CIVIL CASE INFORMATION STATEMENT CIVIL CASES

In the Circuit Court of Logan County, West Virginia

I. CASE STYLE			
Plaintiff(s)	Case No. 08-C-14		
CABOT OIL & GAS CORPORATION.			
vs.			
Defendant(s) RANDY HUFFMAN, CABINET SECRETARY WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS	Days to Answer	Type of Service	
Intervenors			
SIERRA CLUB, INC.			
Original and copies of complaint furnished herev	vith.		

RANDY HUFFMAN, SEC DEP OF ENV PROT, OFF OIL & GAS **DEFENDANTS:** SIERRA CLUB, INC. **INTERVENORS:** II. TYPE OF CASE: **TORTS** OTHER CIVIL Appeal from Magistrate Court Asbestos Adoption Petition for Modification of ☐ Professional Malpractice Contract Magistrate Sentence ☐ Personal Injury Real Property Miscellaneous Civil Product Liability Mental Health Other Other Tort X Appeal of Administrative Agency III. JURY DEMAND: ☐ Yes X No CASE WILL BE READY FOR TRAIL BY (MONTH/YEAR): 12/2006 IV. DO YOU OR ANY OF YOUR CLIENTS OR WITNESSESS IN THIS CASE REQUIRE SPECIAL ACCOMMODATIONS DUE TO A DISABILITY OR AGE? ☐ YES ☐ Wheelchair accessible hearing room and other facilities ☐ Interpreter or other auxiliary aid for the hearing impaired ☐ Reader or other auxiliary aid for the visually impaired Spokesperson or other auxiliary aid for the speech impaired Other: Attorney: William V. DePaulo, Esq. #995 □ Defendant X Intervenor - Sierra Club, Inc. ☐ Plaintiff Representing: Street: 179 Summers Street, Suite 232 ☐ Cross-Complainant City/State/Zip: Charleston, WV 25301-2163 ☐ Cross-Defendant Tel: <u>304-342-5588</u> Fax: <u>304-342-5505</u> email: william.depaulo@gmail.com

CASE NUMBER: 08-C-14

CABOT OIL & GAS CORP

PLAINTIFFS:

Dated: September 17, 2009

IN THE CIRCUIT COURT OF LOGAN COUNTY, WEST VIRGINIA

CABOT OIL & GAS CORPORATION,

a Delaware corporation,

Petitioners/Appellants,

and

LAWSON HEIRS, INC., a Virginia corporation,

V.

CA No. 08-C-14

RANDY HUFFMAN, CABINET SECRETARY WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

Respondents/Appellees.

NOTICE OF HEARING

PLEASE TAKE NOTICE that the Sierra Club, Inc. will bring on for a hearing at 2:30 PM on September 298, 2009 its Motion to Intervene in this proceeding. You may attend and defend your interests as they may appear.

Respectfully submitted,

SIERRA CLUB, INC.

By Counsel

wwserato

William V. DePaulo, Esq. #995 179 Summers Street, Suite 232 Charleston, WV 25301-2163

Tel: 304-342-5588 Fax: 304-342-5505

william.depaulo@gmail.com

IN THE CIRCUIT COURT OF LOGAN COUNTY, WEST VIRGINIA

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RANDY HUFFMAN, CABINET SECRETARY WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

Respondents/Appellees.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Sierra Club, Inc.'s NOTICE OF HEARING was served by fax this 17th day of September 2009 on the following:

Timothy M. Miller, Esq. #2564
Anne C. Blankenship, Esq. #9044
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Raymond S. Frank II, Esq. #6523
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Fax: 304-344-3684 trodd@calwelllaw.com

Counsel for Cordie O. Hutchins, Former Director, Division of Natural Resources, the West Virginia Highlands Conservancy, and Friends of Blackwater

William V. DePaulo

IN THE CIRCUIT COURT OF LOGAN COUNTY, WEST VIRGINIA

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RANDY HUFFMAN, CABINET SECRETARY
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION, OFFICE OF OIL AND GAS,

Respondents/Appellees.

SIERRA CLUB, INC. MOTION TO INTERVENE

Pursuant to Rule 24 (a) and (b), the Sierra Club, Inc. (Sierra Club), by its counsel, William V. DePaulo, Esq., respectfully requests that this Court enter and order permitting it to intervene in this proceeding for the purpose of defending its interest in the preservation of the parks of this state.

The Sierra Club's interest in preserving natural resources will be seriously and adversely affected by the June 17, 2009 ruling which, through apparent inadvertence of the parties in failing to direct the Court's attention to controlling authorities, effectively eliminates at least a decade long legislative policy of the state prohibiting exploitation of oil and gas minerals by drilling in state parks.

The totally foreseeable result, if this Court's June 17, 2009 order is not corrected, will be the wholesale exploitation of the state's entire park system, composed of 43 state parks and consisting of more than 183,000 acres of the state's most prized natural

scenery, lakes, mountains and wildlife preserves. This Court would not intentionally issue a ruling with such dire results, and this motion to intervene is a practical and judicially efficient means of addressing the clear, albeit unintended results, of the Court's decision

In support of its motion to intervene, the Sierra Club respectfully draws this Court's attention to the following points and authorities:

Rule 24 (a), entitled "Intervention of right," provides that:

Upon timely application anyone shall be permitted to intervene in an action: (1) when a statute of this State confers an unconditional right to intervene; or (2) when the applicant claims an interest relating to the property or transaction which is the subject of the action and the applicant is so situated that the disposition of the action may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.

In the present case the Sierra Club's interest in preserving the use of the 43 state parks of West Virginia is the subject of this action, and as a practical matter, the Sierra Club's ability to defend that interest will be impaired if it is not permitted to intervene in this proceeding. Unless reversed, this Court's June 17, 2009 decision will set off a land rush by oil and gas companies to tie up the mineral rights underlying all 43 state parks covering 183,000 acres of the state.

As recited in the Rule 24 9c) pleading submitted herewith, the Sierra Club's 1800 state-wide members have current outings scheduled throughout the state park system, and it has an extensive history of use of all of the state's parks. The Sierra Club clearly satisfies the test of "direct and immediate" impact established in *State ex rel.* Ball v. Cummings, 208 W. Va. 393 540 S.E.2d 917 (1999).

No other party adequately represents the Sierra Club's interest. Plainly, Cabot Oil

& Gas Corporation and Lawson Heirs, Inc. have interests adverse to those of the Sierra

Club. The Department of Environmental Protection has to date not effectively defended

its own authority, and no one can simply assume that it will seek or prosecute

aggressively an appeal. The Sierra Club has filed a petition with the US Environmental

Protection Administration seeking to rescind the EPA's delegation of authority to

regulate water under the Clean Water Act because of past defalcations. There is no

justification for forcing the Sierra Club to depend on the DEP now.

The intervention is as timely as was possible. The Sierra Club only learned of the

June 17, 2009 decision recently and has promptly upon learning of the decision filed this

intervention. No party will be prejudiced by the intervention, and the public interest,

including this Court's interest in the efficient operation of the judicial process strongly

suggests that the intervention should be granted.

Respectfully submitted,

SIERRA CLUB, INC.

By Counsel

wiserato

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Tel: 304-342-5588 Fax: 304-342-5505

william.depaulo@gmail.com

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IN THE CIRCUIT COURT OF LOGAN COUNTY, WEST VIRGINIA

CABOT OIL & GAS CORPORATION, a Delaware corporation,

Petitioners/Appellants,

and

LAWSON HEIRS, INC., a Virginia corporation,

V.

CA No. 08-C-14

RANDY HUFFMAN, CABINET SECRETARY WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

Respondents/Appellees.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Sierra Club, Inc.'s Motion to Intervene was served by fax this 17th day of September 2009 on the following:

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Counsel for Cordie O. Hutchins, Former Director, Division of Natural Resources, the West Virginia Highlands Conservancy, and Friends of Blackwater

WV Shado William V. DePaulo

Rule 24. Intervention.

(a) Intervention of right.

Upon timely application anyone shall be permitted to intervene in an action: (1) when a statute of this State confers an unconditional right to intervene; or (2) when the applicant claims an interest relating to the property or transaction which is the subject of the action and the applicant is so situated that the disposition of the action may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.

(b) Permissive intervention.

Upon timely application anyone may be permitted to intervene in an action: (1) when a statute of this State confers a conditional right to intervene; or (2) when an applicant's claim or defense and the main action have a question of law or fact in common. When a party to an action relies for ground of claim or defense upon any statute or executive order administered by a federal or State governmental officer or agency or upon any regulation, order, requirement, or agreement issued or made pursuant to the statute or executive order, the officer or agency upon timely application may be permitted to intervene in the action. In exercising its discretion the court shall consider whether the intervention will unduly delay or prejudice the adjudication of the rights of the original parties.

(c) Procedure.

A person desiring to intervene shall serve a motion to intervene upon the parties as provided in Rule 5. The motion shall state the grounds therefor and shall be accompanied by a pleading setting forth the claim or defense for which intervention is sought. The same procedure shall be followed when a statute of this State gives a right to intervene. When the constitutionality of a statute of this State affecting the public interest is drawn in question in any action to which this State or an officer, agency, or employee thereof is not a party, the court shall give notice thereof to the attorney general of this State.

http://westvirginia.sierraclub.org/outings/o003.html

September 26th Watoga State Park Day Hike

When: Saturday, Sep 26, 2009

Contact the Outing Leader for start time and rendezvous location

Details:

This Watoga State Park hike is about 10 miles, with moderate to strenuous difficulty.

We will hike to Jesse's Cove then to Workman Cabin and to Ann Bailey Lookout Tower, with possible off trail exploratory venture into Watoga Wilderness. Beautiful hike through some old growth and beautiful views.

Everyone is required to sign a liability release form.

Contact Frank Gifford, entropypawsed@yahoo.com 304-497-0561 for more information **Directions:**

Contact the Outing Leader for directions to the rendezvous point

Contact Information:

Sierra Club West Virginia Frank Gifford 304-497-0561 entropypawsed@yahoo.com http://westvirginia.sierraclub.org/outings/o004.html

October 4th Ken's Run Trail Day Hike at Cooper's Rock North

When:

Sunday, Oct 04, 2009

Contact the Outing Leader for start time and rendezvous location

Details:

Enjoy a 7.2 **moderate difficult** hike as we connect Ken's Run Trail with the Virgin Hemlock Trail in the northern section of Coopers Rock State Forest. Some stream crossings, so wear appropriate footwear.

Contact Ann Devine-King at <u>atdk@aol.com</u> or 304-594-2636 for more information **Directions:**

Contact the Outing Leader for directions to the rendezvous point

Contact Information:

Sierra Club West Virginia Ann Devine-King 304-594-2636 atdk@aol.com http://westvirginia.sierraclub.org/newsletter/archives/MayJune 09%20 Newsletter%20 pdf.pdf

Saturday June 20th - Hawks Nest
State Park
Easy 4 mile hike down an old railway to
the New River. From there we will take a
jetboat upriver to view the New River
Gorge Bridge from river level. We will
return and ride the tramway up to the
Hawksnest lodge. There will be fees for
the jetboat and tramway.
Contact Mike Price 304- 779-2861 or Mike
Price54@suddenlink.net
PS: We might reconnoiter at the Stardust
in Lewisburg for dinner, but reservations
are in order, so let me know if you are
interested.

$\frac{http://westvirginia.sierraclub.org/newsletter/archives/WV\%20SC\%20Mar-April09\%20pdf.pdf}$

Saturday, May 9th - Hike Blackwater Falls to Canaan Valley State Park.

Moderate intensity, 9.7 mile shuttle hike connecting these 2 great state parks.
Controlled, well behaved dogs allowed.
Contact Ann Devine-King for more info at 304-594-2636 or ATDK@aol.com

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a Delaware corporation,

Petitioners/Appellants,

and

LAWSON HEIRS, INC., a Virginia corporation,

Intervenor,

v.

CA No. 08-C-14

RANDY HUFFMAN, CABINET SECRETARY
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION, OFFICE OF OIL AND GAS,
Respondents/Appellees.

SIERRA CLUB, INC.'S RESPONSE TO CABOT OIL & GAS CORPORATION'S PETITION FOR REVIEW, AND LAWSON HEIRS, INC.'S INTERVENTION IN SUPPORT THEREOF

Pursuant to Rule 24 (c), Intervening Sierra Club, Inc. ("Sierra Club") submits this pleading setting forth the defense for which intervention is sought.

