

COMMONWEALTH OF PENNSYLVANIA
HOUSE OF REPRESENTATIVES

ENVIRONMENTAL RESOURCES AND ENERGY
COMMITTEE HEARING

STATE CAPITOL
IRVIS OFFICE BUILDING
ROOM G-50
HARRISBURG, PENNSYLVANIA

TUESDAY, SEPTEMBER 30, 2008
1:30 P.M.

PRESENTATION ON
THE MARCELLUS SHALE

BEFORE:

HONORABLE CAMILLE "BUD" GEORGE, MAJORITY CHAIRMAN
HONORABLE TIM SEIP
HONORABLE GREG VITALI
HONORABLE JAMES WANSACZ
HONORABLE SCOTT E. HUTCHINSON, MINORITY CHAIRMAN
HONORABLE GARTH D. EVERETT
HONORABLE RON MILLER
HONORABLE KATHY L. RAPP
HONORABLE CHRIS ROSS
HONORABLE RICHARD R. STEVENSON

IN ATTENDANCE:

HONORABLE SANDRA J. MAJOR

* * * * *

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ALSO PRESENT:
E. THOMAS KUHN
MAJORITY EXECUTIVE DIRECTOR
LEEANN H. MURRAY
MAJORITY LEGAL COUNSEL
JOSEPH A. DEKLINSKI
MINORITY EXECUTIVE DIRECTOR

DEBRA B. MILLER
REPORTER

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P R O C E E D I N G S

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CHAIRMAN GEORGE: The hour of 1:30 having arrived, the committee will come to order.

I would like to introduce the members of the committee.

Next to the young lady on the far right is Representative Seip. I will get to you, ma'am.

Then Representative Vitali.

Then the gentleman, Representative Hutchinson.

Representative Everett.

Representative Stevenson.

And Representative Miller.

Representative Ross just came in.

Representative Major is an invited Representative. We welcome her.

We are here today to discuss the Marcellus Shale explorations. While Pennsylvania is no stranger to gas exploration and Marcellus Shale deposits present new challenges to our current system of drilling, the size and magnitude of it is to be examined and understood so that we can ensure that industry as well as the environment is protected.

1 To better understand the mechanisms
2 involving the entire drilling process, along with
3 the potential environmental concerns posed by this
4 new water-intensive drilling, we have invited
5 various individuals here to testify on this day
6 before the Environmental Resources and Energy
7 Committee.

8 By becoming somewhat educated about the
9 Marcellus Shale and the fracking used to extract this
10 valuable resource, I believe the Legislature will
11 come to understand those areas where we will best
12 be able to serve the people of this fine
13 Commonwealth.

14 I turn to my cochairman for opening remarks,
15 if you will, Mr. Hutchinson.

16 REPRESENTATIVE HUTCHINSON: Thank you,
17 Chairman George.

18 I also want to thank you for holding this
19 hearing on what I believe is an exciting opportunity
20 for the State of Pennsylvania, both economically,
21 because of the potential creation of many jobs in
22 wide-ranging areas of the Commonwealth because of
23 this newly accessible resource, as well as an
24 opportunity to make our State more energy
25 independent.

1 And I think with both of those aspects, it
2 is important that we do our best to promote the use
3 of this homegrown energy and to move forward in a
4 timely manner in making Pennsylvania energy
5 independent and economically stronger, and I thank
6 you for holding this hearing today.

7 CHAIRMAN GEORGE: I thank the gentleman.

8 We have a full agenda on this afternoon.
9 Consequently, it is imperative that those presenting
10 their testimony keep their presentation within the
11 allotted time. Your complete testimony should be
12 submitted for the record.

13 Up first is the gentleman, John Hanger,
14 recently nominated by Governor Rendell as Secretary
15 of the Pennsylvania Department of Environmental
16 Protection.

17 Welcome, Mr. Secretary.

18 ACTING SECRETARY HANGER: Thank you,
19 Mr. Chairman.

20 One preliminary question: What is the
21 allotted time?

22 CHAIRMAN GEORGE: When you hear me holler
23 louder than you, then you will know that you are over
24 your time.

25 ACTING SECRETARY HANGER: I have prepared

1 brilliant testimony, but it is somewhat lengthy, so I
2 may get hollered at.

3 CHAIRMAN GEORGE: Before you start, may I
4 introduce the lady, Representative Kathy Rapp.

5 ACTING SECRETARY HANGER: Thank you again,
6 Mr. Chairman, and also Chairman Hutchinson and
7 members of the committee, as well as Representative
8 Major. It is a pleasure to be here.

9 With me is Ron Gilius, who is the Director
10 of the Bureau of Oil and Gas Management.

11 We thank you for this opportunity to
12 testify. It is certainly an important topic, and
13 it is one that deserves some serious time and
14 attention.

15 The Marcellus Shale is a rock formation that
16 underlies much of Pennsylvania and portions of
17 New York and West Virginia at a depth of 5,000 to
18 8,000 feet.

19 It is estimated to hold as much as
20 150 trillion cubic feet of recoverable natural gas.
21 To put this in -- that is the Pennsylvania portion, I
22 should add. To put this number in perspective, the
23 United States consumes 23 trillion cubic feet of
24 natural gas a year.

25 While it has long been considered

1 prohibitive expensive to access the natural gas
2 contained within the Marcellus Shale, recent advances
3 in drilling technology and rising natural gas prices
4 have attracted new interest in this previously
5 largely untapped formation.

6 Developing these resources not only will
7 build on our continuing efforts to develop more
8 homegrown energy resources that are cleaner and
9 better for the environment, but also could lead to
10 billions of dollars in new economic investment for
11 Pennsylvania's communities as well as tens of
12 thousands of new jobs.

13 As an example of what may be in store for
14 the Commonwealth, I offer the case of the Barnett
15 Shale in Texas. Since development of that formation
16 began in 2001, nearly 84,000 new jobs have been
17 created, and the annual output of the region's
18 economy increased by \$8.2 billion.

19 Here in Pennsylvania, Penn State University
20 estimates the economic value of the Marcellus Shale
21 formation at \$1 trillion, and that for every
22 \$1 billion in royalty income paid to Pennsylvania's
23 residents, nearly 8,000 new jobs will be created each
24 year over the next 3 years.

25 If we apply the mandated minimum royalty

1 percentage of 12.5 percent to the estimated value of
2 the natural gas the formation contains,
3 Pennsylvania's landowners could receive as much as
4 \$125 billion in royalty payments. That creates the
5 potential of tens of thousands of new jobs.

6 The economic potential contained in the
7 Marcellus Shale could be a boon to Pennsylvania
8 communities, particularly regions in the
9 north-central and northeastern parts of the State
10 that have not traditionally seen much gas well
11 drilling development.

12 Earlier this month, DEP issued 83 drilling
13 permits for exploration in the Marcellus Shale, or I
14 should add another 83 permits for drilling in the
15 Marcellus Shale.

16 As more developers converge on Pennsylvania
17 and discussions over leasing and purchasing mineral
18 rights become more common, there has been
19 considerable interest from the media and the general
20 public.

21 The Department of Environmental Protection
22 has fielded many calls over the past year with
23 questions from landowners, farmers, local
24 governments, environmental organizations, and
25 sportsmen's groups.

1 The questions have ranged from how we intend
2 to facilitate the tremendous economic opportunities
3 before us to how to handle land leases to how the
4 department plans to protect our natural resources.

5 Each drilling operation in the Marcellus
6 Shale will require substantial volumes of water, much
7 more than conventional drilling operations. Ensuring
8 that water withdrawals do not threaten Pennsylvania's
9 environment or ecosystems is one of the department's
10 primary concerns.

11 With increased interest and activity in oil
12 and gas drilling throughout the State, Pennsylvania
13 will indeed experience a boost to its local
14 economies, but we want to make sure that our
15 environment and natural resources are not sacrificed
16 in the process.

17 While the department is committed to
18 providing the industry with prompt reviews and timely
19 decisions on all permit applications that meet our
20 regulations, we are mindful of the consequences these
21 operations could have on the State's natural
22 resources and are working to ensure that both gas can
23 be produced and water protected.

24 Below, I will address some of the more
25 often-asked questions and issues surrounding this

1 activity in greater detail.

2 More than 350,000 oil and gas wells have
3 been drilled in Pennsylvania since the first
4 commercial oil well was developed in 1859. The
5 Commonwealth first began regulating drilling in
6 1956.

7 Oil and gas exploration and production is
8 regulated under all or part of the State's oil and
9 gas laws and the environmental protection laws. That
10 includes the Clean Streams Law, the Dam Safety and
11 Encroachments Act, the Solid Waste Management Act,
12 and others.

13 The Department of Environmental Protection
14 is responsible for reviewing and issuing well
15 permits, inspecting drilling operations, and
16 responding to complaints related to water supplies
17 and other water-quality problems.

18 Thirty-six DEP inspectors and water-quality
19 specialists conduct routine and unannounced
20 inspections of drilling sites and wells statewide.

21 Other agencies directly involved in
22 monitoring the effects of drilling on water quality
23 and aquatic life include the Pennsylvania Fish and
24 Boat Commission, the Susquehanna and Delaware River
25 Basin Commissions, the U.S. Fish and Wildlife

1 Service, and Pennsylvania's county conservation
2 districts.

3 In May and June, routine DEP inspections
4 uncovered violations at Marcellus Shale drilling
5 operations, including poorly constructed water
6 impoundments, inadequate erosion and sediment
7 controls, improper waste and fluid disposal, and
8 unregistered and unapproved water withdrawals from
9 streams.

10 The violations threatened the State's water
11 resources. Consequently, DEP took action on May 30
12 by ordering the drilling companies to cease
13 withdrawal and use of water on two sites until
14 complete water management plans were submitted to the
15 department and approved.

16 The plans were approved on July 9, and the
17 sites have resumed operation, although each remains
18 under order to maintain records of water use and
19 disposal volumes at the sites.

20 In June of this year, DEP, along with the
21 Department of Conservation and Natural Resources, the
22 Fish and Boat Commission, and the Susquehanna and
23 Delaware River Basin Commissions, hosted a summit
24 with current and prospective gas exploration
25 companies to review permit procedures and expected

1 environmental public health and safety outcomes,
2 including the requirements for water management
3 plans.

4 More than 300 representatives from across
5 the industry and across the nation attended this
6 summit at the Farm Show Complex. Those in attendance
7 expressed their desire to work within the framework
8 of our environmental regulations and asked that we
9 present them with a clearly defined statewide
10 permitting process.

11 Since then, permitting staff from DEP's
12 regional office have met one on one with each
13 drilling company that had received permits to explore
14 the Marcellus Shale to review development plans and
15 appropriate regulations.

16 We have also worked with the industry and
17 the Susquehanna and Delaware River Basin Commissions
18 to develop an amended permitting process that creates
19 consistent rules for water usage and disposal in all
20 areas of the State to ensure that water quality is
21 not threatened by drilling operations.

22 Pennsylvania has witnessed an increase in
23 gas production each year since 2001 due to increased
24 drilling activity throughout the State. An
25 additional 35 billion cubic feet of gas was produced

1 in 2006 when compared to 2001.

2 The department has seen a steady increase in
3 oil and gas exploration permits over the past several
4 years. In 2004, more than 4,500 permits were issued,
5 and this year, we expect 7,200 permits will be issued
6 statewide.

7 Of the permits issued to date, 267 permits
8 have been issued to drill exclusively in the
9 Marcellus Shale formation. The department has issued
10 528 Marcellus Shale permits since development of the
11 formation began in 2005.

12 Drilling activities have taken place at
13 277 well sites. And I was told yesterday that there
14 are 20 drilling operations underway just recently, in
15 essentially the last 2 weeks, in 10 counties on the
16 northern tier that probably are not reflected in that
17 number.

18 Extracting natural gas from the Marcellus
19 Shale formation requires horizontal drilling and a
20 process known as hydraulic fracturing that uses far
21 greater amounts of water than traditional natural gas
22 exploration.

23 Drillers pump large amounts of water,
24 sometimes on the magnitude of a few million gallons,
25 mixed with sand and other chemical additives into the

1 shale formation under high pressure to fracture the
2 shale around the well, which allows the natural gas
3 to flow freely.

4 Once the hydraulic fracturing process is
5 completed, the used water, often referred to as "frac
6 fluid," must be treated to remove chemicals and
7 minerals.

8 During the fracing operation, these fluids
9 must be contained in impermeable tanks or
10 impoundments and disposed of at an approved treatment
11 facility.

12 Drilling companies must identify where they
13 plan to obtain and store the water used in their
14 drilling operations and where the used frac water is
15 to be stored and treated as part of the drilling
16 permit application process.

17 When applying for a permit, drillers must
18 specify the sources and location of fresh water and
19 the anticipated impacts of water withdrawals on water
20 resources and obtain approval from the appropriate
21 river basin commission.

22 DEP has been working in cooperation with the
23 Susquehanna and Delaware River Basin Commissions to
24 create a consistent process for evaluating water
25 usage and disposal in all areas of the State, because

1 this type of drilling requires significant amounts of
2 water.

3 In the course of reviewing any gas well
4 permit, the department needs to have a thorough
5 understanding of proposed water withdrawals as well
6 as disposal and treatment plans.

7 An Application Addendum was created and
8 designed to assist applicants in completing a water
9 management plan associated with the development of
10 the Marcellus Shale Gas Wells.

11 Under the application process, gas well
12 operators seeking to extract resources from the
13 Marcellus Shale formation must provide the following
14 information to DEP when applying for a permit to
15 drill a gas well: the type of well with proposed
16 location; acreage to be disturbed by drilling and
17 operations; sources and locations of water to be used
18 in the drilling process, the impacts of drilling on
19 water resources, and proof that the water withdrawals
20 have been approved by the appropriate river basin
21 commission; locations of treatment facilities where
22 drilling and fracing fluids will be taken for
23 treatment and disposal; and size and locations of
24 proposed dams and water impoundments.

25 Depending on various site considerations and

1 timing issues, applicants may propose to obtain the
2 water for the fracing operations from a public water
3 supplier or propose a direct withdrawal from a stream
4 or groundwater well. That Application Addendum has
5 been designed to accommodate all these options.

6 The gas well permit application and
7 Application Addendum are submitted to the appropriate
8 Oil and Gas Program office. The Oil and Gas Program
9 will then forward the Application Addendum to the
10 appropriate Watershed Program.

11 The overall intent of this addendum is to
12 utilize a consistent framework Commonwealth-wide when
13 evaluating water usage. This effort will help to
14 protect water resources in the Ohio and Potomac and
15 Great Lakes Basins where no Federal interstate
16 compact commission exists. This will also help in
17 the Delaware Basin where the policy is less
18 protective than the Susquehanna River Basin
19 Commission.

20 Erosion and sediment control plan
21 requirements under State law apply to any
22 earth-disturbance activities, including oil and gas
23 drilling.

