

J. Raymond Miyares
Thomas J. Harrington
Christopher H. Heep
Donna M. Brewer

Jennie M. Merrill
Jonathan E. Simpson
Ivria Glass Fried
Eric Reustle
Blake Mensing

April 24, 2015

Massachusetts Department of Environmental Protection
Northeast Region
Drinking Water Program
205B Lowell Street
Wilmington, MA 01887

**Re: Lifetime Green Homes 40B Comprehensive Permit
100 Long Ridge Road, Carlisle MA
Application: Public Water Supply Designation**

Dear Mr. Persky,

I am Town Counsel in the Town of Carlisle, and am writing on behalf of its Board of Health. The Board of Health respectfully requests that the Massachusetts Department of Environmental Protection ("MassDEP") determine, in writing, that the twenty (20) unit housing development that Lifetime Green Homes, LLC has proposed at 100 Long Ridge Road must be served by a public water system. As currently designed, the project includes twenty (20) freestanding single-family homes containing a total of fifty-four (54) bedrooms. All twenty (20) houses are to be located on a single 9.84-acre lot, and are to be owned as condominium units. Sheets of the current site plan showing the units, the proposed wells and septic system locations, are attached as "Exhibit A."

This project presents a public water system. 310 CMR 22.02 defines "public water system" as:

a system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year... The Department reserves the right to evaluate and determine whether two or more wells located on commonly owned property, that individually may serve less than 25 people, but collectively serve more than 25 people for more than 60 days of the year should not be regulated as a public water system, taking into account the risk to public health.

(emphasis added).

Massachusetts Department of Environmental Protection

April 24, 2015

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Notwithstanding the foregoing, project proponent Jeffrey Brem of Lifetime Green Homes, LLC (the "applicant") proposes to serve these twenty (20) dwellings with eleven (11) private drinking water wells and one (1) additional irrigation well. Mr. Brem has assumed for purposes of project design that MassDEP will grant a waiver from public water system status, and allow him to construct this system of multiple private wells. To be clear: This project, as the applicant has designed it, cannot provide a public water supply. Based on the number and layout of the proposed dwellings, and the size of the lot, the applicant has left itself no room to provide the required Zone I. Accordingly, the feasibility of the applicant's project turns entirely on the question of whether MassDEP will allow him to avoid regulation as a public water system.

This Town's Zoning Board of Appeals is currently conducting a public hearing on the application for a comprehensive permit pursuant to M.G.L. c.40B §§20-23. This public hearing opened in July 2014, and is currently scheduled to close in late June 2015; a final written decision is not expected to be filed earlier than August 2015.

The Board believes that this project is properly characterized as a public water system, and must be regulated as such. The Board presented the reasons for this position in the letter to MassDEP dated November 14, 2014, and wishes to reiterate everything contained in that letter. A copy of this letter is attached for reference as "Exhibit B." In response to this letter, MassDEP met with me, representatives of the Board and Mr. Brem on November 17, 2014. The Board expressed concern that delaying a determination on the water supply could lead directly to a situation where the ZBA might be required to issue a comprehensive permit for a project that could not actually be built. In response, MassDEP took the position that it was premature for it to classify the water supply system and, more specifically, that it would not make a determination on public water supply status until all local permitting was complete and condominium documents had been recorded with the registry of deeds.

Since that November 2014 meeting, the applicant has not made any meaningful project changes with respect to density, the number of proposed private drinking water wells, or the size and location of its septic systems.

* * * * *

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The Board now wishes to bring to your attention the MassDEP's "2014 Annual Notice to Local Boards of Health," dated June 16, 2014. This guidance document states, in pertinent part, as follows:

Condominium Developments and Public Water Systems

Please be aware that some types of construction, such as residential or business condominium developments, which propose to use two or more wells to serve the on-site facilities so that each well serves less than 25 persons per day, may still be considered PWSs. With an increase in development throughout the state, these cases may come before the BOHs as private well proposals. In these cases, the applicant should be referred to MassDEP for a written determination of public or private water system status during the design phase, and/or prior to the issuance of local permits. This information should be communicated to your local planning office, planning board, building inspector's office, and to the applicant as it could substantially change the outcome of the project.

MassDEP 2014 Annual Notice to Local Boards of Health, dated June 16, 2014, p. 6 (emphasis added) ("Exhibit C"). As expressed in both the Board's November 14 letter and MassDEP's own guidance, it is extremely important for MassDEP to make this determination prior to the issuance of local permits because its decision "could substantially change the outcome of the project." *Id.*

The Town, Mr. Brem and abutters have devoted substantial amounts of time and money on consultants, attorneys and engineering and hydrogeological studies concerning this project. There is a significant amount of work that remains to be done: The ZBA continues to press the applicant for plan revisions (on subjects other than water supply, which it recognizes is a MassDEP decision), hydrogeological studies remain underway, and it is apparent that additional review and hearings will be necessary before the ZBA will issue any decision. The applicant has stated that it does not intend to seek Board of Health permitting for its septic systems until after the ZBA proceedings have concluded. Permit drafting and review of the applicant's condominium documents will also take a significant amount of time, such that it may be another eight months before MassDEP even has the information it has suggested it will need in order to begin its review of this proposed water supply.