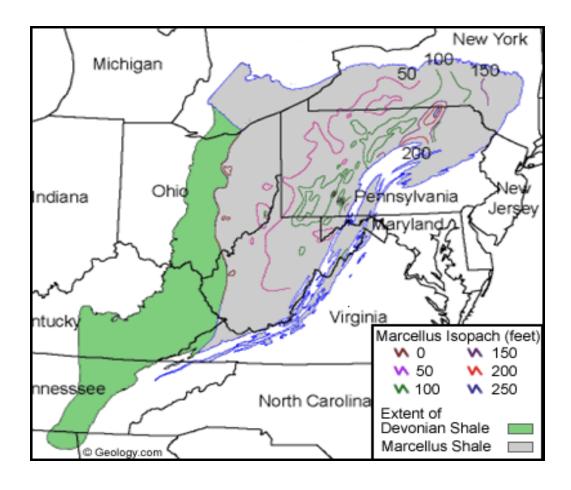
A. Cabot Oil & Gas Corporation

Plaintiff Cabot Oil & Gas Corporation (Cabot Oil & Gas), a Delaware corporation with its principal office in Houston, Texas, has appealed the Department of Environmental Protection's December 17, 2008 denial of an application to drill a gas well in Chief Logan Park. According to a July 23, 2009 press release published on its web page, Cabot Oil and Gas has oil and gas drilling operations across the United States, and

reported net income for the six months ended June 30, 2009, of \$73.1 million, on cash flow from operations of \$300.4 million. See EXHIBIT "A."

B. The "Marcellus Shale" and Cabot Oil & Gas

Also on July 23, 2009, Cabot Oil & Gas announced the results of four successful horizontal completions in three different reservoirs in a geological formation referred to as the "Marcellus Shale," a very highly publicized gas exploration prospect that has set off a land rush in the states of Pennsylvania, New York, Ohio and West Virginia – which is the only state that falls entirely within the bounds of the Marcellus Shale.



 $^{1}\ http://phx.corporate-ir.net/phoenix.zhtml?c=116492\&p=irol-newsArticle_Print\&ID=1311215\&highlight=121212124492$

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The "Marcellus Shale" represents a potentially important energy resource for the United States, and to the extent that it offers a diversification away from the much higher (nearly double) carbon content coal-based economy on which West Virginia relies for virtually 100% of its current electric generation capacity, the expanded use of natural gas — with appropriate environmental protections — can become a positive development. In 2008, two professors at Pennsylvania State University and the State University of New York (SUNY) Fredonia estimated that about 50 TCF (trillion cubic feet) of recoverable natural gas could be extracted from the Marcellus Shale (Engelder and Lash, 2008). In November 2008, on the basis of production information from Chesapeake Energy Corporation, the estimate of recoverable gas from the Marcellus Shale was raised to more than 363 TCF (Esch, 2008). The United States uses about 23 TCF of natural gas per year (U.S. Energy Information Administration, 2009), so the Marcellus gas resource may be large enough to supply the needs of the entire Nation for roughly 15 years at the current rates of consumption.

Cabot Oil & Gas has not ignored the Marcellus Shale. According to the Dan O. Dinges, Chairman, Cabot Oil & Gas' President and Chief Executive Officer, Cabot's most recent horizontal completion in the Marcellus, the Teel 8H, had an initial production (24-hour into sales) rate of 10.3 Mmcf per day with a maximum spot rate during that period of 12.0 Mmcf per day. Production from this well remains strong with a 30-day average rate of 9.8 Mmcf per day.

The Teel #6, a vertical Marcellus well, is flowing to sales at an initial 24-hour rate of 4.2 Mmcf per day. The well was completed over a 370-foot interval in the lower and upper Marcellus shale. "We believe the stimulation contacted most of the lower and

upper shales, plus the Purcell limestone," added Dinges. "We consider this completion a critical event in the development of our Marcellus acreage." "Today in Pennsylvania, we are producing 39 Mmcf per day from seven horizontal and 20 vertical wells," stated Dinges.

"One year ago we announced our first Marcellus production from a vertical well. Since that time we have cumulatively produced over 5.8 Bcf." The 2009 drilling program is on schedule to spud 18 additional horizontal wells between now and year-end. See **EXHIBIT** "B."²

C. The "Marcellus Shale" and Horizontal Drilling

Horizontal drilling is a phenomenon important to exploitation of the gas producing potential of the Marcellus Shale. According to www.geology.com, natural gas occurs within the Marcellus Shale in three ways: (1) within the pore spaces of the shale; (2) within vertical fractures (joints) that break through the shale; and, (3) adsorbed on mineral grains and organic material. Most of the recoverable gas is contained in the pore spaces. However, the gas has difficulty escaping through the pore spaces because they are very tiny and poorly connected.

Most historic wells in the Marcellus produced gas at a very slow rate because of the low permeability mentioned above. This is typical for a shale. However, some of the most successful historic wells in the Marcellus share a common characteristic: they intersect numerous fractures. These fractures allow the gas to flow through the rock unit and into the well bore. The fractures intersecting the well also intersect other fractures and those fractures intersect still more fractures. Thus, an extensive fracture network

allows one well to drain gas from a very large volume of shale. A single well can recover gas from many acres of surrounding land.

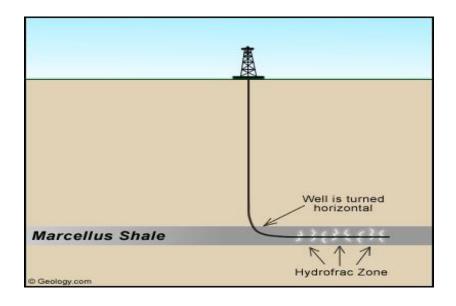
The fractures (also known as "joints") in the Marcellus Shale are vertical. So, a vertical borehole would be expected to intersect very few of them. However, a horizontal well, drilled perpendicular to the most common fracture orientation should intersect a maximum number of fractures.

High yield wells in the Marcellus Shale have been built using the horizontal drilling technique, which involves steering a downhole drill bit in a direction other than vertical. An initially vertical drillhole is slowly turned 90 degrees to penetrate long horizontal distances, sometimes over a mile, through the Marcellus Shale bedrock. Hydraulic fractures are then created into the rock at intervals from the horizontal section of the borehole, allowing a substantial number of high-permeability pathways to contact a large volume of rock. According to Range Resources (2008), one of the first major horizontal drillers of Marcellus Shale, these wells typically produce gas at a rate of about 4 MMCF (million cubic feet) per day. Over its lifetime, each horizontal well on an 80-acre surface spacing can be expected to produce a total of about 2.5 BCF (billion cubic feet) of gas at an estimated production cost of \$1.00 per MCF.

The diagram below illustrates the concept of a horizontal well.

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² http://www.reuters.com/articlePrint?articleId=US238670%2B23-Jul-2009%2BPRN20090723



D. The "Marcellus Shale" and Hydrofracing

A second method used to increase the productivity of a Marcellus Shale well, according to www.geology.com, is to increase the number of fractures in a well using a technique known as "hydraulic fracturing" or "hydrofracing". This method uses high-pressure water or a gel to induce fractures in the rock surrounding the well bore.

Hydrofracing is done by sealing off a portion of the well and injecting water or gel under very high pressure into the isolated portion of the hole. The high pressure fractures the rock and pushes the fractures open. To prevent the fractures from closing when the pressure is reduced several tons of sand or other "propant" is pumped down the well and into the pressurized portion of the hole. When the fracturing occurs millions of sand grains are forced into the fractures. If enough sand grains are trapped in the fracture it will be propped partially open when the pressure is reduced. This provides an improved permeability for the flow of gas to the well.

The production of commercial quantities of gas from this shale requires large volumes of water to drill and hydraulically fracture the rock. This water must be recovered from the well and disposed of before the gas can flow. Concerns about the availability of water supplies needed for gas production, and questions about wastewater disposal have been raised by water-resource agencies and citizens throughout the Marcellus Shale gas development region.

Drilling requires large amounts of water to create a circulating mud that cools the bit and carries the rock cuttings out of the borehole. After drilling, the shale formation is then stimulated by hydraulic fracturing, which may require up to 3 million gallons of water per treatment (Harper, 2008). Many regional and local water management agencies are concerned about where such large volumes of water will be obtained, and what the possible consequences might be for local water supplies. Under drought conditions, or in locations with already stressed water supplies, obtaining the millions of gallons needed for a shale gas well could be problematic. Drillers could face substantial transportation costs if the water has to be trucked in from great distances.

Large hydrofrac treatments often involve moving large amounts of equipment, vehicles, and supplies into remote areas. Transporting all of this to drill sites over rural Appalachian Mountain roads could potentially cause erosion, and threaten local small watersheds with sediment. Drill pad and pipeline construction also have the potential to cause similar problems. Of equal concern is the possibility for spills or leaks into water bodies as the fluids and chemical additives are transported and handled. Little is known about how a Marcellus Shale drilling "boom" might adversely affect the land, streams, and available water supplies in the Appalachian Basin. Even under current Marcellus gas

production levels, complaints of rural road damage and traffic disruption from drilling equipment have been received, indicating that this could be a significant problem if carried out across thousands of active drill sites.

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For gas to flow out of the shale, nearly all of the water injected into the well during the hydrofrac treatment must be recovered and disposed of. In addition to the problem of dealing with large bulk volumes of liquid waste, contaminants in the water may complicate wastewater treatment. Whereas the percentage of chemical additives in a typical hydrofrac fluid is commonly less than 0.5 percent by volume, the quantity of fluid used in these hydrofracs is so large that the additives in a three million gallon hydrofrac job, for example, would result in about 15,000 gallons of chemicals in the waste.

Hydrofrac fluids are often treated with proprietary chemicals to increase the viscosity to a gel-like consistency that enables the transport of a *proppant*, usually sand,

into the fracture to keep it open after the pressure is released (fig. 6). The viscosity of these fluids then breaks down quickly after completion of the hydrofrac, so they can be easily removed from the ground. The chemical formulations required to achieve this are highly researched and closely guarded, and finding out exactly what is in these fluids may present a challenge.

The data publicly available on Marcellus Shale hydrofrac treatments indicate that a slickwater frac works best on this formation (Harper, 2008). These types of hydrofracs employ linear gels and friction reducers in the water, and utilize only small amounts of proppant, relying instead on fracture surface roughness to hold it open (Rushing and Sullivan, 2007). The potential problems for local wastewater treatment facilities caused by proprietary chemical additives in hydrofrac fluid are unclear.

Along with the introduced chemicals, hydrofrac water is in close contact with the rock during the course of the stimulation treatment, and when recovered may contain a variety of formation materials, including brines, heavy metals, radionuclides, and organics that can make wastewater treatment difficult and expensive. The formation brines often contain relatively high concentrations of sodium, chloride, bromide, and other inorganic constituents, such as arsenic, barium, other heavy metals, and radionuclides that significantly exceed drinking water standards (Harper, 2008).

The current disposal practice for Marcellus Shale liquids in Pennsylvania requires processing them through wastewater treatment plants, but the effectiveness of standard wastewater treatments on these fluids is not well understood. In particular, salts and other dissolved solids in brines are not usually removed successfully by wastewater treatment,

and reports of high salinity in some Appalachian rivers have been linked to the disposal of Marcellus Shale brines (Water and Wastes Digest, 2008).

Another disposal option noted by www.geology.com involves re-injecting the hydrofrac fluids back into the ground at a shallower depth. This is a common practice in the Barnett Shale production area of Texas, and has been utilized for some Marcellus wells drilled in West Virginia (Kasey, 2008). Concerns in Appalachian States about the possible contamination of drinking water supply aquifers has limited the practice of reinjecting Marcellus fluids, however.

With good reason. Contamination of West Virginia waste waters is not a frivolous concern. A lengthy article published in the *New York Times* on September 12, 2009,³ documented significant water pollution problems nationwide, resulting from numerous sources, but focused on the plight of Jennifer Hall-Massey and her children in the small town of Prenter, West Virginia, 17 miles from Charleston, and their experience with metal and other toxins polluting their water supply, most likely as a result of discharges by coal companies:

Jennifer Hall-Massey knows not to drink the tap water in her home near Charleston, W.Va. In fact, her entire family tries to avoid any contact with the water. Her youngest son has scabs on his arms, legs and chest where the bathwater — polluted with lead, nickel and other heavy metals — caused painful rashes. Many of his brother's teeth were capped to replace enamel that was eaten away. Neighbors apply special lotions after showering because their skin burns. Tests show that their tap water contains arsenic, barium, lead, manganese and other chemicals at concentrations federal regulators say could contribute to cancer and damage the kidneys and nervous system. "How can we get digital cable and Internet in our homes, but not clean water?" said Mrs. Hall-Massey, a senior accountant at one of the state's largest banks. She and her husband,

 $^{^3 \} http://www.nytimes.com/2009/09/13/us/13 water.html?_r=1 \& hp=\& pagew$

Charles, do not live in some remote corner of Appalachia. Charleston, the state capital, is less than 17 miles from her home.

