Governor Paterson Issues Executive Order on Hydraulic Fracturing

by New York State Office of the Governor

ALBANY, NY (12/11/2010)(readMedia)-- Governor David A. Paterson has issued an Executive Order directing the Department of Environmental Conservation (DEC) to conduct further comprehensive review and analysis of high-volume hydraulic fracturing in the Marcellus Shale. The Executive Order requires that, if approved, high-volume, horizontal hydraulic fracturing would not be permitted until July 1, 2011, at the earliest. This should allay any fears that high-volume hydraulic fracturing and horizontal drilling under study by DEC will commence without assurances of safety.

"We in government must always focus on protecting the well-being of those whom we represent and serve, but we also have an obligation to look to the future and protect the long-term interests for our State and its residents," Governor Paterson said. "Therefore, I am proud to issue this Executive Order, which will guarantee that before any high-volume, horizontal hydraulic fracturing is permitted, the Department of Environmental Conversation will complete its studies and certify that such operations are safe." Permits for high-volume, horizontal hydraulic fracturing can not be issued until the Department of Environmental Conservation (DEC) completes a Supplemental Generic Environmental Impact Statement (SGEIS), which is currently being developed. As a result, there is already in place a de-facto moratorium on such permits.

The Governor issued the Executive Order contemporaneously with his veto of S.8129-B/A.11443-B, which would have suspended the issuance of new oil and gas drilling permits through May 15, 2011, including all conventional, low-volume, vertical oil and gas wells.

"This legislation, which was well intentioned, would have a serious impact on our State if signed into law. Enacting this legislation would put people out of work - work that is permitted by the Department of Environmental Conservation and causes no demonstrated environmental harm, in order to effectuate a moratorium that is principally symbolic," Governor Paterson said. "Symbols can have great importance, but particularly in our current terrible economic straits, I cannot agree to put individuals out of work for a symbolic act."

"I am sympathetic to the sponsors' desire to protect the environment and public health, and I respect the concerns that produced this legislation," the Governor continued. "But this legislation does not accomplish this purpose, since the activities at the heart of the moratorium are not currently taking place, and would not take place until well after the legislation's proposed moratorium."

The bill goes well beyond high-volume, horizontal hydraulic fracturing and effectively would result in a moratorium on all new oil and gas well drilling in this State. The cessation of such new activity, even for a limited period, would have substantial negative financial consequences for the State, local governments, landowners and small businesses involved in conventional oil and gas production.

The Division of the Budget estimates that the bill would cause a substantial reduction in State revenues from the loss of permit fees and tax revenue. With a $315 million budget gap in the current fiscal year, and a projected gap of over $9 billion in the 2011-12 State fiscal year, New York simply cannot afford to send hundreds and perhaps thousands of jobs, and millions of dollars in capital investment to Pennsylvania and other states to our south.

Pittsburgh Post Gazette Tuesday 4 January 2011:

Pa. allows dumping of tainted waters from gas boom

Companies insist there's little risk, but now recycle Tuesday, January 04, 2011

By David B. Caruso, The Associated Press

Keith Srakocic/Associated Press

Jim Riggio, plant manager for the Beaver Falls Municipal Authority, shows a sample of solid materials removed from the Beaver River during treatment Dec. 15 at his plant.

The natural gas boom gripping parts of the United States has a nasty byproduct: wastewater so salty, and so polluted with metals like barium and strontium, that most states require drillers to get rid of the stuff by injecting it down shafts thousands of feet deep.

But not in Pennsylvania, one of the states at the center of the gas rush. In Pennsylvania, the liquid that gushes from gas wells is only partially treated for substances that could be environmentally harmful, then dumped into rivers and streams from which communities get their drinking water.

In the two years since the frenzy of activity began in the vast underground rock formation known as the Marcellus Shale, Pennsylvania has been the only state letting its waterways serve as the primary disposal place for huge amounts of wastewater produced by a drilling technique called hydraulic fracturing, or fracking. State regulators, initially caught flat-footed, tightened the rules this year for any new water treatment plants, but let existing operations continue discharging water into rivers.

At least 3.6 million barrels of the waste were sent to treatment plants that empty into rivers during the 12 months ending June 30, state records show. That's enough to cover a square mile with more than 8 1/2 inches of brine.

Researchers are still trying to figure out whether Pennsylvania's river discharges, at their current levels, are dangerous to humans or wildlife. Several studies are under way, some under federal Environmental Protection Agency auspices.

State officials, energy firms and treatment plant operators insist that with the right safeguards in place, the practice poses little or no risk to the environment or the hundreds of thousands of people, especially in Western Pennsylvania, who rely on the rivers for drinking water.

But an Associated Press review found that Pennsylvania's efforts to minimize, control and track wastewater discharges have sometimes failed.

