

From Ben Pauli Draft Book Chapter "Flint Fights Back"

Obtained by FOIA (slight typo's due to converting pdf optical character recognition).

But Smith was

generally seen as far less compromised by his ties to the business world than Edwards was by his ties to state and federal agencies; ironically, while the activists accused the tenured professor of being motivated by money

FACHEP and the battle over bacteria

The conflict between Edwards and Smith revolved mainly around DBPs, but there was another type of contaminant lurking in the background, one that also offered some hope of explaining unexplained illnesses and impeding the rush to declare the crisis over: bacteria. Residents had been wary of bacteria ever since the boil water advisories of 2014, but the state's admission in January 2016 that cases of Legionnaires' Disease had boomed during the two summers prior took these concerns to a new level. It was the strongest evidence yet that the water could actually *kill* people, and residents looked ahead to the summer months with trepidation. So did the state. The revelations about Legionnaires' had gotten the Attorney General talking about possible manslaughter charges for some state employees, and officials in Lansing were terrified that they would have to deal with another slew of cases as the weather warmed.

To get out ahead of any potential problem, the state recruited Shawn McElmurry from Wayne State to carry out a study of legionella contamination, awarding him a \$4.1 million grant

to be overseen by the MDHHS. McElmurry was already in the process of forming the Flint Area Community Health and Environment Partnership (FACHEP), a multi-university team of researchers working with grants from the National Institutes of Health and the National Science Foundation to study the water system's recovery and the point-of-use filters being distributed to residents. For help with community engagement around these various studies, McElmurry enlisted Laura Sullivan and, in April, me, writing us both into the legionella grant.

I accepted the assignment with some hesitation. I was hard at work at the time trying to integrate myself into the activist scene, and signing on to a state-funded study was hardly going to boost my credibility with people who saw the state as their number-one enemy. It would not be easy for Sullivan and I to convince the activists that the study was shaping up to be serious and important work worth paying attention to or even getting involved in (for it, too, had a large "citizen science" component).⁷⁷ Our initial idea, to arrange small-group conversations between the activists and core members of the team, went nowhere: the activists wouldn't even respond to messages about it, and acted annoyed when Sullivan unexpectedly invited some members of the team to a Flint Rising community meeting. The activists already had their expert (or at least counter-expert) of choice in Scott Smith, and were extremely skeptical, understandably, that state-sponsored research would result in anything but whitewashing.

Still, FACHEP was doing work that piqued at least some interest, even early on: like Smith, it was looking for contaminants other than lead and sampling hot water heaters as well as hot water in showers. Pointing out that Edwards also made a point of sampling hot water heaters around the same time, Harold Harrington told me that it seemed like Smith's methods were catching on, with the scientists following the lead of the so-called "pseudoscientist." This perceived overlap of FACHEP's work with Smith's created at least some possibility of winning over the activists allied with him.

I did not see much hope of this happening, however, without directly, and respectfully, engaging Smith. My preference was to have members of FACHEP, the Virginia Tech team, and

the EPA sit down with Smith in some sort of a public setting and have a civil conversation about his data. I figured that under these conditions Smith would self-moderate his claims and we could move on from Edwards's barrage of *ad hominem* insults to a more substantive discussion of residents' concerns. Sullivan and I spent two months trying, behind-the-scenes, to arrange a panel of this nature, without success: there was little appetite for wading into the waters that Edwards and Smith had bloodied with their mutual animosity. Ironically, as Sullivan and I worked diligently to give Smith what he wanted—a seat at the table—he and Melissa Mays came to the conclusion that we were aligned with Edwards, or at least hostile to Water Defense, and kept their distance from us for the next several months.⁷⁸

In the meantime, we were still faced with the conundrum of how to convince the activists (and, more broadly, residents) of the credibility of FACHEP's work, particularly the legionella study. After the failure of our initial overtures, there were two things the team needed to prove, as I saw it: first, that it could accept money from the state while retaining its independence, and second, that it had something to say about the water that was worth hearing. On the first front, it helped that McElmurry had negotiated strict conditions to ensure the study's integrity, but there was still plenty the state could do to interfere if it looked like we might arrive at politically inconvenient conclusions. Early on, there were signs that the state would use its powers of obstruction to try and corral the study in an acceptable direction. Following the project's initial scoping phase, tortuous contract negotiations delayed the start of sampling until the warmest summer months had passed (and with them, the most suitable conditions for studying bacterial

20 growth). It appeared to the core members of the team that the state was fearful their work would show that cases of Legionnaires' Disease were being underreported, or that the outbreaks of 2014-2015 were caused by the switch to the river. Carrying out even the work we had contracted for proved to be a continual battle, leading to combative exchanges with the MDHHS⁷⁹ and repeatedly putting the future of the project into jeopardy. When the team refused to compromise some key parts of the study, Rich Bairq., Governor Snyder's close advisor and his man on the ground in Flint, told us that we were not giving our "customer" (i.e., the state) what it wanted, and that there were "other" teams waiting in the wings (i.e., Virginia Tech) that would. At one point, it looked virtually certain that the state would pull the project's funding and we would all end up in court.

