



COMPARATIVE ANALYSIS & COMMENTARY ON ACT 13 OF 2012

MARCH 2012

INTRODUCTION

On February 14, 2012, Governor Corbett signed what is now known as **Act 13 of 2012** into law. Act 13 represents the conclusion of the first comprehensive legislation aimed at addressing shale gas development in Pennsylvania. It also presents a tangible pause, however brief, in the overreaching public policy debate – one that has stretched over two administrations and multiple legislative sessions.

Combined, Act 13 and the July 2011 Report of the Governor’s Marcellus Shale Advisory Commission (“Commission”) present a very broad slate of regulatory and agency policy changes. However, a number of significant issues were not addressed by either the Commission Report or Act 13 – the need for identifying solutions and actions for these remaining issues is equally critical.

This comparative analysis contains three parts:

PART ONE: How Act 13 compares to the recommendations developed by the Pennsylvania Environmental Council (PEC), as well as the recommendations of the Commission Report.

PART TWO: Implementation priorities for DEP as a result of Act 13.

PART THREE: Commission Report recommendations that still await action by the Administration and/or General Assembly.

PART ONE: ACT 13 COMPARATIVE ANALYSIS

GUIDE TO REFERENCE DOCUMENTS USED IN THIS ANALYSIS:

- [ACT 13](#) – signed into law by Governor Corbett (February 14, 2012)
- [REPORT OF THE MARCELLUS SHALE ADVISORY COMMISSION](#) (July 22, 2011)
- [PROPOSED LEGISLATIVE AMENDMENTS TO SB1100 AND HB1950](#) (November 2011)
- [OIL & GAS ACT LEGISLATIVE PROPOSAL](#) (May 2011)
- [PEC MARCELLUS SHALE POLICY REPORT](#) (July 2010)

ADDITIONAL NOTES:

- The PEC Recommendations described in the analysis, unless otherwise noted, are derived from the following documents (linked in the Guide, above):
 - PROPOSED LEGISLATIVE AMENDMENTS TO SB1100 AND HB1950
 - OIL & GAS ACT LEGISLATIVE PROPOSAL
 - PEC MARCELLUS SHALE POLICY REPORT
- The OIL & GAS ACT LEGISLATIVE PROPOSAL and PROPOSED LEGISLATIVE AMENDMENTS TO SB1100 AND HB1950 were jointly developed by PEC and the Chesapeake Bay Foundation (Pennsylvania Office).
- PEC was one of four conservation organization members on the Commission; the other members include: Chesapeake Bay Foundation (Pennsylvania Office), The Nature Conservancy (Pennsylvania Chapter), and the Western Pennsylvania Conservancy.
- All of the recommendations contained in the “Oil & Gas Act” Legislative Proposal were submitted to the Commission for consideration during the Commission’s deliberative phase.
- The following comparative analysis is broken down into subject area, as was done in PEC’s prior comparative analysis of the Commission Report.

REFERENCE KEY

BMPs = Best Management Practices
DCNR = Pennsylvania Department of Conservation & Natural Resources
DEP = Pennsylvania Department of Environmental Protection
EHB = Pennsylvania Environmental Hearing Board
EQB = Pennsylvania Environmental Quality Board
PFBC = Pennsylvania Fish & Boat Commission
PGC = Pennsylvania Game Commission

RECOMMENDATIONS CONCERNING DATA COLLECTION, SITE ANALYSIS, AND PERMITTING

PEC Recommendation

To better protect sensitive public and natural resources, amend Section 205(c) of the Act as follows:

- Add the following as listed public resources:
 - Sources used for public drinking water supplies
 - Whether the proposed Well Site location is within a Floodplain
 - Wild and Wilderness Trout Streams
 - High Quality or Exceptional Value Waters
 - Exceptional Value Wetlands
- Expressly allow DEP to condition or deny a permit application based upon potential impacts to the public resources listed in Section 205(c).
- Require DEP to consult with County Conservation Districts regarding potential impacts to any resources listed in Section 205(c).
- Require DEP to consult with PFBC when there are potential impacts to Wild and Wilderness Trout Streams, High Quality or Exceptional Value Waters, or Exceptional Value Wetlands.

Commission Recommendation 9.2.3

Authorize the EQB to develop, by regulation, criteria for conditioning a well permit based on its impact to public resources.

Act 13 of 2012

- Adds “sources used for public drinking water supplies” to Section 205(c) [§3215].
- Authorizes the EQB to develop, by regulation, criteria for conditioning a well permit based on its potential impact to public resources. [§3215].
- Act 13 contains a separate section with new protections for floodplains (described further, below).

Comparative Analysis

- Act 13 does not include express language on DEP’s ability to deny a permit, although authorizing the EQB to establish regulatory criteria appears to confirm that ability.
- Act 13 contains no additional protections for Wild and Wilderness Trout Streams, High Quality or Exceptional Value Waters, or Exceptions Value Wetlands; nor does it require consultation with County Conservation Districts or PFBC.

PEC Recommendation

Pre-drilling notification (including copy of plat) should be extended from 1,000 feet to 2,500 feet of the proposed well site, and include all landowners and water purveyors. In addition, the notification shall be made to the host municipality or adjacent municipalities/counties within 2,500 feet of the well site.

Commission Recommendation 9.2.5

Similar to the PEC recommendation, although it does not include providing notice to all counties within 2,500 of the well site.

Note: **Commission Recommendation 9.1.17** references providing notice of permit applications to counties.

Act 13 of 2012

Expands pre-drilling notice requirement to 3,000 feet for unconventional wells, although it includes only adjacent municipalities (not counties). [§3211]

Comparative Analysis

Act 13 comes close to the PEC and Commission recommendations, although we maintain that any county within the 3,000 foot radius should also receive the statutorily required notice.

PEC Recommendation

PEC raised the issue of orphaned/abandoned wells as potential pollution migration hazards, as well as the benefit of providing incentives to operators to plug or remediate such wells on/near proposed drilling sites, in its 2010 Policy Report. PEC also recommended enhanced site analysis (including the identification of site hazards like abandoned/orphaned wells) in its 2011 Legislative Proposal to prevent pollution incidents.