For example:

Of roughly 6 million barrels of well liquids produced in a 12-month period The Associated Press examined, the state couldn't account for the disposal method for 1.28 million barrels, about one-fifth of the total, due to a weakness in its reporting system and incomplete filings by some energy firms.

Some public water utilities downstream from big gas wastewater treatment plants have struggled to stay under the federal maximum for contaminants known as trihalomethanes, which can cause cancer if swallowed over a long period.

Regulations that should have kept drilling wastewater out of the important Delaware River Basin, the water supply for 15 million people in four states, were circumvented for many months.

The situation in Pennsylvania is being watched carefully by regulators in other states, some of which have begun allowing some river discharges. New York also sits over the Marcellus Shale, but former Gov. David Paterson slapped a moratorium on high-volume fracking while environmental regulations are drafted.

Industry representatives insist that the wastewater from fracking has not caused serious harm anywhere in Pennsylvania, in part because it is safely diluted in the state's big rivers. But most of the largest drillers say they are taking action and abolishing river discharges anyway.

All 10 of the state's biggest drillers say they have either eliminated river discharges in the past few months, or reduced them to a small fraction of what they were a year ago. Together, those firms accounted for 80

percent of the wastewater produced in the state.

The biggest driller, Atlas Resources, which produced nearly 2.3 million barrels of wastewater in the review period, said it now recycles all water from its wells in their first 30 days of operation, when the flowback is heaviest. The rest is still sent to treatment plants, but "our ultimate goal is to have zero surface discharge of any of the water," spokesman Jeff Kupfer said.

Still, with dozens more energy firms at work in Pennsylvania's surging gas industry -- more than 2,400 wells drilled and work starting on 5,400 more -- operators of the largest of the 16 treatment plants they most commonly use say they haven't lost much business.

Records verifying industry claims of a major dropoff in wastewater discharges to rivers will not be available until midwinter, but John Hanger, secretary of Pennsylvania's Department of Environmental Protection, said he believed that the amount of drilling wastewater being recycled is now about 70 percent -- an achievement he credits to tighter state regulation pushing the industry to change its ways.

"The new rules, so far, appear to be working," he said. "If our rules were not changed, ... we would have all of it being dumped in the environment, because it is the lowest cost option," Mr. Hanger said.

But he cautioned that rivers need to be watched closely for any sign that they have degraded beyond what the new state standards allow. "This requires vigilance," he said. "Daily vigilance."

University of Pittsburgh scientist Conrad Volz, who has been studying the environmental effect of the wastewater discharges, said he had student researchers in the field this fall documenting a steady flow of brine-filled tankers arriving at plants on the Monongahela River south of Pittsburgh, and on the Blacklick Creek, 17 miles northwest of Johnstown.

"We've been taking pictures of the trucks," he said. "We know it's still happening."

He said researchers are still trying to figure out whether the wastewater discharges, at their current levels, could cause serious environmental harm.

The municipal authority that provides drinking water to Beaver Falls, 27 miles northwest of Pittsburgh, began flunking tests for trihalomethanes regularly last year, about the time a facility 18 miles upstream, Advanced Waste Services, became Pennsylvania's dominant gas wastewater treatment plant.

Trihalomethanes aren't found in drilling wastewater, but there can be a link. The waste stream often contains bromide, a salt, which reacts with chlorine disinfectants used by drinking water systems to kill microbes. That interaction creates trihalomethanes.

The EPA says people who drink water with elevated levels of trihalomethanes for many years have an increased risk of getting cancer and could also develop problems of the liver, kidney or central nervous system.

Gas drilling waste isn't the only substance that can cause elevated trihalomethane levels. Pennsylvania's multitude of acid-leaching, abandoned coal mines and other industrial sources are also a major factor in the high salt levels that lead to the problem.

Beaver Falls' treatment plant manager Jim Riggio said he doesn't know what is causing the problem, but a chemical analysis raised the possibility that it might be linked to the hundreds of thousands of barrels of partially treated gas well brine that now flow past his intakes every year.

"It all goes back to frack water," he said.

Natural gas drilling has taken off in several U.S. states in recent years because of hydraulic fracturing and horizontal drilling, techniques that unlock more methane than ever before from ancient shale sea beds buried deep underground. Fracturing involves injection of millions of gallons of water mixed with chemicals and sand deep into the rock, shattering the shale and releasing the gas trapped inside.

When the gas comes to the surface, some water returns, along with underground brine that exists naturally. It can be several times saltier than sea water and tainted with fracking chemicals, some carcinogenic if swallowed at high enough levels over time.

The water is often laden with barium, found in underground ore deposits and also used by drillers as a bit lubricant. It can cause high blood pressure if someone ingests enough of it over a long period of time.

It also is often tainted with radium, a naturally occurring radioactive substance, and strontium, a mineral

abundant in rocks, earth, coal and oil.

The amount of produced water varies from well to well, but in Pennsylvania it has been running about 1 to 2 gallons for every 10 injected into the ground.