As noted above, all documents, plans and studies that the applicant has submitted to the Town are based on its assumption that MassDEP will decline to treat this as a public water system. If MassDEP adheres—as it should—to its earlier informal opinion that the project should not be granted a waiver to allow the construction of private wells virtually all of this effort (much of it conducted by all-volunteer boards) and money will have been wasted. Mr. Brem will be required to

Miyares and Harrington LLP

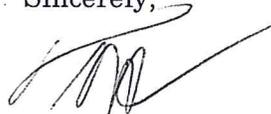
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redesign the project in order to comply with the requirements for public water suppliers, triggering the need for additional studies, tests, and hearings. This will only result in added costs and expenses. Although MassDEP noted during the November meeting that Mr. Brem bears the risk of continuing with the project as proposed, the Town is clearly impacted by MassDEP's refusal to issue a determination. In light of the fact that MassDEP has already suggested—consistent with the plain definition of the term—that public water supply status is appropriate, it should make this determination now. The Board notes that the applicant should have designed for provision of a public water system in the first place, and should not be allowed to proceed further on the unfounded assumption that a private water system is acceptable.

The Board does not oppose this project as a whole, but believes that this project must be characterized as a public water supply. Given the drinking water demands of the twenty proposed (condominium) single-family houses, the close proximity to both the on-lot septic systems and the abutter's nearby drinking water wells, this project presents a clear and present risk to public health, and the applicant should not be allowed to avoid proper classification as a public water system. Most importantly, for present purposes, is that it is in the best interest of every party involved in this process to have MassDEP make this determination now, lest the applicant and the Town's permitting boards continue to devote their time, energy and money on a project that is, on its face, not feasible.

Accordingly, the Board of Health respectfully requests that MassDEP—in accordance with its own 2014 Annual Notice to Local Boards of Health—immediately issue a written determination of public water supply status for this project.

Sincerely,

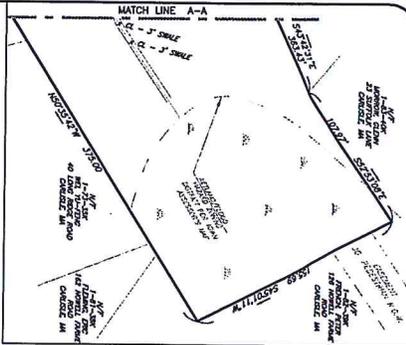


Thomas J. Harrington

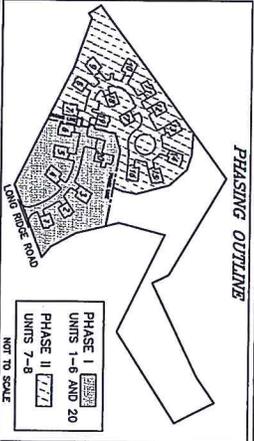
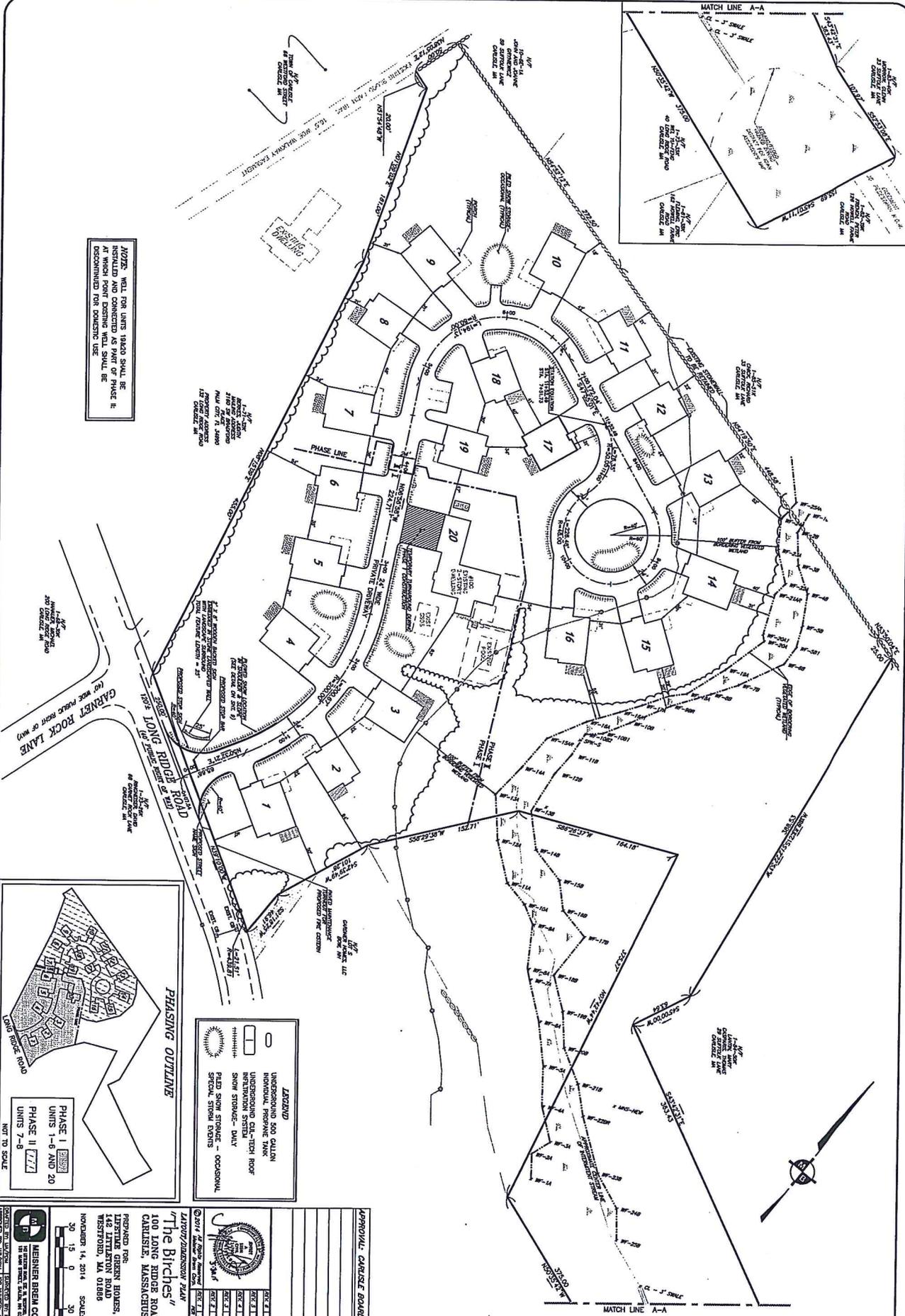
Encl.