Commission Recommendation 9.2.8

Authorize DEP to develop a well operation permit so that entities can “adopt” orphaned or abandoned wells.

Act 13 of 2012

The Act does not speak directly to the issue of enhancing pre-permit site analysis to better identify potential hazards like abandoned wells, although it does establish that permits shall be issued for operation or plugging of an abandoned well. [§3211]

Comparative Analysis

PEC maintains that the permit review process should be expanded to include better identification and remediation of on-site hazards like abandoned/orphaned wells prior to operation, including “Good Samaritan” protection for operators who proactively plug an abandoned well located in proximity to the site.

PEC Recommendation

In both its 2010 Policy Report and 2011 Legislative Proposal, PEC recommended regional planning and expansion of the permit application and review process to require greater site information gathering and analysis – including identification of areas of ecological or conservation significance, completion of a site assessment pursuant to published checklist, and the requirement of alternatives analyses where appropriate.

Commission Recommendation 9.2.26

Using publicly available data (e.g., PA Natural Diversity Inventory, County Natural Heritage/Natural Area Inventories, and other relevant sources), DEP, DCNR, PGC and PFBC will jointly identify and make accessible for public review information (but not including location information on species) on areas of high ecological value in Pennsylvania (e.g., high conservation value forests, concentrations of biological diversity, sensitive aquatic communities, etc.). When submitting a permit application for an unconventional shale gas well that would be located in such an area, the applicant will be required to provide DEP with a description of its efforts to avoid, minimize or mitigate for impacts to the area (e.g., co-location and centralization of infrastructure, use of specialized BMPs, well pad spacing and density adjustments, working with other companies holding leases in this area to reduce cumulative impacts, etc.). DEP could establish specific conditions on well permits proposed in such areas.

Commission Recommendation 9.2.29

DEP should develop an environmental assessment checklist as part of the permit application process to locate and construct a drilling site. The checklist should be used to identify all the features to which setbacks are applicable; identify all natural features that DEP is authorized to consider; and to identify those additional Areas of High Ecological Value.

Act 13 of 2012

The Act does not address this issue, or provide DEP with expanded permit review authority consistent with PEC's or the Commission's recommendations. However, the Act does direct the Energy Executive to work with resource management agencies and the PUC to deliver a report to the General Assembly within one year on the issue of pipeline placement. [Section 8]

Comparative Analysis

PEC supports the direction of the Commission recommendations, although we maintain that the more complete site analysis component of our 2011 Legislative Proposal should be conducted in addition to the checklist assessment. This should be a priority for subsequent regulatory or policy implementation.

PEC Recommendation

PEC joined other conservation members of the Commission in submitting the following recommendation.

Commission Recommendation 9.2.28

Strengthen and improve effectiveness of the permit review process in protecting rare, threatened and endangered species. State agencies should consider, but not be limited to, the following options: increasing staff capacity and program resources, enhancing quality and presentation of data on wildlife and critical habitats; identifying appropriate opportunities to improve and manage access to such data, upgrading computer systems, providing additional technical and planning assistance, increasing acquisition of current field data, and other options as identified.

Act 13 of 2012

The Act does not address this issue.

Comparative Analysis

PEC supports this Commission recommendation which, among other things, would enhance the Pennsylvania Natural Heritage Program. This should be a priority of Administrative budgeting and policy moving forward with implementation of Act 13.

RECOMMENDATIONS CONCERNING SURFACE LAND AND WATER RESOURCE PROTECTION

PEC Recommendation

To better address stormwater impacts associated with Well Sites and Ancillary Facilities, amend Section 206 as follows:

- In Section 206(b): Require that, upon temporary or permanent cessation of all earth moving activities at a Well Site, stabilization must occur in a manner consistent with Title 25, Chapter 105 of the Pennsylvania Code.
- In Section 206(c): Require the completion of a Post-Construction Stormwater Management Plan within nine months of completion of a Well.
- Expand Section 206(d) to include reclamation or remediation of a Well Site.

Commission Recommendation 9.1.18

DEP should ensure that natural gas construction activities are required to meet the same standards as general construction activities. Modifications to current construction standards as they are applied to unconventional natural gas drilling activities may be necessary.

Commission Recommendation 9.2.20

The Oil and Gas Act's well site remediation provisions should be amended to authorize the Department to extend the nine-month well-site restoration requirement when the Department determines that an extension would ultimately result in less surface disturbance, increased water reuse, or more efficient development of the resource. Such an extension would be for a defined period of time and could include interim restoration/stabilization measures, as specified by DEP.

Act 13 of 2012

The Act allows extension of the 9 month restoration requirement (for a period not to exceed two years) based upon demonstration of net environmental benefit, provided the operator submits and implements a restoration plan that includes removal of any pits as well as establishing post-construction stormwater management BMPs. [§3216]

ANALYSIS

PEC supports the provision in Act 13.

PEC Recommendation

Well operators should be required to track and report on the transporting, processing and treatment or disposal of wastewater.

Commission Recommendation 9.2.7

Well operators should be required to track and report on the transporting, processing and treatment or disposal of wastewater from high-volume wells (i.e. 80,000 gallons or more of water used).

Act 13 of 2012

Requires tracking and record keeping on the transportation and disposal of wastewater from any unconventional well, although this information only needs to be submitted to DEP upon request of the Department. [§3218.3]

Comparative Analysis

PEC supports the provision in Act 13, although we believe there should be mandatory reporting to DEP. The DEP Secretary should ask operators to voluntarily comply with automatic reporting since they are already collecting the information.

PEC Recommendation

To better protect surface structures and private water supplies, amend Section 205(a) to:

- Increase the Well Site setback standard to 500 feet for Unconventional Wells.
- Require implementation of Best Management Practices as a condition of any waiver to the setback standard.

Commission Recommendation 9.2.11

Increase the minimum setback distance from a private water well from 200 feet to 500 feet and establish a minimum setback distance from a public water supply (water well, surface water intake or reservoir) to 1,000 feet unless waived in writing by the owner or public water supply operator.

