May 1, 2023

Board of Selectmen and
Hebron Public Building Committee
c/o Donna Lanza
Town Office Building
15 Gilead Street
Hebron, CT 06248

Dear Selectmen Larson, Richmond, Kasper, Thiele, and Rubera
and Members of the Hebron Public Building Committee:

Before we set out what we hope will be helpful information to you, we want to acknowledge the amount of effort you have put into the process of identifying and evaluating sites for the possible placement of a new Public Works facility or facilities. You must be exhausted and even disheartened, at times. The Green Committee, by this cover letter and attached information, does not intend to add to the challenges you face. Rather it is our hope that the information we provide will help you further the process and achieve the selection of the best possible site (or sites) for the environment and the Town.

After much discussion, research, and review of available information, the Hebron Green Committee would like to express some of our concerns regarding the proposed location of the new Hebron Department of Public Works (DPW) facility between John Horton Boulevard and Kinney Road. While we fully understand that the Town of Hebron is in dire need of a new DPW facility, and we acknowledge the considerable amount of time and effort that have gone into the site selection process, we are not convinced that the Kinney Road location is optimal for the proposed activity.

The operation of the new DPW facility entails activities such as salt storage and handling, truck maintenance operations, fuel storage and dispensing, and other related activities which have the potential to be detrimental to the environment. As you have acknowledged, a new DPW facility is required to be built and operated to the most up-to-date standards required by law and by Department of Energy and Environmental Protection (DEEP) permits. However, as we all know, even at well designed, constructed, and operated facilities, accidents happen, and small releases of pollutants can, over time, cause major problems. This is why we are concerned about the long-term effects of these activities on the quality of the surface water and ground water, including future water supplies in the area, regardless of the standard of the design and construction of the new DPW facility.

We are aware of the challenges presented by all properties evaluated so far and recognize that the existing location on Old Colchester Road presents issues of its own. Nevertheless, the Committee is not altogether certain that problems posed by the Old Colchester Road site are so insurmountable as to rule out this location, possibly including the Eversource property, for at least those activities of greatest environmental concern. The Old Colchester Road site is undoubtedly already contaminated, and while no amount of pollution is acceptable, it is much better to minimize the number of potentially impacted sites in town.

We understand that more information is continually being made available by the Town and others, and we may provide further input as the consideration of a new Public Works facility continues. Again, it is the Green Committee's hope that the information following this cover letter will be of assistance to you in finding a more appropriate site or sites.

Thank you for considering our comments on these important issues for the Town of Hebron. We appreciate the good work you do for our Town to do what is best for Hebron.

Sincerely,
The Hebron Green Committee

GROUNDWATER

As an environmental committee of the town, it is probably no surprise that protecting groundwater, a finite resource, is a priority and the first thing we would like to discuss.

The groundwater at and around 17 Kinney Road is classified as "GA"[1] and the site is characterized by high groundwater.[2] According to DEEP's water quality regulations,[3] it is the policy of DEEP to maintain or restore all groundwater in such areas to its natural quality.[4] The "GA" groundwater classification is for groundwater within the area of existing private water supply wells or an area with the potential to provide water to public or private water supply wells. DEEP presumes that groundwater in such an area is, at a minimum, suitable for drinking or other domestic uses without treatment.[5]

As proposed, the activities that are currently carried out by the Public Works' staff at Old Colchester Road will continue on the Kinney Road site. These activities may include, but are not limited to:

- Storage of salt and calcium chloride
- Installation and use of oil water separator
- Vehicle and equipment wash bay
- Vehicle maintenance
- Stormwater discharges
- Above ground fuel storage
- Oil/hydraulic fluid storage
- Flammable liquids
- Fuel station
- Fluids for vehicle and equipment maintenance (e.g., antifreeze, oil)
- Pesticides / herbicides
- Road construction materials and substances
- Paint and paint solvents
- By-products of welding[6]

While any of the above noted activities, chemicals, solvents, or refined liquid fuels can adversely impact the GA-classified groundwater in this area, salt in groundwater can be difficult, if not impossible to remove. Salt dissolves easily with precipitation and moves freely through soil to groundwater and can persist for a long time.[7] In high enough concentrations, salt in drinking water can corrode pipes, pumps and fixtures and release metal ions (such as lead and copper) into the water. Salt in drinking water can also worsen health conditions, such as hypertension (even with low concentrations) and kill plants when such water is used to water lawns and gardens.[8]

