State of New Hampshire

GENERAL COURT

CONCORD

DATE: October 30, 2020

TO: Honorable Chris Sununu, Governor
Honorable Steve Shurtleff, Speaker of the House
Honorable Donna Soucy, President of the Senate
Honorable Paul C. Smith, House Clerk
Honorable Tammy L. Wright, Senate Clerk
Michael York, State Librarian

FROM: Senator Jeanne Dietsch, Chair

SUBJECT: First interim report of the Commission on the Environmental and Public Health Impacts of Perfluorinated Chemicals, RSA:126-A:79-a (2019)

Pursuant to RSA:126-A:79-a (HB 737, Chaptered Law: 335:1 Laws of 2019) enclosed please find the first interim report of the Commission on the Environmental and Public Health Impacts of Perfluorinated Chemicals. If you have any questions or concerns about this report, please contact me.

I want to convey my thanks to those members of the Commission who were instrumental in this study. I would also like to acknowledge all those who testified before the Commission and its subcommittees and assisted in our work to date.

Members of the Communications Subcommittee:

Sen. Jeanne Dietsch, Chair
Rep. Rosemarie Rung, Clerk
Rep. Wendy Thomas
Rep. Nancy Murphy, Prime Sponsor
Nicole Fordey, Litchfield

Please note that members of the Commission on the Environmental and Public Health Impacts of Perfluorinated Chemicals agree to the filing of this interim report by the Chair. This action should not be construed in any way as an adoption of any position by any individual commission member or state agency or organization they represent on any of the recommendations of the Commission.

Executive Summary

Perfluorinated chemicals are persistent substances used in industrial and consumer products, linked to many health concerns. Since 2016, elevated levels of these substances have been found in Merrimack, Bedford, Litchfield, and, more recently, Londonderry.

The Commission met in October 2019 and for three more meetings before the COVID-19 shut-down interrupted its work. However, because of the need to stop dangerous, ongoing emissions and Saint-Gobain Performance Plastic's [SGPP] application to delay mitigation, leadership pushed to be the first legislative Commission to gain permission to meet remotely in July 2020.

Because of the complexity of the PFAS problem and in order to optimize the use of members' time, Health and Environmental subcommittees were created to hear and distil information on those topics. The Policy Subcommittee was created to develop policy recommendations, and the Communications Subcommittee was tasked with completing this report and communicating findings to the public.

The Commission and the Environmental Subcommittee heard testimony from the New Hampshire Department of Environmental Services [NHDES] regarding the history and current status of PFAS emissions from SGPP. PFAS released into the air by SGPP settled into ground and groundwater surrounding the Merrimack plant. The company has worked with NHDES and the town of Merrimack to reduce emissions and mitigate issues in some of the polluted areas. More needs to be done as the area of impact has expanded. The 12 parts per trillion [ppt] standard is applicable to the approximately 26 sq. mile area within the blue line [see Figure 1, p 12]. However, between the blue line and the red line, the Consent Decree allows SGPP to dispute whether its emissions are the PFAS source. SGPP has accepted that it is the PFAS source within the red line. Beyond the blue line, the Consent Decree does not place an obligation on SGPP for exceedance it has caused of less than 70 ppt.

This leaves many households without mitigation, outside the one-mile radius. There are also households within the radius that remain on bottled water, with no plan for more permanent, sustainable access to clean water.

Due to violations of air emissions regulations, NHDES required that SGPP install air pollution control equipment on the stack, subject to Best Available Control Technology [BACT], and issued SGPP a permit to install a Regenerative Thermal Oxidizer [RTO] that satisfies the BACT requirements. SGPP appealed and requested a one-year permit extension beyond February 2021 that has been denied by NHDES. The Town of Merrimack has sought relief in the Air Resources Council via an appeal of the permit that will be heard in December 2020, requesting amendments that include the application of lower emissions limits for PFAS than those set forth in the Permit and a requirement that SGPP install a hydrogen fluoride scrubber simultaneous with the construction of the RTO.

Ongoing PFAS testing continues both at the SGPP facility site, and off-site. Additional PFAS impacted areas within the Merrimack Valley region have been identified. Consideration of further study in terms of the Commission's work has been given to those areas, and as a result, the town of Londonderry has been recommended for inclusion.

The Environmental Subcommittee developed this and other recommendations submitted to the Policy Subcommittee, along with plans for future tasks, as described herein.

The Health Subcommittee heard testimony from five health and toxicology professionals at the New Hampshire Department of Health and Human Services [NHDHHS], Agency for Toxic Substances and Disease Registry [ATSDR], and NHDES. They developed recommendations submitted to the Policy Subcommittee, along with plans for future tasks, as described herein.

Based on work by the Health and Environmental subcommittees, the Policy Subcommittee submits the following legislative recommendations for the 2021 session, categorized by recommended House committee assignment. The Policy Subcommittee also made non-legislative recommendations to be carried out by NHDES and by NHDHHS.

Legislation, Arranged by Recommended House Committee

RESOURCES

- Expand 2019 HB737 Statutory Commission membership to include 1 elected and 1 community member from Londonderry.

JUDICIAL/LEGAL

- Extend the statute of limitations on chemical and PFAS-related injury.

ENVIRONMENTAL

- Resubmit (2020 HB1569) which would maintain a public registry of where certain fire suppressants have been used.
- Establish a policy related to the identification of any PFAS chemicals that pose a concern to public health and/or the environment. This policy must also cover the regulation and establishment of MCLs for each newly identified PFAS chemical.
- Resubmit (2020 HB1446) to establish a committee to study the labelling of products containing PFAS.