24 For oil and gas well activity on less than
25 5 acres, an erosion and sediment control plan must

1 contain best management practices designed to
2 minimize point source discharges to surface waters,
3 preserve the integrity of stream channels, and
4 protect the physical, biological, and chemical
5 qualities of the receiving waterway.

6 For oil and gas earth-disturbance activities
7 that disturb 5 or more acres at one time, a notice of
8 intent authorization for the erosion and sediment
9 control general permit must be completed.

10 The erosion and sediment control plan or the
11 notice of intent must be submitted to the DEP or an
12 authorized county conservation district for review
13 and approval.

14 The oil and gas industry has questioned the
15 legality of this State permit and has complained that
16 the process is difficult to work with, and I am
17 personally committed to working with them to see what
18 changes can be made where appropriate.

19 The Energy Policy Act of 2005 exempted oil
20 and gas activities from the requirements of the NPDES
21 Stormwater Construction Permit. However, the EPA
22 acknowledged that this does not prohibit individual
23 States from regulating oil and gas earth-disturbance
24 activities under State authority.

25 In response to the EPA's decision, DEP has

1 used its authority under the Clean Streams Law and
2 Pennsylvania's Oil and Gas Act to regulate erosion,
3 sediment, and stormwater runoff associated with oil
4 and gas activities.

5 Additionally, over the past summer, staff
6 from DEP's Bureau of Oil and Gas Management has
7 conducted 12 training sessions on the use of best
8 management practices and State permits for industry,
9 county conservation districts, and the DEP regional
10 office staff. Three more training sessions are
11 scheduled for the coming months.

12 Drilling companies involved in the natural
13 gas wells in the Marcellus Shale must disclose the
14 names of all chemicals to be stored and used at a
15 drilling site in the pollution prevention and
16 contingency plan, as well as response plans in case
17 of an accidental release.

18 These plans contain copies of material
19 safety data sheets along with emergency contact
20 information and training protocol for employees. The
21 information is on file with DEP and is available to
22 landowners, local governments, and emergency
23 responders.

24 Pennsylvania law requires drillers to
25 install steel casing and cement the casing through

1 all fresh water aquifers before drilling through
2 deeper zones known to contain oil or gas.

3 This casing protects groundwater by
4 isolating the borehole from the groundwater system.
5 It further keeps water from the surface and other
6 geological strata from mixing with and contaminating
7 groundwater.

8 Disrupting water quality or flow in water
9 wells from drilling activities does occur in some
10 cases, and this disruption is often temporary.
11 However, if problems persist, State law requires
12 drilling operators to replace or restore water
13 supplies affected by drilling.

14 Landowners should contact the drilling
15 company if problems with water wells develop.
16 Landowners who are not satisfied with the company's
17 response should contact the nearest DEP regional
18 office. DEP will investigate complaints within
19 10 days and issue orders as necessary to replace or
20 restore water supplies.

21 The mineral lease is a private contractual
22 agreement between the owner of the minerals and the
23 producer; i.e., a drilling or mining company.

24 County courts hear suits for property damage
25 or disputed lease matters. The Commonwealth does not

1 regulate mineral leases, audit payments, or read or
2 calibrate meters.

3 DEP recommends that landowners who are
4 contacted by companies wanting to purchase or lease
5 mineral rights consult an attorney who is familiar
6 with oil and gas law before signing any documents.
7 Contact the local Bar Association for assistance
8 finding an attorney in your area.

9 Under Pennsylvania law, there is no eminent
10 domain granted for natural gas collection pipelines
11 associated with the well. Drilling companies must
12 negotiate with landowners for the rights to build
13 gas lines on their property. This right may be
14 included as part of a lease agreement.

15 Interstate transmission pipelines are
16 regulated by the Federal Energy Regulatory
17 Commission, and indeed the FERC does have eminent
18 domain power.

19 DEP issues permits for earth-disturbances
20 and to protect wetlands and streams but does not have
21 the authority to control the route or location of
22 these interstate pipelines.

23 According to the U.S. EPA, at power plants,
24 the burning of natural gas produces nitrogen oxides
25 and carbon dioxide but in lower quantities than

1 burning coal or oil. Methane, a primary component of
2 natural gas and a greenhouse gas, can also be emitted
3 into the air when natural gas is not burned
4 completely.

5 Similarly, methane can be emitted as the
6 result of leaks and losses during transportation.
7 Emissions of sulfur dioxide and mercury compounds
8 from burning natural gas are negligible.

9 The average emission rates in the United
10 States from natural gas-fired generation, and there
11 are some numbers there which I am not going to read,
12 you can see for yourself, but the point is that
13 natural gas generation is typically quite a bit
14 cleaner than most pollutants, in the case of most
15 pollutants than coal-fired or oil-fired
16 generation.

17 Wells cannot be drilled within 200 feet of
18 structures or within 100 feet of streams and
19 wetlands. The locations of wells, access roads, and
20 related drilling operations are usually negotiated as
21 part of the lease agreement.

22 If the proposed location of a pipeline or
23 access road must cross a stream or wetland, an
24 encroachment permit must be obtained from the
25 department which includes U.S. Army Corps of

1 Engineers' approval.

2 Drilling operators must restore the land
3 once drilling activities are completed. Once a well
4 is no longer producing, the operator must plug the
5 well, then restore the site within 9 months.

6 A permit applicant may propose to construct
7 a fresh water impoundment to store this water or may
8 propose to store the water in many individual
9 22,000-gallon tanks for the drilling process.

10 Whether the source of water is from a public
11 water supplier, a large river, or a small stream,
12 there may be considerable truck traffic between the
13 source of the water and the gas well site.

14 Maintenance and repair of municipal and
15 State roads is an important concern in rural areas.
16 In many cases, these local municipal roads will need
17 to be repaired after they are used to access well
18 sites. The Pennsylvania Department of Transportation
19 has a process to assist municipalities to survey
20 and evaluate roads and establish mitigation
21 procedures.

22 Conclusion.

23 There is no question that Marcellus Shale
24 holds tremendous potential for Pennsylvania citizens,
25 communities, and the economy if managed properly.

1 Governor Rendell recognizes this potential
2 and has made facilitating this development in a
3 manner that is environmentally sound one of his top
4 priorities.

5 Given that direction, the Department of
6 Environmental Protection is working diligently to
7 review permits expeditiously and render a decision in
8 a timely fashion once it has been thoroughly
9 evaluated.

10 As I mentioned earlier, although the vast
11 majority of activities surrounding the Marcellus
12 Shale to date has involved the purchase or leasing of
13 mineral rights, drilling activity has begun, and even
14 some wells are actually producing gas.

15 If the drilling companies find natural gas
16 in the anticipated quantities, we can expect
17 exploration and drilling activity to increase
18 dramatically. I believe the department, along with
19 its partner agencies, is prepared to meet this
20 challenge.

21 Thank you, Mr. Chairman and members of the
22 committee.

23 CHAIRMAN GEORGE: I thank the gentleman.

24 Let me say it first: I was being somewhat
25 facetious, but I feel we ought to allow a credible

1 amount of time for all testimony today so we can go
2 out of here at least with some vision of what still
3 has to be done legislatively.

4 I wish to introduce the gentleman from
5 Lackawanna, Representative Wansacz, who has now
6 presented himself to the committee.

7 And I will, since you are willing to answer
8 some interrogation, I will turn to the -- I intend to
9 -- can I take you in order?

10 I will recognize you first, Mr. Seip,
11 because you called in, then I will call on the dear
12 lady.

13 Go ahead, Mr. Seip.

14 REPRESENTATIVE SEIP: Thank you,
15 Mr. Chairman.

16 I thank you for your testimony,
17 Mr. Secretary. Thanks for being here today.

18 ACTING SECRETARY HANGER: Thank you.

19 REPRESENTATIVE SEIP: Just two quick
20 questions, Mr. Chairman. You'll appreciate my
21 brevity.

22 Just one on permitting and one on the
23 fracing operations.

24 In regard to permitting, do you feel that
25 you have enough staff currently to handle this

1 process, and what would you anticipate the length of
2 the permit applications to average?

3 ACTING SECRETARY HANGER: To answer your
4 first question, the answer is, unfortunately no. As
5 you saw, the volume of permit applications has
6 increased from, in a short period of time, 4,500 to
7 7,200. Actually, just a few short years before that,
8 we were at 1,500 permits a year. So we have
9 essentially gone from 1,500 permits a year to over
10 7,000.

11 I would also point out that the fee for
12 applying for a permit is still \$100. That was the
13 original fee set in the early 1980s, and it has not
14 been increased since then.

15 We do not have the staffing to properly
16 implement all of the responsibilities of the
17 department. I have informed the Governor of that and
18 have, with the help of the DEP staff, submitted to
19 him a budget proposal that we hope will be a part of
20 his budget. This, of course, would take effect in
21 2009, on July 1, 2009.

22 What was your second question?

23 REPRESENTATIVE SEIP: In regard to the
24 fracing operations.

25 Unfortunately, my district does seem to have

1 a surplus of mine acid drainage, and I am just
2 wondering if it would be possible to use that in
3 these fracing operations and then hopefully restore
4 water back to the environment that would be in much
5 better condition than the mine acid drainage that we
6 started with.

7 ACTING SECRETARY HANGER: That is one of our
8 hopes, too. I know the industry is interested in all
9 sources of water, and I want to thank the industry
10 for exploring that possibility.

11 I do not know how practical it is going to
12 be. I would imagine, as we move forward with this
13 activity, that in some cases the water used for
14 fracing could well come from an acid mine pool of
15 some sort.

16 So we have an opportunity in looking to
17 encourage it, and I am also glad to say it is
18 my understanding, at least in talking with
19 industry, that they are also interested in that
20 possibility.

21 REPRESENTATIVE SEIP: Thank you for your
22 answers today.

23 Thank you, Mr. Chairman.

24 CHAIRMAN GEORGE: I thank the gentleman.

25 The gentelady, Miss Major.

1 REPRESENTATIVE MAJOR: Thank you,
2 Chairman George.

3 Good afternoon, Secretary Hanger. I
4 sincerely appreciate your being here today to provide
5 testimony.

6 As Chairman George indicated, I am not a
7 member of the Environmental Resources Committee but
8 am very interested as a member of the House of
9 Representatives, because the Marcellus Shale indeed
10 does exist in all three of the counties of
11 Susquehanna, Wyoming, and Wayne that I indeed
12 represent. So it is a very active process
13 ongoing.

14 One of the big concerns that I hear from my
15 constituents is the issue of their wells, the water
16 that we obtain, because as you know, in the rural
17 areas, wells are very prominent in how we achieve our
18 drinking water.

19 And I am just wondering, does the department
20 anticipate that there should be or needs to be any
21 additional regulations that they need to impose to
22 protect our water resources? Specifically, our well
23 water, drinking water.

24 ACTING SECRETARY HANGER: Well, you are
25 right to emphasis the well-water issue.

1 Approximately, I believe close to 25 percent
2 of Pennsylvanians actually receive their water from a
3 well. And the department is mindful of the fact that
4 water is probably our most precious resource, even
5 more precious than natural gas, and that so many of
6 us rely on water for so many different things. And
7 we take it for granted, and, of course, when you lose
8 it, then you really realize the value of it.

9 The department, working with the Delaware
10 River Basin Commission and the Susquehanna River
11 Basin Commission, is carefully examining the issue of
12 water withdrawals, which is obviously one issue, and
13 the Delaware River Basin Commission and the
14 Susquehanna River Basin Commission have the authority
15 to look at groundwater as well as surface water and
16 withdrawals from groundwater.

17 At this point, as to that issue of
18 withdrawal of water, at least within the Delaware
19 River Basin Commission and the Susquehanna River
20 Basin Commission, I believe all three counties are in
21 the latter, so it is covered under the Susquehanna
22 River Basin Commission. I hope I got that right, but
23 I think you are covered under that.

24 REPRESENTATIVE MAJOR: They are actually in
25 both.

1 ACTING SECRETARY HANGER: You are both.
2 Okay. You are in that part of Pennsylvania where you
3 could just be in both.

4 It is my sense today that for those
5 counties, the withdrawal issue is well regulated.
6 And once the drilling process occurs, then there are
7 instances already that have come to the department's
8 attention where there is some impact on a landowner's
9 water, it sometimes being the case that it is the
10 landowner who has leased the property for the
11 drilling and in other instances it may be a neighbor,
12 and I addressed that in the testimony.

13 Often in our experience, so far at least,
14 the impacts have been temporary in that water
15 resumes, but we believe we have in those instances
16 authority under existing law to provide a remedy for
17 the landowner or homeowner.

18 We also believe that industry is going to
19 hopefully not test that authority but they will be
20 good corporate citizens and in fact recognize when
21 there is a problem and appropriately respond to the
22 problems to keep the departments out of this as much
23 as possible. We are not eager to interject ourselves
24 into those kinds of situations, but we stand
25 absolutely ready to do so if needed.

1 Now, I have to tell you, there is a part of
2 Pennsylvania that is not within any of the Federal
3 interstate compacts, like the Delaware River Basin
4 Commission or the Susquehanna River Basin Commission,
5 and we address that in the testimony as well.

6 There, the regulatory authority as to
7 groundwater distinct from surface water is more
8 questionable, and we are relying really there on the
9 Clean Streams Law. And the Clean Streams Law has
10 good protections as to surface water. It is probably
11 more open to legal challenge and discussion about how
12 protective it is of groundwater.

13 We have had internal discussions of that
14 issue, and we are reviewing that matter.

15 REPRESENTATIVE MAJOR: Thank you.

16 One other question, Mr. Chairman, if I
17 might.

18 It is an issue, and you mentioned it, you
19 addressed it somewhat in your testimony, and that is
20 the issue that the department is handing down, when
21 you indeed receive a permit application, that permit
22 ultimately can be passed down to the local soil
23 conservation agency within our counties for them to
24 review, say where indeed the companies might be
25 passing a certain stream, or whatever erosion might

1 be taking place.

2 Is the department mindful of, especially in
3 the three counties that I represent -- I indicated
4 Wayne, Wyoming, and Susquehanna -- the number of
5 permit applications that may be applied for and the
6 number of those applications indeed being passed down
7 to those local conservation districts, is the
8 department mindful of the manpower that it will take
9 to review those applications? And indeed is the
10 department looking towards next year's budget to help
11 compensate the counties for the manpower that is
12 going to be utilized within the counties and what is
13 going to be needed there to actually review those
14 applications on the local level?

15 ACTING SECRETARY HANGER: That is an
16 excellent question.

17 The county conservation districts often have
18 primary or even exclusive jurisdiction over the
19 erosion and sediment control permits.

20 In some cases, the department's regional
21 offices -- Delaware County's -- have historically,
22 for whatever reason, not chosen to have their
23 conservation districts do that. But in many cases,
24 it is the county conservation district.