As the water in Mrs. Hall-Massey's community continued to worsen, residents began complaining of increased health problems. Gall bladder diseases, fertility problems, miscarriages and kidney and thyroid issues became common, according to interviews.

When Mrs. Hall-Massey's family left on vacation, her sons' rashes cleared up. When they returned, the rashes reappeared. Her dentist told her that chemicals appeared to be damaging her teeth and her son's, she said. As the quality of her water worsened, Mrs. Hall-Massey's oncehealthy teeth needed many crowns.

Her son brushed his teeth often, used a fluoride rinse twice a day and was not allowed to eat sweets. Even so, he continued getting cavities until the family stopped using tap water. By the time his younger brother's teeth started coming in, the family was using bottled water to brush. He has not had dental problems.

Medical professionals in the area say residents show unusually high rates of health problems. A survey of more than 100 residents conducted by a nurse hired by Mrs. Hall-Massey's lawyer indicated that as many as 30 percent of people in this area have had their gallbladders removed, and as many as half the residents have significant tooth enamel damage, chronic stomach problems and other illnesses. That research was confirmed through interviews with residents.

EXHIBIT "C."

The foregoing pollution and medical problems are directly associated with pollution of water tables by discharges from coal operations, not natural gas wells. But the experience to date in the Marcellus Shale indicates that the actual and potential problems are every bit as real for natural gas drilling.

An article in *The State Journal* of August 14, 2009 reported that the Clarksburg Sanitary Board has stopped accepting Marcellus Shale gas well drilling brine until Energy Contractors LLC of Bridgeport provides extensive testing of the wastewater.

According to The State Journal's article, the suspension was in response to a July 23 letter from the West Virginia Department of Environmental Protection transmitting a long list of pollutants of concern in oil and gas-related wastewaters.

"The wastewaters from these types of operations contain high levels of chloride, dissolved solid, sulfate and other pollutants," the letter reads. "(Publicly owned treatment works) provide little to no treatment of these pollutants and could potentially lead to water quality issues in the receiving stream."

EXHIBIT "D."

The State Journal article stated that the DEP letter listed more than 40 pollutants of concern, including several forms of radiation, and quoted Clarksburg's plant Superintendent Bill Goodwin as follows:

"Those are parameters that they suspect or anticipate are in Marcellus water, and they want to make sure the levels that are in there are at concentrations that we can deal with -- or show that they're at levels we can't deal with."

EXHIBIT "D."

The Clarksburg wastewater treatment plant had been accepting about 37,000 gallons per day of gas well drilling brine from Energy Contractors in a trial that began last fall, according to Goodwin, but after receiving the DEP letter, the sanitary board elected to stop taking the brine until Energy Contractors has the water tested, which

Goodwin said, would cost about \$1,000 for a laboratory analysis for all of the pollutants of concern.

The experience in Clarksburg, West Virginia indicates clearly that the metals and other toxins are present in Marcellus Shale wasterwater, the experience in Prenter, West Virginia demonstrates that contaminated water is a serious problem that threatens the life and health of the citizens of this state. That is why the legislature has delegated very substantial authority to protect the state's citizens and land to the Department of Environmental Protection.

E. West Virginia State Park System

In December 1960, the Logan Civic Association deeded the property to the West Virginia Conservation Division, which has, through a series of bureaucratic transformations, been succeeded by the Division of Natural Resources (DNR), the state agency that now operates the park under the authority granted to it by the legislature. In 1969, the land deeded to the West Virginia Conservation Division years earlier was converted to a state park, on of 43 parks now managed by the DNR encompassing more than 183,000 acres of land located all across the state. The parks are located at the following locations:

- Audra State Park
 Rt. 4 Box 564
 Buckhannon, WV 26201
- Babcock State Park HC 35, Box 150 Clifftop, WV 25831

4127 acres

•	Beartown State Park HC 64 Box 189 Hillsboro, WV 24946	107 acres
•	Beech Fork State Park 5601 Long Branch Road Barboursville, WV 25504	3144 acres
•	Berkeley Springs State Park #2 S. Washington St. Berkeley Springs, WV 25411	
•	Berwind Lake Wildlife Management Area Rt. 16 Box 38 Warriormine, WV 24894	18000 acres
•	Blackwater Falls State Park P.O. Drawer 490 Davis, WV 26260	590 acres
•	Blennerhassett Island Historical State Park 137 Juliana St. Parkersburg, WV 26101-5331	
•	Bluestone State Park HC 78 Box 3 Hinton, WV 25951	2100 acres
•	Bluestone Wildlife Mgt Area HC 65 Indian Mills, WV 24935	17632 acres
•	Cabwaylingo State Forest Rt. 1 Box 85 Dunlow, WV 25511	8123 acres
•	Cacapon Resort State Park 818 Cacapon Lodge Drive Berkeley Springs, WV 25411	6000 acres
•	Camp Creek State Park PO Box 119 2390 Camp Creek Road Camp Creek, WV 25820	5300 acres

•	Canaan Valley Resort HC 70, Box 330, Davis, WV 26260	6300 acres
•	Carnifex Ferry Battlefield State Park 1194 Carnifex Ferry Rd. Summersville, WV 26651	156 acres
•	Cass Scenic Railroad State Park P.O. Box 107 Cass, WV 24927	
•	Cathedral State Park Rt. 1 12 Cathedral Way Aurora, WV 26705-9631	133 acres
•	Cedar Creek State Park 2947 Cedar Creek Road Glenville, WV 26351	2483 acres
•	Chief Logan State Park 376 Little Buffalo Creek Road Logan, WV 25601	4000 acres
•	Coopers Rock State Forest Rt. 1 Box 270 Bruceton Mills, WV 26525	12713 acres
•	Droop Mountain Battlefield State Park HC 64 Box 189 Hillsboro, WV 24946	
•	Greenbrier State Forest HC 30 Box 154 Caldwell, WV 24925	5100 acres
•	Hawks Nest State Park P.O. Box 857 49 Hawks Nest Park Road Ansted, WV 25812	276 acres
•	Holly River State Park PO Box 70 Hacker Valley, WV 26222	8101 acres

•	Kanawha State Forest Rt. 2 Box 285 Charleston, WV 25314	9300 acres
•	Kumbrabow State Forest PO Box 65 Huttonsville, WV 26273	9474 acres
•	Laurel Lake Wildlife Mgt Area HC 70 Box 626 Lenore, WV 25676	12851 acres
•	Moncove Lake State Park Rt. 4 Box 73-A Gap Mills, WV 24941	250 acres
•	North Bend State Park Rt. 1 Box 221 Cairo, WV 26337	305 acres
•	Panther Wildlife Management Area Box 287 Panther, WV 24872	7810 acres
•	Pinnacle Rock State Park PO Box 1 Bramwell, WV 24715	400 acres
•	Pipestem Resort State Park P.O. Box 150 Pipestem, WV 25979	4000 acres
•	Plum Orchard Lake Wildlife Mgt Area Rt. 1 Box 186 Scarbro, WV	3200 acres
•	Tu-Endie-Wei State Park PO Box 486 Point Pleasant, WV 25550	
•	Pricketts Fort State Park Route 3 Fairmont, WV 26554	

•	Seneca State Forest Rt. 1 Box 140 Dunmore, WV 24934	11684 acres
•	Stonewall Jackson Resort 940 Resort Drive Roanoke, WV 26447	2000 acres
•	Tomlinson Run State Park PO Box 97 New Manchester, WV 26056	1398 acres
•	Twin Falls Resort State Park PO Box 667 Mullens, WV 25882	3776 acres
•	Tygart Lake State Park Rt. 1 Box 260 Grafton, WV 26354	1750 acres
•	Valley Falls State Park Rt. 6 Box 244 Fairmont, WV 26273	1145 acres
•	Watoga State Park HC 82, Box 25 Marlinton, WV 24954	10100 acres

 Watters Smith Memorial State Park PO Box 296 Lost Creek, WV 26385

The Affidavit of Cordie Hutchins, a former Chief of the West Virginia State Park System, recites that he has been informed that Cabot Oil & Gas has proposed to drill 35 to 50 wells in the 4,000 acres of Chief Logan Park alone. It requires a limitless supply of naiveté to believe that the natural gas industry is not fully aware of the potential for exploitation of minerals in the other 179,000 acres managed by DNR.

This Court's June 17, 2009 ruling in this case has placed all of that acreage on the table for review by every oil and gas exploration company in the United States.

F. The Department of Environmental Protection

The Court's June 17, 2009 ruling acknowledges that the legislature has, in WV Code § 20-5-2 (b)(8)), explicitly directed the DNR to adopt regulations that prohibit the exploitation of minerals in state parks, in language that does not admit of ambiguity:

- (b) The Director of the <u>Division of Natural Resources</u> shall
- (8) <u>Propose rules</u> for legislative approval in accordance with the provisions of article three [§§ 29A-3-1 et seq.], chapter twenty-nine-a of this code to control the uses of <u>parks</u>: Provided, That the <u>director [of DNR]may **not** permit public hunting, except as otherwise provided in this section, the <u>exploitation of minerals</u> or the harvesting of timber for commercial purposes <u>in any state park</u>;</u>

However, focusing exclusively on the authority of the Department of Environmental Protection (DEP) statutory authority in § 22-6-6(h) – one subpart of one subsection of Article 6 of Chapter 22 of the West Virginia Code – the Court held that the legislative prohibition applicable to DNR rule making authority notwithstanding, DEP was powerless to deny a drilling permit to Cabot Oil & Gas, in the absence of a prior bad drilling record, the sole matter listed in WV Code 22-6-6 (h) as grounds for denying a drilling permit.

The June 17, 2009 ruling comes against a background which includes the fact – according to the affidavit of former DNR chief Cordie Hutchins – that no permit to drill for oil or gas has been issued to permit drilling in any state park since the 1995 legislation mandating DNR's prohibition by rule of drilling in state parks.

Specifically, this Court's June 17, 2009 order rejected the notion that the plenary grant of authority to DEP in WV Code § 22-1-6(c)(1) -- cited by the DEP for the proposition that DEP was required to carry "out its functions in a manner which supplements and complements the environmental policies, programs and procedures of...other instrumentalities of this state" -- authorized DEP to enforce the limitation on DNR rulemaking authority at WV Code § 20-5-2 (b)(8)).

According to the June 17, 2009 ruling, at page 5, ¶¶ 12 -13: "There is no statutory, regulatory or legal precedent which authorizes DEP to use the provisions of W.Va. Code § 20-5-2(b)(8) as a basis to deny well work permits. The authority vested in DEP's OOG is set forth in W. Va. Code § 22-6-1 et seq. Section 22-6-6 sets forth the reasons which DEP must deny a well permit application. The DEP did not deny the permits for any reasons set forth in Section 22-6-6, nor any of the statute applicable to OOG permitting authority."

In plain English, the Court ruled that there were no "dots" connecting the specific authority of the DEP Office of Oil and Gas, recited in Chapter 22, Article 6 of the West Virginia Code, with the limits on DNR rulemaking authority spelled out in Chapter 20, Article 5 of the West Virginia Code. And the Court did not accept as an adequate intermediate "dot" the general authority of DEP recited in § 22-1-6(c)(1) to follow other state policies, because of the more specific authority for drilling permits that was recited in § 22-6-6 (h).

Thus, in the critical "Conclusion of Law" on page 6, ¶ 4 of the June 17, 2009 order:

None of the statutory authority delegated to the DEP's OOG, including W.Va. Code § 22-1-6(c)(1), authorizes the

DEP's OOG to "take note", adopt or infer the statutory limit on rulemaking granted to DNR to prohibit the exploitation of minerals for commercial purposes in state parks.

June 17, 2009 Order at p. 6, ¶ 4.

At the time this Court issued its June 17, 2009 order, it apparently did not have before it any language which appeared to supply the intermediate bridge for OOG to invoke other instrumentalities authority, i.e., the "dot" that specifically directs the OOG – not DEP in general – to follow the policies recited elsewhere in implementing its narrow authority over the regulation of oil and gas.

Specifically, no party had presented to this Court, and the Court therefore did not have before it when it issued the June 17, 2009 order in this case, any reference to WV Code 22-6-2 (c)(11)⁴ -- directly relating to DEP authority over oil and gas drilling – and which explicitly provides that:

"The <u>secretary shall have full charge of the oil and gas</u> <u>matters set out in this article</u>In addition to all other powers and duties conferred upon him or her, the secretary <u>shall have the power and duty to</u>:

(11) <u>Perform all other duties which are expressly imposed upon the secretary by the provisions of this chapter</u>

This language clearly and unambiguously provides the missing link in DEP authority, in the absence of which, this Court concluded that OOG's authority was narrower than the plenary authority of DEP in general.