HEALTH

- Institute educational standards and practices related to health implications of PFAS chemicals for all healthcare personnel.
- Use public data systems to manage and monitor information regarding certain outcomes in the areas impacted by PFAS air emissions and drinking water contamination.
- All bottled water be subject to the newly established MCLs.
- Require any source company responsible for water and soil contamination to be responsible for the costs of medical monitoring over a long-term basis for those exposed.
- All blood samples obtained by the MVD Community Exposure Assessment be maintained and that a PFAS blood test registry be established.
- Require that all new residents who have private wells within contamination zones receive disclosure of information related to water quality and standards including PFAS and other reportable contaminants.

- Require that physicians' medical screenings determine whether patients live or work inside areas of known PFAS contamination.
- Ensure continuing professional development and education concerning PFAS for healthcare professionals, as suggested by 2020 HB1538.

Future Legislation

- After the DES/USGS soil survey to be completed in early 2022- Study the ability to accurately test and designate standards for PFAS in foods and determine the appropriate state department that would be responsible for any resulting enforcement.

Conclusion

All recommendations and this report were reviewed by the full Commission and approved, as amended, on October 30, 2020 at the public meeting of the Commission. This is an ongoing Commission. The next interim report will be available on or before November 1, 2021. Additional and ongoing information is available at the Commission's website: http://www.gencourt.state.nh.us/statstudcomm/committees/1495/

Commission Members

Sen. Jeanne Dietsch, Chair
Rep. Rosemarie Rung, Clerk
Rep. Nancy Murphy
Rep. Jeanine Notter
Sen. Shannon Chandley
Mike Wimsatt, NHDES
Joseph Ayotte, USGS
Kathleen Bush, NHDHHS
Amy Costello, UNH
Rep. Gary Woods
Rep. Wendy Thomas
Rep. Ralph Boehm
Mindi Messmer, Scientist
Nancy Harrington, Merrimack
Rebecca DeVries, Merrimack
Chris Bandazian, Bedford
Emma Paradis, Bedford
Nicole Fordey, Litchfield

HB737 Commission 1st Annual Interim Report: 2020

CHAPTER 335 HB 737 AN ACT establishing a commission to investigate and analyze the environmental and public health impacts relating to releases of perfluorinated chemicals in the air, soil, and groundwater in Merrimack, Bedford, and Litchfield.

Background

Perfluorinated chemicals [PFCs] is a term that refers to a large group of compounds that is estimated to contain approximately 5,000 unique chemicals. A key characteristic of chemicals in this group if an organic carbon structure containing multiple fluorine atoms. In the scientific literature and professional terminology, the term PFC is being replaced by per and polyfluoroalkyl substances [PFAS] to more accurately describe this chemical class. Perfluorooctanoic acid [PFOA] is one example from the PFAS chemical class and can be sub-classified as a perfluoroalkyl acid [PFAA] due to its chemical structure that differs from certain PFAS (ATSDR, 2018; Buck et al., 2011; ITRC, 2020).

PFAS are used in industrial and consumer products due to the water-repellant, stain-resistant, and non-stick characteristics of these compounds. They owe their chemical properties to the carbon-fluorine bond, which is one of the shortest and strongest known. This property also makes these chemicals—or the parts of them composed of C–F bonds—highly resistant to breakdown in the environment, earning them the nickname “forever chemicals.”

Certain long-chain PFAS, such as PFOA and perfluorooctanesulfonic acid [PFOS], have been found to be persistent, bioaccumulative, and toxic (ATSDR, 2018; NHDES, 2019b). Exposure to PFOA has been linked to kidney and testicular cancer and thyroid problems, while exposure to PFOS is associated with decreased fertility and adverse developmental effects. Both are linked to elevated cholesterol and obesity in adults and decreased immune response in children.

Due to concerns over possible links between human exposure to PFAS and adverse health conditions, the long-chain chemicals (PFAS with more than six perfluorinated carbons) were recently phased out and replaced by numerous similar compounds, including short-chain molecules called C6 and C4. The potential hazards (e.g., bioactivity, bioaccumulation, and toxicity) of these alternative PFAS are being studied. Research has demonstrated similar concerning biodegradation properties and indicated that shorter chain replacement chemicals, like GenX, may cause health problems similar to what has been found with the long-chain compounds.

When looking for possible human-health effects of chemical compounds, it is important to understand that they are hard to study, especially with thousands of variations in PFAS chemicals. While knowledge about the potential health effects of PFAS has grown, many questions remain unanswered.

Why the Commission Exists

On February 26, 2016, SGPP, Daniel Webster Highway, Merrimack, NH reported to NHDES that PFOA was detected at 30 ppt in four facility faucet samples of water supplied by the MVD, the town's municipal water system management entity.

In March 2016, the Merrimack, NH community (pop. approx. 26,000) was informed by NHDES that the public drinking water supply was contaminated by PFOA. MVD public wells #4 & #5, the public wells closest to the SGPP facility, were shut down due to PFAS concentrations above the 2016 EPA Health Advisory Level of 70 ppt. The State identified industrial polluter SGPP as the source of the contamination.

A growing number of private wells (in Merrimack, Bedford, Litchfield, and other communities) and the four remaining active MVD public wells were found to also be contaminated. The levels of some PFAS in the public wells were above those determined to be safe for consumption.