As we certainly all know, we live in an area of the country where snow and ice are a yearly occurrence and effective alternatives to the use of road salt that are both safe and cost effective are currently unavailable. And even though the construction of a new Public Works' facility must, according to law and issued permits, comply with Best Management Practices (BMPs), they cannot prevent accidental spills, mistakes, negligent maintenance and use of storage areas, improper handling or mishandling of salt, the failure to follow proscribed procedure, and the consequences of extreme weather.[9]

In addition to the salt shed, there are two other possible ways that salt can reach Hebron's groundwater. First, there is the salt that would be placed on roads (for the Kinney Road site, this would be Horton Boulevard and its extension to Kinney Road) during weather events, creating a new conduit for salt to enter the wetlands and groundwater in the area.[10] The second is the use, maintenance, and washing of trucks after snow removal or de-icing procedures, which can generate saline water or can spill salt that can run off into the environment.[11] We understand there are Best Management Practices (BMPs) in place to combat some of these issues, but adding more surfaces (e.g., the extension from Horton Boulevard to Kinney Road) adds additional surface area for runoff and BMPs only work when the best management practices are strictly followed and there is no intervening accident, mistake, or negligence.

It is generally accepted that groundwater moves in the same direction as the topography above it. Activity upland of drinking water wells, can affect wells that are downhill.[12] Since the topography at the proposed site is upland from drinking water wells and potential future drinking water wells, if salt or other toxins from the proposed site leach into the groundwater, existing and future drinking water wells may be affected.[13] Another factor to the movement of groundwater is fractures in bedrock. Fractures underlie the Kinney Road site.[14] Fractures present a unique problem in locating and controlling contaminants because they are generally randomly spaced and do not follow the contours of the land surface or the hydraulic gradient.[15]

The Committee understands that a considerable amount of Hebron sits on top of "GA" groundwater and, therefore, the facts set forth above apply equally to other locations. No location is perfect, but serious consideration should be given to locating the highest risk activities in an area where the groundwater has already been impaired, such as on property designated as "GA-may not meet current standards." The groundwater at the existing Public Works facility site is so designated[16] and we discuss this site more fully below.

Now, more than ever as the impacts of climate change become more frequent and more severe, we need to work together to protect Hebron's drinking water supplies. We are fortunate that in adopting

the existing POCD, the Planning and Zoning Commission already anticipated the need to plan for and guide town action in the face of this reality.[17]

Only a few years ago, in May 2018, the largest well that provides most of the water to the Hebron Center and the Mill Stonecroft system, unexpectedly had an insufficient amount of water.[18] By June 2018, the Commissioner of Public Health declared a public drinking water supply emergency in the Town Center and shortly after, Connecticut Water placed a water ban on outdoor water usage.[19] It wasn't until December of that year that the ban was lifted due to a new connection near Country Manor on Wall Street and a new water source on Wall Street.[20] Fortunately, a water supply, drinkable without treatment, was available from the Country Manor system until the new water source was installed.[21]

More recently, droughts have affected water supply.[22] Due to climate change, drought conditions are predicted to occur with increasing frequency.[23] There should be no doubt, that our potable drinking water supplies need to be protected.

EXISTING DEPARTMENT OF PUBLIC WORKS FACILITY

For many years, the Town of Hebron has recognized the need for better working conditions for Public Works' employees and the need for facility improvements for the Town's public works' functions.[24] Located at 550 Old Colchester Road, the current facility has multiple physical and functional issues.[25]

What makes this site unique from others in our town is unlike most of the groundwater in Hebron, the groundwater below the existing site is considered impaired such that it may need treatment to be drinkable.[26] We recognize that the existing site may not meet the space needs for a new DPW facility and poses challenges of its own. Due to the current groundwater designation from activities already on the property, such as the closed landfill, however, this site is a better alternative for the higher risk DPW activities as outlined in the 'Groundwater' section above, such as salt storage, chemical and fuel storage/ distribution, vehicle washing, and housing road maintenance materials.

While researching alternative solutions and long term effects of salt storage, including Hebron's own facilities, we learned that the existing salt sheds have never been inspected by DEEP[27] and that the town is not currently in compliance with parts of the Town's Municipal Separate Stormwater System Permit (MS4 Permit).[28] It posed a challenge for us when determining potential long term consequences of a new site, as there is no up-to-date information to use for comparison within Hebron. This information would be helpful as a predictor for what risks operations might hold, and what

practices of mitigation have been successful. We also learned from last week's Town Management Report, that DEEP is soon to be inspecting facilities in Hebron, and are hoping that it will provide some baseline indicators of current facilities so we can better gauge long-term effects. We understand that the proposed facility on Kinney will be vastly different than the facilities we currently have, but as we mentioned in the 'Groundwater' section, salt is an extremely dissolvable substance that has the ability to go where it is not wanted no matter how guarded.