Act 13 of 2012

Act 13 follows the Commission Recommendation in expanding the setback from structures and private water supplies to 500 feet, and public water supplies to 1,000 feet. Both setbacks are measured from the physical well bore. The Act, however, shifts the variance standard toward requiring a waiver when necessary for the operator to access and recover the gas resource, although submission of a BMP plan is still required. [§3215]

Comparative Analysis

PEC maintains that the determination standard for a variance, if granted at all by DEP, should remain weighted toward protection of human or natural features. Furthermore, we maintain that any setback standard should be measured from edge of disturbance (“Well Site”) and not the physical well bore.

PEC Recommendations

- If a Well Site is located within a Floodplain, prohibit the use of impoundment pits for recycled, produced or flowback waters resulting from, or for use with, an Unconventional Well.
- Provide DEP with additional authority to establish further protective measures for the storage of hazardous chemicals or materials on the Well Site that is within a Floodplain or 500 feet of a Watercourse, Body of Water, or Wetland.
- In addition, PEC proposed listing floodplains as an identified public resource under Section 205(c) of the Act.

Commission Recommendation 9.2.12

Provide DEP with additional authority to establish further protective measures for the storage of hazardous chemicals or materials on a well site located within a floodplain.

Commission Recommendation 9.2.13

Impose additional conditions for locating well sites in floodplains, including prohibiting where appropriate.

Act 13 of 2012

The Act contains new restrictions on the siting of well sites within floodplains, prohibiting the placement of pits or other storage of hazardous or waste materials without a variance subject to implementation of BMPs. The Act also contains a new provision establishing protection standards generally for hazardous chemicals or materials, as well as new containment system standards for prevention of off-site spills. [§3215, §3218.2]

Comparative Analysis

PEC supports the new provisions in Act 13, although we maintain that there should be an absolute prohibition of impoundment pits or hazardous/waste storage in floodplains.

PEC Recommendation

In both its 2010 Policy Report and 2011 Legislative Proposal, PEC stressed the need for adaptive management and incentives for co-benefits in management of the shale gas industry.

Commission Recommendation 9.2.18

Over the next six months DEP should evaluate all of its regulatory programs to determine if obstacles exist or changes could be made to facilitate the increase in proper recycling of flow back and produced water from gas wells and to facilitate and encourage the increased use of non-fresh water for hydraulic fracturing.

Commission Recommendation 9.2.22

The Commonwealth should encourage the use of non-freshwater sources where technically feasible and environmentally beneficial. For example, legislation that would provide operators with immunity from environmental liability for the use of acid mine drainage water from abandoned mine pools would encourage operators to reduce their use of freshwater sources for water utilization as well as reduce the amount of acid mine water draining into local streams.

Act 13 of 2012

The Act contains a new section requiring development and implementation of a Water Management Plan (discussed in more detail, immediately below) that describes operators' plans

for reuse/recycling of wastewater. [§3211]

Comparative Analysis

PEC supports the new requirement in Act 13, as well as the Commission recommendations.

PEC Recommendation

To ensure sufficient statutory authority, add a provision to Section 201 that DEP shall have the authority pursuant to the Clean Streams Law (P.L. 1987, No. 394) to regulate water withdrawal for use with any Unconventional Well and to protect the ecological health of water resources.

Commission Recommendation 9.2.21

The Oil & Gas Act should be amended to clarify that DEP has authority pursuant to the Clean Streams Law to require a Water Management Plan (Plan) as part of the Section 201 permitting process to protect the ecological health of water resources. Approval of a Plan shall authorize the removal and use of such water away from the riparian lands, provided the use is conducted in accordance with the Plan. An operator must still obtain legal permission from the riparian rights owner for access. Such program should not duplicate the authority of any interstate river basin Commissions.

Act 13 of 2012

The Act contains a new section requiring the completion and implementation of a Water Management Plan, with criteria to protect water quality and quantity. [§3211]

Comparative Analysis

PEC supports the new provision in Act 13.

PEC Recommendation

Amend Section 205(b) as follows:

- Remove reliance on USGS Topographic Maps for water resource identification. Instead, apply setback standards to any Watercourse, Body of Water, or Wetland (new Act definitions).
- Increase the setback standard to 300 feet for Unconventional Wells.
- For designated High Quality or Exceptional Value Waters, increase the setback standard to 500 feet.
- Require implementation of Best Management Practices as a condition of any waiver to the setback standards.

Commission Recommendation 9.2.24

The setback standard for an unconventional well shall be increased to 300 feet from the wellbore to a stream or water body as provided in section 205(b) of the Oil and Gas Act. A 100 feet setback from the stream or water body to the edge of disturbance shall also be implemented. DEP's current waiver authority would be retained for both setbacks. For High Quality and Exceptional Value streams, however, additional setbacks or BMPs may be required by DEP. Additional discussion of the appropriate definition of water body for the purpose of these setbacks is necessary.

Act 13 of 2012

- The Act increases the setback to 300 feet from the physical well bore, or 100 feet from

the edge of disturbance, whichever is greater. However, while retaining reliance on the USGS map for stream identification, the new provision changes the standard to a “solid blue line stream” – a more limited standard than the original law. [§3215]

- The Act increases the setback for wetlands to 300 feet, or 100 feet from the edge of disturbance from the boundary of the wetland. [§3215]
- The Act also appears to have conflicting language on when DEP may, or may be required to, grant a variance to these setbacks. [§3215]

Comparative Analysis

While PEC is encouraged with the increased setback distance from edge of disturbance, we disagree with continued reliance on the USGS map and in particular the more narrow definition of “blue line stream”. This is a less protective standard that runs counter to the recommendation of the Commission.

PEC Recommendation

PEC joined with other conservation members of the Commission in submitting the concept of the following recommendation to the Committee for consideration.

Commission Recommendation 9.2.30

Invasive Plant Species introductions should be avoided by utilizing techniques such as:

- thorough cleaning of construction equipment;
- minimization of soil disturbances;
- timely re-vegetation of sites using native, non-invasive species;
- annual surveillance to detect and control early infestations.

Act 13 of 2012

The Act does not address this issue.

Comparative Analysis

PEC remains supportive of the Commission recommendation.

