From: George Seel
To: PFAS Taskforce
Subject: Draft Report Comments - Managing PFAS in Maine
Date: Tuesday, December 03, 2019 4:47:57 PM

Dr. Tipton and Members of the PFAS Task Force,

Thank you for providing the public an opportunity to review and provide feedback on your December 2019 draft report, Managing PFAS in Maine. Overall the PFAS Task Force and your supporting staff from DEP, DACF, DHHS and Emergency Management have obviously done a significant amount of work in a short amount of time. To those of you who are volunteering your time, my thanks. Given the evolving nature of our knowledge about PFAS, their sources, the human health threats, protective exposure levels and exposure routes, I suspect this report is only the first word on this issue in Maine.

Until my retirement in 2015, I was the Director of Technical Services in DEP's Bureau of Remediation and Waste Management and dealt with the remediation of petroleum and hazardous substance sites for most of my 35-year career. My comments are however limited and general in nature, focusing on whether the scope of your investigations to date and this report are sufficient since I do not have any detailed technical expertise regarding PFAS contamination (during my tenure, DEP's remediation efforts were limited to former DOD sites).

In my opinion there are two obvious omissions in the scope of your report and assessment of possible human exposure routes –the threat to private drinking water wells from subsurface wastewater disposal systems, and the land spreading of septage sludge produced by these systems on lands used for crop production. The report acknowledges the presence of PFAS in residential waste water and septage, but does not address the subject any further, either in recommendations to close existing data gaps with future environmental and drinking water sampling initiatives upon which to base management recommendations, or an explanation based on existing data to support a conclusion that PFAS discharged to the environment via subsurface waste water disposal systems and septage disposal do not pose a human exposure risk.

Risk of PFAS contamination of private drinking water supply wells from subsurface wastewater disposal systems.

The report does not address the concentrations of PFAS in residential or commercial waste water discharged via leach fields or engineered systems that discharge human waste water effluent to soil and ground water in residential neighborhoods, usually in close proximity to private wells, and the risk posed to those drinking water supplies. The underlying premise of the siting criteria and design of these systems, even new systems, that any exposure/health risk is from bacteria and nutrients, rather than mobile and persistent compounds like PFASs. As the report notes, most Mainers (51%) get their drinking water from private wells. These wells have been documented by prior studies and MDEP contamination field investigations to be vulnerable to contamination from a variety of sources at unhealthy or nuisance concentrations (e.g. petroleum storage facilities, the former gasoline additive MTBE, home heating oil, commercial and residential subsurface waste water disposal systems, sand/salt piles, etc.). For example in the course of numerous DEP oil contamination investigations, basic background analyses of private well water has found indications of contamination by septic systems (e.g. fecal coliform bacteria, nitrates, caffeine, Ibuprofen) in coastal communities or other sites with shallow to bedrock soils (Harpswell, Phippsburg, Friendship, Penobscot, Deer Isle, Jonesport, Cherryfield, N. Berwick, Industry to name those I recall).

To eliminate residential subsurface wastewater disposal systems as possible PFAS contamination threat to private drinking water systems there are at least several approaches to close this data gap. One approach would be to conduct a sampling study of septage and effluent from randomly selected residential and commercial wastewater disposal systems for PFAS concentrations, similar to that done in the 1990s when DEP and the Environmental Health unit in DHHS collaborated in the random sampling of 1,000 private wells across Maine for MTBE (another ubiquitous, mobile and persistent contaminant). This type of approach could give insight in how widespread PFAS contamination is statewide and in what concentrations. Or another option worth consideration is to focus a sampling

study on the most vulnerable private wells, like those in coastal peninsula communities. If no problem is found there, it may be safe for now to infer this exposure route may not be a significant one statewide.

Septage Land spreading Sites and the Production of Food Crops and Livestock Feed.

Under Chapter 420 of the DEP's regulations, septage land spreading sites are licensed. Land spread septage comes primarily from the septic and holding tanks of residential and commercial subsurface wastewater disposal systems, and in some cases industrial systems. Section 6 of these rules allow for the use of land spreading sites for food crops, grazing, and livestock feed crops after 38 months, 30 days, and again 30 days, respectively, from the last date of septage application. To what extent crops have been produced on septage land spreading sites is not addressed in the report. The focus of these rules is the risk from bacteria, nutrients and heavy metals to surface water, ground water and the human food chain. Are the above timeframes adequate for persistent, so-called "forever" chemicals, like PFAS with their different mobility, chemical and toxicological characteristics? No sampling has been done or is proposed of the soil or crops from these waste facilities in the draft report's recommendations to evaluate if a risk to the human food chain exists as a result of this State regulated waste management practice. I would suggest the report address this potential human exposure route consistent with the approach the Maine DEP has taken with land spreading of treatment plant sludge on crop lands, possibly starting with a sampling program or study of soils and vegetation on existing septage land spreading sites.

Again, thank you for the opportunity to review and comment on your draft report. I believe it represents a good start toward better understanding the human and environmental risks from PFAS in Maine, and ultimately managing those risks.

Sincerely,

George Seel, Belgrade, Maine