Frackers Use EPA Draft Water Report To Raise Doubts On Science

By **Peter Mantius**, on July 7th, 2015

Natural Resources News Service

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Anschutz Exploration Corp. began drilling two natural gas wells at this site in Big Flats, N.Y., in 2010.

Last month's Environmental Protection Agency draft report on fracking's impact on U.S. drinking water served up a sound-bite gift to the energy industry for its fight against the spread of state and local fracking bans.

While the 998-page report cited specific instances where gas drilling contaminated water wells, the nation's headline writers by a wide margin seized on the take-away line from the executive summary: The EPA "did not find evidence" that modern hydraulic fracturing has "led to widespread, systemic impacts on drinking water resources in the United States."

In the body of the report, EPA states that it may have undercounted those impacts because "there is insufficient pre- and post-fracturing data on the quality of drinking water resources. This inhibits a determination of the frequency of impacts."

But if the agency ever had inhibitions, it squelched them when it delivered the pro-industry determination, and headline writers couldn't resist. Newsweek went with "Fracking Doesn't Pollute Drinking Water, EPA Says." The New York Post and many others offered close variations. The Daily Caller followed a few days later with "NY Officially Bans Fracking After EPA Says It's Safe."

Blake A. Watson

Blake A. Watson, a professor at University of Dayton School of Law and a fracking law expert, found it amusing that the media managed to produce totally opposite headlines about the same report (**ecowatch.com** ran with: "It's Official: EPA Says Fracking Pollutes Drinking Water.")

"If I'm in the energy industry, I'm very happy the report is worded the way it is — that yes, there are problems (with fracking), but there's no widespread impact," Watson said. "EPA might have really emphasized that there are problems and we don't have enough data yet. But wording they did use helps industry say fracking bans are inappropriate. That may or may not have been intentional."

Few are competent to accurately analyze the motives of EPA administrators, who are buffeted by heavy political cross-winds. The agency's funding is in the hands of a Republican-controlled House of Representatives that is unabashedly pro-industry. And the Democratic Obama Administration's "all of the above" energy policy has high expectations for oil and gas development. Reporting fresh evidence that fracking has steep environmental consequences means raining on both of those parades.

So it's no surprise EPA consulted extensively with industry officials in preparing the report — as internal emails reveal — or that its final product is oriented toward industry interests. Relying heavily on industry-supplied data, the agency concluded that "the number of identified cases where drinking water resources were impacted are relatively small relative to the number of hydraulically fractured wells."

Tell that to the hundreds of Pennsylvanians who have received letters explicitly stating that their "private water supply was impacted by oil and gas activities." Pennsylvania regulators recently made public 258 such official "**determination letters**." Those impacts are relatively dense in a few heavily fracked counties along the state border with New York.


pennsylvania

Dire reports from those Pennsylvania counties helped drive New York's decision to ban fracking statewide last year. Maryland has since followed suit. Towns in Texas and Colorado have also passed bans, only to be overruled by state-level action spurred by the oil and gas industry. An ongoing campaign against fracking bans is being waged by a loose coalition of industry supporters in Congress, industry lawyers, pro-industry academics and PR spinners who have long sought to deflect liability claims against frackers.


Lamar Smith

Six weeks before the EPA released its June 4 draft report, Rep. Lamar Smith (R-Tex), chairman of the House Science Committee, called a hearing on fracking at which he delivered a blistering critique of EPA — and possibly a political warning.

"It is incredible, given their track record, that the EPA is now working on another large study to suggest a causal connection between hydraulic fracturing and groundwater contamination," Smith said in reference to the study Congress itself had ordered. "Their refusal to accept good science know no bounds…Their political agenda drives their science agenda."

If the EPA got Smith's message, a group of scientists from the University of Texas at Arlington clearly did not. Two weeks after the EPA issued its draft report, the researchers released one of the most comprehensive studies yet on well water contamination based on its work in 13 Texas counties in the Barnett shale gas region.

The study examined 550 samples from residential, agricultural and municipal water wells in an area with some 20,000 fracked gas wells. The results reportedly show elevated levels of 10 heavy metals and chemical compounds, including BTEX chemicals (benzene, toluene, ethylbenzene and xylenes) used in oil and gas processing.

Industry spokesmen noted that the authors of the report do not attempt to show that oil and gas activities caused the contamination. True enough. And if history is a guide, another academic study will soon appear from industry-friendly scientists who challenge evidence provided in the UT-Arlington study.

