's Call to Operators

# Well Permit Fee Increase

- Marcellus well permit fees were increased from \$100 to an average of **\$3,220**
  - The fee increases as the length of the well increases
  - The increased well permit fee allowed DEP to substantially increase the oil and gas program staff
  - DEP Oil and Gas staff has increased from approximately 90 in 2008 to 202 in 2012

# Act 15 of 2010

- Repealed the 5 year confidentiality of production reports
- Required production reporting from Marcellus operators every 6 months instead of annually
- Mandates that DEP post all reports online

# Chapter 78 Well Construction Standards

- Goal – further prevent gas migration and protect water supplies
- Comprehensive update to well construction, casing and cementing standards
- Expanded well completion reporting requirements, including disclosure of hydraulic fracturing chemicals

# Chapter 95 Regulation Revisions

- Limits the discharge of TDS from new or expanded facilities that take oil and gas wastewater to drinking water standards
- Does not allow for new discharges that exceed 250 mg/l for chlorides and also removes radium
- Increases the use of recycled water, promotes the development of alternative forms of disposal

# DEP's Call to Operators

- Called on Marcellus operators to STOP the delivery of wastewater to 15 water treatment facilities grandfathered in under Chapter 95 Total Dissolved Solids rulemaking (Aug. 2010)
- Public request was made April 19, 2011 and compliance achieved by May 19, 2011



# Genesis of Act 13

## Marcellus Shale Advisory Commission

- Executive Order 2011-01 Created the Marcellus Shale Advisory Commission
- March 8 – July 22, 2011
- Goal: outline a comprehensive plan with recommendations on the safe and responsible development of unconventional natural gas resources within Pennsylvania

# A Comprehensive, Strategic Plan

- 96 Recommendations outlining a comprehensive, strategic plan for the responsible development of natural gas drilling in the Commonwealth.
- Every environmental protection recommendation that needed to be accomplished through legislation was included in the Act.
- Unanimously approved by the commission on Friday, July 15, 2011.
- Outlines first major update of Oil and Gas Act in nearly three decades.

# A Comprehensive, Strategic Plan

- Culmination of four months of work by commission.
  - 21 public meetings.
  - 60 expert presentations.
  - 100 citizens offered public comments.
  - 650 emails and letters from public.
  - On-site visit to well sites and local businesses in Lycoming and Clinton counties.

# ACT 13 of 2012 - Overview

- Consolidates the Oil and Gas Act (Act 223 of 1984) into 58 Pa.C.S. (Oil and Gas)
- Creates six chapters within 58 Pa.C.S.
  - Ch 23 – Unconventional Gas Well Fee
  - Ch 25 – Oil and Gas Lease Fund
  - Ch 27 – Natural Gas Energy Development Program
  - Ch 32 – Development
  - Ch 33 – Local Ordinances Relating to Oil and Gas Operation
  - Ch 35 – Responsibility for Fee

# Chapter 23 – Unconventional Gas Well Fee

## Annual Agency Distribution

- \$6 m to DEP
- \$1 m to Public Utility Commission
- \$1 m to Fish & Boat Commission
- \$1 m for Rail Freight Assistance
- \$750 k to PEMA
- \$750 k to Office of State Fire Commissioner
- \$20 m natural gas vehicle incentives (*3 year total*)
- \$7.5 m to Conservation Districts (*budget offset*)

# Chapter 23 – Unconventional Gas Well Fee

## Direct Local Share

- 60% distributed as follows:
  - \$5 million annually to affordable housing
  - 36% of balance to counties with wells
  - 37% of balance to municipalities with wells
  - 27% of balance to all municipalities in counties with wells

# Chapter 23 – Unconventional Gas Well Fee

## Indirect Local Share

- 40% to Marcellus Legacy Fund
- Combined with transfers from Oil & Gas Lease Fund and distributed as follows:
  - 25% to local bridge improvement fund
  - 25% split between PENNVEST and H2O
  - 20% to Commonwealth Financing Authority
  - 15% counties for parks, recreation and open space
  - 10% to Environmental Stewardship Fund
  - 5% for refinery assistance and ethane processing for three years; thereafter to HSCA

# Chapter 25 – Oil & Gas Lease Fund

- Establishes priority for use of funds for Department of Conservation and Natural Resources (*first \$50 million reserved for DCNR under state Fiscal Code*)
- Authorizes following transfers:
  - 2013: \$20 million to Environmental Stewardship Fund (ESF)
  - 2014 and thereafter: \$35 million to ESF
  - 2015: \$5 million to Hazardous Sites Cleanup Fund (HSCA)
  - 2015 and thereafter: \$15 million to HSCA



# Chapter 27 – Natural Gas Energy Development Program

- Creates 3-year, \$20 million program to incentive vehicle fleet conversion to use CNG or LNG
- Administered by Department of Environmental Protection
- Reserved for vehicles of 14,000 lbs or greater
- At least 50% of funds to be available for mass transit and other local transportation organizations

# Chapter 32 – Development

- Codifies and enhances Oil and Gas Act
- Distinguishes standards between conventional and unconventional oil and gas wells
- Provides enhanced permitting, resources protection and enforcement standards

# Permitting

- Permit notice extended from 1,000 ft to **3,000 ft**
- Notice provided to host municipality and all adjacent municipalities
- Orphan well adoption permit
- Increased well permit denial authority
  - Evaluate parent and subsidiary compliance history
  - Failure to pay impact fee

# Bonding

- Current \$2,500/well or \$25,000 blanket bond
- New: two bond schedules:
  - < 6,000 feet
  - > 6,000 feet
- Based on number of operating wells
- Maximum blanket bond increase to \$850,000

# Resource Protection

- Well setbacks extended:
  - From buildings and water wells: 200 feet to **500 feet**
  - From streams and water bodies: 100 feet to **300 feet**
  - From public water supplies: **1,000 feet**
- Expands rebuttable presumption distance from 1,000 feet to **2,500 feet** and duration from six months to **12 months** after well completion

# Resource Protection

- Enhanced floodplain protection
- Establishes standards for containment on well sites
- Requires annual inventory of air emissions

# Inspection and Transparency

- Requires on-site inspection after erosion and sediment controls in place but prior to drilling
- Enhances hydraulic fracturing chemical disclosure, including use of [FracFocus.org](http://FracFocus.org)
- Requires 24 hour notice to DEP prior to commencing critical drilling stages

# Enhanced Enforcement

- Increases civil penalties from \$25,000 to **\$75,000**
- Permits DEP to assess civil penalties (currently Environmental Hearing Board)
- Requires DEP to post site inspections, violations and remedial actions taken online





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For more information, including frequently asked questions, visit:

[www.depweb.state.pa.us](http://www.depweb.state.pa.us)

click on the  graphic.



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# Upcoming Act 13 Webinars

Tuesday, April 3 – Permitting and Notifications

Tuesday, April 10 – Environmental Protections & Enhancements

Tuesday, April 17 – Inspection & Enforcement

All sessions 1 p.m.-2 p.m.

Registration information is available on DEP's Act 13 website



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**Additional Questions?**  
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