cc: Cory Atkins
Michael J. Barrett
Board of Health
Board of Selectmen
T. Goddard
Zoning Board of Appeals
Conservation Commission
D. Deschenes
J. Brem

EXHIBIT A



NOTES: WELL FOR UNITS 19&20 SHALL BE INSTALLED AND CONNECTED AS PART OF PHASE II AT WHICH POINT DRINKING WELL SHALL BE DISCONTINUED FOR DOMESTIC USE



SYMBOL	DESCRIPTION
[Symbol]	LANDSCAPING
[Symbol]	UNDERGROUND 200 GALLON RAINWATER STORAGE TANK
[Symbol]	UNDERGROUND 500-GAL. TECH. ROOF WATER STORAGE TANK
[Symbol]	SHOW STORAGE - DAILY
[Symbol]	SPECIAL STORAGE - OCCASIONAL

APPROVAL: CAROLINE BOARD OF APPEALS

© 2014 MEINER BREM CORPORATION

PREPARED FOR: LITVINE GREEN HOMES, LLC

100 LONG RIDGE ROAD, GARLISSE, MASSACHUSETTS

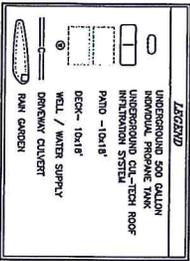
NOVEMBER 14, 2014 SCALE 1" = 30'

MEINER BREM CORPORATION

100 LONG RIDGE ROAD, GARLISSE, MASSACHUSETTS

NOVEMBER 14, 2014 SCALE 1" = 30'

4 of 11



LEGEND

- UNDERGROUND GAS DUCT
- UNDERGROUND PROpane TANK
- UNDERGROUND IRRIGATION SYSTEM
- DECK - 10x18'
- WELL / WATER SUPPLY
- DRIVEWAY/CULVERT
- RAIN GARDEN

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- NOTES**
1. CHECK ASHBY 20, 22, 24, AND 26
 2. CHECK STORMWATER BARRIERS
 3. CHECK STORMWATER BARRIERS FOR SET BACKS ON SHT 9
 4. SEE SHEET 600 FOR UNDERGROUND LOCATIONS

APPROVAL: CARLISLE BOARD OF APPEALS

DESIGNED BY: MEISNER BREN CORPORATION
PROJECT: 100 LONG RIDGE ROAD
CLIENT: CARLISLE, MASSACHUSETTS

DATE: NOVEMBER 14, 2014
SCALE: 1" = 30'

MEISNER BREN CORPORATION
 100 LONG RIDGE ROAD
 CARLISLE, MA 01830
 TEL: 978.232.1111
 FAX: 978.232.1112
 WWW.MEISNERBREN.COM

5411

EXHIBIT B

J. Raymond Miyares
Thomas J. Harrington
Christopher H. Heep
Donna M. Brewer

Jennie M. Merrill
Jonathan E. Simpson
Magdalene K. Carter
Ivria Glass Fried
Eric Reustle

November 14, 2014

Massachusetts Department of Environmental Protection
Northeast Region
Drinking Water Program
205B Lowell Street
Wilmington, MA 01887

**Re: Lifetime Green Homes 40B Comprehensive Permit Application:
Water Supply Concerns**

Dear Mr. Persky,

I am Town Counsel in Carlisle and I submit this letter to you on my behalf and on behalf of the Board of Health.

The intention of the Board of Health is to ensure adequate protection of groundwater resources, the provision of clean drinking water, and continuity of service for residents in a town that has no back up municipal wastewater or drinking water supply. The Board does not intend to obstruct the development of the Lifetime Green Homes project.

It appears to the Board that the only purpose in designing nine private well locations is to circumvent classification of the drinking water system for this property as a public water supply. It is the Board's position that the operation of nine private water supplies at this property creates heightened risks of water service disruption and, considering the location of the property, inadequate monitoring for drinking water contamination. Additionally, the Board does not believe that legal remedies can adequately address the problems that may arise as a result of the number of proposed residential wells and the proximity of those wells to wells and septic systems owned by abutters.

