

NARRATIVE OF MORE DETAILS OF CURRENT DCS PROJECTS:

Protecting public health

As the fracking boom accelerates, so do the health damages being inflicted on families in the neighborhood of drilling activity and infrastructure—with the most vulnerable portion of the population, children, suffering the most severe consequences. In just one of the most recent examples, in four rural counties near Pittsburgh—a hotbed of fracking activities starting just about 10 years ago—there were 67 cases of childhood cancer over that period, including Ewings sarcoma, a rare cancer of which historically only about 200 cases per year are recorded nationwide. and there are over a dozen cases in one school district in this area. and 27 in the four county area - see this video: https://youtu.be/i0S_O4jsBII

Despite these findings, industry lobbyists and lawyers continue to battle any attempt to restrict drilling locations, including those that threaten children, as evidenced by their recent defeat of a provision that attempted to protect playgrounds in Pennsylvania. Part of a prolonged and continuing battle in which DCS has been and continues to be involved by providing health related reports and documentation, and by joining the Advisory committee within the DEP negotiations on these rules.

DCS HEALTH SURVEY: Given the above threats, the gathering and publicizing of facts regarding the devastating health effects of fracking is absolutely crucial—a task made difficult by a number of challenges. Many households that have suffered damages have only been able to get compensation by signing nondisclosure agreements. Many other affected households are too poor to sue or to get medical help, and of course if they become severely ill that also limits their capacity to defend themselves. In some states, gag rules have been placed on doctors with regard to discussion of fracking-related conditions sometimes by hospital policy. Doctors themselves have trouble getting information about any substances to which their patients may have been exposed that are considered proprietary to the industry. Even if and when courts throw out those gag rules (this happened in PA), medical personnel are often still reluctant to discuss fracking-related details with patients and cases with their peers or publish about these cases because of pressure from the industry.

Over the past year:

Several years ago, DCS moved to address this issue by creating a Health and Community Impacts Registry (<http://www.DamascusCitizensATSDR.org>) that not only puts on record the medical problems experienced by affected households, communities and their livestock, but submits surveys as petitions to the federal Agency for Toxic Substances and Disease Registry (ATSDR)(a sub agency of the CDC). This can spur Public Health Assessments (PHAs) and, potentially, federal recognition of the health hazards being posed by natural-gas-related activities and further investigation by medical researchers. The surveys, as you can see at the link, are complex and comprehensive, requiring significant backup documentation, and take laborious, one-on-one work with affected households to complete and submit. Since receipt of your donation in January, 2018 we have submitted over 40 new surveys and have several dozen in progress.

This project has been copied by other groups that have used our survey as a model, although no one else submits data to ATSDR

Over the coming year:

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In the coming year we plan to continue survey interviews and data collection, but with additional workers so we can vastly increase our survey numbers. Additional funding would accelerate our output by enabling us to train and hire these additional interviewers to do the data collection with impacted people.

RALLYING THE MEDICAL COMMUNITY: We also work with the medical professional community to rally and give a voice to members of the health professions who recognize health threats related to natural gas development. We were instrumental in the creation of Concerned Health Professionals of New York and their “Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking,” submitted during New York state’s hearings on banning the practice, which ultimately did result in a ban on the basis of health considerations. The Compendium (<https://www.psr.org/wp-content/uploads/2019/06/compendium-6.pdf>) has taken on a powerful life of its own; now in the sixth edition, it is a reference source for campaigners worldwide.

Over the past year:

We have been working to promote the creation of a similar group in Pennsylvania. We have assembled a list of potentially interested professionals, and as of this writing are in the process of our first mailing to them, seeking to generate interest and identify more interested professionals through the initial recipients.

Over the coming year:

Once we have identified members of an interested group, DCS will help them organize into something similar to, and as effective as, Concerned Health Professionals of New York, and to come up with an action plan, with a goal of speaking out to publicize the health effects of the industry’s processes. More funding will be needed for more mailings, social media campaign, meetings, letters-to-the-editor-campaigns, webinars and other educational activities that will grow the outreach effort increasing members and effectiveness.

Fighting oil- and gas-related toxins in the environment

A major focus of DCS throughout its first decade has been the gathering of scientific information about the various forms of environmental contamination caused by natural gas and oil development and exploration, using that information in educating the public, policymakers, and media; and getting this material on the record in court cases and regulatory proceedings.