25 The county conservation districts' budget --

1 we also looked at that -- has essentially not
2 increased for, I believe it is at least 5 years. In
3 real dollars, the county conservation districts have
4 seen a 15-percent decline in their budget.

5 Ladies and gentlemen, we cannot keep doing
6 more and more with less and less, despite what some
7 folks might want to say, to do more with less. There
8 is a limit to that.

9 So it is a serious issue, and I cannot sit
10 here in good conscience and tell you that each county
11 conservation district has the staffing necessary to
12 process erosion and sediment plans in a timely manner
13 when I personally have not visited them. I have not,
14 at this juncture, personally gotten to all of them,
15 and I think that is an open question.

16 I know the county conservation districts are
17 seeking an increase in their budget. We all know the
18 difficult financial economic times that we now live
19 in. There are some very hard decisions that have to
20 get made.

21 I think that is one of the reasons we are
22 looking at the fees for these applications. I really
23 do not believe it is defensible to have the fees
24 still at \$100, which was the original fee set in 1980
25 or thereabouts, the early 1980s.

1 I think we have to ask those who apply for
2 permits, in the case of at least the original permit
3 to do drilling, to pay a greater share of the total
4 costs so that this is not a taxpayer exclusively or
5 largely a taxpayer burden.

6 REPRESENTATIVE MAJOR: Thank you.

7 And thank you, Mr. Chairman, for allowing me
8 to ask questions.

9 CHAIRMAN GEORGE: The gentleman, Mr. Vitali.

10 REPRESENTATIVE VITALI: Thank you,
11 Mr. Chairman.

12 Thank you, Secretary Hanger, for coming here
13 today.

14 Some of my questions have been answered, and
15 as we go along, I will just sort of underscore them a
16 little bit.

17 It just seems obvious that with this
18 enormous amount of profit to be made here and the
19 acute need for inspectors with regard to water
20 quality and water withdrawal and so forth, that the
21 people who are making the profit ought to be paying
22 for it, the inspection and treatment and so forth.

23 So what I am hearing you saying, and you
24 just sort of correct me, there is some thought to
25 letting the people making the profit pay for the

1 framework to make sure the environment is kept sound
2 here by additional fees, by perhaps even some sort of
3 extraction tax.

4 How would that match up, how would that
5 match up, keeping the environment sound with
6 making the people who are making the profits pay for
7 that?

8 ACTING SECRETARY HANGER: Well, we are
9 looking at the fees. As I said, it is \$100, and that
10 was set nearly 30 years ago without any change, and
11 it was at a time, a very different time, a very
12 different volume, very different demands.

13 And very frankly, from a long period of
14 time, the gas industry was not very profitable. The
15 natural gas over a period of time was very low, and
16 many of these companies had a hard time keeping the
17 doors open. Circumstances have changed, so we are
18 looking at the fees.

19 The extraction-tax issue is above my pay
20 grade, that is your pay grade and the Governor's pay
21 grade, and I will leave that to them, them and you,
22 to consider.

23 REPRESENTATIVE VITALI: Now, the second
24 question I have, I understand -- when I came in, my
25 question involved whether companies were revealing

1 the chemicals they were adding to the water to make
2 the fracing more effective, and it appears from your
3 testimony that they are listing these chemicals with
4 you. So I assume that you know what they are adding
5 to the water.

6 My question is, and I also understand that
7 when they drill this water and they add in the
8 chemicals even in the ground, some of the water with
9 those chemicals remains there? Could you sort of
10 discuss, you know, how are we dealing with the issue
11 of these chemicals which remain in the ground,
12 polluting the groundwater? Is this an issue that we
13 need to be concerned about?

14 ACTING SECRETARY HANGER: Well, it is almost
15 inevitably the case that not every molecule or
16 chemical that goes down in order to contribute to
17 breaking the gas loose comes back up and is then
18 safely, quote, unquote, "safely" stored. And we are
19 concerned about those chemicals and the fracing water
20 polluting other groundwater and drinking water, and
21 we are monitoring those circumstances.

22 I cannot tell you that there is a
23 100-percent guarantee of no problem there. I can
24 tell you that our eyes are open, our ears are open.
25 We will respond to any problem that is identified.

1 We are also, in the first instance, trying
2 to limit the possibility of problems. And I think,
3 generally speaking, at this point in our experience,
4 we feel that we are managing that situation and that
5 problem or challenge well. And next week we might
6 learn something different that may cause me to revise
7 that comment.

8 REPRESENTATIVE VITALI: My final question.

9 Do you think additional State legislation is
10 needed to help keep the environment sound in light of
11 the anticipated increase in drilling here?

12 ACTING SECRETARY HANGER: Well, I believe
13 that there is a need for more staff, which I have
14 stated already, to implement the existing laws, which
15 in most cases are robust and protective of
16 Pennsylvania's water resources. It is up to the
17 regulators to reasonably implement those laws and
18 enforce those laws, and we will do that in a
19 reasonable way.

20 I have also said and would repeat that we
21 are looking at the question of whether or not there
22 is a legal gap to protect groundwater outside of the
23 river basin commissions, whether the existing
24 framework of Pennsylvania law provides adequate
25 authority to deal with real problems in those parts

1 of Pennsylvania that are not part of the interstate
2 commissions.

3 REPRESENTATIVE VITALI: Thank you, Secretary
4 Hanger, and thank you, Mr. Chairman, for your
5 indulgence.

6 CHAIRMAN GEORGE: Thank you.

7 The gentleman, Mr. Ross.

8 REPRESENTATIVE ROSS: Thank you,
9 Mr. Chairman.

10 Good afternoon, Secretary Hanger.

11 Forgive me, but we do not do a lot of gas
12 drilling or gas exploration down in Chester County,
13 so I am not as up to speed as some of my colleagues
14 on this particular subject.

15 But I was wondering if you could maybe take
16 a step back and talk a little bit about the history
17 of this technique of fracing in other areas of the
18 country and perhaps the world in situations similar
19 to ours; in other words, deep drilling in areas where
20 they are essentially going below the groundwater
21 supply and protecting it.

22 The protective techniques that you are
23 applying currently, have those been used successfully
24 for an extended period of time in similar situations
25 elsewhere? How long has this technique been used in

1 a significant way? Just if you could put me in the
2 frame a little bit, if you will.

3 ACTING SECRETARY HANGER: Yes, it's a good
4 question, and I can give you probably a partial and
5 incomplete answer, because at this point, there has
6 been this sort of drilling done in a number of
7 different locations, a number of different geological
8 formations or physical environments, different
9 regulatory schemes.

10 It is my understanding that one of the very
11 first was in Texas in the Barnett Shale area, and I
12 think that more or less this technology was developed
13 actually more than 20 years ago for use in that area.
14 And so there has been at least some experience with
15 this in some parts of the United States for roughly
16 20 years.

17 The pace of this technology's deployment has
18 followed, really, in part the natural gas price
19 increases. This is expensive technology. The
20 drilling and the investors in these companies and the
21 companies themselves are devoting considerable
22 capital and putting considerable capital at risk.

23 And natural gas at \$2 a thousand cubic feet
24 probably can support it, and that was, as you know,
25 Representative Ross, was the case from a lot of the

1 eighties and nineties. Natural gas, where it was
2 this morning, at roughly \$7 and a few odd cents,
3 apparently can support it.

4 So I think it is the case that the
5 technology itself has been available, but its
6 deployment has increased dramatically with the
7 increase in fossil fuel prices and specifically
8 natural gas prices that we have experienced over the
9 last 5 to 8 years.

10 REPRESENTATIVE ROSS: Thank you.

11 I mean, I know we all really want this to go
12 and to be successful, but we are particularly looking
13 at longitudinally in some of these situations that
14 some of the problems do not always appear
15 immediately, and that does make me a little concerned
16 anyway. But thank you for your efforts in this
17 regard.

18 Thank you, Mr. Chairman.

19 CHAIRMAN GEORGE: I thank the gentleman.

20 The gentleman, Mr. Wansacz.

21 REPRESENTATIVE WANSACZ: Thank you,
22 Chairman George.

23 First up, it is good to know that many of my
24 colleagues share the same concerns, especially of us
25 in the east and north-central. I know we have been

1 hearing from our constituents in trying to find out
2 that hub of activity.

3 A couple of things concern me. I was led to
4 believe when we had these DEP meetings and things
5 that we did have enough staff in the beginning. Now
6 you are saying we do not have enough staff.

7 When are we going to have -- you are saying
8 maybe July of next year if we can do it. Is there
9 anything that we can do before that? Do you the
10 request into the Governor of how many additional
11 staff that we need before July of next year?

12 ACTING SECRETARY HANGER: I have made a
13 request to the Governor, and I do not know whether it
14 is possible to -- we have a hiring freeze now
15 statewide, and that is a very big concern.

16 Our revenue collections were \$118 million
17 less than August ---

18 REPRESENTATIVE WANSACZ: Well, how many
19 people -- I know that -- how many people do we have,
20 like that you have requested?

21 ACTING SECRETARY HANGER: Well, we believe
22 and the department believes that we need in the range
23 of 68 or so more people to fully implement this
24 opportunity in a way that allows us to match the
25 words that we are talking about here.

1 We are trying to make sure that the permits
2 are issued in a timely way -- and the industry needs
3 that -- and we are also trying to respond to all
4 these excellent questions you have about well water,
5 about surface waters.

6 Those are real issues, and this is an
7 exciting opportunity, and we believe that with the
8 proper additional staff, we can deliver on our
9 promise, which is to have the gas produced and the
10 water protected.

11 REPRESENTATIVE WANSACZ: And I think,
12 Secretary Hanger, that all of us would agree this is
13 an exciting opportunity. We just want to make sure
14 that it is done right. That is the purpose that we
15 are here.

16 ACTING SECRETARY HANGER: I agree.

17 REPRESENTATIVE WANSACZ: The \$100 fee, do
18 you have the ability to do that through regulations
19 internally to raise that, or does that have to come
20 through us?

21 ACTING SECRETARY HANGER: We believe we can
22 do it through regulation. We cannot do that
23 overnight. You have to go through a regulatory
24 process, and we are going to do it as fast as we can.
25 And we are in the process of working on that right

1 now.

2 REPRESENTATIVE WANSACZ: Also my question
3 here is, when these companies are coming in and
4 drilling and they are creating this casement during
5 the fracing process, do we have someone on site from
6 DEP making sure it is done right, or are we just kind
7 of going with, we hope it is done right and that it
8 will work?

9 ACTING SECRETARY HANGER: Well, we are not
10 necessarily on site each and every minute. We can't
11 possibly -- we do inspect. There are unannounced
12 inspections, and I will actually let Ron Gilius
13 supplement my answer to that question.

14 MR. GILIUS: Sure.

15 For the hydro-fracing operations, the
16 important part is when the surface casing is
17 installed through the groundwater system and when it
18 is cemented in place. That is when we want to make
19 sure we are out there, to make sure that is done
20 properly, because that is the protection for the
21 fresh groundwater system.

22 We do the spot check during the fracing
23 operation to make sure that things are going right,
24 but again, we are not out there at every moment of
25 the day.

1 REPRESENTATIVE WANSACZ: But we are
2 inspecting the case to make sure that none of these
3 chemicals are getting into the groundwater?

4 MR. GILIUS: That is our priority, yes.

5 REPRESENTATIVE WANSACZ: Now, I have a
6 question, because I am concerned about the
7 groundwater, just with the homeowners again. We are
8 excited about the process, and we just want to make
9 sure it is done, because it is our most valuable
10 resource, the water.

11 Is there anything in place that we can do,
12 regulations or so, because from my understanding, it
13 is not shared with the general public of what
14 chemicals are used, because each company uses their
15 own thing for protection. How would a landowner,
16 let's say it is my land, I have a well, they are
17 drilling on my land, how would I know that my well
18 water is safe?

19 MR. GILIUS: First of all, there is a lot of
20 misinformation on this subject out in the public
21 domain.

22 Whereas the formulation might be
23 proprietary, the chemicals are not, okay? So they
24 have to list, provide us information on what
25 chemicals are being used with the exact ratio of

1 all the individual. That is the proprietary
2 information.

3 A landowner, when they sign the lease, they
4 should request that directly from the operator. If a
5 community wants information on the chemicals, they
6 can go through Pennsylvania's Community Right-to-Know
7 Law for worker protection and community protection.

8 We also have information on the chemicals
9 that are being used. We are trying to summarize that
10 right now and put it on the Web site so it is
11 available, so it is transparent.

12 REPRESENTATIVE WANSACZ: So would a
13 landowner then be able to get their well tested and
14 ship it out with these chemicals and see if it is
15 present in their well, present in their well water,
16 or is that---

17 MR. GILIUS: That is a wise insurance policy
18 for a landowner, to have their own water supply
19 tested, yes.

20 REPRESENTATIVE WANSACZ: Great. Thank you.

21 MR. GILIUS: Certainly.

22 ACTING SECRETARY HANGER: Thank you for your
23 questions.

24 CHAIRMAN GEORGE: I thank the gentleman.

25 The gentleman, Mr. Everett.

1 REPRESENTATIVE EVERETT: Thank you,
2 Mr. Chairman.

3 Thank you, Secretary Hanger, for taking the
4 time today.

5 I'll just make a quick statement.

6 I'm from Lycoming County, which is in the
7 middle of where the Marcellus Play is being hotly
8 followed right now. But I am also a member of
9 six different stream and conservation associations.

10 In Lycoming County, we have beautiful farms,
11 hunting camps, a lot of State forests, a lot of
12 Game Commission land, and we are very interested in
13 protecting our environment, but we are also very
14 interested in the economic development and the things
15 that can flow from this.

16 So our county established a Gas Task Force
17 some months ago, and we have heard presentations
18 from, except for Mr. Hanger, I think from everybody
19 that is in the room today and about maybe five
20 different times probably.

21 And through that, just for the folks that
22 are here, we are becoming convinced that we can have
23 the best of both worlds, that we can do this in a
24 manner that will leave us with the beautiful parts of
25 Pennsylvania that I represent and that we can reap

1 the economic benefits at the same time.

2 And just to follow up, I just want to be
3 clear, has there been, up to this point, any
4 documented contamination of any well water in
5 Pennsylvania as a result of Marcellus operations that
6 the DEP is aware of?

7 ACTING SECRETARY HANGER: I personally have
8 not, but I'm going to ask Ron, because I have been on
9 the job 4 weeks. So I would say here, let him
10 answer.

11 MR. GILIUS: We have received a couple of
12 water supply complaints that they were -- well, while
13 in the process of drilling through the fresh
14 groundwater system before they set the surface
15 casing.

16 We have not received, at least I have not
17 heard of any, where it is a result of the
18 hydro-fracing process. It is when the initial drill
19 goes down through the fresh groundwater system.

