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DEPARTMENT OF ENVIRONMENTAL PROTECTION
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THE OFFICE OF APPEALS AND DISPUTE RESOLUTION

February 28, 2017

In the Matter of
Butterworth Water Company, Inc.

OADR Docket No. 2016-016
Adams, MA

RECOMMENDED FINAL DECISION

INTRODUCTION

Butterworth Water Company, Inc., appeals the Massachusetts Department of Environmental Protection's ("DEP") denial of its application for a permit seeking new source approval for a proposed Public Water System ("PWS") that would use water from a spring on its property at 24 Glenn Street, Adams, Massachusetts ("Property").

The permit denial was issued pursuant to DEP's Drinking Water Regulations at 310 CMR 22.00. It was based upon DEP's finding that Butterworth failed to meet the regulations' "Zone I" requirements. Zone I is the name for the protective area around a water source. Here, DEP found that Butterworth failed to meet the Zone I requirements that there be a sufficient protective area around the spring that is owned or controlled by Butterworth and limits land uses in that area to those directly related to the provision of the public water system or to other land uses which the applicant has demonstrated have no significant impact on water quality. Butterworth admits that it does not comply with these Zone I requirements, but it argues that it received a prior approval in 1985, under a different regulatory regime, and the 1985 approval should be recognized or grandfathered. Butterworth also argues that it is unnecessary to apply

the Zone I requirement under these circumstances because the spring is sufficiently protected from contamination. Last, Butterworth argues that the Zone I requirement should be reduced in size or waived. DEP opposed all of Butterworth's positions, arguing that: there was no 1985 approval that should be recognized or grandfathered; there is insufficient evidence to demonstrate that the Zone I requirements are unnecessary; and there is no legal or evidentiary basis for reducing the Zone I size or waiving the Zone I requirement.

After conducting an adjudicatory hearing and thoroughly reviewing the administrative record, I recommend that the DEP Commissioner issue a Final Decision affirming DEP's denial of the PWS permit. In sum, the Zone I is required by the regulations and supported by a rational basis proffered by DEP with respect to Butterworth's proposed project. There is insufficient evidence to demonstrate that the Zone I requirements are unnecessary and there is no legal or evidentiary basis for reducing the Zone I size or waiving the Zone I requirement.

REGULATORY FRAMEWORK

The determination whether to issue a PWS permit is largely governed by DEP's drinking water regulations at 310 CMR 22.00. The purpose of those regulations is to "promote the public health and general welfare by preventing the pollution and securing the sanitary protection of all such waters used as sources of water supply and ensuring that public water systems in Massachusetts provide to the users thereof water that is safe, fit and pure to drink." 310 CMR 22.01.

At 310 CMR 22.21 are provisions that govern the protection of groundwater sources of public drinking water, like the spring at issue in this appeal. A spring is defined as a "natural discharge point where groundwater issues from soil or rocks in concentrated flow. Public water supply Springs will be perennial or intermittent springs of nonthermal origin. A source is not

considered a Spring if mechanical methods are used to enhance the flow of water.” 310 CMR 22.02 (definition of spring).

The regulations contain provisions that must be met for all groundwater sources of public drinking water—including springs—in order to protect the source from contamination. 310 CMR 22.21. In particular, 310 CMR 22.21 specifies, among other things, that a spring must comply with certain “Zone I” requirements. The Zone I is the protective area that is required around a PWS. Among other requirements, the Zone I of the spring must be “owned or controlled by the supplier of water” (Butterworth) and “current and/or future land uses within the Zone I must be limited to those directly related to the provision of public drinking water” or the uses must not have a “significant adverse impact on water quality.” 310 CMR 22.21(1)(b). The regulations also include the following requirements, in relevant part:

(1) Source Approval

(a) No public water supply well, wellfield, or spring shall be constructed, expanded or replaced, and no water supply well, wellfield, or spring shall be placed on-line in a public water system, without the prior written approval of the Department. Persons seeking such approval are directed to follow the procedures set forth in the Drinking Water Program's Guidelines and Policies for Public Water Systems.