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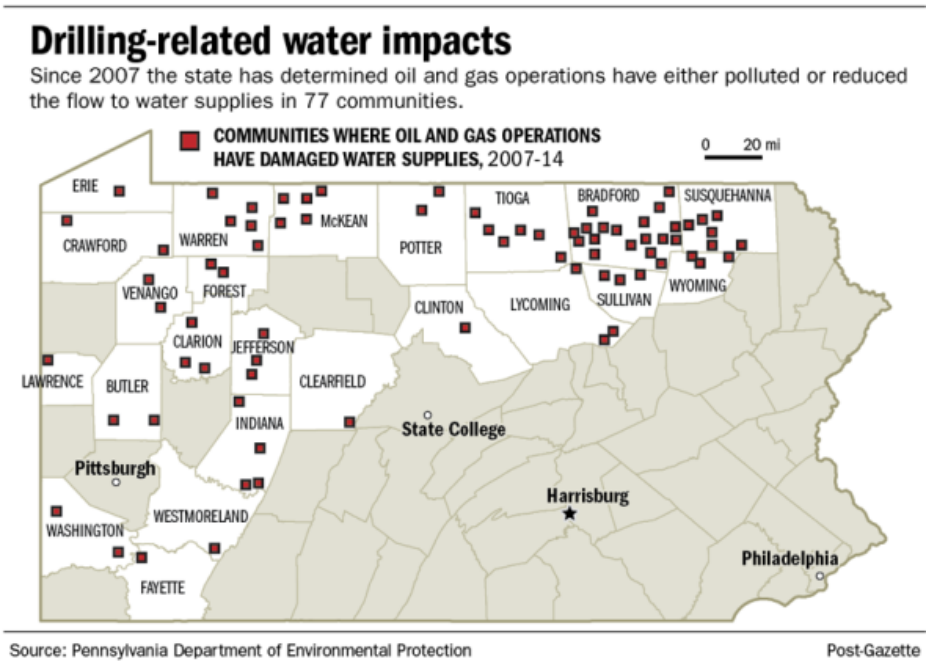
That's happened repeatedly. The record of shill rebuttals to new peer-reviewed fracking science is dutifully recorded in the energy industry's pro-fracking blog Energy in Depth.

Duke University researchers know the drill well. In 2014, a Duke-led peer-reviewed study compared levels of dissolved methane and ethane found in water drawn from Pennsylvania water wells located at varying distances from natural gas wells. They found that, generally, higher concentrations of the gases were found to be present in water drawn from water wells closer to the gas wells.



In March 2015, the journal that published the Duke study, Environmental Science and Technology (ES&T), printed a rebuttal paper by a team led by Donald Siegel of Syracuse University entitled “Methane Concentrations in Water Wells Unrelated to Proximity to Existing Oil and Gas Wells in Northeastern Pennsylvania.”

Energy in Depth promptly trumpeted Siegel’s peer-reviewed study as the latest to “discredit Duke methane papers.”


Donald Siegel

But Siegel neglected to reveal in his report — as ES&T explicitly requires — that he had received industry funding. In April, ES&T published a lengthy “correction” to the study to reflect that Siegel had been “funded privately by Chesapeake (Energy Corp.) for this work.” Siegel has since explained that it was widely understood that he had been working with a pre-drilling data set supplied to him by Chesapeake.

While ES&T was calling attention to a key defect in Siegel’s work, the journal’s editors selected the 2014 Duke study — Siegel’s target — as one of the best of 1,700 scientific papers published that year.

Alarmed by Siegel’s omission of his conflict of interest in the ES&T paper, Syracuse attorney Joseph Heath submitted an ethics complaint to the chancellor, provost and Dean of the College of Arts and Sciences at Syracuse University.

Heath quoted from the university’s Academic Integrity Policy, which says in part, “Academic dishonesty interferes with the moral and intellectual development, and poisons the atmosphere of open and trusting intellectual discourse.” He called on Siegel to resign or be fired for violating university’s academic integrity standards.

The university’s response came in a terse letter from Gina Lee-Glauser, vice president for research. She dismissed Heath’s call for discipline of the chairman of the university’s Earth Sciences Department. “As you recognize in your letter, academic integrity is of utmost importance to the university,” she wrote Health on April 30. “Professor Siegel is in compliance with our internal procedures regarding disclosure of conflicts of interest…”

While Siegel and the university have brushed off the controversy, The New York Times referred to it in passing in a staff-written June 1 editorial entitled, “Scientists Who Cheat.” The editorial never mentions Siegel or Syracuse by name, but it cites ES&T’s correction of a March paper on fracking because the lead scientist “failed to disclose funding from an energy company.”

Citing several examples of tainted academic papers, The Times said, “There are ways to minimize this kind of fraud, but it will require changing the process, from how scientists share their data to how their peers review it and who is allowed to enforce academic standards.”

The flap over the ES&T correction does not appear to have detracted from Siegel’s stature as a fracking expert — at least in pro-industry circles. On April 23, less than a week after the correction appeared, Siegel testified before Rep. Smith’s House Science Committee about the shortcomings of the Duke methane study.