A committed group of Merrimack residents came together to form "Merrimack Citizens for Clean Water" [MCFCW] due to their shared concerns about the PFAS water contamination issue. They worked quickly to educate themselves and others about PFAS and the environmental and public health impacts associated with exposure. Residents recognized the dangers of the ongoing SGPP air emissions and that PFAS air emissions are known to be a pathway to soil and groundwater contamination, which can then also contaminate drinking water. These citizen-advocates raised awareness within Merrimack (and ultimately, other communities) relative to the impact of PFAS on the environment and human-health, and began to reach out to local government and NH state agencies for help.

A summer 2017 health survey of nearly 600 Merrimack residents (designed and conducted by MCFCW) was published in *Environmental Health*, a peer-reviewed public health journal. Even with its limitations, this survey found several important associations that warranted further investigation and more immediate action including: (1) elevated incidence of reproductive, developmental, autoimmune, and kidney disorders among those under 18; (2) elevated levels of health concerns, multiple health concerns, autoimmune disorders, and reproductive disorders among women; (3) elevated levels of health concerns, multiple health conditions, cardiovascular, respiratory, reproductive, and liver disorders in those with industrial occupational exposure; and (4) elevated incidence of health concerns, cardiovascular, and developmental disorders among those who have lived in Merrimack for a long time when compared with incidence rates in newer residents. The survey's conclusions highlighted a critical gap in information, including a lack of access to blood testing, medical monitoring, and guidance from physicians for PFAS-exposed residents.

Analysis conducted by NHDHHS using cancer registry data from 2005 through 2014, compared incidence rates of 24 cancer sites in the Merrimack area to NH state averages. The NHDHHS concluded that while some observed counts were more or less than the expected number, differences were not statistically significant or meaningful. The full report is available here:
https://www.dhhs.nh.gov/dphs/pfcs/documents/merrimack-cancer-012018.pdf

However, consistent concerns have been raised by community members stating that incidence rates in Merrimack and other impacted communities should be compared with national averages rather than the state data since cancer rates in NH are some, if not the highest in the nation.

NHDHHS has not conducted assessments of non-cancer effects related to PFAS exposure specific to the affected community. Non-cancer effects such as elevated blood cholesterol levels and lowered immune response are known to be strongly and consistently linked to PFAS exposure.

In October 2017, the MVD Community Exposure Assessment collected blood tests for approximately 200 residents. Results indicated that the MVD group had blood levels of PFOA over twice the background levels detected in the US population; and that proximity to the SGPP facility, age, and tap water consumption all contributed to higher PFOA levels.

Because of their long-term and ongoing exposure to these toxins (the bioaccumulative, biodegradation, and chemical properties of these "forever" chemicals and the concerning negative health impacts known to be associated with exposure to these toxins) residents in PFAS-impacted communities (e.g., Merrimack, Bedford, and Litchfield) remained concerned. They continued to seek help and answers.

By the end of 2018, nearly three years had passed since discovery of the PFAS contamination of Merrimack's drinking water. Residents were frustrated and felt that NH's environmental and health protection regulations were insufficient to meet the needs of PFAS-impacted communities; that little forward movement had been made to address and evaluate the extent of the PFAS contamination in impacted towns; that human-health impacts known to be associated with long-term and ongoing PFAS exposure were not being recognized or monitored (and health providers were uninformed); and that polluters were not being held accountable to stop contaminating the air, water, and soil of these impacted communities.

Despite requests for support at every level of government, the Merrimack citizen-advocates believed that their community, as well as the Bedford and Litchfield communities, were not afforded the tools with which to determine the extent of human-health impact from this long-term toxin exposure. Thus, the residents believed they were at greater risk of harm to their health due to existing inadequate or non-protective environmental regulations. They sought assistance with data collection linking exposure to outcomes.

Many residents were anecdotally aware of health-related issues experienced by members of their respective communities and were concerned that they were experiencing or seeing health impacts known to be associated with PFAS exposure in others. They voiced frustration at the State's assurances of the safety of the public water at higher PFAS levels, without health studies or formal assessment of potential health impacts. After careful testing and research, NHDES and the legislature lowered Maximum Contaminant Levels (MCLs) to the current standards.

HB737 was written to address the PFAS-related environmental and public health crisis in Merrimack, Litchfield, Bedford, and surrounding communities, that deserves the full attention of this Commission and any related state agencies. The HB737 Commission has great potential to provide answers to the questions the PFAS-impacted communities have asked, as well as to make recommendations and support legislation that will protect human-health and our environment.

Requirements of HB737

HB737 legislation [Rep. Murphy, Hills. 21; Rep. Meuse, Rock. 29; Rep. W. Thomas, Hills. 21; Rep. Stack, Hills. 21; Rep. Cushing, Rock. 21; Rep. Knirk, Carr. 3; Rep. Salloway, Straf. 5; Rep. McMahon, Rock. 7; Rep. L'Heureux, Hills. 21; Rep. Mullen, Hills. 7; Sen. Bradley, Dist 3; Sen. Sherman, Dist 24; Sen. Chandley, Dist 11; Sen. Watters, Dist 4] established this commission "to study environmental and public health impacts resulting from per fluorinated chemicals (PFAS) releases to the air, soil, and water in Merrimack, Litchfield, and Bedford."

