The Allegheny County Sportsmen's League

www.acslpa.org

Conservation Committee Report

Volume 12 Issue 2 | By Jack Walters, ACSL Conservation Chair | February 2010

The Conservation Pledge

I give my pledge as an

American to save and faithfully defend from waste, the natural resources of my country; the soil, the water, the air, the minerals, the plant life and the wildlife.

This is my Pledge!

Inside this issue:

Governor Rendell: PA Taking Aggressive Action to Protect Public, Environment as Marcellus Shale Drilling Operations Expands

Directs DEP to Hire 68 Additional Staff to Bolster Inspections, Environmental Compliance New Regulations Planned to Improve Well Safety Standards

In order to protect Pennsylvania's residents and environment from the impact of increased natural gas exploration across the state, Governor Edward G. Rendell announced today that the commonwealth is strengthening its enforcement capabilities.

At the Governor's direction, the Department of Environmental Protection will begin hiring 68 new personnel who will make sure that drilling companies obey

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Four More PA Streams Added to EPA's List of Cleanup Success Stories

EPA Lauds Improvements to Streams PA Now Second in U.S. for Restored Water Bodies

Environmental Protection Secretary John Hanger today welcomed a new federal report that shows Pennsylvania is now second nationally in the number of waterways that have been restored to health because of the aggressive cleanup efforts by the state and its partners.

According to the U.S. Environmental Protection Agency report, four Pennsylvania streams that stretch a total of 41.7 miles were added to the list of restored water bodies in 2009: Babb Creek in Tioga County, Gumboot Run in McKean

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PA Taking Aggressive Action to Protect Public, Environment

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state laws and act responsibly to protect water supplies. DEP also will strengthen oil and gas regulations to improve well construction standards. These critical upgrades are designed to prevent gas leaks that can pose risks to the public and water quality.

"Interest in Pennsylvania's Marcellus Shale formation is greater than ever before and as natural gas prices continue to rise, that interest will only increase," said Governor Rendell. "In fact, the industry has told us that they expect to apply for 5,200 permits to drill in the Marcellus Shale this year -- nearly three times the number of permits we issued in all of 2009. Given these conditions, an extraction tax is gaining widespread support across our state and I will again ask the General Assembly to enact such a levy. It is fair and affordable to drillers. They know it, and so do members of the House of Representatives who voted for it last year.

"The actions I am announcing today, however, are about decisive, progressive protections for the people of Pennsylvania. We were able to hire 37 additional inspectors and permitting staff in 2009, but the industry's projected growth in 2010 means that we need additional inspectors to ensure oil and gas companies follow environmental laws and regulations. As I've said all along, we want to encourage the development of this resource because it's a tremendous economic opportunity for the state, but we will not allow that to happen at the expense of our environment."

DEP performed 14,544 drilling site inspections in 2009 and took 678 enforcement actions against drillers for violations.

The 68 additional personnel will be funded entirely from money generated by new, higher permitting fees that were instituted in 2009—the first such increase since 1984. The new fees were put in place with bipartisan support from the General Assembly, industry and environmental organizations.

The Governor noted that given the need for these additional health and safety personnel and the dedicated funding source that is independent of the state's General Fund, these new hires are exemptions to the general hiring freeze he instituted last year.

DEP's work to amend Pennsylvania's oil and gas regulations will strengthen well construction standards and define a drilling company's responsibility for responding to gas migration issues, such as when gas escapes a well or rock formation and seeps into homes or water wells. Specifically, he said the new regulations will:

Require the casings of Marcellus Shale and other high-pressure wells to be tested and constructed with specific, oilfield-grade cement;
Clarify the drilling industry's responsibility to restore or replace water supplies affected by drilling;
Establish procedures for operators to identify and correct gas migration problems without waiting for direction from DEP;

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PA Taking Aggressive Action to Protect Public, Environment

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Require drilling operators to notify DEP and local emergency responders immediately of gas migration problems;
Require well operators to inspect every existing well quarterly to ensure each well is structurally sound, and report the results of those inspections to DEP annually; and
Require well operators to notify DEP immediately if problems such as over-pressurized wells and defective casings are found during inspections.