RECOMMENDATIONS CONCERNING ADAPTIVE MANAGEMENT; BEST MANAGEMENT PRACTICES

PEC Recommendation

In its 2011 Legislative Proposal, PEC proposed adding a definition for “Best Management Practices” to the Oil & Gas Act. Best Management Practices would be defined as standards established by DEP through technical guidance. These standards would identify industry practices and actions that can be utilized to better protect natural resources, communities, and human health. The technical guidance would be reviewed and updated (as appropriate) at least every three years. Implementation of Best Management Practices would be required in any instance where DEP (through existing authority) grants a waiver to a setback or other protective standard in the Act, or where a proposed operation would have an impact on public resources.

Commission Recommendation 9.2.23

DEP and DCNR – along with industry – should continually review and examine the range of best management practices utilized during construction and operation of the well site, and consider incorporating these types of practices into regulatory and operator guidance. The practices, some of which DCNR already requires for its leases, could include:

- minimizing the size and disturbance of well sites and related facilities;
- stockpiling of topsoil; utilizing rocks, stumps and slash for wildlife enhancement;
- use of closed-loop drilling systems;
- increased use of flow-back water;
- use of surface water withdrawals rather than groundwater withdrawals;
- utilization of “tank in tank” systems with secondary containment for storage flow-back water;
- use of high-density polyethylene pipe for flow-back water transportation;
- noise abatement strategies for gas processing and compressor stations;
- minimize, avoid or buffer against conflicts with resources such as critical waterways, public parks, endangered or threatened plants, species and habitats, historic and cultural areas;
- avoid or minimize forest loss and fragmentation;
- cement all casing strings to surface to provide multiple protective barriers for aquifer;
- pressure-test each casing to ensure integrity of casing design and cement;
- perform a combination of pressure tests and electric logging to verify the mechanical integrity of the casing and cement over the life of the well;
- enhanced safety procedures for wet gas testing, flowback and production;
- ensure the integrity of well control systems at all times, with a particular focus during completion operations (such as “isolation tools” or “tree savers”);
- avoidance of construction activities during adverse weather conditions which may impact public safety;
- use of marking systems to indicate presence of below-ground gas, water, electric and flow-back pipelines;
- minimize conflicts with recreational activities during holidays and high visitor-use periods.

Act 13 of 2012

While the Act references the concept best management practices in several instances, there is no definition or reference point for how those practices will be defined and followed.

Comparative Analysis

PEC maintains that protection measures utilized in permit review and approval should be transparent, appropriately defined, and vetted through an open process.

PEC Recommendations

In both its 2010 Policy Report and 2011 Legislative Proposal, PEC identified the principles of adaptive management, stakeholder input, and informed decision making in the management of the shale gas industry

Commission Recommendation 9.2.25

DEP should continue to participate in non-profit, multi-stakeholder organizations such as the State Review of Oil and Natural Gas Environmental Recommendations, Inc. (STRONGER), that provide periodic peer review of the Commonwealth’s regulatory structure and enforcement efforts.

Commission Recommendation 9.2.31

Recognize and utilize the expertise of DCNR to advise other Commonwealth agencies which host natural gas development on their land.

Commission Recommendation 9.2.32

DCNR should monitor and document effects, both positive and negative, of natural gas development on plants and forests, wildlife, habitat, water, soil and recreational resources.

Commission Recommendation 9.2.33

The Commonwealth and its agencies should work together to promote, encourage and establish regular communications and information sharing among local communities, operators, environmental and conservation groups and other stakeholders.

Commission 9.2.34

DCNR should establish a Natural Gas Advisory Committee to enhance communications among stakeholders regarding natural gas development on state forest and park land.

Act 13 of 2012

The Act does not speak to these issues, which are more focused on agency policy and practice.

Comparative Analysis

PEC maintains its support for these Commission recommendations, which can be implemented by the agencies without new statutory authority.

PEC Recommendations

To better address concerns relating to Well Site impoundment pits, amend Section 208 of the Act as follows:

- Require DEP to perform a sufficiency analysis on proposed containment systems for the storage of recycled, produced or flowback waters on the Well Site.
- For any surface impoundments used to temporarily store recycled, flowback or produced water, require the use of a dual liner system with leak detection monitoring systems. Require DEP to inspect any such impoundments on, at a minimum, a monthly basis.

Commission Recommendation 9.2.27

Conduct an engineering analysis of spill containment systems at unconventional shale gas well sites, including wells, well pads, storage tanks/impoundments and other equipment/facilities. This analysis will evaluate the design and structure of containment systems and determine adequacy and effectiveness in relation to the volumes and types of materials present at these sites at different stages of the production process. The analysis also will review past performance of containment systems used at well sites. Recommendations for new or improved containment practices, structures, and procedures – including, but not limited to, liners and berms on well sites – will be developed as needed.

Act 13 of 2012

The Act contains a new Section detailing standards and criteria for containment planning and practices. [[§3218.2](#)]

Comparative Analysis

DEP's rulemaking for this new section should be adaptive and reflect both best practices in the industry as well as suitability for different site characteristics.

RECOMMENDATIONS CONCERNING REGIONAL AND CUMULATIVE IMPACTS

PEC Recommendation

PEC joined with the conservation members of the Commission in submitting the concept of the following recommendations to the Committee for consideration. The issue of consolidating operational infrastructure to reduce cumulative impacts was raised both in PEC's 2010 Policy Report and 2011 Legislative Proposal.

Commission Recommendation 9.1.15

State law should be amended to authorize PENNDOT to negotiate leases which permit the location of energy and utility infrastructure within PENNDOT's right-of-way.

Commission Recommendation 9.2.35

Identify legislative/regulatory changes needed to:

- Effect the sharing of pipeline capacity and reduce surface disturbance and associated environmental impacts;
- Encourage the use of existing pipeline infrastructure and co-location with other rights-of-way;
- Achieve coordination and consistency of infrastructure planning and siting decisions by State, county and local governments;
- Provide sufficient authority and resources for appropriate government agencies to ensure that ecological and natural resource data are used in the review and siting of propose pipelines, in order to avoid or minimize impacts to these resources.