20 REPRESENTATIVE EVERETT: So a temporary
21 interruption in water supply, but no permanent
22 contamination?

23 MR. GILIUS: That is the information I have
24 at this point, yes.

25 REPRESENTATIVE EVERETT: And today, from

1 Marcellus operations, have we had any incidents where
2 there was stream contamination or any kind of spill
3 or any, you know, toxic event of any sort?

4 ACTING SECRETARY HANGER: Go ahead.

5 MR. GILIUS: We have had a couple of spills
6 -- okay? -- at one of the operations up in the
7 northeast. But, you know, through our regulations,
8 you know, they were able to respond to the spill and
9 clean it up afterwards, and it was fuel from the
10 equipment at the site, and, you know, that was
11 addressed by the spill cleanup.

12 REPRESENTATIVE EVERETT: And that was
13 nothing different than what would happen in a
14 construction operation if somebody was building
15 anything; it was not anything particular to gas and
16 oil operations?

17 MR. GILIUS: It was part of the fuel for the
18 bulldozers, and, you know, that could happen in any
19 types of situations.

20 REPRESENTATIVE EVERETT: Thank you very
21 much.

22 MR. GILIUS: Sure.

23 ACTING SECRETARY HANGER: Thank you.

24 CHAIRMAN GEORGE: The gentleman,
25 Mr. Stevenson.

1 REPRESENTATIVE STEVENSON: Thank you,
2 Mr. Chairman.

3 Thank you for your testimony today,
4 Secretary Hanger.

5 Just one brief question. Actually, it is a
6 clarification based on comments as given earlier.

7 Pennsylvania has such a long history of oil
8 and gas exploration and extraction. I just want to
9 make sure I heard you correctly.

10 I believe you said that our current process
11 for extraction is well regulated, and I interpret
12 that to mean that you do not see the need for new
13 regulations given the Marcellus Shale discovery and
14 what we see ahead of us, that the regulations we have
15 in place are adequate.

16 ACTING SECRETARY HANGER: The laws that are
17 in place are adequate, with only the exception of the
18 issue identified outside of the river basin
19 commissions. They are looking at that.

20 There is obviously the fee issue, which is a
21 regulatory change.

22 But at this point, we believe we have
23 adequate authority to deal with both the challenge
24 and the opportunity in a responsible way.

25 REPRESENTATIVE STEVENSON: Thank you very

1 much.

2 Thank you, Mr. Chairman.

3 CHAIRMAN GEORGE: Representative Rapp.

4 REPRESENTATIVE RAPP: Thank you,

5 Mr. Chairman.

6 Thank you, Mr. Hanger, for being here

7 today.

8 I represent Warren, Forest, and McKean
9 Counties, so I am very familiar with oil and gas
10 drilling.

11 And as well as Representative Everett, I
12 also live in an area with a beautiful national forest
13 -- some of the headwaters of the Allegheny River
14 and lots of hunting camps and lots of oil and gas
15 wells.

16 My question to you is just kind of following
17 up with Representative Stevenson. I live 40 miles,
18 approximately, from the Drake Well, which I see you
19 have here was drilled in 1859, and we started
20 regulating the oil and gas industry in 1956.

21 And I hear you say that, it seems to me,
22 hearing you say that you are fine with the
23 regulations the way they are, that our oil and gas
24 producers actually have a pretty good track record of
25 complying with those regulations as they are. Am I

1 correct?

2 ACTING SECRETARY HANGER: I am not here to
3 complain about the oil and gas industry, and I
4 believe based upon the Marcellus Shale activity,
5 there have only been a small number of problems. A
6 couple were identified just previously.

7 I believe that the existing statutory
8 authority with the areas that I have already noted,
9 with possible exceptions, is a good statutory
10 authority. I believe that the challenge here is
11 implementing the existing law in a way that allows
12 the gas to be produced while protecting our water.

13 As Representative Everett said, I, too,
14 believe that we can achieve both of those goals. It
15 does require day-to-day work by the industry, and I
16 am grateful to them acting responsibly. It frankly
17 requires regulators who, nonetheless, will watch and
18 inspect and play a real role in this whole activity,
19 and we will do that.

20 REPRESENTATIVE RAPP: With the wells that
21 had, the plans that were approved on July 9 where
22 there were some problems with the water and you are
23 asking them now to maintain records of that water
24 use, just from that statement I am hearing that those
25 producers are complying with the DEP and with

1 basically what you are asking them to do, to make
2 sure and to ensure that that water table is not being
3 destroyed.

4 ACTING SECRETARY HANGER: I am going to say
5 yes, but I am going to have it confirmed or denied by
6 Ron here.

7 MR. GILIUS: Yes, all the operators that
8 have filed the Marcellus Shale applications, they
9 have proper plans in place for water withdrawals.
10 They have water-disposal locations as part of the
11 addendum process that we are reviewing.

12 ACTING SECRETARY HANGER: But the question
13 was specifically as to the July 9; we issued an order
14 saying that they could resume operations after---

15 MR. GILIUS: Yes, they have brought their
16 operations into compliance also.

17 REPRESENTATIVE RAPP: And just a comment.

18 I also know that there are, you know, some
19 problems. You know, in my area, there was a sabotage
20 just recently, but that was not the fault of the
21 producers. And there have been some producers who,
22 you know, have been told by DEP to cease to drill.

23 But I guess what I am hearing from you, if I
24 am correct, that by and large since 1956, our
25 producers have been complying with regulations.

1 ACTING SECRETARY HANGER: Well, look, I
2 cannot say since 1956. I wasn't -- I was born in
3 1957, so I cannot vouch for the industry that long,
4 Representative.

5 And we do have oil and gas wells that the
6 taxpayers are putting a lot of money up to plug, so
7 there is a real need for a regulatory role here, and
8 I am confident with a responsible industry and proper
9 oversight regulators who are committed to the law and
10 implementing it fairly, that we can avoid future
11 problems and have this natural resource, the natural
12 gas, developed in a way that is consistent with the
13 other priceless natural resource, our water.

14 REPRESENTATIVE RAPP: Thank you.

15 Thank you, Mr. Chairman.

16 CHAIRMAN GEORGE: I thank you.

17 And just a couple of questions. I do not
18 want to be redundant, but again, I have noticed that
19 two or three of our members have asked that same
20 question in different ways.

21 But isn't it true the regulations that you
22 have to implore are the regulations that the
23 department has had for years? They are not new
24 regulations, and they are not taking into any
25 consideration the fact of drilling these deep wells

1 and the need to have approximately to a million
2 gallons of water available, and the fact that when
3 that water comes back out it will be polluted.

4 Now, I am not against prosperity in my area
5 or any other area, and I know, I was not here in '54
6 but I was here in '74, and I put a law in called
7 rebuttable presumption. So I daresay there are not
8 too many that believe in the preservation and the
9 protection of water like this guy does.

10 So I am not picking on the department, but
11 when you say we could be ready, do you think that we
12 have the facilities available to be able to treat
13 this fracing water when it comes out of that
14 ground?

15 ACTING SECRETARY HANGER: That is an
16 excellent question and point.

17 I am concerned about the amount of capacity
18 to treat water, the industrial water treatment
19 capacity. The industry is concerned about that. And
20 we are in the process of permitting three more
21 facilities that would provide additional water
22 treatment for the fracing water.

23 We are also looking, as the industry is, at
24 certain technology that could allow the water to be
25 essentially desalinated and recycled. It is

1 expensive technology. I know at least one of the
2 companies doing business in Pennsylvania is seriously
3 considering investing in that technology.

4 We also, the department, are interested in
5 other solutions. If we could find a safe underground
6 disposal site where it could be injected and
7 contained away from other groundwater, so we are not
8 treating it and then returning it to the surface
9 waters, that might also be a very useful and good
10 thing for the environment, assuming, again, the site
11 is appropriate and did the job that was needed.

12 So you are right to point out that there is
13 a problem looming, which is, we have got this
14 tremendous rush of drilling, there is increasing
15 volumes of water that are going to be used in the
16 fracing process, and it has to be all disposed of
17 safely.

18 Today, we are doing that, but we have got to
19 stay -- our ability to treat the water or dispose of
20 the water has to match and stay up with the increased
21 volumes of water being used in the drilling process.

22 That is one of the reasons why the
23 department has initiated the requirement of a water
24 plan that goes with each permit, and that was not
25 always the case. And that water plan, as listed in

1 the testimony, some of the basic elements of the
2 water plan include where the water is going to go.

3 CHAIRMAN GEORGE: Your department wouldn't
4 hesitate to send this committee some type of version
5 of that water plan and what you would insist upon,
6 would they?

7 ACTING SECRETARY HANGER: Oh, we would
8 gladly provide that to you. I'm sorry we haven't
9 already. I'd be glad to let you see that.

10 CHAIRMAN GEORGE: Good.

11 Let me take this one step further: Is there
12 going to be any effort to make sure that at a time of
13 drought, that the normalization of the drilling and
14 the usage will be contained in that the continual
15 withdrawal could place a community in desperate
16 need?

17 And the fact remains, there is no one can
18 deny that there are more areas in Pennsylvania
19 without the potable water used in what they had years
20 ago. So can we as a group, working with you and the
21 energy development people, utilize the philosophy of
22 using bad water rather than just imploring good
23 water?

24 For example, we are blamed for being
25 environmentalists. I really want to be a

1 conservative Legislator. And you can smile, but you
2 listen: I frowned for years of the department
3 insisting that a coal operator treat water that is
4 just going to go down the stream 5 miles and run into
5 another source that has been abandoned for 20 years.
6 You gain nothing.

7 So wouldn't we be benefiting at all by using
8 that water that is bad and then treating it and
9 putting it into a stream?

10 ACTING SECRETARY HANGER: Yes, Mr. Chairman.

11 I am smiling because your experience is
12 valuable and you are right. And it is similar to
13 what Representative Seip was talking about, is trying
14 to identify mine water and utilizing that as a source
15 for water in the fracing process.

16 That, I think everybody in this room might
17 be able to agree, that would be better than taking
18 water from a stream or even a municipal water supply
19 and still have the issue that you have raised about
20 disposing of it, making sure we have adequate
21 disposal.

22 CHAIRMAN GEORGE: And then finally, and this
23 may be a little bit higher than your pay grade, as
24 you insisted. By the way, how high is your pay
25 grade?

1 Will this drilling and this usage of this
2 very fine resource, will it result in more of it
3 being used in-State where the pricing will help to
4 lower the pricing?

5 Now, I have argued for years on these fears
6 that for some reason a lot of this stuff goes out of
7 State, and when it comes back it is not controlled by
8 the PUC, as you yourself know, being a former
9 Commissioner. So in essence it is easy to send it
10 out, create it, and bring it back and get a lot more
11 money, while at the same time the guy on that
12 property cannot even utilize it. I would like to
13 talk to you and the individuals to see what we can do
14 to make everybody happy.

15 And if we are going to have altered the
16 sources, I do not think there is any better source --
17 I am not against gas; I want to see it utilized --
18 but don't you think we ought to approach that in some
19 intelligent but yet modest manner? Or is that still
20 50 cents above what you make?

21 ACTING SECRETARY HANGER: No, I'm fine. I
22 will try to answer that one.

23 You are right, I think, to point out that
24 the gas that is produced here is set at a market
25 price, and the market price is generally the price

1 for Appalachian gas, which is a little different than
2 gas, say, in the Gulf, but not hugely different, and
3 no producer is going to sell gas at something less
4 than the market price. And this is where you might
5 find this not completely correct; I do not blame them
6 for selling at the market price, and I do not really
7 expect them to do anything other than that.

8 I do think this amount of gas is so large
9 here in Pennsylvania, and then there are similar
10 technologies opening up in other areas of the country
11 and producing so much new natural gas, that the
12 supply of natural gas in the country is going to
13 increase enough to put downward pressure on the
14 market price of natural gas.

15 CHAIRMAN GEORGE: Now, you know,
16 Mr. Secretary, there are landowners that do not own
17 either the mineral or the gas rights, and there was
18 a time when we were all much younger when some of
19 these gas companies would be credible to the point
20 that they would offer the landowner the use of that
21 very important resource for heating purposes or
22 whatever.

23 Now over the years, this committee and this
24 Legislator, we get complaints about that stopping,
25 because somebody is selling to somebody else and then

1 not accommodating or keeping that word of continued
2 usage.

3 Now, there is a thing that I am going to
4 remind you, since you are the new Secretary. For
5 example, we have called the gentleman on your right
6 -- he has been very cooperative -- but when we say
7 these people are fracturing all night and the people
8 can't sleep and the noise is just out of the realm of
9 being absolutely acceptable, and then they say, well,
10 we can build a shed, and they make them build a shed
11 without insulation, and now the noise is accentuated
12 in a hundred different fold, now we have got to do
13 something to be able to keep this landowner who isn't
14 benefiting.

15 Now, if this landowner is benefiting, then
16 he should put up with some of this so-called routine.
17 But for an individual, and let me give you an
18 example.

19 ACTING SECRETARY HANGER: Okay.

20 CHAIRMAN GEORGE: Should you be an
21 individual that bought a home, and you and your wife
22 4 years later, your job is transferred and you have
23 to leave. At the time you bought it, it was a nice
24 serene greenery. At the time you are going to sell
25 it, there is a gas well in the back.

1 You do not think it will bring the same
2 money as what you paid for it, do you, sir?

3 ACTING SECRETARY HANGER: Probably not.

4 CHAIRMAN GEORGE: I thank you for your
5 testimony. I thank you for your flexibility. And I
6 thank the gentleman to your right.

7 And incidentally, we have still got to get
8 to you about taking care of that shed.

9 ACTING SECRETARY HANGER: Well, we thank
10 you, and we stand ready to work with you,
11 Mr. Chairman.

12 CHAIRMAN GEORGE: I thank the gentleman.

13 ACTING SECRETARY HANGER: Thank you.

14 CHAIRMAN GEORGE: The next guest will be
15 Thomas Beauduy, Deputy Director and Counsel for the
16 Susquehanna River Basin Commission.

17 Welcome, sir.

18 MR. BEAUDUY: Good afternoon, Mr. Chairman,
19 Chairman Hutchinson, members of the committee, and
20 Representative Major.

21 We do appreciate, the commission appreciates
22 the opportunity to be here today and offer comment on
23 this very important issue, and we acknowledge and
24 commend your leadership in bringing this matter up
25 for review.

1 I believe that most of you--- Excuse me for
2 a second.

3 Let me just introduce Michael Brownell.
4 Mike is the Chief of our Water Resources Management
5 Division at the commission, oversees the regulatory
6 program, and interfaces with this industry on a daily
7 basis. And he is my lifeline here today, because
8 when you start to ask questions of a highly technical
9 nature, I know I'll get in over my head. So Mike is
10 here as a resource for all of us.