First, the reference in § 22-6-2 (c) to the five italicized words "set out in this article" clearly refers to Article 6, entitled "Office of Oil and Gas; Oil and Gas Wells;

Administration; Enforcement." The balance of the main clause of § 22-6-2 (c) provides for an addition to the authority recited elsewhere in Article 6 (specifically, in addition to the language on which this Court relied in Article 6-6 (h)).

Second, the reference in the last five italicized words of § 22-6-2 (c)(11) to "the provisions of this chapter" can only mean Chapter 22 (i.e., the Chapter establishing the DEP) recites the added authority of the Office of Oil and Gas to include all of the general DEP authority, thereby vesting OOG with authority over an area of activities vastly broader than the inherently narrower area of management of oil and gas activities.

Although § 22-6-2(c)(11), which appends a mandatory duty to the broad grant of authority in § 22-6-2(c) itself, is neither conspicuous nor a model of optimal style, although its meaning is completely unmistakable. But inartful style and inconspicuity alone have never brought a government agency to its knees; there is a school of thought which contends that there is, in fact, no other way for our bureaucratic brethren.

Nonetheless, no obvious judicial avenue provides a path around the ineluctable dictates of § 22-6-2(c)(11). The very plain language of that section not only *authorizes*, it *compels* the Office of Oil and Gas – OOG itself and not merely DEP in general – to comply with the mandate of WV Code 22-1-6 which in subsection (c) explicitly charges the DEP secretary with implementation of state-wide environmental policy:

- (c) The [DEP] secretary has responsibility for the conduct of the intergovernmental relations of the department, including assuring:
 - (1) That the [DEP] t carries out its functions in a manner which supplements and complements the environmental policies, programs and procedures of the federal government, other state governments and other instrumentalities of this State to enforce

⁴ The entire text of Article 22, Section 6 is set out as an endnote to this pleading.

environmental policies of other instrumentalities of the state), thereby rebutting the Circuit Court's lame effort to arbitrarily limits DEP's plenary authority over oil and gas to the very few items recited in Article 6 of Chapter 22, i.e., WV Code 22-6-6 (h).

The legislative statement of limits on DNR rulemaking authority is, no matter what else one may say, unmistakably an "environmental policy" of an instrumentality of the state, i.e., the legislature. Therefore, DEP not only has authority to enforce the legislative policy banning drilling permits in parks, it has an obligation to deny all requests for such permits.

It is perhaps unfortunate that these matters were not clearly laid out for this Court in advance of the issuance of the June 17, 2009 order. But the import of the language is clear; the missing "dot" bridging the authority of the Office of Oil and Gas to the broad mandates applicable to DEP generally, and thereby to the legislative policy expressed in a delegation of rulemaking authority to the DNR, has been found. No serious reason may be proffered for failing to "connect those dots" now.

Clearly, no authority issue is presented by the claim of a "taking." DEP's authority to exercise the "taking" authority of the state is expressly recited at W. Va. Code § 22-1-6 (d)(5) which provides that:

<u>In addition to other powers</u>, duties and responsibilities granted and assigned to the secretary by this chapter, <u>the secretary is authorized and empowered to</u>:

(5) Acquire for the State in the name of the Department of Environmental Protection by purchase, condemnation, lease or agreement, or accept or reject for the State, in the name of the Department of Environmental Protection, gifts, donations, contributions, bequests or devises of money, security or property, both real and personal, and any interest in property.

W. Va. Code § 22-1-6 (c)(5) (emphasis added).

The remedy, if any, for a purported "taking" is, as the Lawson Heirs, Inc.'s brief readily acknowledges, an inverse eminent domain proceeding, which they can commence is a separate mandamus proceeding. That proceeding, in future, is not a ground warranting a reversal of DEP's decision to deny Cabot Oil & Gas' request for a permit.

Among the obvious issues to address in any mandamus proceeding Lawson Heirs, Inc. may commence is why the horizontal drilling now so clearly available throughout the Marcellus Shale cannot be employed to permit them access to the subsurface mineral rights from a location outside of Chief Logan Park, thereby avoiding any taking, and simultaneously adhering to the legislature's unmistakable policy of prohibiting drilling in state parks.

G. Lawson Heirs, Inc.

Among its mineral assets, Cabot Oil & Gas includes a lease -- of unspecified date -- authorizing Cabot Oil and Gas to drill for natural gas in the geological formations underlying Chief Logan Park, which is located in its entirety in Logan County. In 1960, the Lawson Heirs, Inc., a Virginia corporation deeded 3,271 acres on which Chief Logan Park lies to the Logan Civic Association, a non-profit corporation in November 1960, reserving certain mineral rights.

In exchange for the acreage which now constitutes Chief Logan Park, the Logan Civic Association paid the Lawson Heirs, Inc. \$90,000.00, a sum which in today's dollars has an inflation adjusted value, according to the U.S. Bureau of Labor Statistics "CPI

Inflation Calculator,"⁵ of \$649,667.56. <u>See</u> **EXHIBIT "E."** The sale of the Lawson Heir, Inc. property to the Logan Civic Association has, been described, with a straight face, as constituting a "gift" according to Cabot Oil & Gas and the Lawson Heirs, Inc.

The Lawson Heirs, Inc. executed leases for mineral exploration in 1921, 1955, 1960 and 1965 which resulted in drilling operations; a 1981 well was permitted but never drilled. No well has been drilled on property accessing the mineral rights reserved by the Lawson Heirs, Inc. for forty-five (45) years.

The terms of the Lawson Heirs, Inc. lease with Cabot Oil & Gas – and its date – are not a part of the record in this proceeding. Although land owners have traditionally received a flat 12.5% royalty interest in revenues flowing from oil and gas leases, speculation on leases in the Marcellus Shale has vastly exceeded historical benchmarks.

Again, according to www.geology.com, the size of the signing bonuses that have been paid in transactions between informed buyers and informed sellers is directly related to two factors: (1) the level of uncertainty in the mind of the buyer, and (2) the number of other buyers competing to make the purchase. These factors have changed significantly in a very short time.

As recently as 2005 there was very little interest in leasing properties for Marcellus Shale gas production. The Marcellus was not considered to be an important gas resource and a technology for tapping it had not been demonstrated. At that time the level of uncertainty in the minds of the buyers was very high and the signing bonuses were a few dollars per acre.

⁵ http://data.bls.gov/cgi-bin/cpicalc.pl

⁶ http://geology.com/articles/marcellus-shale.shtml

When the potential of the Marcellus was first suspected in 2006 a small number of speculators began leasing land - paying risky signing bonuses that were sometimes as high as \$100 per acre. In late 2007 signing bonuses of a few hundred dollars per acre were common. Then, as the technology was demonstrated and publicized signing bonuses began to rise rapidly. By early 2008 several wells with strong production rates were drilled, numerous investors began leasing and the signing bonuses rose from a few hundred dollars per acre up to over \$2,000 per acre for the most desirable properties.

If the Lawson Heirs, Inc.'s bonus approached anything remotely near the \$2,000 per acre range, over any significant portion of the 3,000+ acre tract under which they reserved mineral rights, the Virginia corporation would have grandly rebutted their counsel's lachrymose claim in this proceeding that "no good deed goes unpublished," and instead proved without risk of contradiction that "giving truly is better than receiving."

H. The Sierra Club

The Sierra Club, founded in 1892 is among the oldest environmental organizations in the United States, and is dedicated to the preservation of America's natural heritage. The Sierra Club is a non-profit, California corporation with a national membership of more than 1,000,000 citizens of the United States, including approximately 1,800 citizens of West Virginia.

The Sierra Club's interest in this litigation is direct and immediate. Sierra Club members use Chief Logan Park in Logan County and many, if indeed not all, of the other 42 state parks in the park system throughout West Virginia.

The current edition of the club's monthly publication, *The Mountain State Sierran*, ⁷ lists a future outing on October 4, 2009 to Coopers Rock North, outings this month include a September 26, 2009 outing at Watoga State Park. Outings earlier this year include a June 20, 2009 outing at Hawks Nest State Park, and a May 9, 2009 hike from Blackwater State Park to Canaan Valley State Park.

Historically, the Sierra Club has an annual outing every winter in Canaan Valley State Park; in 1998, 1999 and 2000 it had week long service projects in Blackwater State Park, in 1992 it had outings in Blackwater and Watoga State Parks. The list is literally endless and is documented in the archives retrievable in pdf copies of past *Mountain State Sierran's* downloadable from the club's web page generally. Under settled principles governing intervention, the Sierra Club's right to mandatory intervention under Rule 24 (a) is undeniable; the authority of this Court to grant it permissive intervention is very nearly plenary.

WHEREFORE, in light of the foregoing, Intervenors respectfully request that this Court dismiss with prejudice the Plaintiff Cabot Oil & Gas' petition and the supporting intervention of Lawson Heirs, Inc. and enter judgment in favor of the governmental Defendants and Intervenors Sierra Club, and Intervenors Gordie O. Hudkins, West Virginia Highlands Conservancy, Friends of Blackwater.

⁷ http://westvirginia.sierraclub.org/outings/o003.html

⁸ http://westvirginia.sierraclub.org/newsletter/archives/index.html

Respectfully submitted,

SIERRA CLUB, INC.

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IN THE CIRCUIT COURT OF LOGAN COUNTY, WEST VIRGINIA

CABOT OIL & GAS CORPORATION, a Delaware corporation,

Petitioners/Appellants,

and

LAWSON HEIRS, INC., a Virginia corporation,

Intervenor,

v. CA No. 08-C-14

RANDY HUFFMAN, CABINET SECRETARY
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION, OFFICE OF OIL AND GAS,
Respondents/Appellees.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Sierra Club, Inc.'s Response to Cabot Oil & Gas Corporation's Petition for Review, and Lawson Heirs, Inc.'s Intervention in Support Thereof, was served by fax this 17th day of September 2009 on the following:

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William V. DePaulo

ENDNOTE

§ 22-6-2. Secretary -- Powers and duties generally; department records open to public; inspectors.

- (a) The secretary shall have as his or her duty the supervision of the execution and enforcement of matters related to oil and gas set out in this article and in articles eight [§§ 22-8-1] et seq.] and nine [§§ 22-9-1] et seq.] of this chapter.
- **(b)** The secretary is authorized to propose rules for legislative approval in accordance with the provisions of article three [§§ 29A-3-1] et seq.], chapter twenty-nine-a of this code necessary to effectuate the above stated purposes.
- (c) The secretary shall have full charge of the oil and gas matters set out in this article and in articles eight [§§ 22-8-1] et seq.] and nine [§§ 22-9-1] et seq.] of this chapter. In addition to all other powers and duties conferred upon him or her, the secretary shall have the power and duty to:
- (1) Supervise and direct the activities of the Office of Oil and Gas and see that the purposes set forth in subsections (a) and (b) of this section are carried out;
 - (2) Employ a supervising oil and gas inspector and oil and gas inspectors;
- (3) Supervise and direct such oil and gas inspectors and supervising inspector in the performance of their duties;
- (4) Suspend for good cause any oil and gas inspector or supervising inspector without compensation for a period not exceeding thirty days in any calendar year;
- (5) Prepare report forms to be used by oil and gas inspectors or the supervising inspector in making their findings, orders and notices, upon inspections made in accordance with this article and articles seven [§§ 22-7-1 et seq.], eight [§§ 22-8-1 et seq.] and ten [§§ 22-10-1 et seq.] of this chapter;
- (6) Employ a hearing officer and such clerks, stenographers and other employees, as may be necessary to carry out his or her duties and the purposes of the Office of Oil and Gas and fix their compensation;
- (7) Hear and determine applications made by owners, well operators and coal operators for the annulment or revision of orders made by oil and gas inspectors or the supervising inspector, and to make inspections, in accordance with the provisions of this article and articles eight [§§ 22-8-1] et seq.] and nine [§§ 22-9-1] et seq.] of this chapter;
- (8) Cause a properly indexed permanent and public record to be kept of all inspections made by the secretary or by oil and gas inspectors or the supervising inspector;

- (9) Conduct such research and studies as the secretary shall deem necessary to aid in protecting the health and safety of persons employed within or at potential or existing oil or gas production fields within this State, to improve drilling and production methods and to provide for the more efficient protection and preservation of oil and gas-bearing rock strata and property used in connection therewith;
- (10) Collect a permit fee of four hundred dollars for each permit application filed other than an application for a deep well or a coalbed methane well; and collect a permit fee of six hundred fifty dollars for each permit application filed for a deep well: Provided, That no permit application fee shall be required when an application is submitted solely for the plugging or replugging of a well, or to modify an existing application for which the operator previously has submitted a permit fee under this section. All application fees required hereunder shall be in lieu of and not in addition to any fees imposed under article eleven [§§ 22-11-1] et seq.] of this chapter relating to discharges of stormwater but shall be in addition to any other fees required by the provisions of this article: Provided, That upon a final determination by the United States Environmental Protection Agency regarding the scope of the exemption under section 402(l)(2) of the federal Clean Water Act (33 U.S.C. 1342(l)(2)), which determination requires a "national pollutant discharge elimination system" permit for stormwater discharges from the oil and gas operations described therein, any permit fees for storm water permits required under article eleven of this chapter for such operations shall not exceed one hundred dollars.
- (11) <u>Perform all other duties which are expressly imposed upon the secretary by the</u> provisions of this chapter;
- (12) Perform all duties as the permit issuing authority for the State in all matters pertaining to the exploration, development, production, storage and recovery of this State's oil and gas;
- (13) Adopt rules with respect to the issuance, denial, retention, suspension or revocation of permits, authorizations and requirements of this chapter, which rules shall assure that the rules, permits and authorizations issued by the secretary are adequate to satisfy the purposes of this article and articles seven [§§ 22-7-1] et seq.], eight [§§ 22-8-1] et seq.], nine [§§ 22-9-1] et seq.] and ten [§§ 22-10-1] et seq.] of this chapter particularly with respect to the consolidation of the various state and federal programs which place permitting requirements on the exploration, development, production, storage and recovery of this state's oil and gas: Provided, That notwithstanding any provisions of this article and articles seven, eight, nine and ten of this chapter to the contrary, the Environmental Quality Board shall have the sole authority pursuant to section three [§ 22B-3-3], article three, chapter twenty-two-b to promulgate rules setting standards of water quality applicable to waters of the State; and
- (14) Perform such acts as may be necessary or appropriate to secure to this State the benefits of federal legislation establishing programs relating to the exploration, development, production, storage and recovery of this State's oil and gas, which programs

are assumable by the State.