Act 13 of 2012

The Act does not address these issues directly, although it directs the Energy Executive to issue a report within one year on pipeline placement for natural gas gathering lines. [Section 8]

Comparative Analysis

PEC supports the Commission recommendations and encourages quick action by the Administration to identify effective legislative and/or regulatory changes that will serve to reduce surface and resource impacts through consolidation and reduction of operational infrastructure.

RECOMMENDATIONS CONCERNING INSPECTION, COMPLIANCE, AND ENFORCEMENT

PEC Recommendation

PEC joined with other conservation members of the Commission in submitting the concept of the following recommendation to the Committee for consideration.

Commission Recommendation 9.1.17

Develop and provide planning tools and educational opportunities relating to unconventional natural gas development to counties; require proper notice of permit applications with an opportunity to comment (similar to notice for host and adjoining municipalities); and, under DEP guidance and consistent with applicable permit conditions, allow for County Conservation Districts to engage in inspections of erosion and sedimentation controls at unconventional well sites, if they choose to do so.

Act 13 of 2012

The Act does not address this issue, or provide for an enhanced role by County Conservation Districts.

Comparative Analysis

PEC supports DEP partnership with County Conservation Districts for inspection and monitoring of unconventional gas wells, but believes DEP should retain primary responsibility for consistency purposes.

PEC Recommendation

PEC has supported higher civil and criminal penalties in the Oil & Gas Act for violations.

Commission Recommendation 9.2.1

Civil penalties for violations of the Oil and Gas Act should be increased from \$25,000 to \$50,000 and the daily penalty should be increased from \$1,000/day to \$2,000/day. Current criminal penalties for summary and misdemeanor offenses should be reviewed to ensure they are consistent with penalties of comparable environmental statutes.

Commission Recommendation 9.2.2

Consistent with other environmental statutes, DEP should be able to assess civil penalties, rather than the Environmental Hearing Board.

Act 13 of 2012

- Increases civil penalties to \$75,000 plus \$5,000/day. [§3256]
- Increases penalties for criminal violations. [§3256]
- Authorizes DEP to assess civil penalties. [§3256]

Comparative Analysis

PEC supports the provisions of Act 13.

PEC Recommendation

PEC supports the following recommendation when submitted to the Commission by DEP, and believes it is consistent with the inspection and reporting recommendations made by PEC (see Commission Recommendations 9.2.15 and 9.2.16, below).

Commission Recommendation 9.2.4

Amend the Oil and Gas Act to authorize DEP to suspend, revoke or deny permits in a more timely manner than current law allows when an operator has failed to comply with the Oil and Gas or other applicable environmental statutes and is not correcting the violation to the satisfaction of the department.

Act 13 of 2012

On this particular issue, the Act only expands DEP’s ability to deny a permit based upon violations of related entities to the permit applicant. [§3211]

ANALYSIS

PEC supported the Commission recommendation, and had advocated for greater permitting discretion in other areas of the law (addressed elsewhere in this analysis).

PEC Recommendation

Amend Section 208 of the Act as follows:

- Mandate pre-drilling private water supply baseline surveys within 2,500 feet from the Well Site.
- Amend Section 208(a) to require that restored or replaced water supplies meet applicable water quality standards consistent with the Federal and State Safe Drinking Water Acts.
- Amend Section 208(c) and (d) to expand the presumption of liability to 2,500 feet from the Well Site, for a period of 12 months.

Commission Recommendation 9.2.6

Expand an operator’s presumed liability for impaired water quality from within 1,000 feet of a well to within 2,500 feet of a well, and from 6 months to 12 months of completion or alteration of the well. In addition, the presumed liability should be applied to well stimulation.

Act 13 of 2012

The Act does expand the presumption to 2,500 feet and 12 months, and does require replacement water supplies to meet (at a minimum) Safe Drinking Water Act standards. However, the Act does not mandate baseline pre-drilling surveys. [§3218]

Comparative Analysis

Even though it is common industry practice, PEC maintains that pre-drilling water well testing should be an express responsibility of the well site operator unless the landowner refuses to allow access for testing.

PEC Recommendation

PEC supported the following recommendation, which was submitted to the Commission by DEP.

Commission Recommendation 9.2.10

Amend the Oil and Gas Act to authorize DEP to enter into contracts with well control specialists; hold well control specialists free from damages which may arise from emergency response actions; and permit DEP to recover costs from well operators should a contracted well control specialist need to be deployed.

Act 13 of 2012

The Act includes new provisions mirroring the intent of the Commission recommendation. [§3219.1, §3254.1]

Comparative Analysis

PEC supports this provision.

PEC Recommendation

PEC made the following recommendations in its 2011 Legislative Proposal, and in submitted recommendations to the Commission.

Commission Recommendation 9.2.14

Amend well stimulation and completion reporting requirements to include, at a minimum, the following:

- Pump rate, pressure and total volume used for Hydraulic Fracturing;
- List of all hazardous chemicals used for Hydraulic Fracturing;
- Identification of all water sources used for hydraulic fracturing, consistent with the DEP-approved water management plan (if applicable).
- Depth of potable aquifers encountered during drilling.
- Whether methane was encountered at other than target formation during drilling.
- Radioactive or other industry standard logs, if appropriate.
- Other information as required by DEP
 - Well stimulation and completion reports should be posted on DEP's website and be accessible to the public

Commission Recommendation 9.2.15

Require enhanced inspection and notice of activity on well sites, including:

- The timely inspection of each well site upon completion of erosion and sedimentation control measures, prior to the commencement of drilling activity;
- Notice by the well operator to DEP, at least 24 hours in advance, before commencing the following activities at the well site:
 - Cementing of casing strings;
 - Pressure testing of production casing strings;
 - Well stimulation, including hydraulic fracturing;
 - Plugging or abandoning of a well.

Commission Recommendation 9.2.16

Require DEP to post, and regularly update, well inspection reports online. Reports shall include:

- Nature and description of any violations, if any;
- Operator's written response to violations, if available;
- Status of violation;
- Any remedial steps taken by the well operator or DEP to address the violation.

Act 13 of 2012

The Act closely follows the recommendations of PEC and the Commission:

- New Well Reporting Requirements are contained in §3222.
- Well Inspection Report Website Publication is addressed in §3262.
- New mandatory inspection and activity notice requirements are included in §3258 and §3211.