"These new draft regulations, which were developed through open meetings with experts in the industry, are designed to give Pennsylvanians peace of mind by bringing our state's requirements up to par with other major gas producing states or, as in the case of the well casing requirements, to a level that is even more rigorous," said Governor Rendell.

The new regulations will be offered for public comment on Jan. 29 before going through DEP's formal rulemaking process.

Interest in Pennsylvania's Marcellus Shale formation has been increasing. One third of the more than 6,200 oil and natural gas drilling permits DEP issued in 2009 were for drilling in the Marcellus Shale. By comparison, only four of the more than 6,000 permits issued in 2005 were for the Marcellus formation.

For more information, visit www.depweb.state.pa.us.

Source: PA DEP

Four More PA Streams Added to EPA's List of Cleanup Success Stories (continued)

County, Lloydville Run in Blair County, and Sterling Run in Centre County.

"Through the cooperation and hard work of watershed groups, farmers, conservation districts and state government, we are making dramatic improvements to our most polluted waterways, restoring life to once-dead streams, and improving recreational and economic opportunities for our residents," said Hanger.

The EPA maintains a list of "success stories" on its Web site for formerly polluted streams that have been restored to health. The number of bodies on the list increased from 97 to 172 during 2009. Eighteen of those streams are in Pennsylvania and stretch more than 69 miles throughout the state, which puts the commonwealth second only to Tennessee, which has 19 streams on the list.

The four Pennsylvania streams added this year were once unable to support aquatic life or were severely degraded due to high acidity caused by mine drainage, high concentrations of metals, and silt from coal mines and coal waste piles that were abandoned prior to passage of modern mining laws in 1977.

DEP worked with federal agencies, local volunteer organizations, conservation districts and environmental groups to construct mine drainage treatment plants, reclaim and vegetate abandoned mine lands, and stabilize stream banks to eliminate sources of pollution into these waterways.

Other waterway improvement methods include instituting agricultural best management practices to keep livestock out of streams and reduce sediment and nutrient runoff from fields, planting riparian buffers, building urban stormwater control projects, plugging abandoned oil wells, and making stream channel improvements.

Funding for many of these projects is provided to local watershed groups and conservation districts through the commonwealth.

DEP is responsible for monitoring and protecting water quality in 86,000 miles of rivers and streams in Pennsylvania for recreational, industrial and drinking water uses. The EPA lists more than 16,000 miles of the state's waterways as impaired.

For more information on DEP's efforts to improve water quality, visit www.depweb.state.pa.us, keyword: Watershed Management.
To read more about the EPA's list of success stories, visit www.epa.gov/owow/nps/Success319/index.htm

Source: U.S. EPA

Senate Committee Told Drilling Wastewater Recycling Becoming More Effective

Representatives of both the natural gas drilling industry and the Department of Environmental Protection told the Senate Environmental Resources and Energy Committee this week much more of the 3.4 million gallons of water used to drill and develop each Marcellus Shale well is being recycled by operators.

On the other hand, representatives of several groups and two Committee members expressed concern about whether DEP had enough staff to adequately handle both gas well permitting and enforcement and wastewater issues.

After the Senate hearing, Gov. Rendell announced he ordered DEP to hire 68 more staff to deal with Marcellus Shale issues.

The number of Marcellus Shale gas well applications is predicted to more than double this year in Pennsylvania to 5,200 from the 1,984 issued last year.

Steve Rhoads, East Resources, Inc. and the PA Marcellus Shale Coalition, said of the 3.4 million gallons of water used to develop and frack each Marcellus Shale well, about 25 percent (875,000 gallons) returns to the surface on average to be treated and properly disposed of.DEP differed somewhat with the industry on the amount of flow-back water saying up to 40 percent was returned on average, but said they had heard reports that up to 50 percent of operators are reusing at least a portion of their wastewater with some reusing nearly 100 percent.