- (d) The secretary shall have authority to visit and inspect any well or well site and any other oil or gas facility in this State and may call for the assistance of any oil and gas inspector or inspectors or supervising inspector whenever such assistance is necessary in the inspection of any such well or well site or any other oil or gas facility. Similarly, all oil and gas inspectors and the supervising inspector shall have authority to visit and inspect any well or well site and any other oil or gas facility in this state. Any well operator, coal operator operating coal seams beneath the tract of land, or the coal seam owner or lessee, if any, if said owner or lessee is not yet operating said coal seams beneath said tract of land may request the secretary to have an immediate inspection made. The operator or owner of every well or well site or any other oil or gas facility shall cooperate with the secretary, all oil and gas inspectors and the supervising inspector in making inspections or obtaining information.
- (e) Oil and gas inspectors shall devote their full time and undivided attention to the performance of their duties, and they shall be responsible for the inspection of all wells or well sites or other oil or gas facilities in their respective districts as often as may be required in the performance of their duties.
- (f) All records of the office shall be open to the public.
- W. Va. Code § 22-6-2 (underscoring of § 22-6-2 (c)(11) added).



EXHIBIT "A"

Cabot Oil & Gas Announces Second Quarter Results

HOUSTON, July 23 /PRNewswire-FirstCall/ -- Cabot Oil & Gas Corporation (NYSE: COG) today reported second quarter net income of \$25.5 million, or \$0.25 per share. Removing the selected items, (which are detailed in the Selected Items Table and include the loss related to the sale of the Company's Canadian operations), the quarter's net income was \$39.1 million, or \$0.38 per share. These figures compare to the 2008 second quarter numbers (for both the reported results and after the removal of selected items) of \$54.6 million, or \$0.55 per share, and \$69.9 million, or \$0.71 per share, for net income respectively.

Cash flow from operations for the 2009 second quarter totaled \$147.9 million, while discretionary cash flow was \$133.6 million. Comparatively, 2008 second quarter cash flow from operations was \$143.7 million, and discretionary cash flow was \$147.1 million.

"This marks our 25th consecutive quarter of profitability," said Dan O. Dinges, Chairman, President and Chief Executive Officer. "These results include a ten percent increase in second quarter 2009 equivalent production over the second quarter of 2008 but also reflect a reduced commodity price realization." The production growth rate was driven by a 42 percent increase in the East region and a 20 percent increase in the Gulf Coast region for comparable year over year quarters. On the pricing front, even with the hedge benefit, the price realization fell short of last year. Realized natural gas prices were \$7.25 per Mcf in the 2009 second quarter versus \$9.30 per Mcf in the 2008 second quarter. Realized oil prices fell 15 percent to \$83.76 per barrel.

In terms of cost comparisons, overall reported expenses were higher, but per unit levels were lower in this second quarter versus last year's second quarter. The higher components of DD&A, interest and exploration expense are related to the impact of the August 2008 east Texas acquisition.

Year-to-Date

In the six months ended June 30, 2009, Cabot reported net income of \$73.1 million, or \$0.71 per share, compared to \$100.6 million, or \$1.03 per share, for the same period last year. The cash flow comparisons for the six months ended June 30, 2009 and June 30, 2008, respectively, are cash flow from operations of \$300.4 million versus \$276.4 million and discretionary cash flow of \$271.7 million versus \$285.5 million. The 2009 six-month net income figure, after removal of the selected items, was \$81.3 million, or \$0.78 per share, versus \$126.9 million, or \$1.29 per share for the six-month period ended June 30, 2008.

"The same dynamic that drove the quarter results apply to the year-to-date periods - increased production and lower price realizations," stated Dinges. "Production was up approximately 13 percent while natural gas and oil prices each fell 14 percent." Expenses including financing costs were up three percent between the six-month year-to-date comparable periods.

Conference Call

Listen in live to Cabot Oil & Gas Corporation's second quarter financial and operating results discussion with financial analysts on Friday, July 24, 2009 at 9:30 a.m. EDT (8:30 a.m. CDT) at www.cabotog.com. A teleconference replay will also be available at (800) 642-1687, (U.S./Canada) or (706) 645-9291 (International), pass code 18590704. The replay will be available through Sunday, July 26, 2009. The latest financial guidance, including the Company's hedge positions, along with a replay of the web cast, which will be archived for one year, are available in the investor relations section of the Company's website at www.cabotog.com.

Cabot Oil & Gas Corporation, headquartered in Houston, Texas is a leading independent natural gas producer, with its entire resource base located in the continental United States. For additional information, visit the Company's Internet homepage at www.cabotog.com.

The statements regarding future financial performance and results and the other statements which are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including, but not limited to, market factors, the market price (including regional basis differentials) of natural gas and oil, results of future drilling and marketing activity, future production and costs, and other factors detailed in the Company's Securities and Exchange Commission filings.

OPERATING DATA

		Ended 30,	Six Mont June	
	2009	2008	2009	2008
PRODUCED NATURAL GAS (Bcf) & OIL (MBbl)				
Natural Gas				
East	8.4	5.9	15.7	11.9
Gulf Coast	9.3	7.7	19.7	15.1

West	6.2	7.1	12.4	13.5
Canada	0.4	1.4	1.0	2.6
Total	24.3	22.1	48.8	43.1
10041	====	====	====	====
Crude/Condensate/Ngl				
East	5	6	9	12
Gulf Coast	147	136	300	280
West	44	43	79	79
Canada	2	5	6	11
Total	198	190	394	382
	===	===	===	===
Equivalent Production (Bcfe)	25.6	23.2	51.2	45.4
PRICES				
Average Produced Gas Sales Price (\$/Mc	f)			
East	\$7.09	\$9.64	\$7.67	\$8.96
Gulf Coast	\$8.79	\$10.36	\$8.55	\$9.35
West	\$5.36	\$8.04	\$5.45	\$7.67
Canada	\$3.22		\$3.40	\$7.91
Total (1)	\$7.25	\$9.30	\$7.38	\$8.63
Average Crude/Condensate Price (\$/Bbl)				
East	\$54.24	\$118.33	\$46.90	\$103.89
Gulf Coast	\$94.51	\$91.87	\$90.72	\$88.11
West	\$52.15	\$118.18	\$43.37	\$108.12
Canada	\$45.14	\$96.89	\$36.46	\$87.26
Total (1)	\$83.76	\$98.68	\$79.55	\$92.58
WELLS DRILLED				
Gross	33	116	82	201
Net	28	97	65	162
Gross Success Rate	100%	99%	98%	99%

(1) These realized prices include the realized impact of derivative instrument settlements.

	~	r Ended e 30,		ths Ended ne 30,
	2009	2008	2009	2008
Realized Impacts to Gas Pricing Realized Impacts to Oil Pricing		\$(0.97) \$(21.19)		\$(0.48) \$(14.88)

CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS (Unaudited) (In thousands, except per share amounts)

	Quarter Ended June 30,		Six Months Ended June 30,	
	2009	2008	2009	2008
Operating Revenues				
Natural Gas Production	\$176,213	\$202,689	\$360,735	\$369,248
Brokered Natural Gas	11,704	27,188	45,085	62,808
Crude Oil and Condensate	16,210	18,600	30,452	35,087
Other	697	377	2,491	1,362
	204,824	248,854	438,763	468,505
Operating Expenses				
Brokered Natural Gas Cost Direct Operations - Field	10,684	24,140	40,433	54,430

and Pipeline Exploration		22,636 7,290		•
Depreciation, Depletion		•	•	•
and Amortization General and Administrative	61,838	48,401	126,930	94,668
(excluding Stock-Based				
Compensation)	•	11,782	•	
Stock-Based Compensation (1)	•	21,695	•	•
Taxes Other Than Income	•	19,225		· ·
	134,023			298,748
Gain / (Loss) on Sale of				
Assets (2)	(16,562)	401	(3,855)	401
Income from Operations	54,239	94,086		170,158
Interest Expense and Other	15,046	6,207	29,272	-
Income Before Income Taxes		87,879	114,864	157,960
Income Tax Expense	13,691	33,254	41,782	57,360
Net Income	\$25,502			\$100,600
	======			
Net Earnings Per Share - Basic Weighted Average Common	\$0.25	\$0.55	\$0.71	\$1.03
Shares Outstanding	103,640	98,467	103,581	98,092

- (1) Includes the impact of the Company's performance share awards and restricted stock amortization as well as expense related to stock options and stock appreciation rights. Also includes expense for the Supplemental Employee Incentive Plans which commenced in 2008.
- (2) The loss on sale of assets in 2009 primarily relates to a loss on our April 2009 sale of our Canadian properties, partially offset by a gain on sale of assets from the first quarter 2009 sale of the Thornwood properties in the East.

$\begin{array}{c} {\tt CONDENSED} \ \ {\tt CONSOLIDATED} \ \ {\tt BALANCE} \ \ {\tt SHEET} \ \ ({\tt Unaudited}) \\ & ({\tt In thousands}) \end{array}$

	June 30, 2009	December 31, 2008
Assets		
Current Assets Property, Equipment and Other	\$370,822	\$460,551
Assets	3,252,862	3,241,113
Total Assets	\$3,623,684	\$3,701,664
	=======	=======
Liabilities and Stockholders'		
Current Liabilities Long-Term Debt, excluding	\$265,127	\$378,913
Current Maturities	795,000	831,143
Deferred Income Taxes	628,234	599,106
Other Liabilities	98,851	101,940
Stockholders' Equity	1,836,472	1,790,562
Total Liabilities and		
Stockholders' Equity	\$3,623,684	\$3,701,664
	========	========

CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (Unaudited) (In thousands)

Quarter Ended Six Months Ended

	June 30,		June	2 30,
	2009	2008	2009	2008
Cash Flows From Operating Activities				
Net Income Unrealized (Gain) / Loss	\$25,502	\$54,625	\$73,082	\$100,600
on Derivatives Income Charges Not	126	2,909	(815)	2,909
Requiring Cash (Gain) / Loss on Sale of Assets	69,151 16,562	50,692 (401)	•	114,498 (401)
Deferred Income Tax Expense	11,903	31,955	38,252	55,515
Changes in Assets and Liabilities	14,210	(8,005)	28,705	(9,061)
Stock-Based Compensation Tax Benefit	_	4,642	_	_
Exploration Expense	10,397	7,290 	16,863 	12,351
Net Cash Provided by Operations	147,851	143,707	300,385	276,411
Cash Flows From Investing Activities				
Capital Expenditures Proceeds from Sale of Assets Exploration Expense	64,604 (10,397)	(244,510) 1,150 (7,290)	79,667 (16,863)	1,150 (12,351)
Net Cash Used in Investing	(67,734)	(250,650)	(230,166)	(383,812)
Cash Flows From Financing Activities				
	1	313,867	150	316,107
in Debt Capitalized Debt Issuance	(62,000)	(105,000)	(52,000)	(85,000)
Costs Stock-Based Compensation Tax	(10,409)	-	(10,409)	-
Benefit Dividends Paid	(3,110)	(4,642) (2,943)	(6,213)	(5,873)
Net Cash (Used in) / Provided by Financing		201,282		
Net Increase in Cash and Cash Equivalents	\$4,599 =====	\$94,339 =====	\$1,747 =====	