In some Pennsylvania locales, there have been fights over whether the drilling process itself has the potential to contaminate nearby drinking water wells.

When firms recycle wastewater, they lightly treat it for particles and other substances, combine it with fresh water and reuse it in a new fracturing job.

Operators of the treatment plants handling the bulk of the waste still being discharged into Pennsylvania rivers say they can remove most toxic pollutants without much trouble, including radium and barium.

"We have been able to do it carefully. We have been able to do it safely," said Al Lander, president of Tunnelton Liquids, one of the state's busiest treatment plants. The facility, near Saltsburg, east of Pittsburgh, treats both drilling water and acid draining from abandoned mines.

"In some respects, its better than what's already in the river," he said of the water his plant discharges into the Conemaugh. "What we are putting into the river now is far cleaner, and far more eco-friendly than what was running in naturally from acid mine drainage."

What can't be removed easily, except at great expense, he said, are dissolved solids and chlorides that make the fluids so salty. Those usually don't pose a health risk to humans in low levels, said Paul Ziemkiewicz, director of the West Virginia Water Research Institute at West Virginia University in Morgantown, but high levels can foul drinking water's taste, leave a film on dishes and cause diarrhea.

In 2008, workers at two plants that draw water from the Monongahela River -- U.S. Steel Corp. in Clairton and Allegheny Energy -- noticed that salt levels had spiked so high that equipment was corroding. State regulators suspected it was related to gas drilling waste being discharged through sewage treatment facilities. But it remains unclear today how much of a role wastewater had in the salt spike. Some research has suggested that abandoned coal mines, which release far more polluted water into state rivers than gas drilling, were predominantly to blame.

Monongahela salt levels have spiked again since 2008, though relatively little drilling wastewater is being discharged into it.

In the Barnett Shale field in Texas and the Haynesville Shale in Louisiana, fracking has also ignited a gas bonanza, but the main disposal method for drilling wastewater there and in other big gas-producing states

such as West Virginia, New Mexico and Oklahoma is injection wells. Regulated by EPA, these are shafts drilled as deep as those that produce shale gas.

When Pennsylvania's gas rush began a few years ago, the state had only a few injection wells in operation. Ohio had more, but trucking wastewater there from Pennsylvania was expensive. River dumping turned out to be the easy answer.

The Environmental Protection Agency requires all polluters to get a permit before they can discharge wastewater into rivers and streams. In theory, the permits limit how dirty the effluent can be when discharged into a river and ensure that the water quality doesn't degrade.

But Pennsylvania, which administers the EPA permit program within its borders, initially lacked a clear regulatory scheme to deal with the big increases in volume created by the gas boom and wasn't initially aware that some facilities had begun handling the waste.

Since then, the state has enacted tougher water quality standards. The new rules, adopted last summer, allow existing treatment plants to continue operating with few changes, but will require new facilities to meet strict targets for dissolved solids and chlorides. Essentially, the water they discharge must be no saltier than tap water.

Operators of several of the public water utilities closest to the biggest plants say they are testing for any signs of degradation in the quality of the raw water flowing into their intakes.

Much of the drilling wastewater legally discharged in Pennsylvania eventually flows into the Allegheny or Monongahela rivers and ultimately past Pittsburgh's drinking-water plants.

Along the way, it passes more than 20 public drinking-water intakes from Emlenton and Clarion, halfway

between Pittsburgh and the New York line, to the Tri-County Joint Municipal Authority on the Monongahela in Fredericktown, 20 miles from West Virginia.

Chemists for the Pittsburgh Water and Sewer Authority have been monitoring river water and testing for salt levels and a variety of other contaminants.

At the Buffalo Township Municipal Authority in Freeport, 23 miles northeast of Pittsburgh -- which is closer to more gas wastewater treatment facilities than any other municipal water supplier in the state --plant manager Don Amadee said he was "not aware of any issues" with his water quality. But he added that, as a small supplier, the authority doesn't have much expertise in drilling waste and may not be testing for every contaminant that could be in the effluent.

Area waterworks, he said, have been communicating more about the problem and keeping in touch with chemists downstream at the bigger water suppliers.

Shifting industry practices have, at times, made it hard for the public officials and researchers monitoring the potential environmental impact of the discharges. For a time, many focused attention on the Monongahela River after drilling waste was suspected of contributing to an unusually high load of chlorides and dissolved solids on the waterway in 2008.

But state records show very little drilling waste was discharged to plants on the Monongahela in 2009 or early 2010. They show 55,257 barrels sent to treatment plants in that river's watershed over the 12-month period The AP analyzed, compared with 1.2 million barrels sent to facilities on the Conemaugh River and a tributary, the Blacklick Creek.