....

In determining whether to grant such approval, the Department shall apply the criteria set forth in 310 CMR 22.21 and the Guidelines and Policies for Public Water Systems. Copies of the Guidelines and Policies for Public Water Systems are available for a nominal fee from the State Bookstore, State House, Room 116, Boston, Massachusetts and 436 Dwight Street, Springfield, Massachusetts.

(b) No public water supply well or wellfield designed to withdraw, or spring which flows, less than 100,000 gallons per day shall be

constructed, expanded or replaced, or placed on-line, unless the Department finds in writing:

1. that the proponent has satisfactorily complied with the Drinking Water Program's Guidelines and Policies for Public Water Systems;
2. that the source of water supply for the well, wellfield, or spring will achieve all applicable water quality standards set forth in the Massachusetts Drinking Water Regulations, 310 CMR 22.00;
3. that the proponent has properly determined the Zone I of the proposed well, wellfield, or spring;
4. that the Zone I of the proposed well, wellfield, or spring is owned or controlled by the supplier of water; and
5. that current and/or future land uses within the Zone I are limited to those directly related to the provision of public drinking water or will have no significant adverse impact on water quality.

310 CMR 22.21(1) (emphasis added).

In addition to the above, the regulations provide in relevant part the following requirements relating to ownership or control for Zone I areas:

(3) Requirements for all New and Existing Groundwater Sources

(b) Zone I. All suppliers of water shall acquire ownership or control of sufficient land around wells, infiltration galleries, springs and similar sources of ground water used as sources for drinking water to protect the water from contamination. This requirement shall generally be deemed to have been met if all land within Zone I is under the ownership or control of the supplier of water. Current and future land uses within the Zone I shall be limited to those land uses directly related to the provision of the public water system or to other land uses which the public water system has demonstrated have no significant impact on water quality. The Department may require greater distances or permit lesser distances than the Zone I distances set forth at 310 CMR 22.02, if the Department deems such action necessary or sufficient to protect public health. No new underground storage tanks for petroleum products shall be located within Zone I.

310 CMR 22.21(3)(b) (emphasis added).

Chapter 4 of DEP's Guidelines and Policies for Public Water Systems¹ specify that the Guidelines' Source Approval Process is applicable here. Exhibit 5 (guidelines). Pursuant to § 4.3.2, the guidelines specify the means for delineating the Zone I for a spring as follows:

2. Protective Area (Zone I) and Approved Withdrawal Volume
 - a. Zone I

The protective area for a spring is a square with sides equal to twice (2x) the radius required by the graph, "Zone I Radius vs. Pumping Rate" (Appendix D), (*i.e.*, if the flow rate is 100,000 gpd, the protective radius from the graph in Appendix D is 400 feet, therefore the protective area for this spring would be a square 800 feet on a side). The protective area shall be arranged such that the spring's outlet is 50 feet upgradient and centered in relation to the downgradient side of the square.

The maximum flow (highest recorded flow measured) shall be used to determine the size of the Zone I from the graph. However, based on variability of the spring, the approved withdrawal may be less than the maximum yield established.

The requirement to own or control land within the Zone I is the same as for all groundwater sources (Section 4.5.1).

Chapter 4, 4.3.2.3 (diagram removed and emphasis added); See also § 4.5.1.

Pursuant to § 4.5.1, detailed guidance for complying with Zone 1 ownership, control, and protection requirements of 310 CMR 22.21 is found within DEP Policy 94-03, Implementation of Zone 1 Requirements in Guidelines and Policies for Public Water Systems, Volume II: Policies. Exhibit 4, DWP Policy 94-03. That section also provides that DEP "may require greater distances or permit lesser distances than the Zone I distances set forth at 310 CMR 22.02, if [DEP] deems such action necessary or sufficient to protect public health." Chapter 4, 4.5.1.