Siegel was among allies. In his opening statement, Smith declared that science overwhelmingly shows that fracking can be done safely, though “activists” have spread “misinformation” to the contrary. One panelist, Christi Craddick, a top environmental regulator in Texas, testified that local fracking bans are “unreasonable oil and gas regulation.”

The ranking member of the committee, Rep. Eddie Bernice Johnson (D-Tex), criticized the panel lineup, which included Craddick, Siegel and an Energy in Depth flak. Johnson said it provided the fracking industry a platform to attack those who question its practices.

Last year, an analysis by the Union of Concerned Scientists concluded that the House Science Committee had strayed away from its traditional practice of calling independent scientists in favor of those promoting industry interests.

Aside from his academic duties at Syracuse and his Congressional testimony, Siegel has also collected substantial expert witness fees in pending energy cases in New York State.

For example, Crestwood Midstream Partners hired him to rebut testimony challenging its proposed liquid petroleum gas storage facility next to Seneca Lake. He disputed an expert witness who concluded that past LPG storage in salt caverns near the lake had probably contributed to the lake's exceptionally high salinity, which jeopardizes drinking water supplies for roughly 100,000 people.

Siegel has also represented Anschutz Exploration Corp. in a groundwater contamination case brought by several families near Big Flats. The Colorado driller is better know in New York for suing to try to block the first local fracking ban by the town of Dryden. Anschutz lost its case against Dryden and dropped the matter. Another company stepped in as plaintiff and pursued the case on appeal, but lost. New York's statewide ban on fracking followed months later.

In the unrelated Anschutz groundwater case, Siegel testified that there was no connection between gas well drilling and the homeowners' tainted water. He and his research partner, Edward Hinchey, reported that they were paid $225 an hour for their work.


Edward Hinchey

In addition to experts Siegel and Hinchey, Anschutz employed top legal talent and a cutting edge legal theory to convince a federal judge to disqualify the plaintiffs' key expert witness and throw out the entire case, known as Baker v. Anschutz, before trial.

U.S. District Judge Charles J. Siragusa issued a so-called "Lone Pine" order requiring an expert for Big Flats plaintiffs to shoulder an unusually heavy burden of proof of causation before allowing his testimony. The procedure, which has been applied in a handful of lawsuits against gas drillers and other corporations, stems from a New Jersey case in which the court dismissed a case because plaintiffs failed to carry a heightened burden of proof.


Charles J. Siragusa

The procedure is controversial because it can sharply curtails plaintiffs' rights, and the Colorado Supreme Court recently overturned the use of a "Lone Pine" order on those grounds.

"Lone Pine" order cases, including Baker v. Anschutz, have spurred analyses from some of the nation's leading corporate law firms. In April, Theodore E. Tsekerides, a partner at the New York law firm Weil, Gotshal & Manges, wrote: "The common theme from cases in which 'Lone Pine'requests have been denied appears to be a reticence to adopt what the courts view as an 'exacting' or 'restrictive' procedure at an early stage of litigation, when the more standard procedures and discretion of the court may be sufficient to balance and protect the interests of all parties."

The Big Flats lawsuit was filed in early 2011, about 10 months after the company began drilling two adjacent gas wells near the Elmira, N.Y., airport and a cluster of homes just to its north. The company drilled vertically about 10,000 feet into the Black River shale formation, then aimed its drill horizontally to follow the formation for another several thousand feet. The process targeted pockets of gas and did not involve fracking. The second of two wells was completed in late August 2010.

Two weeks later, Joe and Bonnie Todd watched the tap water at their nearby home suddenly turn nearly black with sediment. Their water pump regularly seized up due to new methane vapors in the lines. When their water did flow, it was highly flammable. After noticing similar problems at her water well, the Todds' neighbor lit a match next to it; the flames singed her hair.


Joe and Bonnie Todd

Joe Todd, a professional fire fighter, testified: "We have lived here for about 23 years and can honestly say that we have never had these issues before. To have nine separate homes affected around the same time. We plaintiffs are in agreement that we suspect that the (Anschutz) drilling … has disrupted our quality of water in our wells."

Todd and others sued Anschutz for hundreds of millions of dollars in punitive and other damages. Such groundwater contamination lawsuits rarely result in jury verdicts favorable to plaintiffs, according to a log of

nearly 100 fracking-related cases compiled by Watson, the Dayton law professor. Typically, the claims are either dismissed or settled with a payout and a binding confidentiality agreement.

The plaintiffs in Big Flats pinned their hopes on their primary expert, Paul Rubin, president of the New York environmental consulting firm Hydroquest. Rubin found that the Anschutz wells, which were drilled in a fault zone, had to be plugged due to high gas pressures from below. He concluded that disturbances triggered by the drilling caused the gas to seek new paths of escape through faults, leading to the water well contamination.