First published on January 4, 2011 at 12:00 am

Dominion Post editorial Friday 24 December 2010:

EDITORIAL

Lawmakers should know the drill

Legislators shaft public by failing to show up for Marcellus shale meeting

It's like someone's drilling a hole in the ground — and wants to pull everyone into it with them. Maybe that's not fair to describe the Marcellus shale drilling industry in that light. But we are all naive if we trust our legislators to keep us from blindly falling for the promise of what lies in the dark depths below our feet. Though our legislators have been working for years on regulating this industry, at times it appears they are no closer than they were at the outset. One of those times occurred last week during a legislative interim session in Charleston. A subcommittee was scheduled to vote to move a bill on Marcellus gas well regulation to the full joint Judiciary Committee. The room was packed with industry types, environmental advocates, property owners and media. Everyone was interested in a dialogue and debate, and rationality. Everyone except a dozen legislators, who failed to show up for the meeting.

The scheduled two-hour session was adjourned within minutes when it was apparent the panel lacked a quorum of state senators.

We realize there may be some good excuses why eight of the 11 state senators on the subcommittee were noshows. Admittedly, we did not ask the absent senators to explain themselves. Nor did we ask the four delegates, who were missing, their reasons, either.

But we figured they owed everyone an explanation.

More than a week later Sen. Clark Barnes, RRandolph; Sen. Dan Foster, D-Kanawha; Sen. William Laird, D-Fayette; Sen. Joseph Minard, D-Harrison; Sen. Jack Yost, D-Brooke; Sen. Frank Deem, R-Wood; Sen. Jeff Kessler (an ex officio member); and Sen. Mike Hall, RPutnam, are still mum.

Nor have we heard anything from Delegate William Wooton, D-Raleigh; Delegate Robert Schadler, R-Mineral; Delegate Patti Eagloski Schoen, R-Putnam; and Delegate Tim Manchin, D-Marion (a nonvoting member).

The ascendancy of the issue of Marcellus shale drilling is not the result of media or even the threat it poses, but of a very public, very loud debate ... outside Charleston. The big push for public regulation of Marcellus shale drilling is not about isolated damage to a stream or someone's property, either, but the collective costs we may all face. Widespread destruction of our waterways and land, despite the dividends, royalties or severance taxes, is wrong. It could cost our state dearly.

Regulated drilling will cost taxpayers less, and there's a good chance the state may come out ahead, if our legislators do what's right.

If they don't, there's a good chance we may end up in that hole, yet.

Meeting about Marcellus a bust

BY DAVID BEARD The Dominion Post

CHARLESTON — Residents, industry representatives and groups with an interest in a proposed Marcellus gas well regulation bill filled the House Judiciary chamber Tuesday afternoon.

But they left with no news, as the subcommittee handling the bill lacked a quorum and took no action. Members expected to vote to move the bill to the full joint Judiciary Committee, but not enough senators showed up.

There are 11 senators on the subcommittee, but less than half appeared.

Committee counsel answered a couple of questions, then co-chair Sen. Herb Snyder, D-Jefferson, expressed his regret for the inability to move forward.

"There's a lot of issues in this bill, and they're big policy issues," he said. "This is almost a whole new industry, and we need to get off on the right foot on this."

He asked all the interested parties to review the draft bill, as the subcommittee will try again in January to take it up before the regular session.

"I'm sure this is going to be one bill that's going to dominate some time in the legislative session."

Among the bill's provisions:

"Pooling and unitization" of wells to protect property owner interests along with water and land protections to ensure "the orderly development of this new drilling activity."

A pool is a single natural reservoir of gas, and pooling is drilling multiple horizontal wells from a centralized well pad. Unitization means an underground well system that covers more than one surface owners' property. In unitization, a mineral owner could "force" his way into a drilling unit if he can show his resource would be drained by a neighboring unit.

A mineral owner could also be forced into a unit if he doesn't want to join but his property lies between units, or he wants to join but wants better terms.

As part of the permit application, the Division of Highways must approve well road access. No later than the application filing date, the applicant must inform all property owners of its intentions.

"Notwithstanding trade secret claims," the bill reads, well operators must provide a complete list of the chemicals and compounds used in their fracking fluid. The operator must also maintain and report data on the volume of fluids used and returned to the surface.

LETTER TO EDITOR, DOMINION POST, Thursday 25 November 2010:

http://ee.dominionpost.com/Repository/ml.asp?Ref=RFBvc3QvMjAxMC8xMS8yNSNBcjAxMjAw&Mode=Gif&Locale=english-skin-custom

LETTERS TO THE EDITOR

Marcellus industry a `vast experiment'

There have been a number of articles and editorials recently in The Dominion Post concerning extraction of Marcellus natural gas. A few things seem to have been missed in the discussion.

First, a bond of $25,000 for an investment of a few million dollars per well which can be expected to pay off the investment in five years or so doesn't seem exorbitant. The $600 paid now for shallow wells would hardly pay the state to do the necessary paperwork, and allows nothing for the infrastructure services, such as roads, inspections, etc. Marcellus drilling is a good investment and good for the royalty owner, who will receive percent royalties in the high teens. Marcellus can pay for itself.