As a result of concerns with Total Dissolved Solids (primarily chlorides), drilling companies are moving to recycle more and more of their drilling wastewater Rhoads said. Some companies are reportedly are recycling as much as 90 to 95 percent of the drilling/frack water by treating it and taking it to the next drilling site.

Rhoads noted TDSs typically pass through most wastewater plants and the industry relies on the assimilation capacity of streams to deal with the remaining wastewater.

Operators are also exploring the use of deep injection wells to dispose of the wastewater which are regulated by the U.S. Environmental Protection Agency in Pennsylvania.

Rhoads said the industry opposes the TDS regulations recently proposed by DEP saying a better approach would be to take a watershed view of the TDS problem through a Total Maximum Daily Load plan developed with the help of a local stakeholders group. He also said a comprehensive water monitoring network should be set up to help define and monitor the problem.

Sen. Lisa Baker (R-Luzerne) asked whether the provision of the state Oil and Gas Act requiring well water sampling and a presumption of a well causing problems within 1,000 feet of a gas well should be strengthened.

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Senate Committee Told Drilling Wastewater Recycling Becoming More Effective (continued)

Rhoads said both DEP and EPA have told the industry there has not been a complaint about water contamination as a result of gas well fracking in Pennsylvania, noting the industry has over 60 years of experience with the technique.

He did say there have been instances where wells were improperly constructed that resulted in the migration of natural gas into water supplies causing problems for property owners.Sen.

Andrew Dinniman (D-Chester) asked whether the drilling industry would back up its claims about the lack of impact on water wells with a guarantee program, like the Chester County Landfill has, to guarantee the value of properties within a mile of a well

Rhoads said he did not think a guarantee was needed and the industry would stand behind its responsibilities to follow the rules on well drilling.

DEP Knits Together Regulatory Program

John Hines, Deputy Secretary for Water Management at DEP, provided the Committee with an overview of wastewater issue and DEP's regulatory programs. He was assisted by Scott Perry, Director of the Bureau of Oil and Gas Management, and Dana Aunkst, Director of the Bureau of Water Standards and Facility Regulation.

First he said he wanted to clear up confusion over the contents of fracking fluids used in the gas well development process. He said the chemicals used in the fracking fluids have been posted on the DEP Marcellus Shale webpage for all to see, although the precise proportion of the chemicals are trade secrets.

Hines said the agency is working with a subcommittee of the Water Resources Advisory Committee to develop new standards for Total Dissolved Solids discharges because many streams and rivers have very little capacity to assimilate additional TDSs.

He noted "the capacity to treat the expected levels of wastewater (from drilling operations) is not yet available. Even with reuse and recycling, we must still find a solution for the flow-back and production fluids that cannot be reused... the department fully anticipates the need for increased treatment capacity, even at the reduced flow-back estimates."

He said TDSs come from a variety of sources including acid mine drainage, stormwater runoff, meat processing plants as well as drilling operations.

Hines said the department is also working to improve natural gas well construction standards to protect the public from gas migration.

"The regulations and protections I've described above are important to the protection of our natural re

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Senate Committee Told Drilling Wastewater Recycling Becoming More Effective (continued)

sources," said Hines. "However, they mean very little if the department does not have the staff necessary to inspect well sites and oversee the environmentally protective development of this resource."

Hines said DEP was able to add 37 new staff during 2009 funded by increases in drilling permit fees for inspection and drilling permit review. Fee increases will also be proposed shortly to help fund wastewater treatment and water quality permit reviews and enforcement.

Sen. Baker said there is a significant concern in her area that there is no local DEP presence in Wilkes-Barre covering gas well drilling saying the staff added in Williamsport is good, but that's a one or two hour ride from where drilling is occurring in her district. (After Gov. Rendell ordered DEP to hire 68 more staff to deal with Marcellus Shale issues, DEP Secretary John Hanger was quoted as saying some of those staff will be located in Wilkes-Barre.)

Sen. Baker also asked DEP to look at certifying the operators of drilling wastewater treatment plants like they are for municipal wastewater plants.