The Massachusetts Department of Environmental Protection (MassDEP) regulations related to classification of water supplies expressly state that MassDEP "reserves the right to evaluate and determine whether two or more wells located on commonly owned property, that individually serve less than 25 people, but collectively serve more than 25 people for more than 60 days of the year should not be regulated as a public water system, taking into account the risk to public health." 310 CMR 22.02.

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The following comments are submitted in an effort to see that the project's water supply is classified in a manner that appropriately considers the risk to public health posed by the proposed system. The Board strongly believes that the project should be classified as a Public Water Supply regulated under 310 CMR 22.00 and that no waivers should be granted for the construction of private wells.

Protection of Drinking Water

Density - The proposed development, submitted under a 40B Comprehensive Permit Application, consists of 19 new and 1 existing single-family house at 100 Long Ridge Road, Carlisle MA. With three bedrooms per new unit and four in the existing house, the project has the potential for housing a total of 122 residents. As currently proposed, the project includes three soil absorption systems (required design flow of 6,710 gallons per day) and nine private household wells on 9.84 acres of land. The project will also require a well to supply the 30,000-gallon fire cistern and an irrigation well for a total of eleven wells, ten of which would be new wells as one well already serves the existing house.

The land area supporting the proposed wells is limited as all of the nearby and adjacent properties are also served by onsite wells and private sewage disposal systems. The project is also self-limiting in that the build out has maximized the use of all of the land area available for building and waste disposal. The project's wastewater design flows exceed the Title 5 Nitrogen Loading Limitation (440 gpd/acre) and require the approval of a Community Aggregation Plan and nitrogen credits from an adjacent lot. 310 CMR §§ 15.214 and 15.216. No such plans have been submitted for approval at this time.

Following recent natural disasters, it has been the Board of Health's experience that an interruption in water supply even for a short period poses a significant health risk to residents. Not only are residents deprived of drinking water, but interruptions also interfere with waste disposal as toilets need water to flush. Consequently, any interruption of water supply for even a small number of households poses a significant health risk to Carlisle's residents.

Because Carlisle is 100% wells and septic systems National Grid prioritizes power restoration for the community following a storm. Despite being prioritized, water systems without backup power or backup water supplies can still be disabled for substantial amounts of time following storms and other events. Private wells are not required to have backup power or water supplies. See Massachusetts Department of Environmental Protection, Private Well Guidelines. Public Water Supplies, on the other hand, are required to have an emergency supply of water available and a backup power supply pursuant to 310 CMR 22.04.

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Given the density of the project, management of wastewater and protection of drinking water are the two most important considerations for the Board of Health since the Town of Carlisle has no backup town water or municipal sewerage facility.

Hydraulic Connectivity – The project wells will obtain their water from bedrock fractures. This is also true of the abutting wells. The existing soil information deals only with the overburden not the bedrock. Additional information is needed to determine whether the onsite wells are hydraulically connected. If the project wells are hydraulically connected, they should be treated as one system and classified as a Public Water Supply. The Board believes that it may be more economically feasible for the developer to install one or two community wells and possibly include the existing onsite well at 100 Long Ridge Road than to drill ten new wells.

Water quality is a concern in Carlisle. Many wells have high levels of iron and manganese that require filtration. According to Board of Health records, one-third of the properties near the project area exceed the Maximum Contaminant Level (MCL) for Iron and Manganese with a potential for needing filtration. Manganese in drinking water is getting special attention due to concerns about potential health risks especially in infants and young children. MassDEP, Manganese Monitoring Notice to Public Water Suppliers; see also References: Manganese in Drinking Water (and studies cited therein).¹ Arsenic is also a problem for Long Ridge Road, which was identified by the United States Geological Survey (USGS) and MassDEP as an area having the potential for high levels of arsenic in private water supplies based on levels of naturally occurring arsenic in the bedrock. Colman, J.A., 2011, Arsenic and Uranium in Water from Private Wells Completed in Bedrock of East-Central Massachusetts – Concentrations, Correlations with Bedrock Units, and Estimated Probability Maps²; MassDEP, Probability of Exceeding Arsenic Levels in Private Drinking Water Wells in Massachusetts.³ These levels may require some type of filtration or treatment. A Public Water Supply would have a single filtration and treatment system maintained and operated by a Certified Well Operator, and testing would be required on a regular basis. 310 CMR §§22.06(6) and 22.11B. There is no assurance that private wells would be tested on a regular basis. Households may be unaware that there is a problem with the well until someone becomes ill.

Backwash Discharge - The impact of discharging filtration system backwash from nine private household wells into the ground is another groundwater pollutant to consider for the project. Title 5 prohibits the discharge of backwash from filtration

¹ Available at <http://www.mass.gov/eea/agencies/massdep/water/drinking/lead-and-other-contaminants-in-drinking-water.html#9>

² Available at <http://pubs.usgs.gov/sir/2011/5013/>

³ Available at <http://www.mass.gov/eea/docs/dep/water/drinking/au/potential-state-ar.pdf>

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systems into the septic system. 310 CMR 15.004(8). Separate drywells are required. Drywells have specific setbacks to leaching areas and should not be located close to another drinking water well. In addition to introducing chemically treated water back into the ground, the geometry of siting these drywells could be problematic.