The claim the horizontal fracturing is safe is not based on previous experiment or science. This kind of thing has simply not been done before on this scale. Claims the fracture fluids will not escape and destroy ground water are "expert opinion" of the operating companies, at best, along with some wishful thinking, no doubt. Current experience contradicts their claim.

Third, what is in the fracture fluid as it goes down doesn't make any difference. It is kept in tanks and flows through hoses. What is important is what comes back up. The chemicals sent down are not inert; they react with the strata at depth. What needs to be known are the products and concentrations that return to the surface. This would require substantial research.

The solubility of substances often changes dramatically with increased temperature and pressure. When the drill cuttings and fractured rock are in contact with fracture fluids large surface area is available for solution. The material in the rock is complex, like coal. For example, the Marcellus is distinguished by its radioactivity. Mercury, barium, heavy metals — who knows what might be down there and brought back to the surface?

The fact is that the Marcellus industry is conducting a vast experiment. It is sampling a complex stratum a mile below the surface while discarding the flow back. Simultaneously it checks for leaks back to the surface and/or inadequate well construction. Presently it is without scientific oversight or much concern for anything except production.

S. **Thomas Bond, Ph.D. Jane Lew**

Biennial DEP Report Shows 80 Percent of Streams, Rivers Attaining Use Designation; Challenges Remain

Report to EPA Also Recommends Streams, Rivers for 'Impaired' Status

HARRISBURG, Pa., Dec. 23, 2010 /PRNewswire-USNewswire/ -- Although Pennsylvania has made great progress in cleaning up its rivers, streams, lakes, wetlands and other water bodies, Department of Environmental Protection Secretary John Hanger said that a new report submitted to the federal government today shows there are still challenges threatening Pennsylvania's water quality.

The report, entitled "2010 Pennsylvania Integrated Water Quality Monitoring and Assessment Report," is submitted to the U.S. Environmental Protection Agency in accordance with the Clean Water Act, which requires each state to assess water quality within its borders.

"We've made a lot of progress in the past eight years improving water quality throughout Pennsylvania," said Hanger. "We've worked with municipalities to upgrade their wastewater treatment systems; we've worked with developers to minimize runoff; we've restored streambanks, reduced erosion and planted riparian buffers; and we've worked with the agriculture industry to ensure their operations protect the quality of streams running through their farms."

The secretary noted that Pennsylvania has classified approximately 3,300 miles of streams as exceptional value and another nearly 23,000 miles as high quality, ensuring the most stringent protections. He added that earlier this year, the state enacted a mandatory 150-foot buffer from all development along these most pristine waterways.

"This work means better water for the state, which is important to our livelihood and health, obviously, but it's also important to our economy," said Hanger. "Many industries can't function if they have to rely on polluted water. And, unfortunately, there are still many threats to the state's waterways, so unless we continue to address those issues, thousands upon thousands of jobs could be in jeopardy."

According to the report, 68,320 miles of the state's 84,867 miles of streams and rivers — or 80 percent — that are assessed for aquatic life use are attaining that water use. Of the impaired miles, 9,413 require development of a total maximum daily load, or TMDL, to reduce pollutant inputs and 6,105 have an approved TMDL. An additional 65 miles are under compliance agreements and are expected to improve within a reasonable amount of time.

In terms of potable water supplies, 2,762 of the 2,883 stream miles assessed for potable water supplies attained that use, while 107 miles required a TMDL and 14 miles had an approved loading plan in place. Lake potable water supply use was assessed for 44,933 acres with 44,921 attaining that designation and 12 impaired acres requiring a TMDL.
Other findings include:

39,301 acres of the 76,483 acres of lakes that are assessed for aquatic life are attaining that use. Of the impaired acres, 5,349 require a TMDL, 11,290 have an approved TMDL, and 20,543 acres are impaired but do not require a TMDL because they are not affected by pollutants.

1,397 stream miles are assessed for recreational use, but only 701 are attaining that designation. There are 688 impaired miles requiring a TMDL and 8 miles with an approved TMDL in place.

Lake recreational use was assessed for 79,040 acres with 73,928 attaining, and 5,112 impaired acres requiring a TMDL. This does not include the state's portion of Lake Erie, which is impaired due to beach closings because of bacteria.

Of the 4,337 stream miles assessed for fish consumption, 1,907 are impaired and have consumption advisories. Of the impaired miles, 712 have TMDLs.

58, 295 acres of lake were assessed for fish consumption and 44,353 of those acres are impaired and have fish consumption advisories, while 5,483 of those impaired acres have TMDLs. The state portion of Lake Erie is not included in the totals, but a fish consumption advisory is in effect for the lake.

The report found that Pennsylvania's water bodies are facing threats from a variety of industries and are subject to many different types of pollutants. Sources of pollution include agriculture, stormwater runoff, land development, sewage treatment plants, and atmospheric conditions. Some of the pollutants of concern include

nutrients, suspended solids, silt, metals and total dissolved solids (TDS).