11 CHAIRMAN GEORGE: So you are saying that
12 some of the questions might be over your pay grade?

13 MR. BEAUDUY: That is correct, sir.

14 I believe most of you are familiar with the
15 commission, but for the record, I will offer that
16 both under Pennsylvania law and Federal law, we are
17 charged with managing the water resources of the
18 Susquehanna Basin in the State of Pennsylvania. That
19 comprises about 50 percent of the land area.

20 I would also add that we undertake those
21 responsibilities in close coordination with the
22 Department of Environmental Protection and the
23 Commonwealth generally.

24 I would like to speak today on the role of
25 the commission in addressing water resource issues

1 associated with the development of the Marcellus
2 Play.

3 The short answer is that we have a very
4 limited but very important role to play in this
5 activity. Our business is water resource management,
6 not mineral resources development.

7 We do not regulate drilling or the
8 production or transmission of natural gas. We rely
9 on our member jurisdictions to oversee those aspects
10 of this activity, and we focus on water resource
11 issues strictly.

12 We regulate water withdrawals and the
13 consumptive use of water and, in particular, that
14 associated with this development activity.

15 Our management objective is to have this
16 industry avail itself of the water resources of the
17 basin in the development of this important mineral
18 resource and to do it in a way that minimizes impact
19 to the basin's water resources.

20 As you may know, we regulate water
21 withdrawals generally of 100,000 gallons a day or
22 more, and the consumptive use of water of 20,000
23 gallons a day or more.

24 As the industry ramped up its exploratory
25 drilling this past year, we became aware of

1 operations exceeding our regulatory thresholds that
2 didn't have commission approval, and as a result, we
3 took several immediate steps over the last, I would
4 say 120 days as this thing took off.

5 First, we issued a couple of
6 cease-and-desist orders in conjunction with the
7 department. The Secretary mentioned those earlier.

8 Secondly, we immediately notified all
9 companies known or believed to have been issued
10 Marcellus drilling permits by DEP and the Susquehanna
11 Basin, informing them of our regulatory requirements
12 and recommending that they come forward to address
13 any prior noncompliance and obtain approvals they
14 would need for continuing their operations.

15 Shortly thereafter, we negotiated
16 settlements with seven companies to resolve some
17 noncompliance issues, and in the last 90 days, we
18 have received 92 applications for surface water
19 withdrawals or consumptive use approvals from this
20 industry, and they have been very responsive since
21 that initial rough start several months back.

22 Thus far, the commission has issued dockets
23 for 39 surface water withdrawal approvals and 8
24 consumptive use approvals. Those dockets were
25 approved at commission meetings. We meet quarterly,

1 and the last two quarterly meetings were in June and
2 September of '08.

3 Do the members have the handouts, the
4 booklets? They do; okay.

5 You have a booklet in your packet that sets
6 forth all the approvals with some detail from our
7 last meeting up in Lewisburg, Pennsylvania.

8 And while that activity was going on, we
9 also took a third step, which was to activate a
10 previously unused rule that the commission had
11 adopted in 2006 that authorized administrative
12 Approval by Rule and an administrative Approval by
13 Rule process for projects consumptively using water
14 obtained solely from public water supplies.

15 The industry came to us realizing that the
16 commission only met quarterly, that we had a number
17 of projects in the queue already. We have a
18 \$400 million hydroelectric upgrade project. We have
19 ethanol. We have industrial uses. We have public
20 water supply systems, looking for review and approval
21 of those projects.

22 We had a tremendous workload as it stood,
23 and we told the industry that we could not
24 immediately issue surface water approvals for them
25 overnight. But we did have this rule. It was

1 available to utilize, at least on a temporary
2 basis.

3 When the commission adopted that rule and
4 put it in place, it did not contemplate that it would
5 be used by the natural gas industry. It established
6 it with the rationale that people who are on public
7 water supply systems could take that water, that the
8 impacts of those withdrawals are analyzed at the time
9 the public water supply system was authorized to make
10 those withdrawals, and so, therefore, it warranted an
11 expedited administrative review. There wasn't a need
12 to rereview matters that were previously addressed
13 from the standpoint of the water resource impacts.

14 Given the time-sensitive nature of staging
15 drilling and hydrofracture infrastructure in this
16 emerging industry and because the commission only
17 meets quarterly, we utilized this provision to
18 establish an industry-specific Approval by Rule
19 procedure that has enabled us to turn around
20 consumptive use approvals generally in less than
21 30 days.

22 To date, the commission has received
23 82 notices of intent to use the rule, and we have
24 issued 64 approvals by rule since July 1.

25 There is another graphic in your package

1 that depicts the location and supply systems that
2 have been approved under that administrative
3 process.

4 The use of water sourced from public water
5 supply systems may have some long-term viability, but
6 this was really seen as a short-term measure to allow
7 activity to continue while requests for surface water
8 approvals underwent review and consideration by the
9 commission at its quarterly meeting process.

10 It does raise policy concerns as well, given
11 that it puts tremendous tanker-truck traffic on the
12 roads of rural communities. It is very energy
13 inefficient, and it diverts high-quality water to a
14 use that does not really need it.

15 Again, we view this as a stopgap measure and
16 anticipate less use of this option as we move forward
17 and continue to issue approvals for regular
18 withdrawals, be they surface water, groundwater, or
19 other, and as a result of the regulatory action that
20 we intend to take, that I will mention in a moment.

21 As all this was unfolding this summer, we
22 took a fourth step. Using regulatory authority
23 established by the commission, our Executive
24 Director, Paul Swartz, issued a Notice of
25 Determination on August 14, announcing that as of

1 October 15 -- in a couple of weeks -- all natural gas
2 well development projects in the Susquehanna Basin
3 targeting the Marcellus and involving the withdrawal
4 or consumptive use of water would be subject to
5 commission review and approval.

6 You have a copy of that determination, the
7 Notice of Determination, in your packet.

8 Let me offer a few comments on the rationale
9 for this action. First, as the practices of this
10 industry became better known to us, it became clear
11 that there was a wide variability in the amount of
12 water being used in drilling and fracing operations,
13 especially between vertical and horizontal wells.
14 That range started in the hundreds of thousands of
15 gallons and ran up to 3 to 5 million gallons per well
16 in some situations.

17 Our consumptive use standard is 20,000
18 gallons a day, based on a 30-day average. Deep well
19 injection, which hydrofracture treatment entails, is
20 considered to be a consumptive use of water.

21 When you use 600,000 gallons or more on a
22 given day to do a frac operation, that effectively
23 triggers our requirement. Whether the operation is
24 going to use 580,000 gallons or 620,000 gallons can't
25 always be determined in advance.

1 Also, stream withdrawals associated with
2 consumptive uses are also subject to review,
3 regardless of whether they triggered the 30-day
4 average of 100,000 gallons per day, which is our
5 typical threshold for withdrawals.

6 What we also saw was that withdrawals on
7 cold-water trout streams, even if less than 100,000
8 gallons per day, had a real potential for impact
9 during low-flow conditions.

10 In our view, the situation revealed the
11 potential for adverse impact and a fair amount of
12 confusion in the field, I might add, as well. Were
13 vacuum trucks taking water for frac operations that
14 were exempt because they fell below the threshold or
15 above? We were getting calls from county
16 governments, we were getting calls from landowners
17 and Legislators and others, you know, saying, why is
18 one type of activity controlled; why is another one
19 not?

20 The reality is that we saw the potential for
21 adverse impact for any activity related to the
22 Marcellus, and we set to clarify the rules for the
23 industry and to make it very straightforward. If you
24 are drilling a Marcellus well, you need an approval
25 if you are going to use the water in any way

1 associated with those projects.

2 It may add some additional wells,
3 particularly some of the exploratory wells that were
4 coming in below 600,000 gallons, to regulatory
5 oversight. But it clarifies for the industry, for
6 us, local officials, and landowners what needs to
7 come in and what needs to be approved.

8 Along with the Notice of Determination
9 issued to the industry, we also announced a proposed
10 regulatory change to be recommended to our
11 Commissioners for consideration at their September
12 meeting in Lewisburg, Pennsylvania. That
13 recommendation was approved, and we are now
14 undergoing a formal proposed rulemaking process to
15 receive comment on the proposal that would make the
16 following changes to our regulatory program.

17 First, it would require all requests for
18 consumptive use approvals to go through this
19 administrative Approval by Rule process rather than
20 the commission's standard consumptive use application
21 and docketing process, which takes an extended period
22 of time.

23 Second would be expansion of the current
24 Approval by Rule process that I mentioned earlier in
25 that it will allow project sponsors to utilize a

1 broader range of water resources as part of their
2 approval, not just public water supplies but
3 discharges from wastewater treatment plants, mine
4 pools, and other lesser quality water resources, as
5 well as withdrawals that are approved by the
6 commission for underground or surface water
7 withdrawals.

8 It would regulate projects on a drilling-pad
9 basis versus the current docket approvals that
10 address consumptive use on a company lease-area
11 basis.

12 I will also add that while that is how the
13 dockets have been approved, the actual Approval by
14 Rule of the water supply systems is focused on a
15 drilling-pad basis. So that for any drilling pad
16 that is out there, there is a set approval.
17 Regardless of whether one well is being drilled or
18 10 wells are being drilled on a drilling pad, there
19 will be a single approval that controls water-use
20 aspects related to that operation.

21 It would require all projects to demonstrate
22 or certify compliance with all State and Federal laws
23 for the treatment and disposal of flowback or
24 produced fluids, including brines.

25 Again, we coordinate with our member

1 jurisdictions. We do not want to duplicate that
2 effort. They have got controls in place, laws and
3 regulations in place that address it. We are relying
4 on our member jurisdictions to regulate that aspect
5 of the activity.

6 It would also incorporate into the
7 regulations the removal of the regulatory thresholds
8 that I mentioned in the August 14 determination.
9 Mainly, it is a Marcellus well that comes in for an
10 approval.

11 Finally, it would also provide for a
12 5-year term to allow for the development activity to
13 occur.

14 The proposed rulemaking is now in the
15 process of being published in the Pennsylvania
16 Bulletin, the New York Register, the Maryland
17 Register, and the Federal Register for review and
18 comment.

19 Those actual publications, they start to
20 roll out this week, and we will be conducting and it
21 will be announcing public hearings for Williamsport
22 on October 21 and Binghamton, New York, on October 22
23 to take comment on the proposal. The public comment
24 period will remain open until October 31 of this
25 year.

1 That proposed rulemaking package is also
2 included in your packet.

3 It is our intention to present a final
4 regulation incorporating all constructive comments to
5 our Commissioners for consideration and final
6 adoption at the commission's December 3, 2008,
7 meeting.

8 Our hope is to streamline the approval
9 process for consumptive use, yet simultaneously
10 require the monitoring, reporting, and mitigation
11 requirements that all consumptive users in the basin
12 comply with so as to enable the commission to better
13 manage the cumulative impact of such use.

14 I should also add that the proposed
15 rulemaking does not modify any of the current
16 standards or requirements associated with the review
17 and approval of water withdrawals. We have a very
18 mature program for evaluating and approving water
19 withdrawals from streams and groundwater. That will
20 continue in place unaffected by this rule change.

21 They will continue to be subject to the same
22 standards that all withdrawals all across the basin
23 are subject to and we believe are appropriate to
24 protect our water resources as we simultaneously
25 allow for the utilization to support this important

1 industry.

2 We stand ready to continue to provide
3 value-added service to the Commonwealth as it moves
4 forward with the natural gas production issues
5 associated with the Marcellus Shale.

6 Mr. Chairman, I want to thank you for the
7 opportunity to present this testimony. I know the
8 hour has gone late, but we are here and stand ready
9 to answer any and all questions that you may have.

10 Thank you.

11 CHAIRMAN GEORGE: I thank the gentleman, and
12 I know there will be questions.

13 I will start on the left. The gentleman
14 from York.

15 REPRESENTATIVE MILLER: Thank you,
16 Mr. Chairman.

17 I guess I would just ask how other States
18 within the basin are dealing with this same issue?
19 Is it being coordinated so it is all the same?

20 MR. BEAUDUY: Yes, it is coordinated at
21 certain different levels.

22 First, the other States that are members of
23 the commission, their gubernatorial appointees and
24 our Commissioners meet. They are all involved in the
25 decisions related to this.

1 These rules, these changes, are basin-wide
2 in scope. They are not limited to Pennsylvania. We
3 have coordinated with the New York DEC, the Maryland
4 MDE. The Governor's representatives from those
5 States in fact are officials with those environmental
6 agencies.

7 So on a policy level, they are very much
8 involved. On a technical level, Mike has led a major
9 coordination effort, more particularly with the State
10 of New York and the State of Maryland. There is
11 activity in western Maryland, but in the Maryland
12 portion of the Susquehanna Basin, there is no
13 activity ongoing right at the moment. However, we
14 are bringing up officials from Maryland to meet with
15 DEP officials and to take a look at things in the
16 field here this coming month.

17 The State of New York is a different
18 situation. There is a lot of activity in the State
19 of New York, not quite as much as there is in
20 Pennsylvania, but I will tell you that there is a lot
21 of activity, political policy and regulatory, in the
22 State of New York right now.

23 New York has an environmental review statute
24 that suggests and the State has decided -- the
25 Governor made a determination a month or two ago

1 indicating that the generic environmental impact
2 statement that had been developed for this industry
3 in '92, I believe, did not contemplate this type of
4 activity, and therefore, they are developing a
5 supplemental generic EIS for the State of New York.
6 We are actively involved with DEC in the scoping of
7 that exercise, we will participate in the public
8 hearing process as well, and have been actively
9 coordinating with New York State with regard to water
10 resource issues.

11 REPRESENTATIVE MILLER: And I appreciate
12 that answer. I was wondering how our neighbor to the
13 south was involved. I could envision New York State,
14 but I appreciate that.

15 Thank you, Mr. Chairman.

16 CHAIRMAN GEORGE: I thank the gentleman.

17 The gentleman, Mr. Stevenson.

18 The gentleman, Mr. Everett.

19 REPRESENTATIVE EVERETT: Thank you,
20 Mr. Chairman.

21 It is good to see you, Tom.

22 MR. BEAUDUY: Representative.

23 REPRESENTATIVE EVERETT: Just maybe so
24 that you can calm the fears of maybe some of the
25 folks.

1 When you take the whole Susquehanna River
2 watershed and the amount of water that we are talking
3 about withdrawing, is there enough water in the
4 Susquehanna watershed that can be safely removed to
5 support these gas operations?

6 MR. BEAUDUY: In a general sense, yes, there
7 is. Let me offer a few perspectives.

8 First, the nature of water use by this
9 industry is somewhat different than other industries.
10 You can get, on a deep horizontal frac operation, you
11 can get millions of gallons of water used at one
12 time.

13 But it is a one-time use, if you will. I
14 mean, there may be situations where they come back
15 and refrac down the road, but effectively it is a
16 one-time use on a well basis, unlike most of the
17 industries in the basin that are continuously using
18 water around the clock.