The Commission was signed into law and effective August 16, 2019 and expires November 1, 2024. By statute, it is comprised of twenty-one members and is tasked with, but not limited to, fourteen specific duties. Seven members constitute a quorum. The Commission is expected to submit an interim report of its findings by November 1, each year between 2020 and 2024, and a final report of its findings and any recommendations for proposed legislation to the speaker of the house of representatives, the president of the senate, the house clerk, the senate clerk, the governor, and the state library on or before November 1, 2024.

A full commission review of the HB737 legislation and its requirements recognized the complexity of the PFAS contamination issue as it related to the included communities, and the vast amount of work to be completed. For purposes of fulfilling all legislative obligations as well as the development of this interim report, it was determined that the expertise of commission members might be best utilized, and the tasks most comprehensively addressed, by dividing tasks based upon interest and expertise. A process was identified for organization of subcommittees to address each of the fourteen RSA requirements and provide subcommittee reports to be included within the full commission report. Four subcommittees were created: Health, Environmental, Policy, and Communications. The Health, Environmental, and Policy subcommittees addressed the following RSA requirements:

III. (a) The commission's study shall include, but not be limited to:
(1) Obtaining information necessary to delineate the extent of PFAS drinking water contamination from airborne, soil, and groundwater releases.
(2) Assessing and implementing steps necessary to investigate public health impacts from PFAS exposures to air, soil, and drinking water.
(3) Assessing sources and impacts to surface water from wastewater and other discharges from the Merrimack, NH SGPP plant.
(4) Assessing whether soil regulations are sufficient to contain contaminated materials.
(5) Receiving updates at each commission meeting from the department of environmental services and NHDHHS on matters including but not limited to, scientific findings and related materials, enforcement actions, and regulatory status.
(6) Receiving ongoing copies of all correspondence between state and federal agencies and responsible parties; including but not limited to, documents related to scientific findings, interim progress and regulatory or enforceable matters from the department of environmental services and NHDHHS.
(7) Developing prioritized governmental and community actions.
(8) Reviewing the progress made by state and federal agencies, if appropriate, and their partners.

(9) Delineating the potential roles and responsibilities for municipalities, state agencies, and their partners.
(10) Communicating to the public about the environmental and public health impacts of the PFAS exposure investigation and analysis.
(11) Assessing whether current rules or regulations are sufficiently protective of public health and proposing legislation, as necessary, to protect public health.
(12) Recommending legislation, as necessary, to carry out the charge of the commission or resulting from any commission findings.
(13) Assessing whether current penalties and regulatory controls are sufficiently protective of the environment and public health and recommending changes necessary.
(14) Assessing agreements between the state and SGPP and proposing additional actions necessary to achieve the charge of the commission and,
(b) The commission shall solicit information from any person or entity the commission deems relevant to its study. The commission may, with input from a state agency or agencies, decide whether additional appropriations are necessary to complete the work of the commission.

The Communications Subcommittee took responsibility for the compilation of subcommittee reports to develop this interim report, and that of providing public information about the work of the Commission.

The subcommittee reports follow.

Environmental Subcommittee Interim Report

Charge of Environmental Subcommittee

- Obtaining information necessary to delineate the extent of PFAS drinking water contamination from airborne, soil, and groundwater releases
- Assessing sources and impacts to surface water from wastewater and other discharges from the Merrimack, NH SGPP plant
- Assessing whether current penalties and regulatory controls are sufficiently protective of the environment and recommending changes necessary, including assessing whether soil regulations are sufficient to contain contaminated materials

Members:

Chris Bandazian, Bedford, Chair
Mike Wimsatt, NHDES (replacing Clark Freise upon retirement)
Joseph Ayotte, USGS
Mindi Messmer, Scientist

Sources of Environmental Contamination

The Environmental Subcommittee identified and studied, and will continue to study, the following sources of PFAS contamination of the environment originating from the SGPP facility in Merrimack, NH:

1. Ongoing industrial processes

2. Stack, roof, plumbing, and drainage system residue at the Merrimack, NH SGPP facility
3. Soil at the Merrimack, NH SGPP facility
4. Surface water (NHDES, 2019a)
5. Groundwater
6. Stormwater
7. Wastewater

Migration of Environmental Contamination

The Environmental Subcommittee identified and studied, and will continue to study, the following pathways of migration of environmental PFAS contamination originating from the SGPP facility in Merrimack, NH:

1. Air
    a. Stack emissions
2. Water
    a. Discharge into the Merrimack River and tributaries near the SGPP facility:
        i. Building runoff
        ii. Surface water
        iii. Stormwater
        iv. Wastewater
        v. Groundwater
3. Groundwater migration from air deposition of PFAS contamination in the surrounding communities of Merrimack, Litchfield, Bedford, and Manchester
4. Soil
    a. Removal of contaminated soil from the SGPP facility and surrounding properties is presently subject to, and limited by, hazardous waste disposal procedures.

Remediation of Environmental Contamination

The Environmental Subcommittee studied, and will continue to study, the following remedial actions pending or taken to mitigate the migration of environmental PFAS contamination originating from the SGPP facility in Merrimack, NH:

1. Air
    a. Regenerative Thermal Oxidizer installation (subject to ongoing litigation, but otherwise pending completion in February 2021). Time required for commissioning and placement in service of equipment to be determined.
        i. HF treatment (not required by Air Permit and subject to pending litigation).
2, Drinking water
    a. Municipal systems

i. Merrimack Village District [MVD]. Not until summer of 2022 will all water be expected to meet state PFAS requirements. MVD recommends in-house filtration for concerned customers.[1]

ii. Municipal water line extensions and connections (all agreed to projects completed)

iii. Residential well sampling and provision of bottled drinking water if results exceed MCL/Ambient Groundwater Quality Standard [AGQS] established by RSA 485:16-e/NHDES.