Hanger said pollution levels and the threats to waterways all across the state justified DEP recommending that the EPA designate certain waters as "impaired." The report included those recommendations, which meets the EPA's "303 (d) list" requirements. The EPA will decide whether to grant the impaired designation.

The Clean Water Act requires all states to submit a 303 (d) list to the EPA for approval every two years. States must identify waterways that require additional pollution controls to attain or maintain applicable water quality standards. Waters must be ranked to take into account uses and the severity of the pollution problem.

Most notable among those recommendations was the Monongahela River in western Pennsylvania, which is listed on the draft list as impaired because of concerns over sulfates — a constituent of TDS.

"We've spent a considerable amount of time the past three years assessing the quality of the Monongahela, particularly with respect to TDS and sulfates," said Hanger. "Our extensive research clearly shows TDS levels in the Mon are close to the upper limits of the safe drinking water standard. This river is stressed, and TDS must be addressed. Any further increases in TDS loads will ensure that the river becomes impaired, adversely affecting all dischargers in the watershed and those businesses and industries that rely on clean Monongahela River water."

WV/PA MONONGAHELA AREA WATERSHEDS COMPACT

FIFTH MEETING, JANUARY 5, 2010, MORGANTOWN AIRPORT ANNEX

POSITION STATEMENTS FOR DISCUSSION AND POSSIBLE ADOPTION

1. As participants of the WV/PA Monongahela Area Watersheds Compact, we recognize the urgent need for State-wide legislation to limit the impacts of Marcellus Shale natural gas development in West Virginia and Pennsylvania.

[A petition is available for individuals to sign in support of this Statement and copies of this petition are available for the use of the various conservation and watershed groups participating.]

2. The Monongahela River watershed and other watersheds in West Virginia and Pennsylvania are in a long-term crisis condition as a result of increasing levels of total dissolved solids and other effluents. Some of these streams have already been recognized as "impaired" and in need of comprehensive protection plans. The WV/PA Monongahela Area Watersheds Compact herewith requests that all the citizens of these States participate with us in contacting our Governor(s), our Legislators, and the various agencies of government to enact needed legislation, establish needed regulations and enforce the laws to conserve and protect our drinking water, our agricultural water, our industrial water, our aquatic life, as well as our recreational and commercial waterways.

3. The current "boom" in natural gas development in West Virginia and Pennsylvania is a tremendous economic benefit to our States. This "boom" can and should provide the financial resources to maintain and protect the public roads, the public and private lands, the waterways and the atmosphere throughout the States. The public health is at risk in some areas as are the drilling team workers and the supporting work force personnel. Comprehensive local, state and federal governmental bodies are called upon to address these problems. In addition to legislation and regulations, an adequate number of inspectors and enforcement staff must be assigned to these problems as soon as it is possible to do so.

4. The drilling, transportation and processing of Marcellus Shale gas in West Virginia and Pennsylvania will require the investment of billions of dollars and result in billions of dollars worth of gas being produced while generating thousands of jobs in both States. In order to ensure that the process is accomplished in an environmentally sound and safe manner that benefits the people and the economies of both WV and PA, the WV/PA Monongahela Area Watersheds Compact herewith endorses and promotes the hiring of fully-trained local workers with competitive wages and full benefits for work in Marcellus related projects. The Compact further supports apprenticeship and training programs for workers and contractors and for programs to ensure the health and safety of the workers involved.

WV PA Mon River Watershed Compact Legislative Committee Summary

12/8/10 The first meeting of WV PA Mon River Watershed Compact Legislative Committee occurs at the Morgantown Airport Conference room from 1-3:30 p.m. Discussion ensues regarding how to best outreach to our public officials and encourage them to pass legislation dealing with hydraulic fracturing and drilling. The group decides to write a letter to Judiciary Subcommittee A regarding the upcoming Interim Committee meeting on Tuesday December 14 calling for action to be taken, in the form of introducing a bill, regarding Marcellus Shale Gas Drilling/Hydraulic Well Fracturing. Once a bill is introduced to the committee, the committee can then choose to sponsor (or not sponsor) the bill, therefore allowing the issue to be introduced during the regular 2011 legislative session, where a vote would be held to either pass legislation into law, or deny legislation.

12/12/10 A letter written on behalf of Compact's Legislative Committee is *delivered in person* via one of the committee members to WV Senators and Delegates. The letter, addressed to WV Senators and Delegates, states that WV-PA Mon River Watershed Compact Legislative Committee supports the proposed legislation regarding constructing of natural gas wells using hydraulic fracturing and horizontal drilling and *urges* them to introduce the bill via Committee during the upcoming 2011 WV Legislative session, but more specifically, to introduce the bill on Dec. 14 during the interim session meeting of Judiciary Sub Committee A.