Focus issues have included methane emissions (these emissions make natural gas as dirty or dirtier than coal in terms of GHGs and climate change); regulatory classifications of radioactive materials generated by drilling activity and disposal of radioactive waste; pollution related to the mining, transport and use of frac sand, the fine silicate used in the fracking process (see our poster for details of related harms: <http://www.damascuscitizensforsustainability.org/wp-content/uploads/2015/06/Frac-Sand-Fold-Out-Poster.pdf>; and the spreading of “brine”—actually toxic wastewater produced by drilling activity—on roads in a number of states including Pennsylvania.

Over the past year:

DCS has participated in raising awareness of the toxic effects of brine spreading via a suit brought by DCS member Siri Lawson against the PA Department of Environmental Protection before the Environmental Hearing Board (EHB), for issuing permits for this dangerous activity. Though taking place in Pennsylvania, the suit is relevant both in terms of raising public awareness and in setting a precedent

and example for other states, like New York, that allow a similar runaround for oil and gas waste product regulation. Importing such waste even if it is not produced there.

DCS aided Lawson by providing scientific information regarding this practice for use during the proceedings, including a paper we facilitated by Bryce Payne, PhD, (<https://www.damascuscitizensforsustainability.org/2018/11/07/frack-brine-is-ineffective-for-dust-control-and-a-health-hazard/>). The study found that the practice is counter-productive for its purported purpose, dust suppression, as well as environmentally risky in terms of toxins washed into the roadside environment. We filed to intervene and later filed an amicus brief. Though the motion to intervene was denied, the information in both these documents, in the words of Lawson, “put the human face on this contaminating practice,” and the amicus has since received wide attention.

The EHB case ended after the PA DEP voluntarily withdrew its permitting authority, recognizing that it did not have such authority under PA's Solid Waste Management Act, as it had claimed. Permitting has ceased as of the time of this writing.

Over the coming year:

Though permits for brine spreading have been suspended in PA, disposal of drilling wastewater remains a problem for drillers and therefore also for communities and the environment - including the Delaware River Basin (see middle of page 6). This brine is an unavoidable by-product of fracking, so that its production can't be eliminated or reduced. To make matters worse, no one has a clear idea where the brine is currently going, as the record-keeping system is grossly inadequate and incomplete. This is in part due to federal exemptions from classification as hazardous that oil and gas drilling waste has received--despite its scientifically recognized toxicity. However, DCS has discovered what is happening to some of it: the industry and DEP are getting around the permitting problem by designating drilling brine a “co-product,” which, unlike “by-products,” its previous (and proper) designation, are not regulated, and marketing it as such to municipalities for dust and ice control on road surfaces, to private companies (Cargill apparently uses it in processing hides), and even as a salt for pools (<https://truthout.org/articles/is-drilling-and-fracking-waste-on-your-sidewalk-or-in-your-pool/>). Again, this type of possibly evasive runaround is also being used in other states (for instance, in New York the alternative classification is “Beneficial Use Designation”), so to pursue this case in Pennsylvania ultimately could have national significance.

Our attorney is working on a 60-day notice Citizens' Suit letter, for a suit against the PA DEP, regarding this failure to regulate this toxic material. It will reference the Clean Air Act, the Clean Water Act, and RCRA (Resource, Conservation, and Recovery and Act / Superfund), the PA Clean Streams Act, and PA Environmental Rights Amendment. But funds are needed to continue to follow up on the notice letter and otherwise finance this legal effort.

Frac sand is a threat to human health not widely recognized, because very few people outside the area where it is mined—in the U.S., largely the area south of the Great Lakes, and recently in Texas,—are even aware it exists. Both the mining operations and the sand itself form a variety of serious threats to environmental and human health, not only where it is mined, but where it is used (as a proppant holding newly created cracks open during hydraulic fracturing) and even in the areas through which it is shipped or transloaded.

Frac sand is a fine-grained crystalline silica sand which, whenever moved around, breaks down into smaller pieces that are respirable silica dust. The dust is highly bioactive and can float several miles to impact surrounding populations and agriculture. Additionally, the sand, which is needed as a 'proppant' to hold open the subterranean cracks created by hydraulic fracturing, uses polyacrylamide to wash the sand. This polymer, not considered dangerous, degrades to its component monomer, acrylamide, which is a potent nerve toxin appearing in area water sources. Moreover, the boom and bust nature of the drilling industry is seeing huge frac sand mines developed and a few years later declaring bankruptcy, leaving windblown silica and un-reclaimed open pit mines. The mines also impact the local aquifer recharge—especially crucial in these agricultural areas.