Selected Item Review and Reconciliation of Net Income and Earnings Per Share $\hbox{(In thousands, except per share amounts)}$

	~	er Ended ne 30,	Six Mont	
	2009	2008	2009	2008
As Reported - Net Income	\$25,502	\$54,625	\$73,082	\$100,600
Reversal of Selected Items, Net of Tax:				
(Gain) / Loss on Sale of				
Assets (1)	9,596	(253)	1,629	(253)
Stock-Based Compensation Expense Unrealized (Gain) / Loss on	3,875	13,668	7,091	24,723
Derivatives (2)	79	1,833	(511)	1,833

Net Income Excluding Selected Items	\$39,052 =====	\$69,873 =====	\$81,291 =====	\$126,903 =====
As Reported - Net Earnings Per Share Per Share Impact of Reversing	\$0.25	\$0.55	\$0.71	\$1.03
Selected Items	0.13	0.16	0.07	0.26
Net Earnings Per Share Including				
Reversal of Selected Items	\$0.38	\$0.71	\$0.78	\$1.29
	=====	=====	=====	=====
Weighted Average Common Shares Outstanding	103,640	98,467	103,581	98,092

- (1) The loss on sale of assets in 2009 primarily relates to a loss on our April 2009 sale of our Canadian properties, partially offset by a gain on sale of assets from the first quarter 2009 sale of the Thornwood properties in the East. The loss on sale of assets for the three and six months ended June 30, 2009 considers a tax benefit associated with foreign tax credits.
- (2) This unrealized (gain) / loss is included in Natural Gas Production Revenues in the Condensed Consolidated Statement of Operations and represents the mark to market change related to the Company's natural gas basis swaps.

Discretionary Cash Flow Calculation and Reconciliation (In thousands)

	Quarter Ended June 30,			ths Ended
	2009	2008	2009	2008
Discretionary Cash Flow As Reported - Net Income Plus / (Less):	\$25,502	\$54,625	\$73,082	\$100,600
Unrealized (Gain) / Loss on Derivatives Income Charges Not	126	2,909	(815)	2,909
Requiring Cash (Gain) / Loss on Sale	69,151	50,692	140,443	114,498
of Assets	16,562	(401)	3,855	(401)
Deferred Income Tax Expense Exploration Expense	11,903 10,397	31,955 7,290	•	•
Discretionary Cash Flow Changes in Assets and	133,641	147,070	271,680	285,472
Liabilities Stock-Based Compensation	14,210	(8,005)	28,705	(9,061)
Tax Benefit	-	4,642	-	-
Net Cash Provided by				
Operations	\$147,851 ======	\$143,707 ======		\$276,411 ======

Net Debt Reconciliation (In thousands)

	June 30, 2009	December 31, 2008
Current Portion of	¢20,000	425 057
Long-Term Debt Long-Term Debt	\$20,000 795,000	\$35,857 831,143
20119 101 2020		

Total Debt	\$815,000	\$867,000
Stockholders' Equity	1,836,472	1,790,562
Total Capitalization	\$2,651,472	\$2,657,562
Total Debt Less: Cash and Cash	\$815,000	\$867,000
Equivalents	(29,848)	(28,101)
Net Debt	\$785,152	\$838,899
Net Debt Stockholders' Equity	\$785,152 1,836,472	\$838,899 1,790,562
Total Adjusted Capitalization	\$2,621,624	\$2,629,461
Total Debt to Total Capitalization Ratio Less: Impact of Cash	30.7%	32.6%
and Cash Equivalents	0.8%	0.7%
Not Dobt to Addingted		
Net Debt to Adjusted Capitalization Ratio	29.9%	31.9%

SOURCE Cabot Oil & Gas Corporation

CONTACT: Scott Schroeder of Cabot Oil & Gas Corporation, +1-281-589-4993



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Cabot Oil & Gas Reports Well Successes in Pennsylvania and East Texas

Thu Jul 23, 2009 6:02pm EDT

HOUSTON, July 23 /PRNewswire-FirstCall/ -- Cabot Oil & Gas Corporation (NYSE: COG) today announced the results of four successful horizontal completions in three different reservoirs. "These recent completions indicate the success we continue to experience in the Marcellus and also success with several new initiatives in the Pettet and Cotton Valley Taylor sand," said Dan O. Dinges, Chairman, President and Chief Executive Officer. At the same time, the Company discloses the cumulative impact of some plays and its plan for the remainder of 2009.

Marcellus

Cabot's most recent horizontal completion in the Marcellus, the Teel 8H, had an initial production (24-hour into sales) rate of 10.3 Mmcf per day with a maximum spot rate during that period of 12.0 Mmcf per day. Production from this well remains strong with a 30-day average rate of 9.8 Mmcf per day.

The Teel #6, a vertical Marcellus well, is flowing to sales at an initial 24-hour rate of 4.2 Mmcf per day. The well was completed over a 370-foot interval in the lower and upper Marcellus shale. "We believe the stimulation contacted most of the lower and upper shales, plus the Purcell limestone," added Dinges. "We consider this completion a critical event in the development of our Marcellus acreage."

"Today in Pennsylvania, we are producing 39 Mmcf per day from seven horizontal and 20 vertical wells," stated Dinges. "One year ago we announced our first Marcellus production from a vertical well. Since that time we have cumulatively produced over 5.8 Bcf."

The 2009 drilling program is on schedule to spud 18 additional horizontal wells between now and year-end. Presently, eight rigs are drilling with a ninth preparing to spud a well. "At this point we have three wells completing and 12 waiting on completion or pipeline," commented Dinges. "I am extremely pleased with the latest results and the pace of progress as our new team transitions to our new regional office in Pittsburgh."

Additionally, infrastructure has been expanded to handle the physical production with Cabot now having 100 Mmcf per day of capacity at its Teel compression station. Firm take-away from the station increases to 70 Mmcf per day August 1, 2009 and then to 100 Mmcf per day August 1, 2010. "We are working with several customers to secure additional firm take-away capacity above the current levels," added Dinges.

East Texas

At Minden, the Company recently completed its first horizontal Cotton Valley Taylor sand well with an initial rate of 9.5 Mmcf per day. This well has performed extremely well with a 30-day average rate of 7.9 Mmcf per day. "We are pleased with both the initial results and the production stability of this well," said Dinges. "These rates significantly enhance the economics for Cotton Valley development in a lower price environment, and to that end, we have identified 50 to 60 potential locations."

Also, in response to the soft price for natural gas near-term, the Company initiated an effort to exploit the horizontal Pettet at County Line - a known oil reservoir. "We have completed our confirmation wells of the Pettet Lime oil reservoir under the James Lime field. The most recent well confirms the initial discovery drilled by Cabot this past spring," stated Dinges. The Sustainable Forest #5 tested the Pettet in April 2009 with a 4,700-foot

1 of 2 9/17/2009 9:11 AM

lateral and a ten-stage slickwater frac. The well IP'd to sales at 842 barrels of oil per day plus 1.4 Mmcf per day at 1,300 pounds flowing casing pressure. The 30-day average rate was 519 barrels of oil per day plus 2.0 Mmcf per day.

The confirmation well, the Timberstar Redditt #4, drilled about 4,000 feet from the discovery, was spud in May 2009 and tested the Pettet in a 5,200-foot lateral with a ten-stage frac. This well flowed to sales at an initial IP rate of 504 barrels of oil per day plus 1.2 Mmcf per day. Over the first nine days of production, the well flowed at an average of 465 barrels of oil per day plus 584 Mcf per day.

"Because Pettet oil economics are superior to the James at current commodity prices, we will shift some capital from the James program to the Pettet," added Dinges. "We have recently spud our third Pettet well and if the price disparity between natural gas and oil persists, we plan to expand the program further in 2010."

Other

The Company has increased its investment program for 2009 from \$475 million to \$500 million with the incremental earmarked for more horizontal activity in both east Texas and Marcellus, along with additional leasehold primarily in the Marcellus.

"We have replaced some verticals with horizontals in Pennsylvania, and we have added horizontals in east Texas," commented Dinges. "Specifically, we have two horizontal Haynesville shale wells drilling with partners in our County Line area."

Cabot Oil & Gas Corporation, headquartered in Houston, Texas is a leading independent natural gas producer, with its entire resource base located in the continental United States. For additional information, visit the Company's Internet homepage at www.cabotog.com.

The statements regarding future financial performance and results and the other statements which are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including, but not limited to, market factors, the market price (including regional basis differentials) of natural gas and oil, results of future drilling and marketing activity, future production and costs, and other factors detailed in the Company's Securities and Exchange Commission filings.

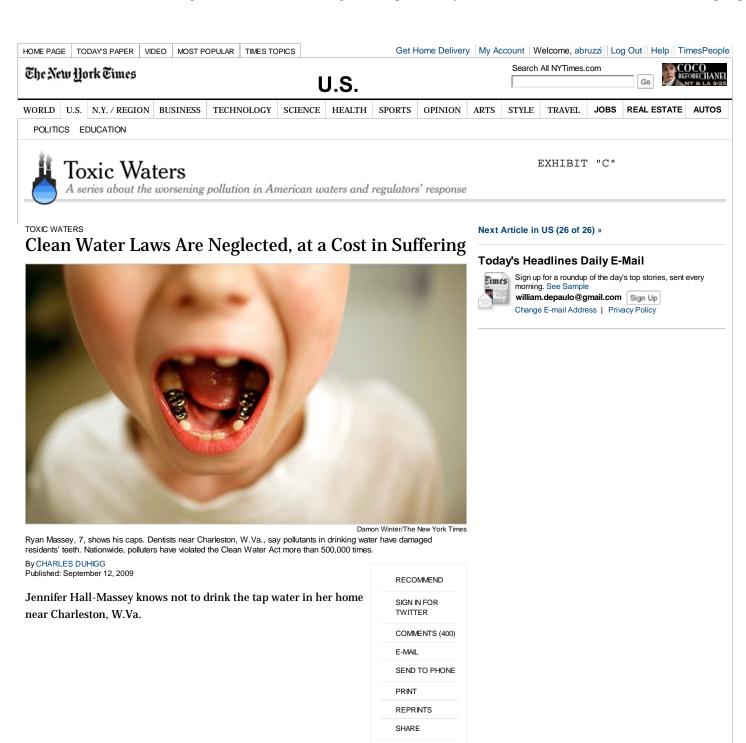
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Damon Winter/The New York Times Jennifer Hall-Massey relies on drinking water that is brought in by truck and stored in barrels on her porch near Charleston, W.Va.

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Damon Winter/The New York Times
A water sample collected from a water
heater by Patty Sebok, a neighbor of
Jennifer Hall-Massey. Residents say
such water is typical and has
destroyed toilets, dishwashers and
washing machines.

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Clay Massey, 6, waits for his mother to put prescription ointment on painful scabs and rashes that she said were caused by polluted bath water.

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Damon Winter/The New York Times In West Virginia, one of many lagoons that hold slurry, water used to remove impurities from coal. Such water can seep into local drinking supplies.

In fact, her entire family tries to avoid any contact with the water. Her youngest son has scabs on his arms, legs and chest where the bathwater — polluted with lead, nickel and other heavy metals — caused painful rashes. Many of his brother's teeth were capped to replace enamel that was eaten away.

Neighbors apply special lotions after showering because their skin burns. Tests show that their tap water contains arsenic, barium, lead, manganese and other chemicals at concentrations federal regulators say could contribute to cancer and damage the kidneys and nervous system.

"How can we get digital cable and Internet in our homes, but not clean water?" said Mrs. Hall-Massey, a senior accountant at one of the state's largest banks.

She and her husband, Charles, do not live in some remote corner of Appalachia. Charleston, the state capital, is less than 17 miles from her home.

"How is this still happening today?" she asked.

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When Mrs. Hall-Massey and 264 neighbors sued nine nearby coal companies, accusing them of putting dangerous waste into local water supplies, their lawyer did not have to look far for evidence. As required by state law, some of the companies had disclosed in reports to regulators that they were pumping into the ground illegal concentrations of chemicals — the same pollutants that flowed from residents' taps.

But state regulators never fined or punished those companies for breaking those pollution laws.

U.S. Toxic Waters: Coal in the Water

Jennifer Hall-Massey of Prenter, W.Va., explains how water pollution, which she believes is caused by nearby coal companies, has impacted her family and community.