12/14/10 Judiciary Sub Committee A meets; and on the agenda are staff presentations to draft legislation relating to:

a. Establishing a prohibition on construction for underground wells and providing tax credit for developing alternative technologies and;
b. Establishing a new regulatory programs for gas wells utilizing horizontal drilling and hydraulic fracturing

However, lack of a quorum—only 3 of the 10 voting Senators were present at this meeting—leaves the bill still sitting on the committees agenda, unable to get the bill OUT of committee for all to vote upon. **Something to think about:** When Senators either leave during a committee meeting, or choose not to attend a meeting, their perceived intention to destroy a quorum is a tactic *both to kill a bill and also to avoid having a registered vote on an issue,* thus avoiding displeasure on either side of the isle.

A letter addressed to Governor Tomblin written by Duane Nichols and Barry Pallay on behalf of the entire WV PA Mon River Watershed Compact, was sent to Gov. Tomblin, the deputy director, and Josh Austin (staffer) requesting a meeting to discuss legislation to protect WVs infrastructure, water, and air during this crisis of unregulated Marcellus shale gas drilling in the state. In addition to being very candid about a crisis existing in WV, a summary of the 14 resolutions passed via the Compact were also sent for review by Governor Tomblin.

12/15-12/28 Members of the WV PA Mon River Compact Legislative Committee email back and fourth, furiously trying to understand what transpired during the interim committee meeting. After regrouping, Deb Fulton, as an ordinary citizen, writes an op/ed piece published both by the Dominion Post and Charleston Gazette on December 26 stating her frustration with our legs, who though voted into power, don't seem to be taking their job seriously enough(by not showing up for an interim subcommittee meeting). Talk of creating a similar letter written on behalf of the WV PA Compact Leg. Committee, to be disseminated to the local newspapers of those Senators who did not attend the Dec. 14 subcommittee meeting was discussed; and continues to be worked upon.

1/3/11 A meeting is held in Grafton from 1-3:30 via the Compact's leg committee to formulate a new game plan. Governor Tomblin is "aware" of our concerns and issues, though has yet to set a date for us to visit with him in person. Currently, we are working to draft another letter to Tomblin to request a meeting. The WV PA Compact Committee came up with the following action plan during the Jan. 3 meeting:

1. Recommend all watershed groups write letters to their legislator
2. Recommend face to face meetings in Charleston via representatives' of the

Compact

3. Garner (written/public) support from Southern WV watersheds and alike organizations
4. Create petitions for the general public to sign (watershed groups and the like)
5. Recommend all watershed groups send a Letter to the Editor to their local newspaper to inform the public about water quality issues and how important it is that legislation is passed to protect WV's water, health, and land during the upcoming 2011 WV Legislative session/ CALL TO ACTION!

RESOLUTIONS ADOPTED BY

WV/PA MONONGAHELA AREA WATERSHEDS COMPACT

[AUGUST 17, SEPTEMBER 22, OCTOBER 26, & DECEMBER 3, 2010]

We recognize the value of mineral extraction, including coal, oil, gas and water, in the Monongahela basin and adjoining areas, when conducted responsibly. But, the current and projected levels of Marcellus shale drilling for natural gas production and the manner in which it is being conducted poses very serious problems for most all of West Virginia and Pennsylvania. Some 28 watershed and conservation groups have participated in the development of these resolutions. Contacts are appended, and more information is available at www.uppermon.org.

1. PROTECT OUR WATER RESOURCES. The WV and PA DEPs must enact enforceable standards and rules/regulations with adequate penalties to protect regional water resources from potential hazards caused by mineral extraction and oil and gas drilling, including but not limited to sedimentation, water withdrawal, organic and inorganic chemicals and thermal effects.

2. HIRE NEEDED INSPECTORS. The WV and PA DEPs must hire an additional and adequate number of inspectors and other staff to effectively monitor and enforce regulations governing mining and the oil and gas well industries.

3. REQUIRE BLOWBACK CONTAINMENT. Closed-loop systems for containment of blowback water should be required at all new construction gas well drilling sites rather than an open pit system of containment.

4. LIMITATIONS ON OPEN PITS. If open pits exist or are absolutely necessary, these should provide sufficient natural or geosynthetic protection to both contain the produced water and to prevent its percolation into the soil or groundwater beneath the pit should the containment liner become ruptured. Also, dam safety statutes should apply to ensure that containment pits are properly sited and constructed, and that emergency contact/notification procedures are implemented when an accident involving the release of produced water occurs.

5. REGULATION OF WATER WITHDRAWALS. The withdrawal of water from any source for high volume applications as Marcellus Shale drilling, fracking or similar operations must be regulated and require permits from an appropriate State agency.