19 A power plant is taking in millions of
20 gallons of water a day, and that runs 24/7, 365 days
21 a year. This industry is somewhat different.

22 When you look at the volume of approvals
23 that have already come before our commission, and we
24 do anticipate the ones that are going to be coming on
25 a continuing basis, the numbers may seem daunting,

1 but they need to be reviewed in context. Let me give
2 you one.

3 The Barnett Shale out in the Texas-Oklahoma
4 area of this country is a major, major development
5 for this industry involving thousands of wells, lots
6 of water, and it is actually happening in an area
7 that is not blessed with the water resources that we
8 are. But it takes water to run these operations.

9 When you look at the entire quantity of
10 water being used in the Barnett and looking at it
11 going from the exploratory phase to the production
12 phase, and if you were to double that and apply it to
13 the Susquehanna Basin and you annualized the numbers,
14 you are looking at about 28 million gallons a day.
15 Now, that is a little bit of fuzzy math, I guess, but
16 the bottom line is, that represents about half the
17 amount of water used by the golf course industry, the
18 recreation industry, in the basin, okay?

19 So it is a significant amount of water, but
20 it is a manageable amount of water. We are a
21 water-rich basin. The real issue is making sure that
22 the use, the withdrawals and the use occur in a way
23 that does not impact, particularly during low-flow
24 conditions, and that that use is mitigated.

25 So we believe that there are adequate

1 resources here if properly managed to accommodate
2 this industry.

3 REPRESENTATIVE EVERETT: Thank you, sir.

4 And just one more question, a similar
5 question that was asked of Secretary Hanger.

6 Do you feel that the Susquehanna River Basin
7 has the appropriate amount of personnel, budget, and
8 everything that you can stay on top of the issues you
9 just identified?

10 MR. BEAUDUY: No, sir, but we are taking
11 steps to address that.

12 Let me tell you that we have a little bit
13 more flexibility than the department in that regard.
14 We are bringing on additional staff. We have already
15 advertised for them.

16 We have also retained firms to assist us.
17 We have a provision in our fee schedule that allows
18 us, if an applicant wants to be moved up to the head
19 of the class, if you will, if they are willing to pay
20 the increased costs associated with that, we can make
21 some accommodation.

22 We cannot sacrifice our review of projects
23 that are currently in the queue, but the bottom line
24 is that in this last wave of approvals, what we are
25 doing is having the industry pick up the bill to

1 allow consulting firms that we utilize to assist us
2 in doing some of the assessments, the analyses. And
3 so we have the ability to surcharge our fee schedule
4 to bring on the additional help that we need to keep
5 things moving along.

6 But looking long term and looking at what
7 the anticipated level of activity is, there is no
8 question that we are going to need to modify our fee
9 schedule, and although -- we have a fairly robust fee
10 schedule. I am sure the industry has probably told
11 you that.

12 But nonetheless, we are trying to anticipate
13 what the workload is to be responsive to the requests
14 that are being made to us and not negatively impact
15 all the other water users out there that are standing
16 in line waiting for their projects to be approved
17 that have nothing to do with this industry.

18 And so it is going to require additional
19 support. We are modifying management systems
20 internally to address this. We are rebuilding data
21 systems so that we can track all of this activity --
22 the reporting activity, the quantification of data,
23 compliance reviews, and the like.

24 So we are developing as many smart systems
25 as we can to address the anticipated workload. We

1 are bringing on additional people. We do have the
2 ability to surcharge, and we do believe that we are
3 up to the task, but it is going to take more than
4 what we have now. Thank you.

5 REPRESENTATIVE EVERETT: Thank you, sir.

6 And, Mr. Chairman, if I may just make a
7 comment based on what we just heard, that this may be
8 something that we would want to look at, providing
9 DEP with that kind of flexibility that they could
10 adapt, you know, through fee schedules and the kind
11 of flexibility that they are talking about, to be
12 able to stay up with the surges that we are going to
13 see in permit applications on the gas bill side.

14 Thank you, Mr. Chairman.

15 CHAIRMAN GEORGE: I thank the gentleman.

16 Again, the matter of a fee schedule and the
17 matter of prioritizing those that can be most willing
18 to put up the money isn't, in my opinion, always the
19 way to go if you are concerned about certain matters,
20 and the matter we are concerned about more than the
21 environment is the water loss.

22 So we are going to, as a committee, you can
23 be sure, work with all concerned. And we want to see
24 this developed, but we are also going to put an
25 emphasis on the preservation of this most important

1 commodity and resource, which is water.

2 Now, any of us -- and most of us live in an
3 area where we have seen the decline. And again, I
4 came up and mentioned to the Secretary the ability to
5 utilize that that has already been degraded. But,
6 you know, you have already got people that have
7 drilled in for this deep-well need, and I am sure you
8 have better facts than me with 580,000 to 620,000
9 gallons. That is an awful lot of water whenever we
10 have other industries that are begging for an
11 allowance of 150,000 and they cannot get it from the
12 department.

13 So again, I know you will be most willing to
14 work with us and to confide some of the policy and
15 the directions that you will be going, because I
16 think the committee wants to see this industry
17 survive, but we also want to see the matter of water
18 preservation still be a priority, if you will.

19 I see no other questioning. At this time,
20 Mr. Beauduy, I thank you and your colleague for
21 taking the time to come before us. Thank you very
22 much.

23 MR. BEAUDUY: Thank you.

24 CHAIRMAN GEORGE: We will just take
25 2 minutes now, if you will, while we change around.

1 I think we are going to have the gentleman,
2 Mr. Richard Weber, President of Atlas Energy
3 Resources; and the gentleman, Stephen Rhoads,
4 President of the Pennsylvania Oil & Gas Association;
5 and the gentleman, Louis D'Amico, Executive Director
6 of Independent Oil and Gas Association of
7 Pennsylvania.

8 Welcome, gentlemen. Take your time to get
9 yourselves settled in.

10 MR. RHOADS: Chairman George, Chairman
11 Hutchinson, thank you all very much for this
12 opportunity.

13 We really appreciate the opportunity to come
14 here today and address the committee.

15 There are three of us here, and we are going
16 to start with Mr. Weber.

17 If you would, Rich.

18 MR. WEBER: Good afternoon, Chairman George,
19 Chairman Hutchinson, distinguished committee members
20 and other guests.

21 My name is Rich Weber. I am the President
22 of Atlas Energy Resources of Moon Township,
23 Pennsylvania.

24 We have been drilling and operating natural
25 gas wells in Pennsylvania for over 30 years and are

1 the largest oil and gas producer headquartered in the
2 Commonwealth.

3 In addition to our activities in
4 Pennsylvania, we are active in seven other States and
5 are the 12th largest driller of oil and gas wells in
6 the country according to RigData reports. Atlas
7 Energy trades on the New York Stock Exchange under
8 the symbol ATN.

9 In our home State of Pennsylvania, we
10 operate approximately 6,000 natural gas and oil wells
11 and are one of the largest owners of oil and gas
12 mineral rights with approximately 600,000 acres under
13 lease.

14 We directly employ about 350 Pennsylvanians.
15 However, if you include the employees of our
16 subcontractors, total employment of Pennsylvanians as
17 a result of our activities would measure in the
18 thousands.

19 Traditionally, we have targeted the upper
20 Devonian sandstones and siltstones of central and
21 southwestern Pennsylvania and the Medina sandstones
22 in northwestern Pennsylvania.

23 We became interested in Marcellus Shale as a
24 potential commercial play about 2 1/2 years ago. We
25 always knew the Marcellus Shale existed and that it

1 was gas saturated, but we didn't know how to extract
2 the resource profitably from such a tight rock.

3 With the success of new technologies being
4 employed in the Barnett Shale in Texas, and in
5 particular the use of large-scale hydraulic fracs, we
6 decided to try some of these new techniques in the
7 Marcellus Shale.

8 Today, we have over 80 Marcellus wells
9 producing into a pipeline and are convinced that the
10 Marcellus Shale is a large commercial resource
11 capable of being one of the largest natural gas
12 fields in the United States.

13 Essentially, all of our Marcellus production
14 is located in the southwestern part of the State,
15 specifically in Fayette, Greene, Westmoreland, and
16 Washington Counties.

17 However, the Marcellus Shale extends up
18 along the western front of the Allegheny Mountains
19 into the far northeast counties of Pennsylvania and
20 underlies approximately 60 percent of our State. It
21 is found at depths between 4,000 and 9,000 feet and
22 is anywhere from 40 and 250 feet thick in the
23 productive areas.

24 Our company has already invested over
25 \$150 million dollars in the development of the

1 Marcellus Shale, and we plan to accelerate our
2 capital investment over the next few years. We count
3 over 30 companies with equally ambitious plans for
4 the shale, which portends significant capital
5 investment and job growth in Pennsylvania.

6 Our two industry associations in
7 Pennsylvania, the Independent Oil & Gas Association
8 of Pennsylvania and the Pennsylvania Oil and Gas
9 Association, have jointly formed the Marcellus Shale
10 Committee, which count as members the 25 largest
11 players in the Marcellus Shale.

12 The purpose of this committee is to form
13 industry consensus as to best practices and to form
14 consensus on the many issues that face the profitable
15 development of the Marcellus Shale.

16 In addition, we plan to implement a public
17 outreach campaign to help increase the general
18 public's awareness as to the many benefits of natural
19 gas development in the Marcellus Shale.

20 Lastly, we have commissioned the
21 Pennsylvania Economy League to study the impact of
22 our existing industry in Pennsylvania and have also
23 commissioned Penn State University to study the
24 potential impact of the Marcellus Shale itself.

25 We plan to make the Economy League study

1 public in the next week or so. However, I did take a
2 quick peek at the study and noted that our industry
3 currently employs 26,000 Pennsylvanians with an
4 aggregate annual payroll of \$1 billion.

5 The total direct and indirect economic
6 impact to Pennsylvania of the indigenous oil and gas
7 industry is over \$7 billion annually. This is before
8 the impact of the Marcellus Shale.

9 We hope to make the Penn State study public
10 by the end of the year.

11 As operators, all we ask of our Legislature
12 and regulators is fair and balanced laws and
13 regulations that are consistently timely and
14 predictably implemented. Our industry is very
15 capital intensive with long lead times and
16 uncertainty with regard to regulation and significant
17 risk to our decisionmaking.

18 At Atlas, we are active in three other shale
19 plays in other States and make decisions every day on
20 how to allocate our capital. As Pennsylvanians, we
21 at Atlas look forward to the continued profitable
22 development of the Marcellus Shale and our continued
23 responsible stewardship of our environment and the
24 natural resources in Pennsylvania.

25 Thank you.

1 CHAIRMAN GEORGE: I thank the gentleman.

2 The next that we have would be the
3 gentleman, Mr. Rhoads. Would you prefer to be
4 last?

5 MR. RHOADS: Do you want to go, Lou? Let
6 Lou go ahead of me.

7 CHAIRMAN GEORGE: The gentleman,
8 Mr. Louis D'Amico, Executive Director of
9 Independent Oil.

10 Who is going first? You, sir?

11 Welcome sir. You may present.

12 MR. D'AMICO: Good afternoon,
13 Chairman George, Chairman Hutchinson, and
14 distinguished committee members.

15 I am Lou D'Amico, Executive Director of
16 the Independent Oil and Gas Association of
17 Pennsylvania.

18 Thank you for the opportunity to provide
19 testimony in developing the Marcellus Shale here in
20 Pennsylvania.

21 I find myself in an unusual and unexpected
22 position today. Since I graduated from Penn State in
23 1972 with a degree in natural gas engineering, I
24 worked in my home State literally in the backwaters
25 of the oil and gas industry.

1 Prior to joining IO then in government
2 affairs, my career was primarily focused on the
3 growing completion of operations on marginal wells.

4 Our industry here has often struggled with
5 economic liability. In the 1980s, I watched many
6 friends and colleagues become jobless as the industry
7 lost three-quarters of a million jobs in the
8 exploration and production business in the country
9 nationwide.

10 At the same time, I watched high school
11 classmates from my southwestern Pennsylvania roots,
12 those in manufacturing jobs and mining jobs, as
13 government policies encouraged our companies to move
14 to other States and take their jobs with them.

15 Today, there appears to be an opportunity
16 for my friends in my home State to benefit from the
17 industry in which I spent my entire career. The
18 Marcellus Shale has the potential to generate huge
19 economic opportunity.

20 Some industry experts have estimated that
21 the Marcellus Shale could contain up to 200 trillion
22 cubic feet of clean-burning natural gas reserves,
23 enough to supply the U.S. natural gas demand for
24 nearly a decade. Pennsylvania is poised to become a
25 leader in energy production.

1 We currently produce about 25 percent of the
2 natural gas that Pennsylvania consumes. The
3 Marcellus Shale could turn the Commonwealth into an
4 exporter of natural gas, providing tens of thousands
5 of high-paying jobs to Pennsylvania in the process.

6 Virtually every day I read or hear of some
7 editorial about how the Marcellus Shale development
8 threatens the environment or will ruin the character
9 or our municipalities or take over all of our water
10 supplies. The amount of misinformation,
11 exaggeration, and outright lies being spread is
12 staggering. The facts tell a far different story.

13 The story in Pennsylvania is of an industry
14 over a century old. The story is of an industry in
15 Pennsylvania that has an enviable environmental
16 record. The story is of an industry full of outdoors
17 men, hunters, fishermen, and outdoor enthusiasts who
18 love and respect our environment as much as any
19 environmental science professor in some Pennsylvania
20 college or university.

21 We have heard about all this new dangerous
22 technology, like hydraulic fracturing. Is it not
23 strange that this new dangerous technology has been
24 referred to by the Interstate Oil and Gas Compact
25 Commission and the Association of Regulators from all

1 the oil and gas producing States that clearly state
2 there is no problem with this 50-year-old new
3 technology; the fracking has not resulted in damage to
4 the nation's groundwater supplies. Or in 50 years of
5 hydraulic fracturing where it has been standard
6 practice for almost all of Pennsylvania's oil and gas
7 wells, our own DEP has not seen a problem with this
8 new technology affecting our groundwater.

9 There clearly are new methods of completion
10 in drilling in the Marcellus Shale, yet these new
11 technologies are not significantly different from
12 what has happened in the past, just combined in a
13 different manner. We still set protective casing to
14 protect the freshwater supplies as mandated by State
15 law. We still will be disposing of the fracture
16 fluids, drilling fluids, and production fluids in
17 accordance with the same State laws that conventional
18 oil comply with.

19 My fundamental message is that the Oil and
20 Gas Act, Clean Streams Law, and other existing laws
21 regulating this industry will still serve the needs
22 of the Commonwealth to protect the environment.

23 We need the General Assembly, particularly
24 members of this committee, and your counterparts in
25 the Senate to press the regulators of our industry to

1 continue to meet with industry and develop workable
2 and timely solutions to regulating our industry.