PLAN OF CONSERVATION AND DEVELOPMENT

The Hebron Plan of Conservation and Development (POCD) recognizes the importance of protecting our water supplies.[29] The POCD discusses the "[p]reservation and protection of Hebron's finite ground water resources and their recharge areas" as a Town goal.[30] This aligns with DEEP's direction that "[p]reventing contamination is the single most effective way to protect our groundwater supplies."[31] And though it is our understanding that our POCD is a guidance document, it was written to be a roadmap to follow for guiding future land use decisions.[32]

Hebron's Plan of Conservation and Development also states:

- "One of Hebron's most important resources is its underground drinking water supply. … [A]ll of Hebron's population depends on its underground water supply for its drinking water."[33]
- "Stratified drift aquifers are the most productive sources of groundwater and experts in the field see these as the State's most likely source of future drinking water supplies. As such, these areas should be protected from all sources of contamination."[34]
- Objective: "[T]he Town relies entirely on private and small community wells tapping primarily low yielding bedrock aquifers. Land use types and densities should be compatible with the need to protect these on-site water supplies."[35]
- Objective: "Protect important existing and potential water supply aquifers from land uses that pose high water quality risk."[36]
- Goal: Re the Town Center – supports a sound commercial district that "does not adversely affect water supplies."[37]

These statements are more than wishful thinking. They are to be considered in all land use decision-making.[38] As members of a town board and committee making land use decisions, we encourage you (and the Planning and Zoning Commission) to consider all relevant POCD provisions. As noted in the Plan itself, the "Plan is designed to be a working tool for those who will use it – the Town boards and commissions that establish Town land-use policies and procedures."[39] According to the POCD, "[o]ur purpose is to provide both a vision and a pragmatic road map that will be used on an ongoing

basis to guide the future of our town."[40] This Plan, consistent with § 8-23 of the Connecticut General Statutes, recognizes Hebron's dependence on pristine groundwater and the need to make land use decisions consistent with its protection and preservation.[41] The fact that the POCD talks about the Public Works Facility does not mean the other applicable sections of the POCD can be ignored.

ALTERNATIVES AND SOLUTIONS

As a committee, who likely spends more time down at the current DPW facility than most, we know firsthand how dire the need for a new facility is. We also acknowledge the dedication it is taking, especially by the Building Committee, to find an appropriate place for the much-needed DPW facility or facilities, and the difficulty of pivoting away from the Kinney Road site when so much time, effort, and funding has already gone into the exploration of this site. Thankfully, it appears that alternatives exist that have a corresponding reduced risk of adverse or potentially adverse environmental impacts. We only have one shot at finding the best site or sites for a new DPW facility/facilities while minimizing environmental impacts. With your leadership, the Town has the opportunity to get this right.

The Green Committee understands that needs or wants can evolve over time, especially when a project is considered for so long, but it would be good environmental practice to consider sharing space (e.g., conference rooms and kitchen and any unused office and garage space at the Town facility at Burnt Hill Park), reducing square footage demands, or both. In fact the Public Building Committee had suggested that "the Town consider locating the "off Season" Storage, the Fueling Station and the Salt Storage at the current Old Colchester Road location. The Offices, and Equipment Garage could then be located adjacent to the current Parks and Rec facilities at Burnt Hill Park."[42] And, as has been observed, the "Town would be best served by locating the DPW at both Burnt Hill Park and Old Colchester Road."[43] Consideration to building the administrative spaces up instead of out (consistent with the height limitations in zoning regulations and the Town's rural character and the reality of firefighting)[44] will reduce the building's footprint while also reducing the potential noise pollution[45] in the currently undeveloped Kinney location. It would also preserve more open space among other benefits.[46]

Regardless of the future re-orientation of the buildings at the Old Colchester Road site, we recognize that the same potential for environmental problems would exist there as they would exist at any other site in Town. However, the Old Colchester Road site is already, undoubtedly impacted by existing and past operations, including the old landfill. While no amount of pollution is acceptable, it is *much better* to minimize the number of potentially impacted sites in town. While not many impacted sites exist in Hebron, there are at least three that could be considered for the riskier Public Works' operations and functions.[47]