Paul Rubin

"Plaintiffs have unwittingly participated in the development of an excellent case study in stray gas migration," Rubin wrote in an affidavit. "Lessons learned here in this case study can be applied elsewhere to alert and inform homeowners of key symptoms associated with stray gas migration."

Rubin emphasized the likelihood that gas had strayed upward from the horizontal drilling nearly 10,000 feet below his clients' homes, rather than by potentially shorter routes closer to the surface. That stance may have provided Anschutz's lawyers the opening needed to effectively argue for a "Lone Pine" order requiring evidence of gas migration along deep faults.

Siegel and Hinchey worked closely with lawyers from the firm Kellogg Huber, a small Washington, D.C., litigation practice where at least a dozen of the 31 partners once clerked for U.S. Supreme Court justices.

The pair of experts asserted that Rubin had inappropriately rejected conclusions by the state Department of Environmental Conservation that the well problems experienced by the Todds and their neighbors were caused by natural conditions near the surface that had nothing to do with drilling. Further, they wrote that isotopic testing of the methane in the water wells showed it couldn't have come from relatively deep sources.

Judge Siragusa found that Rubin failed to adequately rebut or address those points. "Rubin's speculation is not sufficient to establish causation," the judge wrote in his summary judgement order in December. "…Rubin's testimony at trial would not be based on sufficient facts or data, would not be the product of reliable principles and methods…"

While Siragusa's relatively strict standard of evidence helped the Denver-based energy corporation defeat the claims of the New York homeowners, Pennsylvania law turns that evidence standard on its head.

Under state law in Pennsylvania, the link between contaminated water wells and gas drilling is *presumed* — without any evidence at all — under certain circumstances. When the law applies, drillers are required to supply alternative water supplies, no questions asked.

Many of Pennsylvania's 258 "determination letters" linking local water well contamination to gas drilling spell out the legal requirement. For example, the state Department of Environmental Protection wrote an unidentified Susquehanna County water user on May 22: "Because drilling activities occurred at a gas well within 2,500 feet of your water supply, and the pollution occurred and was reported within one year after completion of those activities, under … the (state) Oil and Gas Act, the gas well operator is presumed to be responsible for the temporary degradation of your water supply."

Joe Todd said last week he wishes it were that easy in New York.

He and his wife say their lives have more or less returned to normal now that their well water is no longer nearly black and their kitchen tap water no longer erupts into a three-foot flame when lighted. They accept the risk of showering in it, but they must change filters repeatedly, and Bonnie Todd swears she'll never drink it.

They still buy their drinking water. For a while, when their water was highly contaminated, a local church donated a few cases of bottled water. Todd said Anschutz never offered to help.

The state's public database on gas well production shows that the two Anschutz wells produced gas up to 2013, but no further information is listed.

Todd said his lawyers at Napoli, Bern, Ripka and Shkolnik didn't notify him that Judge Siragusa dismissed their case last December. He learned that from a reporter. The attorney with whom he had worked had left the firm last fall.

Todd had also been in the dark about a Napoli Bern motion filed in March that urged Judge Siragusa to reconsider his summary judgment order. The attorney who signed that document has since left the firm. The judge has not responded.

Meanwhile, as far as the court is concerned, Edward Hinchey, one of the key expert witnesses who successfully argued against the Todds' expert witness, remains a mystery man. "The expert report does not detail Hinchley's (cq) field of expertise, and his curriculum vitae is not appended to the exhibit as filed," the judge noted in his summary judgment. Even so, the judge accepted and repeatedly cited the report Hinchey co-wrote.

Internet sources help fill in Hinchey's background. Before turning to environmental consulting three years ago, he played a prominent role in the oil and gas industry's efforts to develop the Marcellus shale in Pennsylvania. He is a former "Marcellus Program Director" for Environmental Resources Management Inc., the company that

produced the State Department's environmental review for the northern section of TransCanada's Keystone XL Pipeline.

In a March 2013 report, ERM concluded that the tar sands exporting pipeline would not have a significant climate impact. Critics claimed ERM failed to state on its conflict of interest disclosure forms that it maintained a consulting relationship with TransCanada and had been a paying member of the American Petroleum Institute, which has spent millions of dollars lobbying for Keystone's approval and funding Energy in Depth.

Hinchey worked for ERM from 1991 through June 2012, according to a bio posted on the website Oilpro.

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Peter Mantius is a reporter in New York. He covered business, law and politics at *The Atlanta Constitution* from 1983-2000. He has also served as the editor of business weeklies in Hartford, CT, and Long Island. He is the author of *Shell Game* (St. Martin's Press 1995), a nonfiction book on Saddam Hussein's secret use of a bank office in Atlanta to finance billions of dollars in arms purchases from Western countries before the 1991 Persian Gulf War.

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