3 This industry needs sensible regulations
4 that foster development of this huge energy resource
5 while protecting the environment, not bureaucratic
6 layers of policies and regulations that will force
7 oil and gas companies to divert their capital to more
8 business-friendly States.

9 We are losing the competition to other
10 States with similar shale plays, particularly the
11 Haynesville Shale in Louisiana and east Texas.
12 Drilling capital, regs, oil-fuel services, and people
13 resources are flowing to the Haynesville Play because
14 of regulatory uncertainty here in Pennsylvania.

15 We need our regulators to think twice about
16 requirements that have no real environmental benefit
17 but rather create delays and costs for no real
18 purpose.

19 The companies who come to Pennsylvania to
20 develop this are not fly-by-night operators. These
21 are among the largest, best capitalized, and
22 responsible corporations in the country. I am proud
23 to have them come here and I'm proud to represent
24 them.

25 They are not "invaders," which is a

1 seemingly favorite term in the press. They are not
2 exploiters of the environment. They are here to
3 eventually make a profit. By being here, they will
4 be improving our Commonwealth -- improving our energy
5 portfolio, improving our economy, improving our
6 employment rate.

7 Ladies and gentlemen, do not let our
8 regulators bury this economic opportunity in
9 red tape, delay, or unnecessary regulation. For
10 example, we have extensive standards and best
11 management practices for erosion and sedimentation to
12 drill in the Commonwealth. The DEP has full
13 enforcement capabilities under the Clean Streams Law
14 to enforce those standards for BMPs.

15 Even with robust drilling activity in the
16 Marcellus Shale, maybe about 10,000 acres of land
17 would be disturbed annually compared to over
18 2 million acres of land that are tilled each year by
19 Pennsylvania's farmers, yet the DEP is banning an
20 erosion and sedimentation permit for Marcellus wells
21 and related facilities. Why?

22 If the enforcement capability standards are
23 in place -- and they are -- why is it necessary to
24 require a permit on top of the drilling permit? What
25 environmental benefit is being achieved?

1 This is just one example. There are others,
2 other duplications of effort and time-consuming
3 efforts. We should do all we can to streamline our
4 efforts to give permits, get wells drilled, and get
5 the pipelines laid. The Commonwealth can get this
6 done quickly and expeditiously while still
7 maintaining superior environmental protection.

8 One area of delaying getting permits is the
9 PNDI program. PNDI searches must be run to determine
10 the potential of endangered species in the permit
11 area. We must get through PNDI clearances before we
12 can even apply for a drilling permit.

13 The program is housed in the Department of
14 Conservation and Natural Resources, and there are
15 often delays due to work backlogs at that department.
16 If there is a PNDI hit, the operator must determine
17 what the potential impact is and get the clearance
18 necessary.

19 To clear the PNDI hit, other agencies may be
20 involved. Aquatic species is being required of the
21 Pennsylvania Fish and Boat Commission and the
22 U.S. Fish and Wildlife clearance. Nonaquatic animals
23 may require both the PA Game Commission and U.S. Fish
24 and Wildlife clearances. Each agency may have its
25 own built-in delays.

1 If DEP could process the rest of the permit
2 application and if the permit application is okay,
3 the permit could be issued whenever PNDI clearance
4 occurs rather than that being the starting point for
5 permit consideration.

6 The General Assembly could also help by
7 seeing that DCNR is adequately staffed and funded for
8 the PNDI program.

9 The General Assembly can be involved in
10 assuring that DEP is utilizing the available
11 expertise in the industry in developing policies and
12 propagating regulations for the industry.

13 In the past, the assumption seems to have
14 been that in some ways, seeking input in the early
15 stages of regulatory development from the industry
16 will taint the process. Clearly, we have something
17 to offer in the way of knowledge in regulating our
18 industry. We believe in the best interests of the
19 Commonwealth and that industry have early involvement
20 in regulatory development.

21 The department can ignore such advice if it
22 so chooses, but at least potential problems may
23 occasionally be recognized before they are carved in
24 stone. Elected officials can ensure that unnecessary
25 bureaucracy does not stifle the development of this

1 resource.

2 Ladies and gentlemen, you have the power to
3 see that the road is not unnecessarily blocked to
4 Marcellus Shale development. Along with the
5 Governor's Office, you could be a positive force not
6 only for the industry but for the people of the
7 Commonwealth.

8 This concludes my prepared remarks.

9 CHAIRMAN GEORGE: I thank the gentleman.
10 The gentleman, Mr. Rhoads.

11 MR. RHOADS: Thank you, Chairman George,
12 members of the committee, and Miss Major. Thank you
13 for coming out today.

14 I want to respond to a concern that the
15 Chairman raised in his letter about making sure that
16 we do all this right when you invited us all here to
17 the committee meeting, and specifically I would like
18 to address a few of the environmental issues that
19 have gained a lot of attention in recent months, and
20 they are the potential impacts of this activity, the
21 Marcellus development, on the landscape and the
22 potential impacts it might have on water resources.

23 With regard to the impacts that we have on
24 the landscape, shales like the Marcellus are
25 difficult geological formations that develop, and it

1 is only because of the evolution of horizontal
2 drilling technology over the last 25 years in the
3 Barnett that our industry is finally able to produce
4 this resource.

5 Horizontal drilling has some significant
6 environmental benefits, but principally because it
7 allows the operator to place well locations further
8 apart, to drill multiple wells from a single pad, and
9 to recover more of the underlying gas from one
10 location. This means less earth disturbance from the
11 construction of the well locations, access roads and
12 pipelines, less impact from noise and traffic, and
13 less of a visual change to the landscape.

14 Horizontal drilling also enables the
15 operator to avoid sensitive environmental features,
16 like habitats which threaten endangered species and
17 also other potential service use conflicts.

18 With regard to the impact on fresh
19 groundwater, successful development of the Marcellus
20 will largely hinge, as you have all heard, on the use
21 of hydraulic fracturing technology to stimulate the
22 gas production.

23 Operators expect to use about 1 million
24 gallons of water to frac a vertical well and about
25 3 million gallons of water to frac a horizontal well.

1 It is important to remember, as Lou had
2 said, that hydraulic fracturing has been around for a
3 very long time. It is not a new technology. It has
4 been in use in Pennsylvania for about 50 years. And
5 these concerns, the use of that technology, was in
6 play in the early 1980s when this General Assembly
7 addressed the environmental concerns related to the
8 oil and gas industry by enacting the Oil and Gas Act
9 of 1984.

10 For example, some of the rules that came out
11 of that act from DEP include the rules governing the
12 construction of the well. When we drill a completed
13 well, we are required to install multiple steel
14 casing strings that are layered and cemented through
15 the fresh groundwater varying horizons before we
16 continue to drill down to the producing sites.

17 When operators frac a well, the well has
18 been built that way. The protection provided by the
19 steel and cement is supplemented by a natural barrier
20 of several thousand feet of overlying formations that
21 separate freshwater zones from the bruising formation
22 and prevent the upward migration of frac fluids.

23 I have included with my testimony a copy of
24 a white paper -- I believe you all have it -- that
25 was handed out, was delivered at last week's

1 Ground Water Protection Council Annual Forum. That
2 paper is very timely and very interesting. It
3 specifically addresses natural gas drilling in the
4 Marcellus Shale and the effect of hydro-fracing on
5 fresh groundwater.

6 What it basically concludes is that the
7 potential for impacts to surface and groundwater from
8 the development of the shale are expected to be
9 minimal because of the State regulatory requirements,
10 the practices operators employ to ensure that frac
11 fluids are contained, and the thick blanket of
12 overlying shales and sandstones that lie above the
13 Marcellus and below fresh groundwater-bearing zones.

14 And then as I think Chairman George said
15 earlier, if all that fails, we can always go back to
16 the Oil and Gas Act, and if something does in fact
17 happen to a groundwater supply, we have the
18 rebuttable presumption to protect the surface owner.

19 To those of you who don't know, the
20 rebuttable presumption simply states that if I drill
21 a well, I am responsible to replace any water supply
22 that may be damaged in the vicinity of that well, and
23 it is my responsibility to prove that I didn't do it
24 if I don't believe I did it. That is what the
25 rebuttable presumption provides.

1 With regard to water withdrawals, obvious
2 concerns have been raised about the possible
3 environmental impacts associated with drawing down
4 3 million gallons of water from the Commonwealth's
5 rivers and streams for frac jobs.

6 It is very important to acknowledge up front
7 that the Commonwealth is blessed with abundant water
8 resources. We have more than 83,000 miles of streams
9 and rivers and over 40 inches of rainfall on average
10 every year in this Commonwealth.

11 This substantial water resource makes the
12 region ideal for the development of this kind of a
13 shale opportunity, especially when you consider other
14 parts of the country that are a lot more arid than we
15 are.

16 As others have discussed, the way we use
17 water is a little different than the way water has
18 been regulated by the commissions and by the
19 department.

20 Water uses associated with the Marcellus
21 Shale development are small scale, intermittent, and
22 carried out by many different companies at hundreds
23 of locations that are spread throughout thousands of
24 square miles of the Marcellus Shale region.

25 A typical development pattern for each of

1 these wells entails the withdrawal of relatively
2 small volumes of water over a period of time, about
3 30 days, and that water is being stored in surface
4 ponds or tanks and then being used for a 1- or 2-day
5 long frac job.

6 Clearly, we all need to take the protection
7 of our aquatic resources very seriously, regardless
8 of the size and scope of our water-use activities,
9 but the agencies regulating these activities, both
10 river basin commissions and DEP, need to reconsider
11 the policies and regulatory models they employ to
12 select surface water withdrawal points and to
13 establish water withdrawal limits from Marcellus
14 Shale operators.

15 The policies and models currently in use are
16 designed to regulate projects that rely on continuous
17 long-term withdrawals and use of water from one or
18 more locations. We don't know this for sure, but
19 they may not be flexible enough to accommodate the
20 pattern of water withdrawals and consumptive uses
21 associated with our development.

22 For us to function more efficiently,
23 operators need access to water withdrawal points
24 closer to their operations, not just on large streams
25 and rivers. Water-source options that are closer to

1 the point of use will enable our industry to use
2 temporary pipelines to move water and could help us
3 substantially reduce truck traffic that we would need
4 otherwise to haul water over long distances to our
5 well locations.

6 To help the agencies address these concerns,
7 our associations through our joint Marcellus Shale
8 Committee are retaining legal and technical expertise
9 to open a dialogue with the potential options of the
10 current flow models that the agency uses to evaluate
11 aquatic life and habitat impacts of surface water
12 withdrawals, and we look forward to finding common
13 ground with them as we move forward. We think we can
14 do that.

15 Finally, I want to talk a little bit about
16 wastewater disposal.

17 This has become, I think, the department's
18 focus. Their real concern, I think, with the
19 Department of Environmental Protection is on this
20 issue.

21 Our industry at this time has three options
22 for disposing of wastewaters. We can either dispose
23 of it at industrial wastewater facilities that treat
24 oil field wastewaters for discharge to streams and
25 rivers under an NPDES permit, we can also go to a

1 large sewage treatment plant that has the capacity to
2 take these loads in and treat and dispose of them, or
3 we can use underground injection through Class II
4 disposal wells that are regulated by EPA.

5 All three options are currently available to
6 operators in Pennsylvania in the conventional oil and
7 gas fields, but we expect that the infrastructure
8 capacity that is now available, that it will be fully
9 utilized in the near future as Marcellus Shale
10 operations expand alongside conventional shallow
11 gas and oil development.

12 There are very limited options available
13 right now to those operators exploring the Marcellus
14 in Pennsylvania's northeastern counties.

15 Currently, operators there are relying on
16 existing infrastructure and building new alliances
17 with public sewage treatment plants and private
18 wastewater plants wherever they are available.

19 In the near term, operators hope to permit
20 new wastewater treatment plants within a reasonable
21 distance of their lease holdings, but the department
22 has expressed some concern about these plants and
23 especially the potential impact they may have on the
24 assimilative capacity of the receiving waters.

25 We as an industry are also beginning to

1 explore the possibility of deep underground injection
2 as a long-term strategy that could, we believe,
3 facilitate full-scale development of this gas
4 prospect.

5 It is imperative that we find ways to
6 expedite the permitting and development of the
7 necessary wastewater treatment and disposal
8 infrastructures that our industry needs, and we have
9 to look to the Department of Environmental Protection
10 as a full partner in deploying the appropriate
11 technology and facilities that we need if we are
12 going to fully enjoy the rich economic benefits that
13 this play has to offer.

14 And with that, ladies and gentlemen, I thank
15 you, and we will be happy to try to answer any
16 questions you may have.

17 Thank you again.

18 CHAIRMAN GEORGE: Are there any questions?

19 The gentleman, Mr. Vitali.

20 REPRESENTATIVE VITALI: Thank you,
21 Mr. Chairman.

22 I have to confess I really have not given
23 this issue a lick of thought up until a day or two
24 ago, so I don't really have a good information
25 background here.

1 But could you talk a little more about the
2 third type of disposal of wastewater, the underground
3 disposal using Class II disposal wells, and the
4 possibility of deep underground injection as a
5 long-term strategy?

6 Could you tell me how that works and sort of
7 allay the gut reaction fears of you are just putting
8 a problem deep into the ground for someone else to
9 deal with at some other point?

10 MR. RHOADS: Well, the Underground Injection
11 Control Program is a Federal program. It is run by
12 the U.S. Environmental Protection Agency. Here in
13 Pennsylvania, the EPA Region 3 out of Philadelphia
14 manages the program.

15 DEP has never taken primacy. They had the
16 option to take primacy over the program, but they
17 never have.

18 And deep disposal wells have not been used
19 very often in Pennsylvania heretofore. There are, I
20 believe there are about six or seven disposal wells,
21 Class II disposal wells. These are residual waste
22 disposal wells basically that are operating in
23 Pennsylvania with other industries. I think our
24 industry has maybe two, if I am not mistaken.

25 It has never been fully utilized, and there

1 has been a longstanding belief in our industry that
2 it could not be, that the geology really isn't here
3 to accommodate that kind of disposal.

4 But with the advent of the Marcellus Shale
5 here in Pennsylvania and the experience that
6 operators have had in other parts of the country, we
7 have begun to reexamine that thought, and it appears
8 from some analytical information I have from some of
9 the companies that there are in fact opportunities to
10 do this.

11 And what this means is, you would have a
12 well, an injection well, permitted by EPA
13 specifically for the purpose of injecting and
14 containing wastewaters, residual wastewaters like
15 those associated with frac flowback and produced
16 waters like brine waters, that would be injected into
17 receiving formations that have enough voracity and
18 enough capacity to be able to take this water in
19 significant volumes.