Legal and Financial Responsibilities – If the water system is classified as a Public Water Supply, the Condominium Association will own the system providing direct responsibility for operation, maintenance and replacement. If the system is classified as nine private wells, responsibilities between the various owners may be ambiguous and decisions arbitrary. Questions may arise on collecting and holding financial reserves for repair and maintenance, who will manage the funds, and the ability to replace a failed well in another location. At Whitney Farms in Sherborn, there was one well per unit. There was a direct one to one responsibility of owner to well. This is not the proposal for Lifetime Green Homes and the shared wells concept.

Operation and Maintenance - This will be one of the most difficult issues to overcome. The present proposal is for a single well to serve two or three households, a/k/a shared well. The wells would be privately owned, operated and maintained under some type of recorded document. It is difficult to understand how any legal document can overcome all of the potential situations that might arise from a shared well. For example, a single unit will be responsible for paying for the electrical service for operating the well pump possibly causing a financial hardship. How will this be resolved? What happens if owner A wants to treat the water but owner B refuses, who decides? What happens if a repair is needed but owners do not agree on cost, contractor, or schedule? What financial remedies will be available to the Association if individual owners refuse to maintain a shared well? Some residents are very careful about their water usage while others think nothing of prolonged water use and waste.

Cost - At an average cost of \$10,000 per single well installation, it is unlikely that the designation of a Public Water Supply would exceed the cost of ten new wells.

Well Testing Protocol – The Board firmly believes that an extended testing protocol of all onsite and abutting wells within 500' of the property is required. The Board would like to see a 48-hour pump test during which time abutting wells will be monitored.⁴ It is important that the testing of the wells takes into account the casing storage. This is the water that sits in the well column and is available for immediate pumping. If the well is very deep this can amount to a large volume of

⁴ Coventry Woods, a forty-one unit Chapter 40B development that was permitted but never constructed, was required to place transducers in abutting wells to track water levels for seven days prior, during the pump test of the new wells, and seven days post in order to evaluate impacts.

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water and complicate the interpretation of well yield. The recovery rate is also important in determining well yield.

Another concern is that Long Ridge will be a phased development. If individual wells are added one at a time, it will not be possible to obtain a complete picture of possible impacts to abutters' wells.

Generators – A Public Water Supply is required to have a generator. 310 CMR 22.04. This is not true of private wells. Given the proximity of the households in the project, it is unlikely that a power loss would only affect a limited number of units. More likely, all of the 20 households will be affected during a power outage. Given the concerns discussed above, the Board strongly believes that a backup power supply is a necessity in this situation to protect public health. Neither the risk of a power outage, nor any mitigation strategy, is mentioned in the legal documents submitted.

Protective Radius – The only setbacks required for a private well in Carlisle are 25' from the property line and any setbacks provided under Title 5. See Carlisle Water Supply Regulations, Section VI: Well Location and Use Requirements; 310 CMR 15.211. As such, there would be no protective area around the proposed wells. Driveways, structures, gardens could be constructed immediately next to a well. A Public Well Supply, on the other hand, has a required protected area ("Zone I") surrounding water supply wells in which certain activities that might harm the water quality are prohibited. See 310 CMR §§22.02 and 22.21. Underground oil tanks would be prohibited in Zone I as well as application of pesticides and herbicides. See 310 CMR 22.21(3)(b). Lifetime Green Homes is proposing underground propane tanks but has not submitted a layout plan or shown proximity to wells. Gas from a leaking tank could seep into a nearby well creating a hazard if ignited.

Conclusion

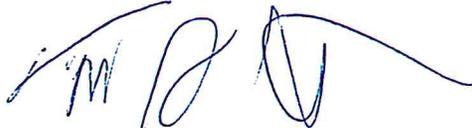
A Public Water Supply would have state site approval, a 48-hour pump test, Zone I protective radius, regular monitoring, a financial reserve account and back-up power. The system would be maintained on a regular basis by a Certified Well Operator. These steps would help to ensure that there is a safe drinking water supply for the project that is located in an area that has exhibited numerous failed septic systems and poor water quality. It would also identify any potential impacts to nearby private wells.

The Board requests that DEP classify the Lifetime Green Homes project as a Public Water Supply. To do otherwise will put the future residents, neighbors and the town disproportionately at risk and jeopardizes the health and safety of the

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individuals and the environment.

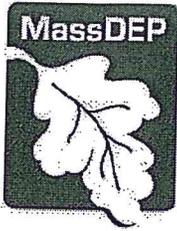
Sincerely,

A handwritten signature in blue ink, appearing to read 'M J H', with a long horizontal flourish extending to the right.

Thomas J. Harrington, Town Counsel

Cc: Board of Health
Zoning Board of Appeals
Board of Selectmen
Conservation Commission
T. Goddard
D. Deschenes

EXHIBIT C



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street, Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

RICHARD K. SULLIVAN JR.
Secretary

DAVID W. CASH
Commissioner

2014 Annual Notice to Local Boards of Health

Dear Health Agent:

June 16, 2014

The Massachusetts Department of Environmental Protection (MassDEP) Drinking Water Program (DWP) annually provides local boards of health (BOH) with information of interest and an inventory of all public water systems (PWS) in the Commonwealth for review and comment.

For your convenience, we have reorganized this mailing by topics and placed the items requiring action by you in Part I: Action Items. One of these action items requires updating your emergency contact information. Please update and return the attached emergency contact sheet (Attachment D). Your submission of this information will provide us with your emergency contact information so that we can effectively communicate with each other and our PWSs during all drinking water emergencies, especially those that occur outside of normal working hours. You may also provide us with your emergency contact information by sending an email to me at Program.Director-DWP@state.ma.us with the subject line: Emergency Contact.