DCS has been working for some years with Pat Popple of Chippewa Concerned Citizens (in Wisconsin) to educate the public and policymakers about this; within the past year we acted as her fiscal sponsor and assisted her in applying for and getting funding for her 'Frac Sand Outreach' project. This project both educated communities near the mines and started a series of actual measurements of the ultrafine silica particles impacting fence-line communities.

Over the coming year:

With financing, in the coming year we could assist with explanations and promotions of those expositions of the health effects and mapping of the mines and locations where the prevailing winds could be carrying the ultrafine particles, informed by the taking of actual measurements. To do this, we would be collaborating with grassroots groups and the University of Wisconsin at Eau Claire, whose students are taking the measurements. This information would be used in the other areas frac sand is now being mined, in Texas and Oklahoma.

Environmental justice/holding industry and regulators accountable

Over the past year:

In the most striking development in our educator/advocate program, DCS, via educator/advocate Ron Gulla, has played a critical role in the development of the Pennsylvania Attorney General's office's opening of an investigation into environmental crimes related to the shale gas industry, first announced in January of 2019. <https://tinyurl.com/yb7ls8z4>

Since 2015, Gulla has been giving advice to afflicted households as to the proper procedure for calling the AG's attention to their problems and whom to talk to. After receiving complaints and information from such households, the office also proactively asked Gulla—who has been in frequent communication with them during this time—to provide it with a list affected people and their contact information. Over the past year, he has also on many occasions spoken directly to officials at the AG's office, at their invitation, to provide information that, in his outreach and networking role for DCS, he is in a unique position to give.

Currently, grand jury proceedings are being held with regard to this case; since such proceedings are confidential, we obviously do not know and cannot provide updates more recent than the announcement of the investigation. We do know that many of the people Gulla spoke to have testified before the grand jury, though their names at this point are confidential.

Over the coming year:

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The future course of this investigation could have huge implications both for the fates of the people immediately affected and for the raising of public consciousness about both the negative impacts of natural gas drilling, and the degree to which the industry has been able to evade responsibility and accountability for the consequences of its behavior.

Also at issue with many households we have spoken to is the degree to which regulators such as the PA Department of Environmental Protection and Department of Health may at times have acted as enablers of the industry rather than protectors of the public. Since this kind of problem has been reported by affected households in many other states, officially uncovering this kind of malfeasance would represent a huge step forward to raise national public awareness and move toward corrective action.

DCS and Gulla, given our intensive outreach work as well as our comprehensive scientific knowledge and documentation, will be in a position to continue to provide information and connect households personally related to any potential crimes with the AG's office as the case moves forward. But we need funding to continue to finance the educator/advocate program out of which these activities are based. And the AG's investigation is only one of many aspects of the educator/advocate's work. He assists 3 to 5 families each day who are mostly in environmental justice communities, to help them understand what is happening to their environment, their health and that of their livestock, and where or how to get help for their problem. He has also conducted 'toxic tours' for policy makers, media and financial managers.

Defending interstate regulatory protections of the Delaware River Watershed

Wayne Land and Mineral Group vs. the Delaware River Basin Commission: The ability of environmental agencies to regulate fracking is under vigorous attack by the industry in every state in which it occurs (not to mention nationally, with federal collaboration from the Trump Administration). The Delaware River Valley, where DCS is located, is a key battleground, where the right of the interstate Delaware River Basin Commission (DRBC) to regulate fracking is currently under attack via a suit brought by a pro-fracking landowners' group, Wayne Land and Mineral Group (WLMG) and their fracking industry backers.

DRBC has proposed a fracking ban. This lawsuit, if successful, could destroy the ability of the regulator to protect water not only from fracking, but from other types of industrial activity as well.

The suit challenges the agency's right to regard gas well pads as projects under its authority. The consequences of the suit, should it prevail, could however be even more serious, as they could bring into question the DRBC's right of project review over a broad range of industrial activities, not just fracking, resulting in massive contamination of a river that is source of drinking water to more than 15 million people. The Delaware River is as clean as it is, with the return of iconic species like the American shad, only after over 58 years of the DRBC preventing potential pollution from municipal sewage and industrial pollution sources.

Over the past year:

A step toward the goal of defeating the suit had been taken in 2017 when it was dismissed by the U.S. District Court for the Middle District of PA, but a decision by the Third Circuit Court of Appeals last year

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represented a serious setback. At the district court level, DCS filed an amicus brief focusing on the public health impacts of fracking and well drilling—including the NY State Department of Health report that concluded the NY SEQRA process and the Concerned Health Professionals of NY's Compendium referred to above. We were told off record that this brief made a significant impact on the court.