Butterworth's proposed use of spring water as a bulk water source triggered DEP's application of Department Policy 92-07 Bulk Water Suppliers, which applies to "water intended for potable uses which is transported via tanker truck or an equivalent means from one area to

¹ The Guidelines are applicable pursuant to 310 CMR 22.04.

another for the purpose of treatment, packing and/or human consumption.” Doherty PFT², p. 9; Exhibit 6. That policy outlines the roles of DEP and the Massachusetts Department of Public Health under such circumstances. A “Memorandum of Understanding Between The Department of Public Health and the Department of Environmental Protection for In State Bottled Water Source Review” (“MOU”) also governs. It is an agreement between the two state agencies that relates to how the agencies allocate responsibility for approval of bottled water sources. Exhibit 7.

WITNESSES

Butterworth provided testimony from Joel Frisch. Frisch is a Professional Geologist with the state of New Hampshire and a hydrogeologist with more than 25 years of experience. He is a Principal and Co-Owner of Northeast Geoscience, Inc., a hydrogeologic and environmental consulting firm. He provides a variety of consulting services for clients in the areas of water resources and environmental compliance, including water resource investigations public water supply development environmental permitting and compliance, hydrogeologic studies and environmental site assessments, water supply impact analysis, and groundwater flow and solution transport modeling. He holds a BA in earth science and is near completion of an MS in geology.

DEP provided testimony from Kimberly Longridge and Deirdre Doherty. Longridge has been employed since 2006 in the Springfield office of DEP as an environmental analyst in its Drinking Water Program. She is responsible for oversight of all source approval projects in DEP’s western region. She holds a BS degree in geology. She was employed from 1992 to 2006 as an environmental consultant with a private firm, focusing on water supply development and

² “PFT” is the acronym for the pre-filed written testimony submitted by the parties on behalf of their witnesses.

permitting. She is also a Massachusetts Licensed Site Professional and a Professional Geologist with New Hampshire.

Doherty is the Section Chief for the Drinking Water and Municipal Services Section of DEP's Western Regional Office. She has held that position since 2003. Part of her responsibilities in that position include reviewing and rendering decisions on PWS new source approvals and other public water systems. Her duties also include compliance and enforcement actions with respect to drinking water regulations, policies, and guidelines. Prior to that position, she worked in other capacities with DEP, starting in 1986. She holds a BA degree in legal education services and a MA degree in public policy.

BACKGROUND

The Spring. Butterworth's spring is located at the base of the western slope of Hales Hill in Adams, Massachusetts, at an elevation of approximately 860 feet. The spring ultimately drains to the Hoosac River, located to the west of the spring. Frisch PFT, p. 4. The spring water results from precipitation falling at elevations above 860 feet in the vicinity of Hales Hill and above in the Hoosac Range. Frisch PFT, p. 4.

The spring is a bedrock spring flowing from joints within a fine-grained limestone. The limestone unit is mapped as the Stockbridge Formation. Frisch PFT, p. 4. The area surrounding and up gradient of the location where the spring flows from the ground, which is otherwise known as the spring vent, is a mix of forest, open space, and residential land uses. The area is overlain by a dense, clay rich glacial till. Frisch PFT, p. 4.

Butterworth's spring possesses artesian characteristics. Generally, artesian characteristics occur when the groundwater, under pressure, finds its way to the land surface. The spring flows because the pressure in the aquifer (water bearing soil or rock), which is covered by a confining

layer (clay or other impervious material), is greater than atmospheric pressure at the land surface. This condition can occur where the water flowing within an aquifer is capped by an impermeable layer or confining layer, and often composed of or containing a high percentage of clay. Frisch PFT, pp. 4-5.

Here, the artesian conditions are a result of recharge received in the uplands at elevations above 1300 feet to as much as 2000 feet, where fractured bedrock is exposed and the confining glacial till deposit terminates. Frisch PFT, pp. 4-5. The water within this confined aquifer is recharged by precipitation in upgradient areas where the confining layer terminates, known as the recharge area, and flows to areas down gradient where it comes to the surface, known as the discharge area, or vent. Frisch PFT, p. 5. The pressure within a confined aquifer is a result of the weight of the overlying water at higher elevations within the confined unit. Frisch PFT, p. 5. The artesian conditions result in the total head of the aquifer to be higher than the bottom of the confining layer of aquifer. Frisch PFT, p. 5. As a consequence, Frisch concludes that the area around the Butterworth spring is by definition a discharge area and, importantly does not receive recharge. Frisch PFT, p. 5.

