

Government Regulation and Citizen Safety: Three Books Reviewed

By Marc Alexander

***Dark Tide: The Great Boston Molasses Flood of 1919*, By Stephen Puleo**

***The Poison Squad: One Chemist's Single-Minded Crusade for Food Safety at the Turn of the Twentieth Century*, By Deborah Blum**

***The Fifth Risk*, By Michael Lewis**

Our government has been described as an insurance conglomerate and a large army. A core function of government is identifying and managing risk to protect the public from harm. The thread tying together the three books under review is government's ability to manage risk. *Dark Tide*, about a horrific industrial accident, has been reissued in time to mark the 100th anniversary of the great molasses flood of 1919 that killed 21 people and devastated the North End of Boston. *The Poison Squad*, about the efforts to protect the public from dangerous and adulterated food, focuses on a heroic public servant. And, *The Fifth Risk* is about contemporary neglect, incompetence, and short-sightedness in federal agencies.

Dark Tide. United States Industrial Alcohol (USIA) was under great pressure to complete a tank for the storage of molasses by the end of 1915. Earlier that year, a German U-Boat sank the *RMS Lusitania*, and alcohol, which could be manufactured using molasses, was an important ingredient in the manufacture of munitions.



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USIA built a tank in the North End of Boston, a block from the harbor where ships could unload molasses. Measuring 50 feet in height and 90 feet in diameter, the tank held 2.3 million gallons of molasses. On January 15, 1919, the tank exploded, sending forth a tidal wave 25 feet high, 160 feet wide, travelling at 35 miles/hour. Steel and rivets exploded into projectiles. Railroad elevated tracks collapsed. The waterfront was devastated. Basements were inundated. A reporter wrote, "Horses died like so many flies on sticky fly paper." Men and women suffered the same fate.

Author Stephen Puleo explains how the unsafe tank came to be built in a congested neighborhood, why and how it exploded, the damage it caused, and the ensuing legal battle. He also places the local Boston story against a wider backdrop of prejudice against the Southern Italians who lived in the North End, discrimination, racism, xenophobia, and lack of political power.

Placing the tank near a railroad spur leading to processing facilities, and near the harbor, made logistical sense. Regarding management's decision about choosing a site, Puleo argues: "Two overriding realities no doubt played a part in their thought process and ultimate decision—social attitudes toward Italians and a lack of political participation among Italian immigrants to control events in their own North End neighborhood.... The plight of North End Italians emboldened USIA to construct its mammoth molasses tank in Boston's most congested neighborhood."

Corporate cost-cutting and urgency also played a part in management decisions leading to safety compromises. The tank originally was to be fully water tested for leaks. However, Arthur Jell, the corporate executive in charge of construction, decided to water-test only up to six inches of the fifty-foot tank, refusing to authorize the expense of tapping into the municipal water supply to fill the tank. The city inspector did not need an engineer's certification for the tank. Plans were not submitted to any architect or engineer. At trial, plans would show steel delivered for building the tank was thinner than on the plans. There was no investigation upon delivery to determine whether the metal met plan specifications. No tests of the steel were conducted. Without engineering experience, Jell decided the tank was safe enough.

From the beginning, the tank moaned with stresses. Neighborhood children carrying cups captured molasses weeping between metal slats and dripping down the riveted sides. An employee charged with watching over the completed tank complained to his superiors. After his warnings were ignored, he gave up and enlisted in the army.

After the disaster, a Boston judge appointed Colonel Hugh W. Ogden, soldier, lawyer, and Episcopal Church leader, as an "Auditor" to try plaintiffs' case and report his findings to the court. Recently returned from combat in WWI, Ogden had a great sense of civic duty, and sterling legal credentials. Assured the matter would be wrapped up in six months, Ogden took on a project that lasted years.

Uniting 119 plaintiffs in interest, the trial was a precursor of modern class actions. The trial included a prolonged "battle of the experts"—one expert testified for three weeks. The defense theory of tank collapse exploited the fear of violent immigrant anarchists. Times were unsettled: the country had encountered a Red Scare, on September 16, 1920, Wall Street was bombed, and in 1921, Sacco and Vanzetti were convicted of murdering a guard and robbing a shoe factory in Braintree, Massachusetts a year earlier. Moreover, the mammoth molasses tank was a conceivable bombing target for opponents of the government and the war effort.

Plaintiffs' attorney Damon Hall described the disaster as "this utterly sordid tale." Puleo tells that tale with great feeling and compassion for the work-

ers killed and injured in the accident. Sometimes Puleo speaks for the workers, expressing thoughts and emotions that likely are not found in his sources. However, the history of the molasses flood is well-sourced, because Puleo was able to work with a 25,000-page trial transcript, the Auditor's report, and contemporary newspaper accounts.