Sen. Ted Erickson (R-Delaware) said he was concerned about whether DEP had the capacity to do the permit reviews and the enforcement needed to properly oversee thousands of new natural gas wells. He also said there are issues of consistency of enforcement and permitting between regions.

Sen. Elder Vogel (R-Beaver) said the capacity of streams and rivers to absorb additional TDSs is not only a problem for an expanding oil and gas industry, it was also a concern for the coal mining industry and how it is going to expand.

Hines said the TDS stakeholder group was coming up with some interesting suggestions for dealing with these issues and would be reporting its results in the next few months.

DEP Shuts Down Operator Certification

Peter Slack, PA Municipal Authorities Association, said his group has a concern about whether DEP has the capacity to oversee the drilling and wastewater issues. He noted DEP just suspended major parts of the wastewater plant operator certification program because of recent budget cuts.

In response, Sen. Mary Jo White said the new gas well drilling application fees will bring the agency significant new resources, adding, "We want to be sure budget constraints do not result in under enforcement of regulations."

Tougher Regulations

Erika Staaf, Clean Water Advocate with PennEnvironment, said DEP's wastewater program should be beefed up to include a cradle to grave water monitoring system from the time water is withdrawn for use by a driller to when it is ultimately disposed of.

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Senate Committee Told Drilling Wastewater Recycling Becoming More Effective (continued)

She also said PennEnvironment encourages wastewater reuse to the maximum extent and setting tougher standards for the discharge of Total Dissolved Solids.

New Technology

David Kohl, CWM Environmental, previewed wastewater treatment technology his company has produced to reduce the wastewater used in well development by 85 percent.

Paul Hart, President of Hart Resource Technologies, Inc. & Pennsylvania Brine, outlined how three drilling wastewater plants his company operators can be part of the solution for wastewater issues.

Additional written comments were submitted to the Committee by: Aqua America, Chester Environmental Partnership, Bartramian Audubon Society, Greater Wyoming Valley Audubon Society and The League of Women Voters of Pennsylvania.

“Today’s hearing provided an overview of the challenges faced from Marcellus Shale wastewater, and how we can best meet them,” said Sen. Mary Jo White. “This is a tremendous opportunity for Pennsylvania to produce not only an abundant supply of clean energy, but scores of well-paying jobs. At the same time, citizens have a right to expect that their natural resources and communities are being respected, that the gas is produced safely, and that our land and water resources are protected. I am confident that we can achieve the proper balance.

”For copies of testimony and comments as well as a video of the entire hearing, visit the Senate Environmental Resources and Energy Committee webpage. Also visit DEP's Marcellus Shale webpage for more background information.

Sen. Mary Jo White (R-Venango) serves as Majority Chair of the Committee and Sen. Ray Musto (D-Luzerne) serves as Minority Chair.

Source: PA Environment Digest

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Source: PA DEP

President Requests $760.4 Million for Fossil Energy Programs

FY 2011 Budget Emphasizes Carbon Capture and Storage Technology, Allowing Continued Use of Fossil Fuels in a Carbon-Constrained Future

President Obama's FY 2011 budget seeks $760.4 million for the Office of Fossil Energy (FE) to support improved energy security and rapid development of climate-oriented technology. The request includes $586.6 million for Fossil Energy Research and Development, $138.9 million for the Strategic Petroleum Reserve, $11.3 million for the Northeast Heating Oil Reserve and $23.6 million for the Naval Petroleum Reserves.

The FY 2011 budget request will allow FE to fulfill its mission: to provide the nation with the best opportunity to tap the full potential of its abundant fossil energy resources in an environmentally sound and affordable manner; and to ensure America's readiness to respond to short-term energy supply disruptions.

FOSSIL ENERGY RESEARCH AND DEVELOPMENT

The Fossil Energy Research and Development (FE R&D) FY 2011 budget request of $586.5 million represents more than 75 percent of FE's total FY 2011 budget request. It is comprised of the Fuels and Power Systems program. This program is designed to ensure that we can continue to use the nation's abundant fossil resources in a way that will benefit our environment and our economy for years to come.