The Permit Application. This appeal is rooted in the WS13 permit application that Butterworth filed to obtain designation as a PWS to use water as a bulk water source, specifically for bottled water. Longridge PFT, p. 2. Butterworth sought approval for the spring to be reactivated as a Transient Non-Community Public Water Supply, pursuant to 310 CMR 22.00. Exhibit 1, Application, p. 1. The proposed PWS would have a planned yield of less than 100,000 gallons per day of bulk water sales. Longridge PFT, p. 2. Butterworth acknowledged in its application that it had not complied with DEP's regulatory requirement in 310 CMR 22.21(3)(b) and 310 CMR 22.21(1) to own and/or control the delineated Zone I area surrounding the spring.

Shortly after receiving the permit application, DEP issued a Technical Deficiency letter concerning the noncompliance with the Zone I requirements for ownership or control. Exhibit 2; Longridge PFT, p. 3. In particular, the Technical Deficiency letter stated that 310 CMR 22.21(3)(b) requires that public water systems own or control the Zone I area and limit activities in the Zone I to those directly related to the provision of the water supply, or to activities that will have no significant adverse impact on drinking water supply. Exhibit 2.

Butterworth responded to the Technical Deficiency letter with additional information, including historic water quality data; Butterworth also requested that DEP exercise its discretion to designate the spring as a source for a PWS by applying DEP's Policy, 94-03, Implementation of Zone I Requirements and Chapter 4 of DEP's guidelines for PWS. The response also proposed purported risk mitigation measures that could be taken by Butterworth. Longridge PFT, p. 3; Exhibit 3.

DEP considered the Technical Deficiency response and the application, and denied the application because the spring still failed to meet the Zone I requirements that were highlighted in the Technical Deficiency letter: that the public water system own or control Zone I and limit activities in the Zone I to those directly related to the provision of the water supply, or to activities that will have no significant adverse impact on drinking water supply. Longridge PFT, p. 3. As a consequence, this appeal ensued.

THE BURDEN OF PROOF

As the party challenging DEP's denial of a permit in this de novo appeal, Butterworth has the burden of going forward by producing credible evidence in support of its position. Matter of Town of Freetown, Docket No. 91-103, Recommended Final Decision (February 14, 2001), adopted by Final Decision (February 26, 2001) ("the Department has consistently placed the

burden of going forward in permit appeals on the parties opposing the Department's position."). So long as the initial burden of production or going forward is met, the ultimate resolution of factual disputes depends on where the preponderance of the evidence lies. Matter of Town of Hamilton, DEP Docket Nos. 2003-065 and 068, Recommended Final Decision (January 19, 2006), adopted by Final Decision (March 27, 2006).

"A party in a civil case having the burden of proving a particular fact [by a preponderance of the evidence] does not have to establish the existence of that fact as an absolute certainty. . . . [I]t is sufficient if the party having the burden of proving a particular fact establishes the existence of that fact as the greater likelihood, the greater probability." Massachusetts Jury Instructions, Civil, 1.14(d).

The relevancy, admissibility, and weight of evidence that the parties sought to introduce in the Hearing were governed by G.L. c. 30A, § 11(2) and 310 CMR 1.01(13)(h)(1). Under G.L. c. 30A, § 11(2):

[u]nless otherwise provided by any law, agencies need not observe the rules of evidence observed by courts, but shall observe the rules of privilege recognized by law. Evidence may be admitted and given probative effect only if it is the kind of evidence on which reasonable persons are accustomed to rely in the conduct of serious affairs. Agencies may exclude unduly repetitious evidence, whether offered on direct examination or cross-examination of witnesses.

Under 310 CMR 1.01(13)(h), "[t]he weight to be attached to any evidence in the record will rest within the sound discretion of the Presiding Officer. . . ."