6. STATE OVERVIEW OF EXTRACTIVE INDUSTRIES. A state-wide review of oil and gas drilling, fracking, production and transmission is urgently needed, one that is directed from the Office of the Governor. And, a Special Session of the WV Legislature would appear to be called for to address these problems and issues that include the protection of our water, air and land as well as our roads, our scenic values and quality of life. Each extractive activity should be responsible for the cost of all the environmental and socio-economic impacts resulting from its activities, taking into account both short and long-term impacts.

7. FEDERAL GUIDANCE ON EXTRACTIVE WASTES. The US Environmental Protection Agency in conjunction with the US Army Corps of Engineers, the US Geological Survey and other federal agencies should prepare a "guidance document" and respond quickly to the water and aqueous waste problems of the extractive industries now affecting New York, Pennsylvania, West Virginia and other States.

8. LONG RANGE FEDERAL PLANNING. An Interagency Task Force study within the United States government is needed to examine the existing problems posed by the extractive industries in the United States. This would aim to establish a viable long range Planning Office that can anticipate many of the problems such as those posed by Marcellus Shale gas exploration and production. The focus would be on environment impacts and socio-economic dislocations such as public infrastructure damages and domestic disturbance problems.

9. MONONGAHELA RIVER CRISIS EXISTS. A crisis now exists in the Monongahela River basin represented by the high total dissolved solids (TDS) content of this River and many of its tributaries. Therefore, we call upon state and federal government officials to recognize the crisis at hand in the face of the current boom in mining and drilling operations in this and adjoining watersheds and to respond with timely actions to meet this crisis as soon as is possible.

10. REGIONAL STUDIES OF WATER RESOURCES. A comprehensive search is proposed for alternative supplies of raw water for industrial usage, to include a survey of mine pool water sources that could potentially benefit coal mining, oil well recovery and natural gas drilling operations. It is imperative that this search take into account the related recent studies of the existing mine pools, that environmental impacts be fully analyzed, that a record-keeping system be devised to track the withdrawals and usage of such groundwater supplies, and that a comprehensive management plan be implemented for the long-term utilization of groundwater supplies.

11. REGIONAL WATER QUALITY MONITORING. The continuous monitoring of our surface and subsurface water supplies is necessary to ensure that the quality and quantity are adequate to meet residential, commercial, industrial, agricultural and recreational uses. Such a monitoring system will facilitate a quick response for unacceptable water quality detection and

identify the source of the offending pollution.

12. ENDORSEMENT OF WATER QUALITY STANDARDS. The WV/PA Monongahela Area Watersheds Compact herewith endorses and promotes the adoption and implementation of the new Water Quality Standards of the WV Department of Environmental Protection including a 500 mg/L in-stream standard for all the streams of West Virginia. This in-stream standard is necessary for the protection of public drinking water supplies in WV and PA, and to protect water quality for industrial uses and for wildlife survival.

13. AIR POLLUTION MONITORING NEEDED. The States and Federal agencies should respond to the air pollution hazards of the extractive industries by instituting both discrete and continuous monitoring in the proximity of known sources. . The pollutants include heavy particulates, fine particulates (e.g. PM-2.5), and diverse chemical substances and mixtures as gases, vapors, condensates, and other liquid droplets. Many of these materials are hazardous in the atmosphere and most are heavier than air. These substances can collect in valleys, they can move in clouds or as packets near the ground.

14. PROTECTION OF PUBLIC & WORKER HEALTH. Existing standards for protection of the public health as well as for the workplace should be reviewed both at the State and Federal level to ensure the public and the workplace health and safety are protected for both short and long term exposures involving natural gas exploration and other related or similar activities. Where standards are not adequate or non-existent they should be revised or new ones developed and promulgated as appropriate.

15. PROTECTION OF REGIONAL STREAMS. The storage of waste water or waters with high total dissolved solids (TDS) or other polluted waters, for the purpose of subsequent release into public waterways without treatment (at times of high flowrates, for example) should be discouraged, if not prohibited. Such storage and subsequent release of polluted waters could be justified if a firm schedule for the establishment of treatment facilities was established.

16. PROTECTION OF MINE POOL WATERS. The water currently existing in mine pools or other such reservoirs should be considered a potential (natural) resource. As such, the quality of such waters should be monitored, favorable withdrawal locations identified, and limits be place on any further contamination of these waters.

»»»»»»»»»»»»»»»»»»»»»»>>> >>> »»»»»»> >>>

NOTE: These Resolutions were adopted by consensus at the First, Second, Third and Fourth WV-PA Watershed Group Meetings on August 17, 2010, September 22, 2010, October 26, 2010, and December 3, 2010 at the Morgantown Airport. These meetings were organized and conducted by the representatives of various watershed and conservation groups in cooperation with the Upper Monongahela River Association (www.uppermon.org).

CONTACTS: MONONGAHELA AREA WATERSHEDS COMPACT: Barry G. Pallay, Co-Chair (bpallay@comcast.net) or Duane G. Nichols, Co-Chair (duane330@aol.com), 330 Dream Catcher Circle, Morgantown, WV 26508. T