In addition, the Act contains expanded chemical disclosure requirements in §3222.1.

Comparative Analysis

PEC supports these new provisions in Act 13.

RECOMMENDATIONS CONCERNING FINANCIAL ASSURANCE AND AN IMPACT FEE

PEC Recommendation

To address deficiencies in the current bonding process, amend Section 215 as follows:

- Raise Well bonding amounts for Unconventional Wells.
- Prohibit blanket bonds for Unconventional Wells.
- Allow the EQB, by regulation, to establish a voluntary Trust Fund Program as an alternative financial assurance mechanism. Consideration should be given to adapting the Trust Fund mechanism from DEP's existing alternative trust fund program in the coal mining program.

Commission Recommendation 9.2.9

Current well bonding amounts are \$2,500/well or a \$25,000 blanket bond. Well bonding amounts should be significantly increased (\$10,000/ deep well) in a manner which provides for bond amounts in two tiers based on total wellbore length (up to and including 6,000 feet and greater than 6,000 feet) and authorizes blanket bonds based on the number of wells per operator, up to \$250,000. Well bond amounts and options for alternative financial assurances should be re-examined within three years.

Act 13 of 2012

The Act substantially raises bonding amounts on unconventional wells, but retains the option for blanket bonding and does not include provisions for an alternative trust fund mechanism. [§3225]

Comparative Analysis

PEC maintains that blanket bonding is not appropriate for shale gas development. The Trust Fund Concept proves an effective and sufficient alternative for financial assurance when individual operators have multiple wells in play.

PEC Recommendation

PEC joined with other conservation members of the Commission in submitting a recommendation for a reasonable statewide impact fee or severance tax that would provide funding to address local impacts; provide additional funding to DEP, DCNR, and other resource agencies charged with management of unconventional shale gas development; and provide funding for the Growing Greener Program (Environmental Stewardship Fund).

Commission Recommendation 9.3.9

The text of the recommendation is too long to incorporate in this analysis. The recommendation proposes imposition of an impact fee to address regional impacts.

Act 13 of 2012

The details of the Impact Fee in Act 13 [contained in Chapter 23] are too long to include in this analysis.

Comparative Analysis

PEC supported a statewide, consistent tax or fee; the Impact Fee as established in Act 13 is

dependent on individual county adoption. In addition, availability of fee revenues to local governments depends on compliance with local ordinance standards/restrictions – PEC does not support those standards/restrictions or the compliance limitation.

RECOMMENDATIONS CONCERNING STATE FOREST & PARK LAND

PEC Recommendation

PEC joined with the conservation members of the Commission in submitting a recommendation that would prohibit any further leases of state forest land that would necessitate any surface impacts.

Commission Recommendation 9.2.36

Any future leasing of state forest land should be limited to agreements which result in no or minimal surface impact to Commonwealth-owned land, and prohibits surface disturbance in high conservation value forests and other ecologically important areas.

Act 13 of 2012

Act 13 does not speak to this issue.

Comparative Analysis

PEC opposes the Commission recommendation. We believe there should be no further leasing of state forest land that results in new or additional surface impacts.

RECOMMENDATIONS CONCERNING PUBLIC HEALTH

PEC Recommendation

With assistance from the University of Pittsburgh Graduate School of Health and Drexel University School of Public Health, PEC submitted two broad sets of recommendations concerning public health to the Commission.

Commission Recommendation 9.2.17

The Commonwealth should enact legislation establishing construction standards for new private water wells to ensure the delivery of safe drinking water to its residents.

Commission Recommendation 9.2.37

The Department of Health should work in partnership with the Commonwealth's graduate schools of public health and other appropriate medical institutions to better protect and enhance the public health interests of citizens, such as through the establishment of the population-based health registry and curriculum development.

Commission Recommendation 9.2.38

The Department of Health should collect and evaluate clinical data provided by health care providers.

Commission Recommendation 9.2.39

The Department of Health should routinely evaluate and assess Marcellus Shale-related environmental data, such as air, water, solid waste, and fish and other food samples, that is collected from a variety of entities, such as PA DEP, US EPA, the US Geologic Survey, water works or treatment facilities, industry and academic partners.

Commission Recommendation 9.2.40

The Department of Health should create, or oversee the creation of, a population-based health registry with the purpose of characterizing and following over time individuals who live in close proximity (i.e. one mile radius) to gas drilling and production sites.

Commission Recommendation 9.2.41

The Department of Health should establish a system to provide for the timely and thorough investigation of and response to concerns and complaints raised by citizens, health care providers or public officials.

Commission Recommendation 9.2.42

The Department of Health should educate health care providers on the presentation and assessment of human illness that may be caused by material in drilling constituents.

Commission Recommendation 9.2.43

The Department of Health should establish public education programs regarding the constituents used in the drilling process, potential pathways to humans, and at what level, if any,

they have the potential to cause human illness.

Act 13 of 2012

The Act does not directly address these recommendations. There are a number of reporting requirements relating to natural gas development contained in the Act, but they do not require any reporting to, or analysis by, the Department of Health.

ANALYSIS

PEC supports the Commission recommendations. As stated in PEC's 2010 Policy Report and 2011 Legislative Proposal, PEC believes issues associated with public health are of vital and immediate importance.

PART TWO: IMPLEMENTATION OF ACT 13

Act 13 establishes new benchmarks for regulatory and policy implementation that must take effect within 60 days. Included below is a quick list of necessary actions for the environmental protection provisions of the new law. Several actions will require rulemaking, and will not be fully realized within the timeframe mandated by the Act.