DISCUSSION

The Zone I. Under the Drinking Water Regulations, the Butterworth Zone I area is required to be approximately 14.7 acres. DEP's determination that Butterworth did not own or control the entire Zone I is not genuinely disputed by Butterworth. Doherty PFT, p. 6;

Longridge PFT, p. 8. In fact, out of the 14.7 acres in the Zone I, Butterworth owns only approximately 1.4 acres, which means that approximately 90.5% is not owned or controlled by Butterworth. Approximately 52% of the area consists of residential use and approximately 5% is mixed use, such as open space and urban public or industrial uses. There is no evidence that Butterworth attempted to gain ownership or control of the entire Zone I area. Longridge PFT, p. 8. In addition, the land uses in the proposed Zone I are not currently limited to those directly related to the provision of the public water system. Longridge PFT, p. 8. Most of the land uses in the Zone I are related to residential uses and public roads. Longridge PFT, p. 8.

Under these circumstances, the parties agreed that the issue to be adjudicated was whether the permit should be denied based upon Butterworth's noncompliance with the Zone I requirements. Butterworth has asserted a number of reasons why it believes that DEP should exercise its discretion to issue it a PWS permit, despite its noncompliance with the Zone I requirement.

Grandfathering. Butterworth first relies on various prior statements dating back to the 1980s from DEP and its predecessor, the Massachusetts Department of Environmental Quality Engineering ("DEQE"). Butterworth makes a number of arguments why it believes that those statements should be recognized today to overlook Butterworth's noncompliance with the Zone I requirements.

The statements originated in the early 1980s, over 30 years ago, when Butterworth's predecessor (Mt. Greylock Natural Spring Water Corp. "Mt. Greylock") sought approval to use the spring as a source of bottled water. Exhibit 3. DEQE had significant concerns with use of the spring as a drinking water source; those concerns included nearby development, sewers, and

other land uses. As a consequence, it recommended that the spring not be used as a drinking water source. Exhibit 3.

Eventually, after Mt. Greylock performed additional work and site investigation, DEQE issued an April 11, 1985, letter to the Massachusetts Department of Public Health (“DPH”), with whom DEQE shared jurisdiction over bottled drinking water approvals. In that letter DEQE updated its assessment of the quality of the spring, stating in part: “this spring appears to be sufficiently protected and could be used for bottling water purposes, provided that an appropriate sampling schedule is prescribed. The Department recommends that samples of water from this source be collected and analyzed monthly for coliform and fecal bacteria. Also, a detailed map of the area should be obtained from the owner of the spring showing the locations of the sewer lines and houses in the area. The recharge area to the spring is largely undeveloped and consists of forested slopes of the Hoosac Range. If the condition of this area changes, a reevaluation of this spring should be made.” Hearing Exhibit C; Exhibits 3, 11, 12.

There is no evidence in the administrative record of any further action regarding the spring until 1991. At that time, Mt. Greylock requested that DEP approve the spring as a PWS so that it could transport the water to a vending machine in Worcester. It had not been previously approved as a PWS. Hearing Exhibit A (“the spring water sources was not approved as a PWS”). In a July 24, 1991, letter to Mt. Greylock, DEP stated that it “feels at this time that the spring . . . can be conditionally approved as a PWS at this time, due to being ‘grandfathered’ in as an approved bottled water source.” Hearing Exhibit A. The letter then proceeded to enumerate 5 detailed conditions as the basis for the conditional approval, including: sampling requirements in 310 CMR 22.00 (which includes 11 coliform samples per month and hiring of a certified water operator); sampling for all 59 volatile organic compounds by September 15, 1991;

submission of plans for the existing spring house, water transmission lines, valves, and appurtenances by December 15, 1991; written approval to operate as a shallow or deep well; and satisfactory completion of a sanitary survey. Hearing Exhibit A. It is undisputed that the conditions for this conditional approval were not completed and the spring's conditional approval status terminated.