Readers' Comments

Share your thoughts on this article and read replies from Charles Duhigg, who is responding to readers' comments.
Post a Comment »

Post a Comment » Read All Comments (400) » This pattern is not limited to West Virginia. Almost four decades ago, Congress passed the Clean Water Act to force polluters to disclose the toxins they dump into waterways and to give regulators the power to fine or jail offenders. States have passed pollution statutes of their own. But in recent years, violations of the Clean Water Act have risen steadily across the nation, an extensive

review of water pollution records by The New York Times found.

In the last five years alone, chemical factories, manufacturing plants and other workplaces have violated water pollution laws more than half a million times. The violations range from failing to report emissions to dumping toxins at concentrations regulators say might contribute to cancer, birth defects and other illnesses.

However, the vast majority of those polluters have escaped punishment. State officials have repeatedly ignored obvious illegal dumping, and the <u>Environmental Protection Agency</u>, which can prosecute polluters when states fail to act, has often declined to intervene.

Because it is difficult to determine what causes diseases like cancer, it is impossible to know how many illnesses are the result of water pollution, or contaminants' role in the health problems of specific individuals.

But concerns over these toxins are great enough that Congress and the E.P.A. regulate more than 100 pollutants through the Clean Water Act and strictly limit 91 chemicals or contaminants in tap water through the Safe Drinking Water Act.

Regulators themselves acknowledge lapses. The new E.P.A. administrator, <u>Lisa P. Jackson</u>, said in an interview that despite many successes since the Clean Water Act was passed in 1972, today the nation's water does not meet public health goals, and enforcement of water pollution laws is unacceptably low. She added that strengthening water protections is among her top priorities. State regulators say they are doing their best with insufficient resources.

The Times obtained hundreds of thousands of water pollution records through Freedom of Information Act requests to every state and the E.P.A., and compiled <u>a national</u> <u>database of water pollution violations</u> that is more comprehensive than those maintained by states or the E.P.A. (For an interactive version, which can show violations in any community, visit <u>www.nytimes.com/toxicwaters.</u>)

In addition, The Times interviewed more than 250 state and federal regulators, watersystem managers, environmental advocates and scientists.

That research shows that an estimated one in 10 Americans have been exposed to drinking water that contains dangerous chemicals or fails to meet a federal health benchmark in other ways.

Those exposures include carcinogens in the tap water of major American cities and unsafe chemicals in drinking-water wells. Wells, which are not typically regulated by the Safe Drinking Water Act, are more likely to contain contaminants than municipal water systems.

Because most of today's water pollution has no scent or taste, many people who consume dangerous chemicals do not realize it, even after they become sick, researchers say.

But an estimated 19.5 million Americans fall ill each year from drinking water contaminated with parasites, bacteria or viruses, according to a study published last year in the scientific journal Reviews of Environmental Contamination and Toxicology. That figure does not include illnesses caused by other chemicals and toxins.

In the nation's largest dairy states, like Wisconsin and California, farmers have sprayed liquefied animal feces onto fields, where it has seeped into wells, causing severe infections. Tap water in parts of the Farm Belt, including cities in Illinois, Kansas, Missouri and Indiana, has contained pesticides at concentrations that some scientists have linked to birth defects and fertility problems.

In parts of New York, Rhode Island, Ohio, California and other states where sewer systems cannot accommodate heavy rains, untreated human waste has flowed into rivers and washed onto beaches. Drinking water in parts of New Jersey, New York, Arizona and Massachusetts shows some of the highest concentrations of tetrachloroethylene, a dry cleaning solvent that has been linked to kidney damage and cancer. (Specific types of water pollution across the United States will be examined in future Times articles.)

The Times's research also shows that last year, 40 percent of the nation's community water systems violated the Safe Drinking Water Act at least once, according to an analysis of E.P.A. data. Those violations ranged from failing to maintain proper paperwork to allowing carcinogens into tap water. More than 23 million people received

drinking water from municipal systems that violated a health-based standard.

In some cases, people got sick right away. In other situations, pollutants like chemicals, inorganic toxins and heavy metals can accumulate in the body for years or decades before they cause problems. Some of the most frequently detected contaminants have been linked to cancer, birth defects and neurological disorders.

Records analyzed by The Times indicate that the Clean Water Act has been violated more than 506,000 times since 2004, by more than 23,000 companies and other facilities, according to reports submitted by polluters themselves. Companies sometimes test what they are dumping only once a quarter, so the actual number of days when they broke the law is often far higher. And some companies illegally avoid reporting their emissions, say officials, so infractions go unrecorded.

Environmental groups say the number of Clean Water Act violations has increased significantly in the last decade. Comprehensive data go back only five years but show that the number of facilities violating the Clean Water Act grew more than 16 percent from 2004 to 2007, the most recent year with complete data.

Polluters include small companies, like gas stations, dry cleaners, shopping malls and the Friendly Acres Mobile Home Park in Laporte, Ind., which acknowledged to regulators that it had dumped human waste into a nearby river for three years.

They also include large operations, like chemical factories, power plants, sewage treatment centers and one of the biggest zinc smelters, the Horsehead Corporation of Pennsylvania, which has dumped illegal concentrations of copper, lead, zinc, chlorine and selenium into the Ohio River. Those chemicals can contribute to mental retardation and cancer.

Some violations are relatively minor. But about 60 percent of the polluters were deemed in "significant noncompliance" — meaning their violations were the most serious kind, like dumping cancer-causing chemicals or failing to measure or report when they pollute.

Finally, the Times's research shows that fewer than 3 percent of Clean Water Act violations resulted in fines or other significant punishments by state officials. And the E.P.A. has often declined to prosecute polluters or force states to strengthen their enforcement by threatening to withhold federal money or take away powers the agency has delegated to state officials.

Neither Friendly Acres Mobile Home Park nor Horsehead, for instance, was fined for Clean Water Act violations in the last eight years. A representative of Friendly Acres declined to comment. Indiana officials say they are investigating the mobile home park. A representative of Horsehead said the company had taken steps to control pollution and was negotiating with regulators to clean up its emissions.

Numerous state and federal lawmakers said they were unaware that pollution was so widespread.

"I don't think anyone realized how bad things have become," said Representative <u>James L. Oberstar</u>, a Minnesota Democrat, when told of The Times's findings. Mr. Oberstar is chairman of the House Transportation and Infrastructure Committee, which has jurisdiction over many water-quality issues.

"The E.P.A. and states have completely dropped the ball," he said. "Without oversight and enforcement, companies will use our lakes and rivers as dumping grounds — and that's exactly what is apparently going on."

The E.P.A. administrator, Ms. Jackson, whose appointment was confirmed in January, said in an interview that she intended to strengthen enforcement of the Clean Water Act and pressure states to apply the law.

"I've been saying since Day One I want to work on these water issues pretty broadly across the country," she said. On Friday, the E.P.A. said that it was reviewing dozens of coal-mining permits in West Virginia and three other states to make sure they would not violate the Clean Water Act.

After E.P.A. officials received detailed questions from The New York Times in June, Ms. Jackson sent <u>a memo</u> to her enforcement deputy noting that the E.P.A. is "falling short of this administration's expectations for the effectiveness of our clean water enforcement programs. Data available to E.P.A. shows that, in many parts of the country, the level of significant noncompliance with permitting requirements is unacceptably high and the level of enforcement activity is unacceptably low."

State officials, for their part, attribute rising pollution rates to increased workloads and dwindling resources. In 46 states, local regulators have primary responsibility for crucial aspects of the Clean Water Act. Though the number of regulated facilities has more than doubled in the last 10 years, many state enforcement budgets have remained essentially flat when adjusted for inflation. In New York, for example, the number of regulated polluters has almost doubled to 19,000 in the last decade, but the number of inspections each year has remained about the same.

But stretched resources are only part of the reason polluters escape punishment. The Times's investigation shows that in West Virginia and other states, powerful industries have often successfully lobbied to undermine effective regulation.

State officials also argue that water pollution statistics include minor infractions, like failing to file reports, which do not pose risks to human health, and that records collected by The Times failed to examine informal enforcement methods, like sending warning letters.

"We work enormously hard inspecting our coal mines, analyzing water samples, notifying companies of violations when we detect them," said Randy Huffman, head of West Virginia's Department of Environmental Protection. "When I look at how far we've come in protecting the state's waters since we took responsibility for the Clean Water Act, I think we have a lot to be proud of."

But unchecked pollution remains a problem in many states. West Virginia offers a revealing example of why so many companies escape punishment.

One Community's Plight

The mountains surrounding the home of Mrs. Hall-Massey's family and West Virginia's nearby capital have long been mined for coal. And for years, the area enjoyed clean well water.

But starting about a decade ago, awful smells began coming from local taps. The water was sometimes gray, cloudy and oily. Bathtubs and washers developed rust-colored rings that scrubbing could not remove. When Mrs. Hall-Massey's husband installed industrial water filters, they quickly turned black. Tests showed that their water contained toxic amounts of lead, manganese, barium and other metals that can contribute to organ failure or developmental problems.

Around that time, nearby coal companies had begun pumping industrial waste into the ground.

Mining companies often wash their coal to remove impurities. The leftover liquid — a black fluid containing dissolved minerals and chemicals, known as sludge or slurry — is often disposed of in vast lagoons or through injection into abandoned mines. The liquid in those lagoons and shafts can flow through cracks in the earth into water supplies. Companies must regularly send samples of the injected liquid to labs, which provide reports that are forwarded to state regulators.

In the eight miles surrounding Mrs. Hall-Massey's home, coal companies have injected more than 1.9 billion gallons of coal slurry and sludge into the ground since 2004, according to a review of thousands of state records. Millions more gallons have been dumped into lagoons.

These underground injections have contained chemicals at concentrations that pose serious health risks, and thousands of injections have violated state regulations and the Safe Drinking Water Act, according to reports sent to the state by companies themselves.

For instance, three coal companies — Loadout, Remington Coal and Pine Ridge, a subsidiary of <u>Peabody Energy</u>, one of the largest coal companies in the world — reported to state officials that 93 percent of the waste they injected near this community had illegal concentrations of chemicals including arsenic, lead, chromium, beryllium or nickel.

Sometimes those concentrations exceeded legal limits by as much as 1,000 percent. Those chemicals have been shown to contribute to cancer, organ failures and other diseases.

But those companies were never fined or punished for those illegal injections, according to state records. They were never even warned that their activities had been noticed.

Remington Coal declined to comment. A representative of Loadout's parent said the company had assigned its permit to another company, which ceased injecting in 2006. Peabody Energy, which spun off Pine Ridge in 2007, said that some data sent to regulators was inaccurate and that the company's actions reflected best industry practices.

West Virginia officials, when asked about these violations, said regulators had accidentally overlooked many pollution records the companies submitted until after the statute of limitations had passed, so no action was taken. They also said their studies indicated that those injections could not have affected drinking water in the area and that other injections also had no detectable effect.

State officials noted that they had cited more than 4,200 water pollution violations at mine sites around the state since 2000, as well as conducted thousands of investigations. The state has initiated research about how mining affects water quality. After receiving questions from The Times, officials announced a statewide moratorium on issuing injection permits and told some companies that regulators were investigating their injections.

"Many of the issues you are examining are several years old, and many have been addressed," West Virginia officials wrote in a statement. The state's pollution program "has had its share of issues," regulators wrote. However, "it is important to note that if the close scrutiny given to our state had been given to others, it is likely that similar issues would have been found."

More than 350 other companies and facilities in West Virginia have also violated the Clean Water Act in recent years, records show. Those infractions include releasing illegal concentrations of iron, manganese, aluminum and other chemicals into lakes and rivers.

As the water in Mrs. Hall-Massey's community continued to worsen, residents began complaining of increased health problems. Gall bladder diseases, fertility problems, miscarriages and kidney and thyroid issues became common, according to interviews.

When Mrs. Hall-Massey's family left on vacation, her sons' rashes cleared up. When they returned, the rashes reappeared. Her dentist told her that chemicals appeared to be damaging her teeth and her son's, she said. As the quality of her water worsened, Mrs.

Hall-Massey's once-healthy teeth needed many crowns. Her son brushed his teeth often, used a fluoride rinse twice a day and was not allowed to eat sweets. Even so, he continued getting cavities until the family stopped using tap water. By the time his younger brother's teeth started coming in, the family was using bottled water to brush. He has not had dental problems.

Medical professionals in the area say residents show unusually high rates of health problems. A survey of more than 100 residents conducted by a nurse hired by Mrs. Hall-Massey's lawyer indicated that as many as 30 percent of people in this area have had their gallbladders removed, and as many as half the residents have significant tooth enamel damage, chronic stomach problems and other illnesses. That research was confirmed through interviews with residents.