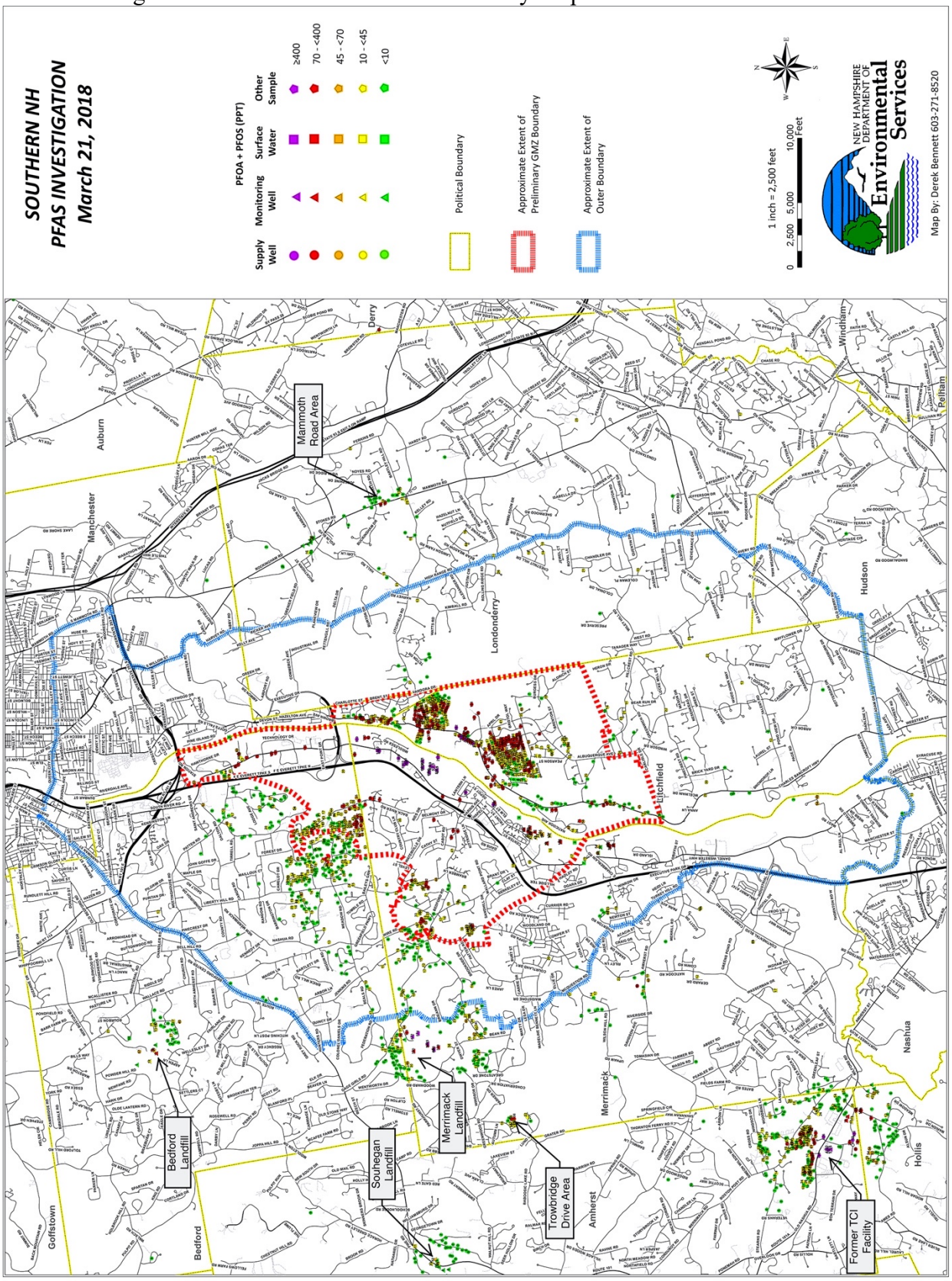
iv. Voluntary PFAS testing of new wells statewide recommended by NHDES.

Recommendations for NHDES

1. Monitor HF Scrubber appeal scheduled for hearing in December 2020 with follow-up to be determined based on outcome
2. Monitor SGPP air emissions subsequent to RTO installation
3. Evaluate data generated by the Work Plan for Residential Well Sampling and whether expansion of a residential well testing program beyond the Groundwater Management Zone outer boundary is advisable
4. Evaluate a program for long-term tri-annual well testing in study areas of hydrogeological interest
5. Compile and analyze statewide new well PFAS test results
6. Evaluate whether to initiate a parallel study to include the communities of Nashua, Amherst, and Hollis impacted by Amherst TSI site
7. Evaluate PFAS labeling and registration requirements for products brought into New Hampshire
8. Evaluate PFAS testing of agricultural products grown in the study area.