Based upon the above, Butterworth argues that DEQE unconditionally approved the spring in 1985. It argues the approval was only subject to sampling regime and the potential for a subsequent investigation in the event of a significant change in circumstances in the vicinity of the spring. It asserts that it is clear from the record that conditions around the spring have not changed. It adds that the 1985 approval should be grandfathered by DEP, and Butterworth need only comply with any applicable DPH requirements for bottled water.

There are a number of reasons why Butterworth's arguments are not persuasive. The 1985 DEQE statement was nothing more than an equivocal opinion to an agency (DPH) with which it shared jurisdiction that the spring "appears" to be "sufficiently protected and could be used for bottling water purposes, provided that an appropriate sampling schedule is prescribed." The opinion then elaborated upon the conditional nature of the approval, stating "[t]he Department recommends that samples of water from this source be collected and analyzed monthly for coliform and fecal bacteria. Also, a detailed map of the area should be obtained from the owner of the spring showing the locations of the sewer lines and houses in the area. The recharge area to the spring is largely undeveloped and consists of forested slopes of the Hoosac Range. If the condition of this area changes, a reevaluation of this spring should be made." This does not carry the weight of a permit decision that should be recognized today—over 30 years later—under DEP's more rigorous standards. Moreover, there was no duration

attached to the purported approval, and there is no evidence that it remains valid today under a very different regulatory regime. Further, the stated conditions were never met and the administrative record does not persuasively show that the spring's quality remains unchanged. Indeed, Butterworth's evidence regarding the condition of the spring is mostly the outdated reports that were generated in the 1980s, along with conclusory statements by Frisch that are unaccompanied by sufficient current and formal field studies and analysis.

The July 24, 1991, letter to Mt. Greylock from DEP does not help Butterworth's arguments. In fact, it does more harm than good, because it specifically states that the spring had not been previously approved as a PWS. Hearing Exhibit A ("the spring water sources was not approved as a PWS"). It specifically adds that the spring could be conditionally approved as a PWS, but it is undisputed that Butterworth never met any of the 5 detailed conditions. Doherty PFT, p. 8; Hearing Transcript, p. 24, 32-34; Initial Brief of Petitioner Butterworth Water Company, pp. 4-5. Indeed, the spring at issue here is not operating and Butterworth has filed an application for a new permit. Doherty PFT, p. 7; Longridge PFT, p. 9.

Likewise, there is no evidence showing the spring is an "existing source" or a "pre-existing source" under the MOU because there is not a preponderance of the evidence showing the source was developed and in operation prior to October 15, 1988, and serving a bottling plant with an operating permit issued by a local Board of Health or DPH. See Exhibit 7 (the MOU, definition of "pre-existing source"). Butterworth is not currently a PWS because the evidence demonstrates only past intermittent activity, and no public water system activity in the last five years. Doherty PFT, pp. 8-9. Moreover, because Butterworth has a noncompliant Zone I, DEP could not make a recommendation for approval by DPH under the MOU.

Despite the above, Butterworth argues that I should find the purported 1985 bottled water approval is grandfathered. That argument is unpersuasive for several reasons. First, as discussed above there was no prior approval, only a conditional equivocal opinion provided to DPH. Second, there is no specific legal authority to rely upon for grandfathering the spring. The regulations do not include provisions that would grandfather a spring under the circumstances present here where there is not an existing, operating PWS.

Despite the absence of legal authority for grandfathering, Butterworth relies upon a relatively recent statement by a DEP employee to argue the spring is entitled to grandfathering. In 2014, DEP staff met with Michael Hannon, who was inquiring about the regulatory status of the spring on behalf of Butterworth. An internal memorandum memorializing the meeting stated that the “decision to grandfather the source for bottled water production was still in effect from DWP [Drinking Water Program] standpoint, but that DPH may have other requirements.” Exhibit 3, p. 3. Butterworth argues that this is significant evidence of discretion to grandfather the spring and a willingness to waive strict compliance with Zone I requirements. Exhibit 3, p. 3. I disagree, and find that the reference to grandfathering during the deliberative part of the application process does not alter the conclusion that there is no legal basis for grandfathering and DEP ultimately issued a permit denial to Butterworth.