- Establish criteria for permitting decisions that potentially impact public resources as identified in Section 3215.
- Adjust criteria and variance decision-making standards relating to well site setbacks pursuant to Section 3215.
- Establish new criteria for siting of well sites within floodplains, pursuant to Sections 3215 and 3218.2.
- Establish criteria for tracking and reporting of wastewater handling and disposal pursuant to Section 3218.3. *While the Act only requires reporting of this information when requested by DEP, PEC urges the Secretary to request, on a voluntary basis, automatic reporting by the industry.*
- Establish criteria for Water Management Plans, pursuant to new language in Section 3211.
- Establish criteria for new well site containment standards pursuant to Section 3218.2.
- Establish new private water supply protection standards in Section 3218, including compliance with the Safe Drinking Water Act.
- Adjust criteria relating to improved site restoration requirements in compliance with the modified provisions of Section 3216.
- Establish criteria concerning enhanced site inspection and well reporting requirements pursuant to Sections 3222, 3258, and 3262.
- Adjust criteria for chemical disclosure requirements in Section 3222.1.
- Establish reporting requirements for air contaminant emissions, as required by Section 3227.
- Effect new penalty and bonding provisions contained in Sections 3256 and 3225.
- Effecting new “bad actor” permitting criteria contain in Section 3211.
- Effect DEP’s ability to contract with well control specialists and recovery of costs as provided in Sections 3219.1 and 3254.1.

PART THREE: REMAINING COMMISSION RECOMMENDATIONS

The following environmental and public health recommendations of the Commission Report were not directly addressed in Act 13. Excepting those Recommendations that require additional statutory authority, these should become a priority for the Administration in concert with implementation of Act 13.

9.1 INFRASTRUCTURE

9.1.10 (PENNDOT)

PENNDOT should calculate and evaluate increased traffic volume to continuously calculate impacts, particularly as natural gas development activities expand into currently undeveloped regions of the Commonwealth.

9.1.16 (PENNDOT)

PENNDOT shall look to add language to either the Excess Maintenance Agreement or the Road Maintenance Plan that directs the industry to evaluate the Erosion and Sediment controls already in place on a roadway to determine if interim erosion and sediment control measures are necessary while the road is in use but before road reconstruction begins.

9.1.17 (DEP)

Develop and provide planning tools and educational opportunities relating to unconventional natural gas development to counties; require proper notice of permit applications with an opportunity to comment (similar to notice for host and adjoining municipalities); and, under DEP guidance and consistent with applicable permit conditions, allow for County Conservation Districts to engage in inspections of erosion and sedimentation controls at unconventional well sites, if they choose to do so.

9.2 PUBLIC HEALTH, SAFETY & ENVIRONMENTAL PROTECTION

9.2.17 (LEGISLATIVE)

The Commonwealth should enact legislation establishing construction standards for new private water wells to ensure the delivery of safe drinking water to its residents.

9.2.18 (DEP)

Over the next six months DEP should evaluate all of its regulatory programs to determine if obstacles exist or changes could be made to facilitate the increase in proper recycling of flow back and produced water from gas wells and to facilitate and encourage the increased use of non-fresh water for hydraulic fracturing.

9.2.19 (MULTIPLE AGENCIES)

The Commonwealth should encourage the establishment of voluntary ecological initiatives which incentivize extraction-oriented industries to finance improvement projects within critical watersheds, streams and forest habitat and which generate mitigation credits which are eligible for use to offset future development.

9.2.22 (LEGISLATIVE; DEP)

The Commonwealth should encourage the use of non-freshwater sources where technically feasible and environmentally beneficial. For example, legislation that would provide operators with immunity from environmental liability for the use of acid mine drainage water from abandoned mine pools would encourage operators to reduce their use of freshwater sources for water utilization as well as reduce the amount of acid mine water draining into local streams.

9.2.23 (DEP AND DCNR)

DEP and DCNR – along with industry – should continually review and examine the range of best management practices utilized during construction and operation of the well site, and consider incorporating these types of practices into regulatory and operator guidance. The practices, some of which DCNR already requires for its leases, could include:

- minimizing the size and disturbance of well sites and related facilities;
- stockpiling of topsoil; utilizing rocks, stumps and slash for wildlife enhancement;
- use of closed-loop drilling systems;
- increased use of flow-back water;
- use of surface water withdrawals rather than groundwater withdrawals;
- utilization of “tank in tank” systems with secondary containment for storage flow-back water;
- use of high-density polyethylene pipe for flow-back water transportation;
- noise abatement strategies for gas processing and compressor stations;
- minimize, avoid or buffer against conflicts with resources such as critical waterways, public parks, endangered or threatened plants, species and habitats, historic and cultural areas;
- avoid or minimize forest loss and fragmentation;
- cement all casing strings to surface to provide multiple protective barriers for aquifer;
- pressure-test each casing to ensure integrity of casing design and cement;
- perform a combination of pressure tests and electric logging to verify the mechanical integrity of the casing and cement over the life of the well;
- enhanced safety procedures for wet gas testing, flowback and production;
- ensure the integrity of well control systems at all times, with a particular focus during completion operations (such as “isolation tools” or “tree savers”);
- avoidance of construction activities during adverse weather conditions which may impact public safety;
- use of marking systems to indicate presence of below-ground gas, water, electric and flow-back pipelines;
- minimize conflicts with recreational activities during holidays and high visitor-use periods.

9.2.24 (LEGISLATIVE)

Special Note: To a large degree, Act 13 addresses this recommendation. However, Act 13 contains a less protective basis surface water identification – PEC firmly supports the basis proposed by the Commission, as well as the contemplation of additional BMPs for HG or EV waters (emphasis added, below).

The setback standard for an unconventional well shall be increased to 300' from the wellbore to a stream or water body as provided in section 205(b) of the Oil and Gas Act. A 100' setback from the stream or water body to the edge of disturbance shall also be implemented. DEP's current waiver authority would be retained for both setbacks. For High Quality and Exceptional Value streams, however, additional setbacks or BMPs may be required by DEP. Additional discussion of the appropriate definition of water body for the purpose of these setbacks is necessary.

9.2.25 (DEP)

DEP should continue to participate in non-profit, multi-stakeholder organizations such as the State Review of Oil and Natural Gas Environmental Recommendations, Inc. (STRONGER), that provide periodic peer review of the Commonwealth's regulatory structure and enforcement efforts.