[1] Proceeding/resumed as per Golder Associates Work Plan for Residential Well Sampling within the Groundwater Management Zone outer boundary defined by the SGPP consent decree

Figure 1: SGPP Consent Decree Boundary Map



Health Subcommittee Interim Report

Charge of Health Subcommittee

- Assess and implement steps necessary to investigate public health impacts from exposure to PFAS-contaminated air, soil, and drinking water
- Assess whether current rules or regulations are sufficiently protective of public health and propose legislation as necessary to protect public health
- Assess whether current penalties and regulatory controls are sufficiently protective of public health and recommend changes as necessary

Members:

Mindi Messmer, Scientist, Chair
Rep. Nancy Murphy
Rep. Gary Woods
Rep. Wendy Thomas

Nancy Harrington, Merrimack
Rebecca DeVries, Merrimack
Kathleen Bush, NHDHHS
Amy Costello, UNH

Introduction

This subcommittee was established to focus on the health-related impacts in the Merrimack, Bedford, and Litchfield area relating to exposure to PFAS emissions in air and contaminated drinking water. The subcommittee assessed the current state of knowledge with input from community members, elected representatives, and agency presentations.

The work of the Health Subcommittee was interrupted by the coronavirus pandemic that paused any meetings of the legislative statutory commissions for a period of time. Starting in late July 2020, the Commission began meeting remotely, which enabled the Health Subcommittee to also meet remotely in a limited manner.

The subcommittee was formed to address concerns of residents relating to the continued and historic exposure to PFAS emissions from industrial sources in the Merrimack vicinity. NHDES conducted rule-making in response to SB309 which included an assessment of peer-reviewed science to determine the appropriate level to set MCLs in drinking water. The new MCLs were enacted in June 2020. As a result, the area of drinking water impacted by PFAS emissions from industrial sources will enlarge substantially from approximately 65 square miles.

The C8 Science Panel studied outcomes in 69,000 people exposed to emissions of one PFAS compound, PFOA, related to the DuPont facility located in Parkersburg, West Virginia. The study concluded probable links between PFAS exposure in drinking water and 6 outcomes: kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, hypercholesterolemia, and pregnancy-induced hypertension (Nicole, 2013).

ATSDR (2020) recognizes the following outcomes may be associated with PFAS exposure: increased cholesterol, changes in liver enzymes, low birth weight, decreased vaccine response,

increased risk of high blood pressure or pre-eclampsia in pregnant women, and increased risk of kidney and testicular cancer.

Process

The Health Subcommittee assessed the current state of knowledge through committee member input and agency presentations. During the course of the subcommittee work, testimony has been received by NHDHHS, ATSDR, and NHDES. The following professionals presented to the Health Subcommittee:

- Dr. Christine Bean, NHDHHS Public Health Laboratory
- Dr. James Chithalen, NHDHHS Chemistry Program Manager
- Dr. Kathleen Bush, NHDHHS Environmental Public Health Tracking Program
- Tara Somers, CDR, RN, MSN/MPH, Regional Director, ATSDR Boston
- Dr. Jonathan Ali, PhD, NHDES Toxicologist

Summary of Meetings/Findings

Because of the coronavirus pandemic, the work of the Health Subcommittee was paused for a period of time and was limited in receiving necessary testimony and opportunities for group work by members. To date, the subcommittee has met 7 times to address the 3 stated responsibilities of the Health Subcommittee. Meeting notes are provided at the Commission website: http://www.gencourt.state.nh.us/statstudcomm/committees/1495/minutes.html

Community Blood Testing

A letter dated March 6, 2020 was sent from the subcommittee to NHDHHS Public Health Laboratories requesting that the MVD Community Exposure Assessment blood samples be maintained. A letter dated September 3, 2020 from NHDHHS reported that the blood samples acquired are still being held and maintained at the public health lab. NHDHHS stated that it needed the subcommittee request to include a rationale for continuing to maintain the samples as well as a timeframe for storage in order for the information to be incorporated into a re-consent letter for participants in the original study.

A response to NHDHHS is being prepared by the Health Subcommittee and will be provided to the full Commission on October 30, 2020. The letter from NHDHHS included a cost estimate for the associated staff, resources, and equipment for this work. Maintenance of these samples is of great importance to this subcommittee in order to continue monitoring for PFAS contamination responses and for any possible linkages to state and national studies now or in the future.

Copies of correspondences are provided at the Commission website: http://www.gencourt.state.nh.us/statstudcomm/committees/1495/documents.html

Health Subcommittee Completed Tasks

The following tasks have been completed since the initiation of the HB737 Statutory Commission.

The subcommittee received testimony from agencies about existing programs and funding that could be made available to address concerns about the health impacts in the affected area.

1. NHDES and NHDHHS were awarded the ATSDR APPLETREE Grant. This is a 3-year award for approximately $400,000 per year and will fund a Program Manager and Risk Assessor within DES as well as a Health Educator within the DHHS Department of Public Health Tracking System (DPHS). The grant has two components:
    1. Conducting site investigations (e.g., health consultations and health risk assessments) at hazardous waste sites and other locations to reduce or eliminate human exposure to environmental contamination with a focus on community engagement, education, and outreach; and,
    2. Supporting the Choose Safe Places for Early Care and Education Program focused on the safe siting of childcare facilities and the development of environmental health standards that may be incorporated into siting criteria.

2. Commission members stated that there is interest in forming a community group with ATSDR involvement in the equivalent of a Community Assistance Panel [CAP], modified as appropriate based on current circumstances of the Southern NH community. In response, ATSDR stated that they have set up CAPs to explore potential study options at some sites where ATSDR is involved such as Pease Tradeport and Camp Lejeune. At this time, ATSDR is not planning to start a CAP in Southern New Hampshire.