Advancing Coal Toward a Low-Carbon Future

Fuels and Power Systems. The FY 2011 budget request for FE's Fuels and Power Systems program is $403.9 million. Initiatives will focus on research, development, and deployment of technologies to use fossil fuels more cleanly and efficiently. The core research and development (R&D) efforts of the Fuels and Power Systems program focus on: the creation of a portfolio of technologies that can capture and permanently store carbon dioxide (CO2) from power plants and industrial processes; carbon capture for existing coal-fired power plants; efficiency improvements for existing and new power generation, such as: improved gasification technologies, coal-to-hydrogen conversion, development of stationary power fuel cells, and improved turbines for future coal-based combined cycle plants.

The Fuels and Power Systems program also supports a robust demonstration program, which includes the Clean Coal Power Initiative (CCPI) and FutureGen programs.

Carbon Sequestration. The Department of Energy is requesting $143.0 million for FE's Carbon Sequestration program. By developing technologies to decrease the release of CO2 into the atmosphere, we can continue to use our extensive domestic fossil energy resources while reducing the impacts on global climate

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President Requests $760.4 Million for Fossil Energy Programs (continued)

change. Carbon capture and storage (CCS) will play a central role in fossil fuels remaining a viable energy source for our nation. CCS is the primary pathway that DOE is pursuing to allow continued use of fossil fuels in a carbon-constrained future.

Essential to these objectives are the Regional Carbon Sequestration Partnerships (RCSPs), which unite public and private entities in an effort to complete and evaluate small- and large-scale CO2 injection tests across the nation with the aim of developing best practices and supporting the regulatory development process.

In FY 2011, several of the nine large-scale RCSP CO2 injection projects will be injecting CO2 for large volume (1 million tons/year) geologic storage tests. Most of the large-scale field tests will have completed the first stage of the projects consisting of site selection and characterization, NEPA, pre-injection monitoring, and permitting. One project will have concluded its injection of 1 million tons of CO2 by FY 2011, and will be conducting post injection monitoring at the site.

Additionally, U.S. engagement and collaboration with the global community will continue through FE's participation in the Carbon Sequestration Leadership Forum, the U.S.-China Clean Energy Research Center, and other international initiatives.

Innovations for Existing Plants (IEP). The FY 2011 budget request for the IEP program is $65.0 million. The IEP program is focused on developing post-combustion CO2 retrofit capture technology. Post-combustion CO2 capture technology can be used in pulverized coal power plants, which is the industry standard for coal-fueled electricity generation.

Advanced Integrated Gasification Combined Cycle (IGCC). DOE is requesting $55.0 million in FY 2011 for the IGCC program. The IGCC program is developing advanced gasification-based technologies to: reduce the cost of near-zero emissions (including CO2) coal-based IGCC plants; improve thermal efficiency; and achieve near-zero atmospheric emissions of all pollutants, including CO2, sulfur dioxide, nitrogen oxides, acid gases, and mercury.

Fuels. The FY 2011 budget request for the Fuels program is $12.0 million. In FY 2011, activities include continued support for the bench-scale development of hydrogen separation technologies and components.

Fuel Cells. The FY 2011 budget request for the Fuel Cells program is $50.0 million. The Fuel Cells activity will continue to increase reliability of the Solid State Energy Conversion Alliance (SECA) fuel cell technology and provide the technology base to permit continued improvement to low cost, MW class, ultra-clean,

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President Requests $760.4 Million for Fossil Energy Programs (continued)

with up to 60 percent electrical efficiencies for central power generation, and fuel cells for distributed generation applications.

Advanced Turbines. In FY 2011, the Advanced Turbines program will continue projects to develop efficient, clean, and cost-effective hydrogen fueled turbines for coal-based IGCC power systems that capture and sequester carbon dioxide. DOE is requesting $31.0 million for this activity in FY 2011.