If you have a drinking water emergency that occurs outside of normal working hours (evenings and weekends), you can contact MassDEP at 1-888-304-1133 (24 hrs, toll-free).

Thank you for continuing to work together with us to protect public health. If you have any problems accessing links for the DWP, or any questions on the material provided in this document, please contact the person listed in the pertinent section or call the regional contact persons listed in Attachment F on page 28

Sincerely,

Yvette DePeiza, Program Director
MassDEP/Drinking Water Program

Attachments: BOH Update, Private Public Chart, Definition of a PWS, Camp Notification Form, Emergency Contact list,
PWS listing in your town, Regional and Boston DWP Contacts

ecc: MDPH, MassDEP Website

Y:\DWPArchive\BOSTON\Annual BOH letter-statewide-2014-06-16.docx

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TDD# 1-866-539-7622 or 1-617-574-6868
MassDEP Website: www.mass.gov/dep

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This year the annual update includes information on the following:

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2014 Board of Health Update

Part I: Action Items

Board of Health Emergency Contacts

Please find attached an Emergency Contact Information sheet for your board (Attachment D: page 25). It is populated with the information we have in our files. If it is correct, no action is needed. **If there are changes to be made please cross out the incorrect information, add the correct information, and send the sheet back by July 18, 2014, to MassDEP – Drinking Water Program; 1 Winter Street - 5th floor; Boston, MA 02108; Attn.: BOH Emergency Contact.** If the sheet is blank, please fill out and return to MassDEP at the above address. You may also respond by email to Program.Director-DWP@state.ma.us, Subject: BOH Emergency Contact. If you have any question about this information contact Paul Niman at 617-556-1166 or Paul.Niman@state.ma.us.

Annual Recreational Camp Requirement

BOHs have the responsibility for licensing local recreational camps. Licenses are issued in accordance with 105 CMR 430.000, which stipulates, "Upon the issuance of a license, the local board of health shall notify Massachusetts Department of Environmental Protection and the Massachusetts Department of Public Health. Said notification shall include the name and address of the camp, the name of the owner, the number of campers and staff, and the number of days per year that the camp will be in operation." **Please remember to submit this information to MassDEP by July 18, 2014, using the attached form (Attachment C: page 23).**

Information on drinking water requirements and campgrounds is available on the MassDEP website at <http://www.mass.gov/eea/docs/dep/water/drinking/alpha/a-thru-h/cgrndfs.doc>. You may also contact Suzanne Robert at 617-292-5620, or Suzanne.Robert@state.ma.us. Alternately, you may contact the regional staff listed in Water Supply Safety Issues at Local Fairs on page 12.

Inventory of All Registered Public Water Systems

Please find attached to this letter a list of PWS in your city or town (Attachment E: page 26). An electronic list of all PWS is available at <http://www.mass.gov/eea/agencies/massdep/water/drinking/health-and-safety.html#3> then click on MA Public Water Supplier Contacts Sorted by Town. This information is provided to make you aware of all of the PWSs in your city or town that are registered with MassDEP. Please review this information for any discrepancies. Discrepancies may include the following:

- **Systems should be added to the list** if the facility meets the definition of a PWS: has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days of the year.
- **Systems should be deleted from the list** if the facility no longer has its own well or source of water.
- **Systems are currently listed as "Inactive" but have re-opened** and should now be listed as "Active." An "Inactive" designation suspends MassDEP's requirements such as water quality testing and certified operator requirements. It is recommended that licensing departments and agencies contact MassDEP to verify compliance with MassDEP drinking water requirements prior to issuance of licenses or occupancy.
- **Changes in address and ownership.**

Please update and return the list by July 18, 2014, to MassDEP - Drinking Water Program, 1 Winter St., 5th Floor, Boston, MA, 02108; Attn.: BOH Update. You may also respond by email to

Program.Director-DWP@state.ma.us, Subject: BOH update. If you have any questions on this information contact Andrew Durham at 617-574-6855 or Andrew.Durham@state.ma.us.

Certificate of Registrations

DWP is no longer mailing out a Certificate of Registration to every public water system in the state. This certificate is very useful for some PWSs especially Transient Non-Community (TNC) systems. When a survey or an audit is being done or even when applying for permitting or being inspected by a local BOH, this certificate may need to be produced for the agency official to verify.

To conserve resources these Certificates of Registrations have now become electronic. If a PWS does not have internet access and need a certificate a hard copy can be printed out and mailed to them.

For a PWS to get their certificate electronically, they need to know their PWS identification (ID) number, then go to: <http://www.mass.gov/eea/agencies/massdep/water/drinking/certificate-of-registration.html>. Then click on their PWS ID # and name from the pull down menu and then click the "Get Certificate" button. The certificate can then be printed. If a PWS does not remember its ID # it can check the electronic list of PWSs located at <http://www.mass.gov/eea/agencies/massdep/water/drinking/health-and-safety.html#3> then click on MA Public Water Supplier Contacts Sorted by Town.

Each January, the current year's Certificate of Registration will be posted and ready for retrieval. Only the current year will be posted. PWS should print and file copies if they wish to keep copies of past years' certificates.