In addition to ushering in class litigation, "[t]he disaster's effects also had a long-term impact on construction safety standards in Boston and across the country." Afterwards, calculations of engineers and architects had to be filed with their signed plans—a practice that became standard across the country.

The Poison Squad. The subtitle of Deborah Blum's book *The Poison Squad is One Chemist's Single-Minded Crusade for Food Safety at the Turn of the Twentieth Century*. That chemist is Harvey Washington Wiley. Chief Chemist of the Department of Agriculture, Wiley fought zealously throughout his long career to promote food safety through legislation, labelling, inspection, and enforcement.

If Wiley is not widely known today, *The Poison Squad* should serve as a corrective. Born in a log cabin in Indiana, Wiley taught Greek and Latin in his youth, became a medical doctor, then earned a B.S. from Harvard, and obtained further education in Germany. He returned to Indiana to teach chemistry at Purdue, becoming an expert on the chemistry of sugar. In 1882, he went to work for the U.S. Department of Agriculture as its chief chemist.

Wiley battled other government officials and industry representatives throughout his long career to insure preservatives, colored dyes, milk, meat, spices, and whisky were properly labelled, and food and drink were safe. He was a highly intelligent, principled, strong-willed, focused individual with a strong sense of mission. He also was a character who penned humorous verses, including lines such as, "The banquet how fine, don't begin it/Till you think of the past and the future and sigh,/How I wonder, I wonder, what's in it."

Possessing a healthy ego, Wiley believed passage of the Pure Food and Drug Act of 1906 was largely his doing. Theodore Roosevelt (TR), another person with a large ego, took credit for the passage

of the Act, though the public often referred to it as “Dr. Wiley’s Law.”

In fact, the passage of the Act resulted from a confluence of circumstances. Wiley spoke and wrote about the need for food safety, and along with muck-raking journalists, women’s clubs and organizations, state food inspectors, and Progressives, deplored the state of food manufacture. Interestingly, one industry leader, Henry J. Heinz, also advocated for pure food. Having developed a preservative-free ketchup, Heinz could exploit that fact by promoting his products as the safest.

TR, who viewed himself as a realist and a pragmatist, had to be convinced to join the legislative fight for food safety. When Upton Sinclair, author of *The Jungle*, the novelistic expose of the Chicago meat industry, wrote to TR, expressing fear the government had no interest in the truth, TR fired back, “Really, Mr. Sinclair, you must keep your head.” But TR then dispatched his own investigators to investigate the meat industry. Their lengthy report concluded, “In a word, we saw meat shoveled from filthy floors, piled on tables rarely washed, pushed from room to room in rotten box carts, in all of which processes it was in the way of gathering dirt, splinters, floor filth and expectoration of tuberculous and other diseased workers.” Exercising political cunning, TR withheld publication of the devastating report, using it instead as political leverage to get the Act passed by Congress.

Wiley’s story is relevant today. He was a strong believer in science. “Poison Squad” refers to the young men who volunteered to participate in culinary experiments testing the effect of harmful food additives and preservatives on the human body. The Secretary of the Department of Agriculture tried to prevent Wiley from publishing the results of his scientific studies. Industry flacks and government superiors worked assiduously to undermine Wiley. In fact, he was the subject of a bureaucratic conspiracy to end his career. In Blum’s retelling, the plot hilariously backfired against the plotters. The instant Wiley realized they had overreached, Wiley displayed his whimsical humor, exclaiming: “Victory! Victory!” Wiley’s stature and bureaucratic in-fighting savvy explain why he did not get sacked.

The story is also today’s news. “[I]n an era when business interests rail,” writes Blum, “—as they did

in Wiley’s time—about government overreach and the need to eliminate regulations, we should remember how much Wiley’s work laid the foundation that allows us to stand up to that.”

The Fifth Risk is about the role federal agencies play in managing risk and protecting the public. If the four chief risks an agency manages are identified, the fifth one would be the next major risk that is not identified and properly evaluated, and that will be addressed ineptly, or not at all, unless our agencies are led by people who are qualified and care about the agency mission. A major theme is that too much planning is short term rather than long term. Yet many long-term risks must be addressed: climate change, collapsing infrastructure, public health, and pollution. Agency leadership turns over with each new administration, making long term planning difficult.

While some may view federal agencies as an unwelcome part of the “deep state,” a boondoggle, and a burden on American industry best removed, Lewis’s perspective is altogether different. He has interviewed men and women who filled leadership posts in the Departments of Commerce, Agriculture, and Energy. He views them as unsung heroes with exceptional qualifications, institutional knowledge, and deep concern about protecting the public. However, they are underappreciated, only getting feedback when something goes wrong, or appears to go wrong.