1. http://cteco.uconn.edu/maps/town/wtrqualcl/WtrQualCl_Hebron.pdf.
2. Responses to Public Comments Received at the Public Building Meeting on September 19, 2022.
3. §§ 22a-471-1 et seq. Regulations of Connecticut State Agencies (RCSA).
4. § 22a-426-7 RCSA. See also https://www.epa.gov/sites/default/files/2014-12/documents/ctwqs.pdf at page 26.
5. https://portal.ct.gov/-/media/DEEP/water/water_quality_standards/wqspdf.pdf page 27. With regard to the subject watershed, see Department of Economic and Community Development Infrastructure Real Estate Projects Environmental Assessment [Hebron] Project ID No: #306 "Hebron is currently undertaking a Town Center Stormwater Management Study (draft 10/03) which states the Town has recognized that the "Town Center area is located in an environmentally significant position in the upper Raymond Brook watershed and that future expansion of its business district must incorporate wise land use and environmental planning to prevent increased flooding, remedy existing stream channel degradation problems and insure the future protection of the watersheds[,] wetland[s] and water resources."
6. See Hebron Public Building Committee's "Evaluation, Study and Recommendation 2011 – 2021 Department of Public Works / Municipal Office Complex" presentation (hereinafter "Presentation") pages 49, 50, 73, 98, 100, 101, 102, 104, 117, 118, 139, 141, 174, 181, 182, and 185.
7. "Once road salt dissolves in ground water, it can travel great distances and is very difficult, if not impossible, to remove from the ground water." Letter from William Warzecha, retired DEEP hydrologist. See also the Connecticut Water Quality Standards: https://portal.ct.gov/-/media/DEEP/water/water_quality_standards/wqspdf.pdf at page 26. See also Department of Public Health Sodium and Chloride in Well Water: Health Considerations, https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/environmental_health/private_wells/Sodium--Chloride-FS-sept-2018-update.pdf.
8. https://portal.ct.gov/-media/DEEP/aquifer_protection/groundwater/ProtectingConnecticutsGroudwaterMainSectionspdf.pdf p. 31. See also Department of Public Health Sodium and Chloride in Well Water: Health Considerations. Consider also that because groundwater moves downward, where it reaches the surface, it can discharge into wetlands and other surface waters, affecting their health. See https://portal.ct.gov/-/media/DEEP/aquifer_protection/groundwater/ProtectingConnecticutsGroundwaterMainSectionspdf.pdf https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-020-00202-y
It follows, therefore, that if contaminants at toxic concentrations move into the groundwater, vegetation in these areas and wildlife that rely on wetlands and other surface waters can be adversely impacted.
9. Id.; 9/29/2022 Letter from Graham Stevens, DEEP Bureau Chief Water Protection & Land Reuse, to Thomas Fenton of Nathan L. Jacobson & Associates (risks can be minimized using BMPs and proper site design, but not eliminated – the potential remains). See also the Consent Order issued to CTDOT for, among other things, discharging approximately 1,500 gallons of liquid calcium chloride solution from the storage tank to surface water as an example of contamination resulting notwithstanding regulations and permit requirements. https://portal.ct.gov/-/media/deep/enforcement/consentorder/COWRIN11001.pdf.
10. See 9/29/2022 Letter from Graham Stevens, DEEP Bureau Chief Water Protection & Land Reuse, to Thomas Fenton of Nathan L. Jacobson & Associates noting salt applied to walkways, driveway, and parking lots can impact drinking water.
11. USGS, Methods for Evaluating Potential Sources of Chloride in Surface Waters and Groundwaters of the Conterminous United States, p. 18.
12. https://portal.ct.gov/-media/DEEP/aquifer_protection/groundwater/ProtectingConnecticutsGroundwaterMainSectionspdf.pdf pp. 14-15. See also Basic Groundwater Hydrology, page 20, U.S. Department of Interior U.S. Geological Survey, Water Supply Survey 2220 https://pubs.usgs.gov/wsp/2220/report.pdf.
13. See topo map at http://cteco.uconn.edu/maps/town/Contour_Map/Contour_Map_South_Hebron.pdf; POCD p. 31: "the great majority of the land area of Hebron drains to the south and to the west."
14. See maps showing the fractures in the following reports: Mapleridge Farm Affordable Housing Development, Hebron, Connecticut, September 1992, Eastern Connecticut Environmental Review Team Report; CBD Update and Proposed Business Expansion Area, Environmental Review Team Report, Prepared by the Eastern Connecticut Environmental Review Team of Eastern Connecticut, Resource Conservation and Development Area, Inc. for the Conservation Commission and Economic Development Commission, Hebron Connecticut, June 2000
15. https://www.epa.gov/sites/default/files/2015-08/documents/mgwc-gwc1.pdf, p. C-2.
16. Other impaired groundwater exists in Town. See http://cteco.uconn.edu/maps/town/wtrqualcl/WtrQualCl_Hebron.pdf.
17. See POCD at 27-30.
18. See Connecticut Department of Public Health Declaration and Order paragraph numbered 4.
19. Id. at paragraph numbered 5.
20. https://hebronct.com/2018/12/ct-water-update-december-14-2018/.
21. See Connecticut Department of Public Health Declaration and Order paragraphs numbered 6 and 7.
22. "State of Connecticut Drought Working Group Declares Stage 2 Drought Conditions Exist in All Eight Counties," July 14, 2022; The Office of the Governor, "Governor Lamont Declares Stage 3 Drought Conditions for New London and Windham Counties," 08/18/2022; "State of Water in Connecticut – UConn Today, September 20, 2022 (drought conditions are going to continue to get worse (p.2) "the drought that we have this summer, people's wells have been running dry. Extended droughts have a real impact on people around here if they have shallow