20 And part of the process of permitting those
21 wells is to ensure that the wells themselves have
22 mechanical integrity; that is, they are designed and
23 built and monitored so that they protect any
24 overlying freshwater, there is no communication, and
25 that they can in fact, formations can in fact contain

1 the fluids that are disposed.

2 This is an EPA-regulated process -- DEP does
3 play a role in it as well -- and I believe that they
4 have to issue a well permit, an oil and gas well
5 permit, that accompanies the UIC permit that EPA
6 would issue.

7 MR. WEBER: I might just add real quick, you
8 know, the company, we have about 75 of these disposal
9 wells in other States and operate them successfully,
10 without incident.

11 But, you know, it is not a fait accompli
12 that this is the solution in Pennsylvania. In fact,
13 through a partner, we permitted a built for purpose
14 water treatment facility in Masontown, Pennsylvania,
15 that was specifically designed to treat the frac
16 water that we receive and treat the contaminates in
17 that water.

18 And it is not entirely clear what our
19 long-term solution is, but there are several of them
20 that are at our disposal.

21 REPRESENTATIVE VITALI: So current State law
22 allows this type of disposal of wastewater.

23 Under what circumstances would DEP require
24 the treatment plant versus the deep-well-injection
25 remedy?

1 MR. RHOADS: It is the option, it is the
2 option of the operator. You have both permitting
3 options, and you can come in for either one.

4 If you can identify an adequate underground
5 injection zone, then you can make an application for
6 the permit. If you cannot in your area where you are
7 operating and you have adequate capacity in the
8 stream to accept an affluent, a treated affluent,
9 then you can go that route.

10 REPRESENTATIVE VITALI: Thank you,
11 Mr. Chairman.

12 MR. D'AMICO: If I may, one other thing to
13 add, Representative Vitali.

14 One of the things we are doing as part of
15 our process of working with the Marcellus Shale
16 Committee is there is a group we refer to as the
17 Appalachian Shale Water Conservation and Management
18 Committee. It has been formed to explore all of the
19 options for water disposal, including the treatment,
20 disposal, and recycling of these fluids.

21 So we are looking at every possible
22 opportunity that is out there to, you know, minimize
23 the amount of wastewater.

24 REPRESENTATIVE VITALI: Thank you.

25 CHAIRMAN GEORGE: Are there any questions to

1 my right?

2 The gentleman, Mr. Hutchinson.

3 REPRESENTATIVE HUTCHINSON: Thank you.

4 I do not know which or if several of you
5 wanted to jump in on these couple of questions.

6 One is sort of a follow-up to what we were
7 just discussing about treatment of the water
8 afterwards. And one of the options you talked about,
9 disposal through sewage treatment, large sewage
10 treatment plants, would the processing of this water
11 typically take additional processes over and above
12 what the typical municipal sewage treatment plant
13 does, or can it just flow through that process as
14 long as there is capacity here?

15 You know, do we have to add chemicals or
16 whatever or use processes of one sort or another in
17 addition to what we normally think of as a sewage
18 treatment plant?

19 MR. RHOADS: I am not intimately familiar
20 with all the details, but I do understand that there
21 is some concern with the addition of this type of
22 wastewater into the sewage treatment system, and
23 because of that concern, there are, I think -- I
24 believe routinely there are pretreatment requirements
25 that go into effect.

1 There is also, you know, depending on the
2 size of the facility that would be receiving these
3 things, that also has a lot to say about whether or
4 not a specific plant can be used.

5 MR. WEBER: And of course we have to dispose
6 of our water in facilities that are configured
7 properly to treat this water. It can't just go to
8 anywhere.

9 REPRESENTATIVE HUTCHINSON: Right.

10 MR. WEBER: And that is part of the DEP
11 permitting process that the Secretary talked about.

12 REPRESENTATIVE HUTCHINSON: The next
13 question is regarding the PNDI.

14 We had previously heard from DEP. They
15 obviously have all their own processes in place, but
16 this is a separate State agency, DCNR, that oversees
17 PNDI. And my understanding is that there is a
18 bottleneck in that area, and, you know, I wish we
19 maybe could have heard from them.

20 I have some other communications with DCNR,
21 and I just wanted to hear a little further comment
22 about how that impacts the timeliness of your ability
23 to actually start drilling.

24 MR. D'AMICO: Yeah; the problem with the
25 PNDI program right now -- actually, there are several

1 problems.

2 Number one, there is a backlog within DCNR.
3 They truly do not have all the personnel they
4 probably need to get this accomplished.

5 But in addition to that, when we get a hit,
6 you know, we get a notification that there is some
7 endangered species, whether it be plant or animal.
8 We have to go through various agencies to get
9 clearance on it.

10 If it is a DCNR, if it is a plant, the
11 clearance will come from DCNR. If it is a freshwater
12 mussel, we are going to probably be dealing with the
13 Fish and Boat Commission.

14 So we are -- in addition to having the
15 timing problem with DCNR is whatever other agency
16 that you are dealing with also.

17 But one of the suggestions that I made here
18 in my testimony is that if DEP could process the rest
19 of the permit application and have it ready to go so
20 that when we do receive the PNDI clearance, that
21 permit could be issued. That would dramatically
22 decrease the time that we are looking at right now.
23 Because right now, the process has to start with the
24 clearance.

25 MR. RHOADS: Let me add to that, just so you

1 understand clearly.

2 DEP's policies state that you have to clear
3 a PNDI hit before they will begin to process your
4 permit. What we are asking for is a concurrent
5 review.

6 There is one other thing I would like to
7 throw out here for you. You heard comments from
8 Mr. Hanger about the lack of money for staffing. The
9 same problem exists for DCNR for their review of the
10 PNDI.

11 I was talking to the person who runs that
12 program a few months ago or at the end of -- well,
13 about a month ago, and she told me that for the first
14 time ever, they were able to get rid of their
15 backlog, briefly, because they had some interns on
16 staff to help them over the summer.

17 DCNR just received an influx of
18 approximately \$180 million from the auction of oil
19 and gas rights. I would suggest to you that that
20 money -- some of that money, not all of it -- some of
21 that money could be put to good use by properly and
22 adequately staffing the PNDI program and all the
23 agencies that use it. That would just greatly
24 facilitate the review that is required.

25 I would also suggest that some of that

1 money might be used for Secretary Hanger's needs as
2 well.

3 REPRESENTATIVE HUTCHINSON: I'm going to
4 make one quick comment, because I really do not want
5 to go into the fact that there were some who would
6 question for you to even have a PNDI.

7 But my final question is regarding the
8 erosion and sedimentation permitting, and could you
9 -- my understanding is that traditionally, those have
10 not been required at drilling sites, but now, because
11 of flexible interpretations of, you know, what is
12 considered being disturbed, that now those are being
13 required. Is that a fair statement, and could you
14 elaborate on that a little bit more?

15 MR. RHOADS: Go ahead, Lou.

16 MR. D'AMICO: Yes, I think that is a fair
17 statement.

18 You know, this has a long history, going
19 back to the Federal Clean Water Act and the NPDES
20 stormwater permit.

21 The process originally, the Clean Water Act
22 at the Federal level specifically exempted any kind
23 of oil and gas runoff, noncontaminated runoff, from
24 requiring a permit.

25 There was interpretation within the EPA that

1 building a well site, building a pipeline, putting a
2 road to a well was an oil and gas activity. We are
3 not sure what oil and gas activity would be, but --
4 all those things were taken out -- but, you know,
5 that was the interpretation that was made.

6 The industry nationwide, you know, tried to
7 deal with this. It was not a particularly big
8 problem because the EPA had a 5-acre limitation, and
9 that, at the time, was not a significant issue. It
10 became a very significant issue when the EPA was
11 forced via a lawsuit to go to 1 acre for
12 disturbances.

13 So to try and make a long story short, the
14 Congress and the Energy Policy Act redefined oil and
15 gas activities. So to clarify it, DEP had the option
16 of letting it alone. They chose not to. They chose
17 to require their own permit, even though we already
18 have the protection in place.

19 REPRESENTATIVE HUTCHINSON: That is
20 certainly something that I'll look at as we go
21 forward.

22 Thank you for your testimony, and I have no
23 further questions.

24 CHAIRMAN GEORGE: The gentleman,
25 Mr. Stevenson.

1 REPRESENTATIVE STEVENSON: Thank you,
2 Mr. Chairman.

3 And for Mr. D'Amico, this is just a brief
4 follow-up question. Given the concerns about
5 regulation and extending those regulations that you
6 mentioned in your testimony, what was your reaction
7 to Acting Secretary Hanger's comment that the
8 extraction process is currently well regulated and
9 sees no need for additional regulation?

10 MR. D'AMICO: I would agree that there
11 certainly is no need for additional regulation. I
12 think -- and no need for additional legislation on
13 that.

14 I do think there is the possibility of
15 streamlining a lot of the process, and I think it
16 would behoove all of us to be involved in that
17 process.

18 I think in the past the DEP has, as I said
19 in our testimony, felt that if, you know, industry in
20 some way was involved in the early development of
21 some of these regulations, that it would somehow
22 taint the process. The reality is, you know, there
23 is no place where there is more expertise in the
24 oil and gas industry than within the industry
25 itself.

1 REPRESENTATIVE STEVENSON: Thank you very
2 much. I appreciated your testimony today.

3 Thank you, Mr. Chairman.

4 MR. RHOADS: If I could add something
5 briefly to that.

6 This whole Marcellus shift that occurred in
7 the agencies has been sudden and rough. It has been
8 a rough road for them as well as for us.

9 They have been struggling to come up with a
10 way to address the issues that they seek, and the
11 struggle has been causing a lot of uncertainty. The
12 ground has been shifting under us for a few months,
13 and it is causing a lot of risk for the decisions
14 that some of these folks have to make with their
15 capital investments.

16 We have approached both the DEP and the SRBC
17 just recently to reach out and to talk with them and
18 ask them to open the kind of dialogue that Lou is
19 suggesting we have, and they have expressed an
20 interest, a strong interest, in doing that with us.
21 We expect to start talking with them in a very robust
22 way very soon.

23 Unfortunately, it is happening now and did
24 not happen 3 months ago.

25 CHAIRMAN GEORGE: Has the gentleman

1 concluded?

2 Are there any other questions?

3 I have just one, if I may. I can understand
4 that there is going to be some dispute over whether
5 or not the injection of this contaminated source back
6 into the aquifers is going to be somewhat troubling,
7 even though you insist that that is not the case. Do
8 you have any viable proof where it has been tested
9 and that isn't the case?

10 MR. RHOADS: I do not have it in front of me
11 right now, but I believe it is available. I think we
12 can go to the EPA and get data on that.

13 Representative George, this program has been
14 around for a long, long time, about 30 years.

15 CHAIRMAN GEORGE: Let me say this: I have
16 allowed a lot of flexibility, and I intend to do
17 that, but again, there is something that when you and
18 I first met we did not have to consider, and that is,
19 over the last 25 years, our water supplies have
20 dwindled and our aquifers, because of industry, have
21 changed direction. And we have a lot of contaminated
22 water, and that is why I was suggesting that we
23 utilize some of these contaminated waters in the
24 stream.

25 In one of your testimonies -- just a minute,

1 please -- in one of your testimonies--- I am being
2 nice today. You ought to be up in front of me when I
3 am not so nice.

4 MR. RHOADS: I appreciate it.

5 CHAIRMAN GEORGE: The fact remains that in
6 your testimony I read, Mr. Rhoads, where we pull so
7 many millions of gallons up in the county where the
8 power plant is, and I understand that, but also
9 understand that I was there when they built it, and
10 we didn't have water shortages in those days.

11 Now, with 25 years of ongoing industry,
12 which we need, this committee and the entire
13 constituency that we represent are not against seeing
14 the exploration and the completion and hopefully the
15 involvement of where we can get a very important
16 resource as cheaply as possible, because with
17 everything happening in the cost to a family, I even
18 encourage you to continue in your effort.

19 But for you people to insist that you can
20 put contaminated water back into an injection hole
21 where it will hit an aquifer, whether it is true, you
22 know, I do not know of anybody that can look up a
23 blind horse's ear any further than me when you tell
24 me that there will be no problem. So I want proof,
25 and you can get it to me, because what I intend to do

1 is to work with you, each and all of you, to try to
2 give the people of Pennsylvania the surge in the
3 economy that we have been looking for.

4 But I want you both to understand that there
5 is another side to this question. We were deliberate
6 in our measures today. We invited the department.
7 We invited you. On the next routine meeting, we are
8 going to invite the public. We are going to find out
9 what their qualms are, what their concerns are, and
10 what they feel that we, as their Representatives,
11 should be able to do to protect them.

12 So again, I am not going to get into an
13 argument about do you or don't you, but I know one
14 thing: I thought that going forward with the
15 suggestion of treating this water in the stream, you
16 would be doing not only a proper service with the
17 conservation of the potable water that is still in
18 the ground but utilizing your industry at no more
19 charge and preventing yourselves from being involved
20 in other contamination measures. That is why in the
21 future I want to talk about portable -- hauling --
22 portable facilities, not just these sewage facilities
23 but other facilities where we can work together with
24 you folks and the department for these treatment
25 facilities that can be hauled to different areas as

1 you do with the construction of concrete -- a
2 portable effort.

3 So with that in mind -- by the way, before I
4 forget, the Pennsylvania Federation of Sportsmen's
5 Clubs has offered their testimony for this committee,
6 and they will probably be at our next hearing.

7 So let me say this in closing: We want to
8 work with you. These members are receptive. We want
9 to see you succeed, but we want also to hear the
10 concerns from the public.

11 Now, for you to tell me that over the years,
12 the last 50 years we have gone after this Marcellus
13 seam -- and we have been using, you know, your
14 figures are 580, 600. I was told that sometimes it
15 is as high as a million gallons. I am set for
16 anything you can provide me, but we want to get
17 everyone together. We want to put Pennsylvania where
18 it ought to be, first in production, first in
19 conservation, and first in environmental control.
20 And we can do that with your cooperation and your
21 open-mindedness, where you must understand there are
22 those that will be affected, and not in a positive
23 way, by your drilling and your exploration and your
24 removal of this most important product.

25 So bear with us. If you have anything to

1 say, I am receptive to hear it. So are these
2 members.

3 So I thank you for coming before us on this
4 given day, and I thank all of those that have taken
5 their time to hear the discussion. And I can say to
6 you there will be several meetings. You are all
7 welcome. You might hear some things that you do not
8 like, but that is what we want. We want you to be
9 able to explain to those people why they are
10 concerned and they should not be.

11 With nothing other, I thank you, I thank the
12 audience for their indulgence, and have a safe trip
13 home.

14 This meeting is adjourned.

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16 (The hearing concluded at 4 p.m.)

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1 I hereby certify that the proceedings and
2 evidence are contained fully and accurately in the
3 notes taken by me on the within proceedings and that
4 this is a correct transcript of the same.

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Debra B. Miller, Reporter

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