9.2.26 (MULTIPLE AGENCIES)

Using publicly available data (e.g., PA Natural Diversity Inventory, County Natural Heritage/Natural Area Inventories, and other relevant sources), DEP, DCNR, PGC and PFBC will jointly identify and make accessible for public review information (but not including location information on species) on areas of high ecological value in Pennsylvania (e.g., high conservation value forests, concentrations of biological diversity, sensitive aquatic communities, etc.). When submitting a permit application for an unconventional shale gas well that would be located in such an area, the applicant will be required to provide DEP with a description of its efforts to avoid, minimize or mitigate for impacts to the area. (e.g., co-location and centralization of infrastructure, use of specialized BMPs, well pad spacing and density adjustments, working with other companies holding leases in this area to reduce cumulative impacts, etc.). DEP could establish specific conditions on well permits proposed in such areas.

9.2.27 (DEP)

Special Note: Act 13 does include a new section on containment [§3218.2]. This recommendation could help inform development of rulemaking for the new provision.

Conduct an engineering analysis of spill containment systems at unconventional shale gas well sites, including wells, well pads, storage tanks/impoundments and other equipment/facilities. This analysis will evaluate the design and structure of containment systems and determine adequacy and effectiveness in relation to the volumes and types of materials present at these sites at different stages of the production process. The analysis also will review past performance of containment systems used at well sites. Recommendations for new or improved containment practices, structures, and procedures – including, but not limited to, liners and berms on well sites, will be developed as needed.

9.2.28 (DEP AND DCNR)

Strengthen and improve effectiveness of the permit review process in protecting rare, threatened and endangered species. State agencies should consider, but not be limited to, the following options: increasing staff capacity and program resources, enhancing quality and presentation of data on wildlife and critical habitats; identifying appropriate opportunities to improve and manage access to such data, upgrading computer systems, providing additional technical and planning assistance, increasing acquisition of current field data, and other options as identified.

9.2.29 (DEP)

DEP should develop an environmental assessment checklist as part of the permit application process to locate and construct a drilling site. The checklist should be used to identify all the features to which setbacks are applicable; identify all natural features that DEP is authorized to consider; and to identify those additional Areas of High Ecological Value.

9.2.30 (MULTIPLE AGENCIES)

Invasive Plant Species introductions should be avoided by utilizing techniques such as:

- thorough cleaning of construction equipment;
- minimization of soil disturbances;
- timely re-vegetation of sites using native, non-invasive species;
- annual surveillance to detect and control early infestations.

9.2.31 (MULTIPLE AGENCIES)

Recognize and utilize the expertise of DCNR to advise other Commonwealth agencies which host natural gas development on their land.

9.2.32 (DCNR)

DCNR should monitor and document effects, both positive and negative, of natural gas development on plants and forests, wildlife, habitat, water, soil and recreational resources.

9.2.33 (MULTIPLE AGENCIES)

The Commonwealth and its agencies should work together to promote, encourage and establish regular communications and information sharing among local communities, operators, environmental and conservation groups and other stakeholders.

9.2.34 (DCNR)

DCNR should establish a Natural Gas Advisory Committee to enhance communications among stakeholders regarding natural gas development on state forest and park land.

9.2.35 (MULTIPLE AGENCIES)

Special Note: Act 13 (Section 8) does direct the Energy Executive to work with stakeholders to develop a report on pipeline placement for natural gas gathering lines. Identify legislative/regulatory changes needed to:

- Effect the sharing of pipeline capacity and reduce surface disturbance and associated environmental impacts;
- Encourage the use of existing pipeline infrastructure and co-location with other rights-of-way;
- Achieve coordination and consistency of infrastructure planning and siting decisions by State, county and local governments;
- Provide sufficient authority and resources for appropriate government agencies to ensure that ecological and natural resource data are used in the review and siting of proposed pipelines, in order to avoid or minimize impacts to these resources.

9.2.37 (HEALTH)

The Department of Health should work in partnership with the Commonwealth's graduate schools of public health and other appropriate medical institutions to better protect and enhance the public health interests of citizens, such as through the establishment of the population-based health registry and curriculum development.

9.2.38 (HEALTH)

The Department of Health should collect and evaluate clinical data provided by health care providers.

9.2.39 (HEALTH AND OTHER AGENCIES)

The Department of Health should routinely evaluate and assess Marcellus Shale-related environmental data, such as air, water, solid waste, and fish and other food samples, that is collected from a variety of entities, such as PA DEP, US EPA, the US Geologic Survey, water works or treatment facilities, industry and academic partners.

9.2.40 (HEALTH)

The Department of Health should create, or oversee the creation of, a population-based health registry with the purpose of characterizing and following over time individuals who live in close proximity (i.e. one mile radius) to gas drilling and production sites.

9.2.41 (HEALTH)

The Department of Health should establish a system to provide for the timely and thorough investigation of and response to concerns and complaints raised by citizens, health care providers or public officials.

9.2.42 (HEALTH)

The Department of Health should educate health care providers on the presentation and assessment of human illness that may be caused by material in drilling constituents.

9.2.43 (HEALTH)

The Department of Health should establish public education programs regarding the constituents used in the drilling process, potential pathways to humans, and at what level, if any, they have the potential to cause human illness.

9.3 LOCAL IMPACTS & EMERGENCY RESPONSE

9.3.3 (PEMA AND/OR OTHER AGENCIES)

Establish and provide for a Specialized Team of Emergency Responders to enhance incident management and unified command practices capable of immediate response to an incident anywhere in the Commonwealth. The Specialized Team will focus on ensuring public safety, isolating and securing the incident site while leaving well control of blow outs, fires or releases to professional, trained experts utilizing equipment staged in a manner to provide a timely response to emergencies.

9.3.5 (PEMA AND OSFC)

Provide comprehensive training to local fire and emergency responders, focused on the unique situations presented from natural gas-related emergencies, and assist in the identification and acquisition of appropriate materials, through a program overseen and administered by the Office of the State Fire Commissioner.

9.3.6 (PENNDOT)

Establish a statewide Commodity Flow Study to assess the need for additional Hazardous Material training, personnel and preparation related to the transport of chemicals, fluids and other materials of concern.

9.4 ECONOMIC & WORKFORCE DEVELOPMENT

9.4.12 (MULTIPLE AGENCIES)

The Department of Conservation and Natural Resources and other public resource agencies should be tasked with ensuring access to mixed land uses with the Marcellus Shale region to highlight and ensure the viability of recreational activities, such as hiking, canoeing, snowmobiling, ATV and other uses.