Lewis’s account of the Trump transition team, apparently based on interviews with insiders who may have their own agendas, is a story of “lost in transition.” President Obama’s administration, like that of President George W. Bush, prepared for transition by assiduously documenting information necessary to transmit institutional memory to the incoming administration. But President Trump was not deeply engaged in the transition process, telling Governor Christie, who was responsible for a smooth transition, “Chris, you and I are so smart that we can leave the victory party two hours early and do the transition ourselves.” And Stephen Bannon was so anxious about the transition, he told friends, “I go, ‘Holy f**k, this guy [Trump] doesn’t know anything. And he doesn’t give a s**t.’”

The focus on Commerce, Agriculture, and Energy brings home that many of us don’t know

what the departments do. And neither did the new appointees. As Lewis explains, the “Department of Commerce” might better be named the “department of data information.” It is responsible for the collection of “big data,” critical to economic projections and business decisions. It is also responsible for the census. It oversees the Patent and Trademark Office. Hoping to impact commerce policy, Wilbur Ross accepted the Commerce Secretary post. He came by himself to meet with Secretary Penny Pritzker, having little idea what he was getting into. Once he realized that the department was a giant data collection apparatus, he apparently was somewhat less interested in its mission. After publication of *The Fifth Risk*, Ross became embroiled in efforts to add a question about citizenship to the census under the pretext that this was necessary to safeguard rights under the Voting Rights Act of 1965—a frolic and detour from the mission of the Commerce Department.

The Department of Energy was turned over to the leadership of Governor Perry of Texas. It had previously been headed by Steven Chu, a Nobel Laureate for his work with superconductivity, then by Ernest Moniz, an MIT nuclear physicist. Governor Perry did have a degree in animal science from Texas A&M, but he was not chosen to be Secretary of Agriculture. When he took the position, he did not realize that the DoE was in charge of maintaining and guarding our nuclear arsenal, a matter of critical importance.

Among other things, the Department of Agriculture runs 193 million acres of national forest and grasslands, fights wildfires, inspects animals we eat, and spends 70% of its budget on school-lunch programs and other programs to alleviate hunger. After the change of administrations, the staff at the Department of Agriculture was instructed “to stop using the phrase ‘climate change’”—a change in messaging unburdened by science. Within a week of being sworn in as Secretary, Sonny Perdue staged a public event at a Virginia school: “Perdue announced that the USDA would no longer require schools to meet the whole-grain standard, or the new sodium standard, or ban fat in artificially sweetened milk”—a change in food policy unaccompanied by science.

“They are going to politicize the science,” said Cathie Woteki, appointed by President Obama as Undersecretary of Agriculture for Research, Education, and Economics. Her greatest concern?

“Regulatory reform in food safety without science.” Wiley would have been utterly familiar with the fears expressed by dedicated agency employees.

“Under each act of data suppression,” writes Lewis, “usually lay a narrow commercial motive: a gun lobbyist, a coal company, a poultry company.” That observation would also have struck a chord with Wiley.

So the reader must ask: Will agency leaders be in it for the mission or the money? Former astronaut Kathy Sullivan, who led the National Oceanic and Atmospheric Administration, laments: “The sense of identity as Citizen has been replaced by the Consumer.” Will politics replace science? Will protection of the public in the long run give way to short-term thinking?

One hundred years ago, food safety and industrial tanks presented issues of public safety and risk management. They still do today. One expert explained to Lewis that food safety can be compromised by the simple expedient of increasing “poultry line speeds”—allowing chicken slaughterhouse lines to speed up killing from 140 to 175 birds per minute, to the detriment of inspectors, and to the satisfaction of the poultry industry. The ASPCA reports that in September 2018, the Department of Agriculture announced a plan to allow the increase, and that it is also planning to allow increased line speeds at pig slaughterhouses. What about industrial tanks? Fifty-six million gallons of “high level waste,” described as “incredibly dangerous stuff” is stored at the Hanford site in Washington, the most contaminated nuclear site in the U.S. Hydrogen gasses must be vented so tanks don’t explode; a fatal dose of radiation can occur in seconds, and serious leaks would pollute ground water and the Columbia River. The site is the responsibility of the State of Washington, the U.S. Environmental Protection Agency, and the Department of Energy. And the Department of Energy is under the leadership of Secretary Perry, who, in a presidential debate, said he wanted to eliminate three agencies (including the Department of Energy)—if only he could remember the darn name of that third agency. As the three books reviewed demonstrate, effective risk management requires competence, dedication to mission, commitment to public safety, and the ability to look beyond the immediate outcome.