3. Commission members asked if ATSDR could connect with NH Medical Society to provide updates on PFAS-related health information. ATSDR has had contact with the NH Medical Society in the past and has attended several of their events. ATSDR stated that they can work with our NH ATSDR APPLETREE cooperative agreement partners to potentially re-engage with the NH Medical Society. A list of partner groups' efforts can be found in the appendix.

4. In 2019, the American Medical Association (AMA) resolved, in House Action, Resolution 901, to:

    "***(1) support continued research on the impact of perfluoroalkyl and polyfluoroalkyl chemicals on human-health; (2) support legislation and regulation seeking to address contamination, exposure, classification, and clean-up of PFAS substances; and (3) advocate for states, at minimum, to follow guidelines presented in the Environmental Protection Agency's Drinking Water Health Advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), with consideration of the appropriate use of Minimal Risk Levels (MRLs) presented in the CDC/ATSDR Toxicological Profile for PFAS***."

    Additional information regarding these Resolutions are provided in the Appendix.

Health Subcommittee Incomplete Tasks

1. **Receive public water system and private well health consultations.**

ATSDR is in the process of drafting the public water system and private well health consultations for the impacted communities in Southern NH. The final reports will help with medical and health monitoring in affected areas and it will help identify areas in the local communities that have been contaminated. Depending on the final reports, this could also indicate the need for remediation or having well owners go onto bottled water.

There is no release date set, however, ATSDR states that they hope to have the documents available for public comment by the end of 2020. It is the understanding of the Health Subcommittee that

PFAS chemicals, along with other identified contaminants, will be included in the final reports.

2. **Coordinating with the four Merrimack-area hospitals to be included in the ATSDR Grand Rounds.**
   The committee asked whether NH hospitals (including those in Southern NH and on the seacoast) could participate in ATSDR grand rounds. This is an effort that the subcommittee would like to see happen and it will take ongoing work in order for this to take place. If the hospitals coordinated with the ATSDR Grand Rounds, it could improve efforts to collect information specific to the health impact of PFAS chemicals on the local communities. With a coordinated approach, it might also be possible to identify pockets of illness or new illnesses as they arise.

   ATSDR is planning to conduct some clinician outreach in NH as part of the Pease Tradeport Study. However, subcommittee members reiterated the need for outreach to physicians more proximal to the Merrimack area as well. Outreach efforts may shift toward online methods and USPS mail. NH is now a recipient of the ATSDR APPLETREE Grant. According to NHDES and NHDHHS, there may be additional opportunities to explore related to healthcare provider education and outreach.

3. **Upcoming testimony to the Health Subcommittee.**
   Future testimonies to be scheduled include: MVD for overview of the water system and PFAS impacts, NHDES to review existing rules and regulations, NHDHHS to update cancer rates in the Merrimack area, the Cancer Prevention Program to share best practices, and Silent Spring to provide update on decreased vaccine response. The subcommittee is still waiting to receive and review results from the NHDHHS Biomonitoring Program related to the 2019 Tracking and Assessment of Chemical Exposure (TrACE) Study. All of these presentations should lead to recommendations from the Health Subcommittee to the full Commission, with possible legislative impacts.

4. **Commission response to NHDHHS regarding retaining community blood samples.**
   A response to NHDHHS has been prepared by the Health Subcommittee and is being considered at the Commission meeting on October 30, 2020.

Policy Subcommittee Interim Report

Charge of Policy Subcommittee

- Developing prioritized governmental and community actions (state level)
- Delineating the potential roles and responsibilities for state agencies and their partners
- Recommending legislation, as necessary, to carry out the charge of the commission or resulting from any commission findings

Members:

Rep. Rosemarie Rung, Chair
Nancy Harrington, Merrimack
Chris Bandazian, Bedford
Mike Wimsatt, NHDES
Sen. Shannon Chandley
Nicole Fordey, Litchfield
Emma Paradis, Bedford

Due to the coronavirus pandemic, the Policy Subcommittee has only met twice and these limited meetings were focused upon identifying and consolidating recommendations from the Health and Environmental subcommittees for this first-year interim Commission report. The Policy Subcommittee recommends the following:

Legislation, Arranged by Recommended House Committee

RESOURCES

- Expand 2019 HB737 Statutory Commission membership to include 1 elected and 1 community member from Londonderry.

JUDICIAL/LEGAL

- Extend the statute of limitations on chemical and PFAS-related injury.

ENVIRONMENTAL

- Resubmit (2020 HB1569) which would maintain a public registry of where certain fire suppressants have been used.
- Establish a policy related to the identification of any PFAS chemicals that pose a concern to public health and/or the environment. This policy must also cover the regulation and establishment of MCLs for each newly identified PFAS chemical.
- Resubmit (2020 HB1446) to establish a committee to study the labelling of products containing PFAS.

HEALTH

- Institute educational standards and practices related to health implications of PFAS chemicals for all healthcare personnel.
- Use public data systems to manage and monitor information regarding certain outcomes in the areas impacted by PFAS air emissions and drinking water contamination.
- All bottled water be subject to the newly established MCLs.
- Require any source company responsible for water and soil contamination to be responsible for the costs of medical monitoring over a long-term basis for those exposed.
- All blood samples obtained by the MVD Community Exposure Assessment be maintained and that a PFAS blood test registry be established.
- Require that all new residents who have private wells within contamination zones receive disclosure of information related to water quality and standards including PFAS and other reportable contaminants.
- Require that physicians' medical screenings determine whether patients live or work inside areas of known PFAS contamination.
- Ensure continuing professional development and education concerning PFAS for healthcare professionals, as suggested by 2020 HB1538.