As frustrating and time-consuming as all of the drama was, it did bolster the team's credibility with residents and activists by suggesting that FACHEP was not simply taking orders from the state. I took it as a good sign when, at a Democracy Defense League meeting, Claire McClinton and Nayyirah Shariff expressed their willingness to help generate some popular pressure to move the study forward. But what really began to arouse activists' sympathies was their burgeoning realization that FACHEP's message about the safety of the water was going to be different from that of Edwards.

Several of FACHEP's early findings suggested that bacterial contamination was still a potential concern in Flint. Legionella was not present in the water system in large quantities, but the type of legionella (serogroup 6) showing up in samples was virtually invisible to urine antigen tests, raising the possibility just as the state feared) that cases of Legionnaires' Disease were being missed in clinical settings. Furthermore, chlorine residuals at the tap were minimal to nonexistent in some homes (between 10-20% of them), creating a favorable environment for bacterial growth. And some unexpected results were emerging from the point-of-use filter study: bacteria were growing in the filters that did not seem to belong there. Scientists had long known that bacteria proliferated in such filters, but McElmurry and Nancy Love of the University of Michigan, the leaders of the filter study, were finding bacteria associated with the mammalian gut (suggestive of some sort of fecal contamination), including species listed by the World Health Organization as being especially dangerous because of their resistance to antibiotics.⁸⁰

The filter issue was full of political significance. The state was determined to get out of the business of providing free bottled water, and the most obvious means to this end was to make

filters available to all residents and argue that the water could be safely consumed through them. To raise the issue of bacteria in the filters at all, given popular fears about bacteria in general, was an obstacle to that agenda. Residents could see right on the boxes the filters came in that they did not filter out bacteria, but no official attempt was made (to my knowledge) to inform the community about the implications of-filter use for bacterial exposure. In fact, the state seemed determined for the filters to remain "black boxes," actively seeking to prevent FACHEP from sampling filter cartridges for legionella. ⁸¹ Consequently, when residents learned from the NSF filter study that the filters actually exacerbated bacterial contamination, it came as a surprise-yet another piece of information they would like to have known but no one saw fit to tell them. ⁸² FACHEP *did* tell residents of this fact, and even quantified the growth by providing participants in the study heterotrophic plate count (HPC) data showing the extent to which bacteria had proliferated from the influent to the effluent side of the filters. Even high quantities of bacteria are not necessarily harmful, of course, and the initial results letter sent to residents stressed this, using the example of yogurt as a reference point. The unforeseen discovery of potentially pathogenic bacteria, however, threw a wrinkle into this ²¹ message. Given everything that residents had experienced, it seemed like they were entitled to know about the findings while there was still time to take extra precautions, even though the results were preliminary and analysis ongoing. At the same time, the team certainly did not want to oversell the risks and cause unnecessary anxiety in people who had plenty of it to deal with already.

As we debated the finer nuances of risk communication internally, Marc Edwards contacted McElmurry in early December with a request. Based on Virginia Tech's latest findings, he was prepared to declare Flint water as safe as municipal water in other cities and wanted the FACHEP team to sign off on a statement to that effect.

McElmurry told Edwards that a sweeping statement about Flint's water quality would be premature and declined to endorse the proposed statement. Although Edwards was clearly already positioning his narrative about the water to undercut FACHEP's work, from that point on my impression was that he was watching us like a hawk. It was plain that all of the business about bacteria, just like Smith's warnings about DBPs, was starting to interfere with his attempts to bring the story of his intervention in Flint to a triumphant conclusion.

Scott Smith, too, had begun to take a keen interest in the team's work. Although he had not given up on proving his earlier claims about DBPs (he had begun doing control sampling in other cities and posting to social media about the "non-detects" he was getting outside of Flint), his emphasis began to shift to bacteria after two pathogenic species turned up in his samples. He was hopeful that FACHEP's far more extensive research would corroborate this finding and thereby bring it more scientific legitimacy. He also seemed to sense that FACHEP's work was opening up an escape hatch for him, presenting an opportunity to pass the torch of "more-than-lead" credibility to us and thereby moderate expectations that he would continue to conduct regular sampling in Flint (he told me that his work in Flint was "done" and that he saw our team as picking up where he was leaving off). Scarred by his experience with Edwards, however, and still unconvinced of our sympathies, he first had to make sure he was not going to get burned.

In the lead up to our first community meeting in mid-December 2016, at which we planned to roll out our preliminary findings directly to residents, Smith called me almost daily as he tried to feel out whether he could safely get behind FACHEP. Because the team would not (indeed could not, by the terms of our contract) share non-public data with him, declaring his support for FACHEP was a bit of a

gamble, premised largely on his perception of my trustworthiness. Nevertheless, it was a gamble he decided to take, and he began the delicate process of convincing his allies, particularly Melissa Mays and the plumbers, to attend our meeting with open minds.

(FLINTWATERSTUDY NOTE: SEE DECEMBER 2nd FACEBOOK POST WHERE MAYS WAS ALREADY ON BOARD WITH WAYNE STATE FACHEP).