Last August, after WLMG appealed, we filed an expanded version of the first amicus at the Third Circuit. The Third Circuit decision, issued on July 3, 2018, sent the case back to the district court, ruling that, contrary to the lower court's finding, the word "project" in the original Delaware River Basin Commission compact is ambiguously defined. The Third Circuit thus sent the case back to the lower court for "fact finding" on the intent of the writers of the compact, which will include not only a more detailed examination of the language within the compact, but of the historical context in which the document was drafted and signed. We have explored that historical context, which goes back to the early 1930s and the DRBC's voluntary predecessor, INCODEL (Interstate Commission of the Delaware River).

Since that decision and continuing on an ongoing basis, DCS has been putting together material to show that the Commission is fulfilling its founders' intent in promulgating regulations protecting the Delaware River from contamination, -researching among other things the history of the DRBC predecessor, INCODEL, which originated as a voluntary arrangement of the four Delaware River Basin states' health departments. INCODEL was a response to a horrendous sewage problem in the Delaware and recognition of other pressing and potential industrial pollution problems.

Over the next year:

We aim to show that DRBC has been successful in its 58-year history in cleaning up and keeping the river basin clean—the clear intent of the creators of both INCODEL and DRBC— only because it has been an effective gate-keeper with sufficient authority to regulate, as challenged by the WLMG. We are working with Ken Warren, lead counsel for the DRBC, providing this information as well as information on health consequences, and plan to file another amicus with that focus. Funding is needed for the continued legal effort.

Simultaneously, we will continue to press the DRBC to fulfill its mandate by both expanding and passing its proposed fracking regulations to include not just a ban on high-volume fracking in the basin but also a block to the import of fracking wastes for "treatment" and disposal in the basin and the export of water for use in fracking elsewhere. ("Treatment" is in quotes because the wastes cannot be made non-toxic without creating other as serious soil, air or water pollution)

Educating media

Educating the media about the dangers attendant upon fracking, other forms of oil and gas exploration and development, and associated products and infrastructure, is a part of each one of the programs above. Indeed, the frontline work we are doing is one source of the comprehensive information we have accumulated and distribute. However, it is worth pointing out some of the more dramatic examples of DCS's impact on public media. Some of these articles mention DCS or DCS people, but often we are behind the scenes sources of information and contacts, nurturing the pieces to fruition.

In the past year, our educator/advocate program has been a key source of information and resources for an important series of articles in the **Pittsburgh Post-Gazette** regarding damage being done to citizens

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by fracking and related infrastructure and activities. This series, by Don Hopey and David Templeton, has included articles about cancer clusters in Southwest PA (<https://www.post-gazette.com/news/environment/2019/06/17/fracking-health-effects-tom-wolf-letter-environmental-rachel-levine/stories/201906140125>), contamination of a public sewage treatment plant by polluted liquid runoff from a facility taking in fracking waste, and the newspaper's efforts to unseal records in a case where residents claimed that Range Resources damaged their health and then conspired to conceal the toxicity of their drinking water (<https://www.post-gazette.com/news/environment/2019/02/07/Post-Gazette-asks-court-to-unseal-Haney-shale-gas-case-settlement/stories/201902070186>, <https://www.post-gazette.com/news/environment/2019/02/07/Post-Gazette-asks-court-to-unseal-Haney-shale-gas-case-settlement/stories/201902070186>). The last is the same case documented in the Pulitzer Prize winning book "Amity and Prosperity."

The latest two articles in this series are:

<https://newsinteractive.post-gazette.com/blog/childhood-cancer-pittsburgh-pennsylvania-canon-mcmillan-pollution/>

and

<https://newsinteractive.post-gazette.com/blog/fracking-and-health-2/>

Director Barbara Arrindell is also a go-to source for the media on fracking-related issues. For example, Laura Lagere, now a staff writer for the **Pittsburgh Post-Gazette** on fracking topics, was writing for a small Wayne County paper when we had a considerable series of hours-long, intense talks laying out the health and environmental impacts of fracking; Jon Hurdle, then of AP, now writing for NPR, State Impact, many articles on fracking topics; Paul Solotaroff, **Rolling Stone** (<https://www.rollingstone.com/culture/culture-news/whats-killing-the-babies-of-vernal-utah-33666/>) and many others. Most recently, she has been working with Justin Nobel, also of **Rolling Stone**, working on an investigation of radiation impacts from fracking.

Over the coming year:

It is impossible to anticipate what journalists are likely to contact us for information and advice over the coming year, but the above list gives you an idea of the range and impact of our media work. We can only continue to perform this function with continued funding for our educator advocate and other education programs.