Advanced Research. The Advanced Research program bridges basic and applied research to help reduce the costs of advanced coal and power systems while improving efficiency and environmental performance. The proposed $47.9 million budget for Advanced Research will fund advanced materials research and projects for ultra-supercritical steam cycles for power generation aimed at a greater understanding of the physical, chemical, biological, and thermo-dynamic barriers that currently limit the use of coal and other fossil fuels.

In FY 2011, a multi-lab partnership will develop a comprehensive, integrated suite of computational models for accelerating the development of carbon capture technologies. The scientific underpinnings of the suite of models will ensure that learning from successive generations of a technology or learning from even competing technologies is maximized. The simulation-based confidence will reduce the risk in incorporating multiple innovative technologies in a design, thereby significantly reducing the development cycle required to move novel technologies to commercialization.

Clean Coal Power Initiative. No funding is being requested for the CCPI program in FY 2011. In FY 2011, FE will focus on project execution in all Rounds of CCPI, and completion of National Environmental Policy Act procedures for ongoing projects.

FutureGen. No new funding is being requested for the FutureGen program in FY 2011.

Tapping the Nation's Unconventional Natural Gas Resources

FE's Natural Gas Technologies and Oil Technology programs continue to focus on science and technology to find and produce oil and gas from non-conventional reservoirs and reduce the environmental impact of resource development.

Natural Gas Technologies. The Natural Gas Technologies program develops technologies to explore the

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President Requests $760.4 Million for Fossil Energy Programs (continued)

recovery potential of natural gas from methane hydrate resources and their potential environmental impacts. In FY 2011, the Office of Science will initiate a new research program in gas hydrates. Therefore, no funding is requested in the Fossil Energy budget.

Petroleum – Oil Technology. Consistent with the President's policy to not fund government R&D for oil technology, there is no funding requested for the Oil Technology program in FY 2011.

Petroleum Reserves

FE's Office of Petroleum Reserves manages programs that provide the United States with strategic and economic protection against disruptions in oil supplies. These include the Strategic Petroleum Reserve, the Northeast Home Heating Oil Reserve, and the Naval Petroleum and Oil Shale Reserves.

Strategic Petroleum Reserve. The Strategic Petroleum Reserve (SPR) provides strategic and economic security against disruptions in oil supplies with an emergency stockpile of crude oil. The SPR is currently filled to capacity at 727 million barrels of crude oil in inventory.

The FY 2011 budget request of $138.9 million for SPR is a decrease from FY 2010 funding. The decrease assumes a one-time cancellation of $71 million in balances from prior year appropriations for a 1 billion barrel expansion at the Richton, Miss., site and the use of these balances to partially fund the $209.9 million operations and management activities of the SPR.

FY 2011 funding initiates activities to integrate into site operations the Bayou Choctaw replacement cavern, planned for purchase with FY 2010 appropriations.

Additionally, FY 2011 provides for the assessment of energy efficiency and greenhouse gas (GHG) control at SPR facilities toward meeting the DOE goal to lower GHG emissions at all DOE facilities.

Northeast Home Heating Oil Reserve. The Northeast Home Heating Oil Reserve, which was established in 2000, is capable of assuring a short-term supplement to private home heating oil supplies during times of very low inventories or in the event of significant threats to immediate energy supplies. The two million barrel Reserve protects the Northeast against a supply disruption for up to 10 days, the time required for ships to carry heating oil from the Gulf of Mexico to New York Harbor.

The FY 2011 budget request of $11.3 million continues operation of the Reserve, including lease of commercial storage space and funding for the award of new storage contracts in FY 2011.

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President Requests $760.4 Million for Fossil Energy Programs (continued)

Naval Petroleum and Oil Shale Reserves. Today, three of the four original Naval Petroleum Reserves (NPR-1, NPR-2, and NPR-4) have been sold or transferred to the Department of the Interior. The only remaining oil reserve managed by the DOE is the Teapot Dome field (NPR-3) in Casper, Wyo., which is now a stripper field that also serves as an oilfield technology testing center (Rocky Mountain Oilfield Testing Center).

The FY 2011 budget request for this program is $23.6 million, which will fund the environmental remediation of NPR-1 and operations for NPR-3.

Source: U.S. DOE