It has long been an axiom of the law that: “[T]hose who deal with the Government are expected to know the law and may not rely on the conduct of Government agents contrary to law. . . . [The Government cannot] be expected to ensure that every bit of informal advice given by its agents . . . will be sufficiently reliable to justify the expenditure of substantial sums of money that cannot be recaptured.” Robert A. Dagastino v. Commissioner of Correction, 52 Mass. App. Ct. 456 (2001). For this reason, the courts have generally not applied estoppel

against the government, especially when, as here, the government is seeking to apply a law that is intended to protect the public interest. Sullivan v. Chief Justice, 448 Mass. 15, 30-31 (2006); LaBarge v. Chief Administrative Justice of the Trial Court, 442 Mass. 462, 468 (1988). For these same reasons, Butterworth's argument that it was somehow misled or misguided into filing the BRP WS 13 application is without merit. This sort of argument that the government is estopped from denying the permit because of alleged wrongful statements is generally not allowed. Id; Harrington v. Fall River Housing Authority, 27 Mass. App. Ct. 301, 538 N.E.2d 24 (1989).

The Zone I Should Not Be Reduced In Size Nor Waived. Butterworth accurately asserts that DEP has discretion under 310 CMR 22.21(3)(b) to modify the Zone I size if such modification is consistent with protection of the public health. Indeed, the Drinking Water Regulations at 310 CMR 22.21(3)(b) provide that DEP "may require greater distances or permit lesser distances than the Zone I distances set forth at 310 CMR 22.02, if [DEP] deems such action necessary or sufficient to protect public health." Butterworth contends that there is sufficient evidence in the record to decrease the Zone I requirement. I disagree, for several reasons.

First, Butterworth has never proffered evidence of a smaller proposed Zone I with an evidentiary basis demonstrating how that Zone I is compliant with the regulations and adequate to protect the public health. That alone is fatal to Butterworth's argument.

Further, Butterworth relies primarily upon Frisch's testimony that is mostly unsupported by sufficient contemporaneous data and field studies and instead relies significantly upon the reports submitted by Butterworth's predecessor, Mt. Greylock, in the 1980s.³ Frisch's testimony

³ Butterworth relies on reports from Normandeau Associates that were submitted in the 1980s as evidence of the quality of the water in the spring. See Initial Brief of Petitioner Butterworth Water Company, p. 3. Not only are the

is general, and conclusory in nature, with no specific showing regarding the extent to which the Zone I can be reduced and still comply with the other Zone I requirements. Instead, Frisch relies primarily on the general characteristics of the spring and outdated data with insufficient sampling to assert that the nature of the spring is inherently safe from contamination. Longridge PFT.

He contends that the area in the vicinity of the spring vent is served by municipal sewers, which he argues eliminate potential impacts from septic systems. Frisch PFT, p. 4. The glacial till confining layer terminates in the Hoosac range at elevations well above the spring vent and the pressure in the vicinity of the spring vent is under greater than atmospheric pressure. Frisch PFT, p. 5. As a consequence, Frisch concludes that the area around the Butterworth spring is by definition a discharge area and, importantly does not receive recharge. Frisch PFT, p. 5. Frisch asserts that the presence of clay rich till in this area limit potential infiltration of contaminants from the surface as a result of both the very low permeability of the clay unit and a by the pressure of the water beneath the clay. In contrast, Frisch testified, in an unconfined aquifer (no confining layer in the waters under atmospheric pressure), surface contamination has the ability to migrate and impact the groundwater. Frisch PFT, p. 6.

Frisch testified that the spring is a high-quality source of water with a unique geologic setting that provides necessary and appropriate protection of its water quality to be used as a public water supply. Frisch PFT, p. 3. He testified that the Zone I requirements may be suitable for new wells but are not appropriate in this case that involves a spring with artesian conditions. He believes that there is a lack of any logical or scientific basis to apply the Zone I requirements to an artesian spring that is recharged from areas distant from the putative Zone I area around the

reports outdated but they are also hearsay for which there is no indicia of reliability. As a consequence, I attach no weight to them in this de novo appeal to the extent that they are offered relative to the quality of the spring and whether it may be impacted by surrounding uses. See Matter of Soursourian, Docket No. WET 2013-028, Recommended Final Decision (June 13, 2014) adopted by Final Decision (June 19, 2014).

spring vent and that purportedly has over 40 years of compliant water quality to support this conclusion. Frisch PFT, p. 3.