Part II: How to Determine if a Facility is a Public or Private System

To help the BOH quickly determine whether a facility is a public or private water system, a flowchart has been attached for your use (Attachment A, page 21). We encourage you to post this flowchart for easy reference. An electronic copy of the chart is also available at <http://www.mass.gov/eea/docs/dep/water/compliance/privpubl.pdf>.

If a facility is a PWS and it is not currently registered with MassDEP then the facility must be added to the inventory list (see Part I: Action Items) and referred to MassDEP for oversight. If you have any question on this information contact the DWP at 617-292-5770 or Program.Director-DWP@state.ma.us.

Attachment B is an excerpt of the Massachusetts Drinking Water Regulations 310 CMR 22.02 containing definitions of what constitutes a PWS and the different categories of PWSs (page 22).

Identifying Daycares that Meet the Definition of a Public Water System

Recently MassDEP identified several daycare facilities that were unregistered PWSs. These daycare facilities serve 25 or more persons, at least 60 days a year and had their own source of drinking water (e.g., a well). If a daycare facility with its own source of water is licensed/permited to have a total of 25 or more children and childcare workers, it must be added to the inventory list requested in Part 1 and referred to MassDEP for registration to ensure compliance with 310 CMR 22.00 and all applicable MassDEP standards, permits, and approvals. Daycares that meet the definition of a PWS but are not currently registered with MassDEP will be subjected to enforcement action (which may include a monetary penalty). Please contact Kenneth Pelletier at 617-348-4014 or Kenneth.Pelletier@state.ma.us for more information on daycare regulations. You may also contact the Massachusetts Department of Early Education and Care at <http://www.mass.gov/edu/government/departments-and-boards/departments-of-early-education-and-care/>

Property Conversions that Create Public Water Systems

As properties continue to change their locally permitted functions, BOH must be vigilant in determining when a conversion will result in the creation of a PWS or a change in the type of PWS. If a facility that is

currently classified as a private water supply proposes or initiates any changes in the use of the establishment that would cause the system to be classified as a PWS, the facility must meet all applicable MassDEP standards, and obtain the proper MassDEP permits and approvals. Some examples of changes that may affect their drinking water status include:

- A change in number of permitted occupancy, e.g., increasing the number of children and staff at a daycare or business to 25 or more persons per day.
- A change in type of permitted occupancy, e.g., changing from a residential home to a daycare or doctor's office. Changing from a small office or gas station to a daycare, coffee shop, restaurant, or other facility that may serve beverages, handle food, require food permits, or supply water to 25 or more persons on average per day.

Proponents creating any new or potential PWS or changing their PWS type should be directed to contact MassDEP, as they would be subject to 310 CMR 22.00 and all applicable MassDEP standards, permits, and approvals. It should also be noted that if a proponent subsequently creates and/or operates a facility as a PWS prior to obtaining MassDEP approvals, the facility owner(s) and operator(s) would be subject to enforcement action (including monetary penalties). If you have any question on a property conversion please contact the DWP regional staff listed under New System Registration in Attachment F on page 28.

Condominium Developments and Public Water Systems

Please be aware that some types of construction, such as residential or business condominium developments, which propose to use two or more wells to serve the on-site facilities so that each well serves less than 25 persons per day, may still be considered PWSs. With an increase in development throughout the state, these cases may come before the BOHs as private well proposals. In these cases, the applicant should be referred to MassDEP for a written determination of public or private water system status during the design phase, and/or prior to the issuance of local permits. This information should be communicated to your local planning office, planning board, building inspector's office, and to the applicant as it could substantially change the outcome of the project.

From 310 CMR 22.02 Definition of a PWS:

MassDEP "...reserves the right to evaluate and determine whether two or more wells located on commonly owned property, that individually may serve less than 25 people, but collectively serve more than 25 people for more than 60 days of the year should not be regulated as a public water system, taking into account the risk to public health."

For any questions or clarifications on PWS definitions and applicable permitting requirements, either generally or for a specific project, please contact your MassDEP regional office (see Attachment F on page 28) for technical assistance.

Part III: Notifications

Emergency Response Notification Requirements

The Massachusetts Drinking Water Regulations, 310 CMR 22.00, include specific notification requirements for reporting emergencies to MassDEP and the local board of health. The regulations identify specific incidents or emergencies that require notification within 2 hours and 24 hours. Section 310 CMR 22.15(9) requires each PWS to notify MassDEP **and the local BOH** after the occurrence of any of the following incidents or emergencies that result in the consumers of the system receiving water that does not meet required or routine quantity or quality conditions:

1. Emergencies or incidents requiring notification within **2 hours**:
 - a. Loss of water or drop in pressure to less than 20 psi, affecting 50% or more of consumers for a system serving less than 10,000 persons