wells because groundwater levels drop in these really dry conditions." p. 3). According to DEEP, as of July 2022, Tolland County experienced 64% of normal precipitation. By that same time in Tolland County, relative to groundwater levels, 10 out of 12 USGS monitoring wells were below normal. 58% of USGS groundwater stations were below the Stage 2 drought level. ("Drought Conditions Report, July 13, 2022, Connecticut Water Planning Council Interagency Drought Workgroup" computer pp 3, 15).

23. See https://www.epa.gov/climatechange-science/impacts-climate-change
24. See 2003 Town Facility Needs Study; 6/16/11 BOS Meeting Minutes.
25. See the following for just some of the descriptions of working conditions: "Municipal Facilities Study" (June 24, 2010); email to A. Tierney from union representative attached to 10/6/22 BOS Meeting Agenda; Presentation at computer pages 94-103; 10/17/13 BOS Meeting Minutes, W. Warwick: "DPW building is dangerous as it is now"; 9/15/16 BOS Meeting Minutes, D. Larson – existing PW location is a "safety hazard"; 11/4/21 BOS Meeting Minutes "[the current DPW facility] needs to be updated for safety reasons, regardless of decision on new site location."
26. http://cteco.uconn.edu/maps/town/wtrqualcl/WtrQualCl_Hebron.pdf.
27. Email from Chris Stone, PE, DEEP Stormwater Section, to Denise Rodosevich: "As for Hebron, I looked back through our inspection records and we have no record of the salt shed having ever been inspected under MS4 or industrial permits. I haven't been there and I asked our current stormwater folks who also haven't been there. I also checked our dearly departed (retired) Donna's files and didn't find anything there, either."
28. See DEEP Desk Audit dated December 1, 2022. The Town's Engineer responded to the Audit re the areas of noncompliance. See 12/12/2022 Memorandum from Tom Wade, Nathan L. Jacobson & Associates, to Nicole Kibbe, of DEEP's Water Permitting and Enforcement Division.
29. Generally, see POCD.
30. Id. at 29.
31. https://portal.ct.gov/-/media/DEEP/aquifer_protection/groundwater/ProtectingConnecticutsGroundwaterMainSectionspdf.pdf
32. POCD at IX
33. POCD at 27.
34. Id.
35. Id.
36. Id.
37. Id. at 95.
38. Note that the Town's Sustainable CT Application, worked on collaboratively by Green Committee Chair, Kaitlin Hershey and former Hebron Town Planner, Michael O'Leary, (which resulted in the Town obtaining a Bronze Certification award) specifically calls out and relied on the following sections of the POCD to demonstrate its prioritization of resources for protection when making land-use decisions: Underground Drinking Water Supplies; Map 2, Aquifer Areas; Stream Corridors, Bodies of Water and Wetland Soils; Amston Lake; Agriculture; Wildlife, Plant Life, and Other Significant Natural Features; and Recreation.
39. POCD at i.
40. Id.
41. § 8-23 CGS: plans of conservation and development must consider the need for protecting existing and potential public surface and ground drinking water supplies.
42. BOS meeting minutes 10/17/13.
43. Id.
44. It is noted that during the time between the Preliminary Program Draft #1 (11/5/12) and the Building and Site Program (1/28/13), while the "ask" for some spaces decreased, the total space programed increased by 1,142 square feet with the "ask" for Equipment Storage increasing by 2,840 square feet. See Attachments D and E to the Presentation.
45. See https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-020-00202-y
46. Constructing in this manner is also encouraged by the POCD. See POCD page 23: need to efficiently use land – create the smallest possible ecological footprint; POCD Goal at 26: "to grow the community in a manner that is as close to "sustainable" as practical, given its small Town and rural character, and to achieve a minimal impact on the environment from land development, energy use, waste and recycling practices, and other human activities."]
47. http://cteco.uconn.edu/maps/town/wtrqualcl/WtrQualCl_Hebron.pdf.