Future Legislation

- After the DES/USGS soil survey to be completed in early 2022- Study the ability to accurately test and designate standards for PFAS in foods and determine the appropriate state department that would be responsible for any resulting enforcement.

Non-Legislative Recommendations for This Commission

- Strongly encourage NHDES to become much more aggressive and proactive in monitoring and act immediately to cease identified emissions that contaminate air, soil, or water sites until remediation or corrective action is complete.
- Support the Town of Merrimack in pursuit of directing NHDES air permitting to include the installation of a scrubber to remove hydrogen fluoride from SGPP's smokestack emissions, and also require SGPP to install a control device that will monitor and ensure that the RTO is working and legal emissions are not exceeded.
- Strongly encourage all state departments including DES, HHS, and Agriculture to provide any PFAS health and/or environment associated information, whether local, state, or national, to the Commission in a timely manner.
- Ensure continuing professional development and education concerning PFAS for healthcare professionals, as suggested by 2020 HB1538.
- Consider concrete steps to assess public exposure in the community.

Conclusion

This is an ongoing Commission. The next interim report will be available on or before November 1, 2021. Additional and ongoing information is available at the Commission's website: http://www.gencourt.state.nh.us/statstudcomm/committees/1495/

APPENDICES

Commission Website

All agendas, documents, minutes, reports and other information about the Commission are stored at the Commission website: http://www.gencourt.state.nh.us/statstudcomm/committees/1495/documents.html

SGPP Consent Decree

The following link contains the final consent decree between SGPP and NHDES:
https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2018/03/final-cd-20180320.pdf

Efforts by Partner Organizations

Local Level
Testing for Pease & Silent Spring: Study group is proposing physician education
Dartmouth Superfund: Developing a general fact sheet and interested in developing more if funding is available to support the work

Federal Level
Federal Bill proposed by NH Sen. Shaheen: https://www.shaheen.senate.gov/news/press/shaheen-rounds-introduce-new-legislation-to-invest-in-pfas-health-impact-and-best-practices-education-for-physicians
ATSDR: They have physician guidance that was released (a year ago now) targeted for physicians with patients exposed to PFAS
National Academies of Science: Currently forming a professional panel on PFAS to review and recommend guidance for physicians and medical practitioners

References

Agency for Toxic Substances and Disease Registry [ATSDR]. (2018). *Toxicological profile for perfluoroalkyls – Draft for public comment, June 2018.* Retrieved from https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf

Agency for Toxic Substances and Disease Registry [ATSDR]. (2020). *What are the health effects of PFAS?* Retrieved from https://www.atsdr.cdc.gov/pfas/health-effects/index.html

Buck, R. C., et al. (2011). Perfluoroalkyl and polyfluoroalkyl substances in the environment: Terminology, classification, and origins. *Integrated Environmental Assessment and Management, 7*(4), 513–541. doi:10.1002/ieam.258

Interstate Technology & Regulatory Council [ITRC]. (2020). *PFAS – Per- and polyfluoroalkyl substances technical and regulatory guidance document.* Retrieved from https://pfas-1.itrcweb.org

New Hampshire Department of Environmental Services [NHDES]. (2019a). *Plan to generate PFAS surface water quality standards.* Retrieved from https://www.des.nh.gov/organization/divisions/water/wmb/wqs/documents/r-wd-19-30.pdf

New Hampshire Department of Environmental Services [NHDES]. (2019b). Technical background report for the June 2019 proposed maximum contaminant levels (MCLs) and ambient groundwater quality standards (AGQSs) for perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), and perfluorohexane sulfonic acid (PFHxS). Retrieved from https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/June-PFAS-MCL-Technical-Support-Document-FINAL.pdf

Nicole, W. (2013). PFOA and cancer in a highly exposed community: New findings from the C8 science panel. *Environmental Health Perspectives, 121*(11-12), A340. doi:10.1289/ehp.121-A

AMA Resolutions

The following is the entry for Resolution 901 at the Interim Meeting last fall (I-19) of the American Medical Association House of Delegates and found on page 246 of this link. The Resolution 922 referred to below is found on page 255 of this link.
https://www.ama-assn.org/system/files/2020-01/i19-resolutions.pdf

901. HEALTH IMPACT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) CONTAMINATION IN DRINKING WATER

Reference committee hearing: see report of Reference Committee K.

HOUSE ACTION: FOLLOWING ALTERNATE RESOLUTION 901 ADOPTED IN LIEU OF RESOLUTIONS 901 AND 922 See Policy H-135.916

Per- and Polyfluoroalkyl Substances (PFAS) and Human Health RESOLVED, That our American Medical Association: (1) support continued research on the impact of perfluoroalkyl and polyfluoroalkyl chemicals on human health; (2) support legislation and regulation seeking to address contamination, exposure, classification, and clean-up of PFAS substances; and (3) advocate for states, at minimum, to follow guidelines presented in the Environmental Protection Agency's Drinking Water Health Advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), with consideration of the appropriate use of Minimal Risk Levels (MRLs) presented in the CDC/ATSDR Toxicological Profile for PFAS.

The following link contains the full text of the two original Resolutions:
https://www.ama-assn.org/system/files/2019-11/i19-handbook.pdf

Resolution 901 is found on pages 385-390
Resolution 922 is found on pages 457-459.