It is difficult to determine which companies, if any, are responsible for the contamination that made its way into tap water or to conclude which specific chemicals, if any, are responsible for particular health problems. Many coal companies say they did not pollute the area's drinking water and chose injection sites that flowed away from nearby homes.

An independent study by a university researcher challenges some of those claims.

"I don't know what else could be polluting these wells," said Ben Stout, a biology professor at Wheeling Jesuit University who tested the water in this community and elsewhere in West Virginia. "The chemicals coming out of people's taps are identical to the chemicals the coal companies are pumping into the ground."

One night, Mrs. Hall-Massey's 6-year-old son, Clay, asked to play in the tub. When he got out, his bright red rashes hurt so much he could not fall asleep. Soon, Mrs. Hall-Massey began complaining to state officials. They told her they did not know why her water was bad, she recalls, but doubted coal companies had done anything wrong. The family put their house on the market, but because of the water, buyers were not interested.

In December, Mrs. Hall-Massey and neighbors sued in county court, seeking compensation. That suit is pending. To resolve a related lawsuit filed about the same time, the community today gets regular deliveries of clean drinking water, stored in coolers or large blue barrels outside most homes. Construction began in August on a pipeline bringing fresh water to the community.

But for now most residents still use polluted water to bathe, shower and wash dishes.

"A parent's only real job is to protect our children," Mrs. Hall-Massey said. "But where was the government when we needed them to protect us from this stuff?"

Regulators 'Overwhelmed'

Matthew Crum, a 43-year-old lawyer, wanted to protect people like Mrs. Hall-Massey. That is why he joined West Virginia's environmental protection agency in 2001, when it became clear that the state's and nation's streams and rivers were becoming more polluted.

But he said he quickly learned that good intentions could not compete with intimidating politicians and a fearful bureaucracy.

Mr. Crum grew up during a golden age of environmental activism. He was in elementary school when Congress passed the Clean Water Act of 1972 in response to environmental disasters, including a fire on the polluted Cuyahoga River in Cleveland. The act's goal was to eliminate most water pollution by 1985 and prohibit the "discharge of toxic pollutants in toxic amounts."

"There were a bunch of us that were raised with the example of the Clean Water Act as

inspiration," he said. "I wanted to be part of that fight."

In the two decades after the act's passage, the nation's waters grew much healthier. The Cuyahoga River, West Virginia's Kanawha River and hundreds of other beaches, streams and ponds were revitalized.

But in the late 1990s, some states' enforcement of pollution laws began tapering off, according to regulators and environmentalists. Soon the E.P.A. started reporting that the nation's rivers, lakes and estuaries were becoming dirtier again. Mr. Crum, after a stint in Washington with the Justice Department and the birth of his first child, joined West Virginia's Department of Environmental Protection, where new leadership was committed to revitalizing the Clean Water Act.

He said his idealism was tested within two weeks, when he was called to a huge coal spill into a stream.

"I met our inspector at the spill site, and we had this really awkward conversation," Mr. Crum recalled. "I said we should shut down the mine until everything was cleaned up. The inspector agreed, but he said if he issued that order, he was scared of getting demoted or transferred to the middle of nowhere. Everyone was terrified of doing their job."

Mr. Crum temporarily shut the mine.

In the next two years, he shut many polluting mines until they changed their ways. His tough approach raised his profile around the state.

Mining companies, worried about attracting Mr. Crum's attention, began improving their waste disposal practices, executives from that period said. But they also began complaining to their friends in the state's legislature, they recalled in interviews, and started a whisper campaign accusing Mr. Crum of vendettas against particular companies — though those same executives now admit they had no evidence for those claims.

In 2003, a new director, Stephanie Timmermeyer, was nominated to run the Department of Environmental Protection. One of West Virginia's most powerful state lawmakers, Eustace Frederick, said she would be confirmed, but only if she agreed to fire Mr. Crum, according to several people who said they witnessed the conversation.

She was given the job and soon summoned Mr. Crum to her office. He was dismissed two weeks after his second child's birth.

Ms. Timmermeyer, who resigned in 2008, did not return calls. Mr. Frederick died last year.

Since then, hundreds of workplaces in West Virginia have violated pollution laws without paying fines. A half-dozen current and former employees, in interviews, said their enforcement efforts had been undermined by bureaucratic disorganization, a departmental preference to let polluters escape punishment if they promise to try harder, and a revolving door of regulators who leave for higher-paying jobs at the companies they once policed.

"We are outmanned and overwhelmed, and that's exactly how industry wants us," said one employee who requested anonymity for fear of being fired. "It's been obvious for decades that we're not on top of things, and coal companies have earned billions relying on that."

In June, four environmental groups petitioned the E.P.A. to take over much of West Virginia's handling of the Clean Water Act, citing a "nearly complete breakdown" in the state. The E.P.A. has asked state officials to respond and said it is investigating the petition.

Similar problems exist in other states, where critics say regulators have often turned a blind eye to polluters. Regulators in five other states, in interviews, said they had been pressured by industry-friendly politicians to drop continuing pollution investigations.

"Unless the E.P.A. is pushing state regulators, a culture of transgression and apathy sets in," said William K. Reilly, who led the E.P.A. under President George H. W. Bush.

In response, many state officials defend their efforts. A spokeswoman for West Virginia's Department of Environmental Protection, for instance, said that between 2006 and 2008, the number of cease-operation orders issued by regulators was 10 percent higher than during Mr. Crum's two-year tenure.

Mr. Huffman, the department's head, said there is no political interference with current investigations. Department officials say they continue to improve the agency's procedures, and note that regulators have assessed \$14.7 million in state fines against more than 70 mining companies since 2006.

However, that is about equal to the revenue those businesses' parent companies collect every 10 hours, according to financial reports. (To find out about every state's enforcement record and read comments from regulators, visit www.nytimes.com/waterdata.)

"The real test is, is our water clean?" said Mr. Huffman. "When the Clean Water Act was passed, this river that flows through our capital was very dirty. Thirty years later, it's much cleaner because we've chosen priorities carefully."

Some regulators admit that polluters have fallen through the cracks. To genuinely improve enforcement, they say, the E.P.A. needs to lead.

"If you don't have vigorous oversight by the feds, then everything just goes limp," said Mr. Crum. "Regulators can't afford to have some backbone unless they know Washington or the governor's office will back them up."

It took Mr. Crum a while to recover from his firing. He moved to Virginia to work at the <u>Nature Conservancy</u>, an environmental conservation group. Today, he is in private practice and works on the occasional environmental lawsuit.

"We're moving backwards," he said, "and it's heartbreaking."

Shortcomings of the E.P.A.

The memos are marked "DO NOT DISTRIBUTE."

They were written this year by E.P.A. staff, the culmination of a five-year investigation of states' enforcement of federal pollution laws. And in bland, bureaucratic terms, they describe a regulatory system — at the E.P.A. and among state agencies — that in many ways simply does not work.

For years, according to one memo, federal regulators knew that more than 30 states had major problems documenting which companies were violating pollution laws. Another notes that states' "personnel lack direction, ability or training" to levy fines large enough to deter polluters.

But often, the memos say, the E.P.A. never corrected those problems even though they were widely acknowledged. The E.P.A. "may hesitate to push the states" out of "fear of risking their relationships," one report reads. Another notes that E.P.A. offices lack "a consistent national oversight strategy."

Some of those memos, part of an effort known as the State Review Framework, were obtained from agency employees who asked for anonymity, and others through Freedom of Information Act requests.

Enforcement lapses were particularly bad under the administration of President George W. Bush, employees say. "For the last eight years, my hands have been tied," said one E.P.A. official who requested anonymity for fear of retribution. "We were told to take our clean water and clean air cases, put them in a box, and lock it shut. Everyone knew polluters were getting away with murder. But these polluters are some of the biggest campaign contributors in town, so no one really cared if they were dumping poisons into streams."

The E.P.A. administrators during the last eight years — <u>Christine Todd Whitman</u>, <u>Michael O. Leavitt and Stephen L. Johnson — all declined to comment.</u>

When <u>President Obama</u> chose Ms. Jackson to head the E.P.A., many environmentalists and agency employees were encouraged. During his campaign, Mr. Obama promised to "reinvigorate the drinking water standards that have been weakened under the Bush administration and update them to address new threats." He pledged to regulate water pollution from livestock operations and push for amendments to the Clean Water Act.

But some worry those promises will not be kept. Water issues have taken a back seat to other environmental concerns, like carbon emissions.

In an interview, Ms. Jackson noted that many of the nation's waters were healthier today than when the Clean Water Act was passed and said she intended to enforce the law more vigorously. After receiving detailed questions from The Times, she put many of the State Review Framework documents on the agency's Web site, and ordered more disclosure of the agency's handling of water issues, increased enforcement and revamped technology so that facilities' environmental records are more accessible.

"Do critics have a good and valid point when they say improvements need to be made? Absolutely," Ms. Jackson said. "But I think we need to be careful not to do that by scaring the bejesus out of people into thinking that, boy, are things horrible. What it requires is attention, and I'm going to give it that attention."

In statements, E.P.A. officials noted that from 2006 to 2008, the agency conducted 11,000 Clean Water Act and 21,000 Safe Drinking Water Act inspections, and referred 146 cases to the Department of Justice. During the 2007 to 2008 period, officials wrote, 92 percent of the population served by community water systems received water that had no reported health-based violations.

The Times's reporting, the statements added, "does not distinguish between significant violations and minor violations," and "as a result, the conclusions may present an unduly alarming picture." They wrote that "much of the country's water quality problems are caused by discharges from nonpoint sources of pollution, such as agricultural runoff, which cannot be corrected solely through enforcement."

Ultimately, lawmakers and environmental activists say, the best solution is for Congress to hold the E.P.A. and states accountable for their failures.

The Clean Water Act, they add, should be expanded to police other types of pollution — like farm and livestock runoff — that are largely unregulated. And they say Congress should give state agencies more resources, in the same way that federal dollars helped overhaul the nation's sewage systems in the 1970s.

Some say changes will not occur without public outrage.

"When we started regulating water pollution in the 1970s, there was a huge public outcry because you could see raw sewage flowing into the rivers," said William D. Ruckelshaus, who served as the first head of the Environmental Protection Agency under President Richard M. Nixon, and then again under President Ronald Reagan.

"Today the violations are much more subtle — pesticides and chemicals you can't see or smell that are even more dangerous," he added. "And so a lot of the public pressure on

regulatory agencies has ebbed away."

Karl Russell contributed reporting.

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A version of this article appeared in print on September 13, 2009, on page A1 of the New York edition.

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Clarksburg Suspends Treatment of Marcellus Brine, Seeks Testing

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The Clarksburg Sanitary Board has stopped accepting Marcellus Shale gas well drilling brine until Energy Contractors LLC of Bridgeport provides extensive testing of the wastewater.

Story by Pam Kasey

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The Clarksburg Sanitary Board has stopped accepting Marcellus Shale gas well drilling brine until Energy Contractors LLC of Bridgeport provides extensive testing of the wastewater.

The move comes in response to a July 23 letter from the West Virginia Department of Environmental Protection establishing a long list of pollutants of concern in oil and gas-related wastewaters.

"The wastewaters from these types of operations contain high levels of chloride, dissolved solid, sulfate and other pollutants," the letter reads. "(Publicly owned treatment works) provide little to no treatment of these pollutants and could potentially lead to water quality issues in the receiving stream."

The DEP listed more than 40 pollutants of concern, including several forms of radiation.

"Those are parameters that they suspect or anticipate are in Marcellus water, and they want to make sure the levels that are in there are at concentrations that we can deal with -- or show that they're at levels we can't deal with," said plant Superintendent Bill Goodwin.

The Clarksburg wastewater treatment plant has been accepting about 37,000 gallons per day of gas well drilling brine from Energy Contractors in a trial that began last fall, according to Goodwin.

After receiving the DEP letter, the sanitary board elected to stop taking the brine until Energy Contractors has the water tested, Goodwin said. Laboratory analysis for all of the pollutants of concern would cost the company about \$1,000, he said.

Energy Contractors did not return a call for this story.

If the company does the tests and the sanitary board decides to take steps to accept the brine, the DEP is requiring the board to write appropriate local limits into the city's sewer use ordinance and to issue an industrial pretreatment permit to Energy Contractors.

That permit likely would include a monthly or biweekly sampling regime, Goodwin said.

Accepting 37,000 gallons per day brings in \$200,000 to \$300,000 a year for the treatment plant, Goodwin said, a significant part of the annual budget.

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Jeromy Tichnerd 8/16/09 at 6:43 PM Report Abuse

It's about time that someone looks past the greenbacks and makes these companies test their waste products. It's too bad that the state DEP had to make this ruling before Clarksburg took any form of action - goes to prove that these people don't care about their constituents! I'll be sure to bring this up around our community.

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