- b. Loss of water or drop in pressure to less than 20 psi, affecting 5,000 or more of consumers for a system serving 10,000 or more persons
 - c. Chemical or microbiological contamination of the water supply in exceedence of limits specified by MassDEP's Office of Research and Standards as set forth in the *Standards and Guidelines for Contaminants in Massachusetts Drinking Waters*. This document is available at <http://www.mass.gov/eea/agencies/massdep/water/drinking/standards/standards-and-guidelines-for-drinking-water-contaminants.html>
 - d. Discovery of malicious intent or an act of vandalism, which may impact a system component
 - e. Any consumer complaint in which the water may have caused physical injury
 - f. A pattern of unusual customer complaints about the water quality such as taste, odor, etc.
 - g. Any other emergency as determined by MassDEP in writing
2. Emergencies or incidents requiring notification within **24 hours**:
- a. Loss of water supply from a source
 - b. Loss of water supply due to major component failure
 - c. Damage to power supply equipment or loss of power
 - d. Contamination of water in the distribution system from backflow or cross connection incident
 - e. Collapse of a reservoir, reservoir roof, or pump house structure
 - f. Break in a transmission or distribution line that results in a loss of service to 100 consumers for more than four hours
 - g. Chemical or microbiological contamination of the water supply, including overfeed of drinking water treatment chemicals
 - h. Any other failure of part or all of the water supply system due to equipment failure, human acts (deliberate or accidental), or natural or human made disasters

More information on the Emergency Response Regulations is available at <http://www.mass.gov/eea/agencies/massdep/water/drinking/emergency-response-regulations.html>. If you have any question about this information contact Paul Niman at 617-556-1166 or Paul.Niman@state.ma.us.

To report an emergency situation outside of normal business hours (evenings and weekends) you can contact MassDEP at 1-888-304-1133 (toll-free, 24 hrs).

Ground Water Rule

In 2009, MassDEP adopted a new federal Safe Drinking Water Act regulation, the Ground Water Rule (GWR). The rule is intended to increase public health protection against potential viral contamination in all PWSs – regardless of size or type - using ground water sources (wells). Over 1,400 Massachusetts PWSs were required to comply with the rule by December 1, 2009. All PWSs that do not remove or kill 99.99% of viruses through state approved treatment processes must test their source water (well) for *E. coli* or *enterococci* (fecal indicator) each time the PWS is notified of a total coliform positive sample collected under routine Total Coliform Rule bacteria monitoring.

If the source (well) sample is positive, the PWS must initiate public notification within 24 hours; this is a federal rule and federal public notification requirement. Boil orders and do not drink orders may be associated with the public notification. The PWS must then take an additional five samples at the source. If all five follow-up samples are negative, the public notice and associated requirements are terminated. Please note that public notice is **REQUIRED** after the **first** positive source (well) sample. This is a new practice for PWSs which may result in consumer questions. MassDEP has prepared standard public notice language to assist water systems, BOH, and consumers. Public notice information is located at

<http://www.mass.gov/eea/agencies/massdep/water/drinking/public-notification-reqs-templates.html> click on the GWR templates. If MassDEP determines that the well is contaminated, the source of contamination must be eliminated or the deficiency in design must be corrected; if not, the PWS must install or increase treatment.

If you have questions on the GWR, please contact Frank Niles at 617-574-6871 or Frank.Niles@state.ma.us. Please look online for GWR information at <http://www.mass.gov/eea/agencies/massdep/water/drinking/new-regulation-notice-ground-water-rule.html>

Boil Orders and Other Public Health Orders

There are 3 types of public health orders issued by MassDEP. During any of these orders, bottled water or water from an approved MassDEP source may be used during the period of concern.

- Boil Water Order
- Do Not Drink Order
- Do Not Use Order

Boil Orders are issued by MassDEP to the PWS to notify consumers to boil the water or use water from another approved source. This occurs when a PWS exceeds or has the potential to exceed the standard for total coliform bacteria or a fecal indicator. During this type of situation there is no other identified public health risk due to inhalation, skin irritation, or flammability.

Do Not Drink Orders are issued by MassDEP when there is a suspected or known synthetic organic compound (SOC), inorganic compound (IOC), volatile organic compound (VOC), or radiological contamination in the drinking water. Continued drinking or other human consumptive uses of the water would or could pose an immediate threat to health. During this type of situation there is no identified public health risk due to inhalation, skin irritation, or flammability.

Do Not Use Orders are issued by MassDEP when there is or may be an unknown chemical, radiological or other unknown contamination and there may be a risk from inhalation, skin irritation, or flammability. A Do Not Use Order may also be issued for a known chemical or radiological contamination that exceeds an immediate health and/or safety risk e.g., gasoline in the water.

What happens when sample results or a situation indicates the need for a public health order?

- The PWS informs MassDEP **and their local BOH** within 2 hours of learning of the problem.
- MassDEP consults with the PWS and determines the appropriate course of action in accordance with Federal and State Drinking Water regulations. The local BOH is made aware of the situation and may participate in discussions with MassDEP and the PWS. MassDEP verbally notifies the PWS of the issue and issues a written order to the PWS within 24 hours or as soon as possible. **The order always includes the actions consumers should take with the drinking water and steps the PWS must take to protect the public health, monitor the situation, and correct the problem.** MassDEP keeps Massachusetts Department of Public Health (MDPH) and US Environmental Protection Agency (EPA) informed throughout the situation.
- MassDEP lists all public health orders on its webpage. If the order is issued on a normal business day the information is on the web within 24 hours. If the order is issued on a weekend or a holiday the information is on the webpage within 24 hours of the first business day following the issuance of the order. This information is located at <http://public.dep.state.ma.us/BoilOrder/Search.asp>.

How are consumers notified of a MassDEP public health order or advisory?

The PWS is required to issue a MassDEP approved notice within 2 hours of receipt of the MassDEP notification of the situation or receipt of the written order, whichever occurs first, by the following means:

Pages 9-30 intentionally omitted