Frisch testified that the application both requests site approval and voluntarily offers mitigation measures that further assure the continued safety of the spring as a drinking water source. The mitigation measures consist of: (1) a one-time potential water quality hazard survey that will be conducted and forwarded to DEP; (2) a one-time drainage survey to determine the adequacy of area storm drains and correct any issues found; (3) development of an emergency response plan in conjunction with the town of Adams to assist local first responders in understanding of sensitive receptors and contaminant flow paths; (4) enhanced signage in the area to alert the public of the presence of the spring water source; and (5) and educational outreach in the form of annual mailed notices to all homeowners in the Zone I and II areas to remind the neighbors of the spring source and to provide best management practices for household hazardous materials, including herbicide and pesticide use. Frisch PFT, p. 7.

He also testified that the area around the spring has changed very little from the time of the original approval and water quality data has shown no significant changes in over 45 years. Frisch PFT, p. 9, 11. Frisch attempted to bolster his claim that the spring has not been adversely affected by surface use activities in the Zone I area by pointing to the use of road salt in the area. He testified based upon discussions with Town of Adams officials and personal observations of the roads in the area, both of which indicated to him that road salt has been liberally applied to the steep roads above the spring vent for many years. According to him, sodium chloride (salt) levels in the spring have consistently and continually tested at low, naturally occurring levels, even though road salt is highly soluble and mobile. Thus, he concludes, the artesian conditions protect the spring from contaminants. Likewise, he concluded, there is no indication that sewage

from surrounding properties in the vicinity the spring vent has had an impact on water quality. If that were not the case, he testified, there would have been some evidence showing up in water quality testing over the past 40+ years. He concluded: "this fact is compelling evidence that supports the hydrogeologic interpretation that recharge for the spring comes from the infiltration of precipitation into cracks in the bedrock far from the zone one, but the area under the spring vent as well protected by a metal of dense, clay rich glacial till, and the artesian conditions provide further protection against contamination – all of which are not present with respect to unconfined aquifers used by Wells." Frisch PFT, p. 14

DEP provided persuasive testimony in response to Frisch's assertions that the spring is sufficiently protected for a reduced Zone I size. I credit DEP's testimony, and do not attach weight to Frisch's testimony. In sum, Butterworth does not dispute that there are a number of property activities or uses within the Zone I area that are not related to the delivery of drinking water and which do not comply with the Zone I requirements. Although Frisch opines theoretically that they would not have a significant impact, there is an insufficient evidentiary foundation supporting that theory. Indeed, the sampling to which Frisch refers has only been intermittent, instead of the regular sampling required by DEP. Longridge PFT, p. 13.

DEP also provided testimony that there is nothing particularly unique about the spring that would somehow lead it to be differently treated than other springs and thus exclude it from the generally applicable Zone I requirements. Longridge PFT, p. 9. Several springs are located in western Massachusetts, including some that are underlain by bedrock units of the Stockbridge Formation. It is not uncommon or unique for wells and springs to penetrate glacial till overlying bedrock. Although Butterworth claims that the spring is well protected by a layer of dense, clay-rich glacial till that overlies bedrock, there is insufficient evidence of this. For example,

there have not been any studies that have been performed to delineate the thickness and lateral extent of the till layer. Little is known about the glacial till characteristics. No effort was made to identify where the till layer thins or narrows. Longridge PFT, p. 9. Frisch's supporting evidence appears to be based only upon observations made during excavation of three test pits and a nearby broken water main in the 1980s. Longridge PFT, p. 9. In fact, if the till is particularly dense it could be prone to drying or cracking, resulting in a potential migration pathway for contaminants. Under such circumstances, a release of oil or hazardous materials from an above or below grade source could impact the aquifer by migrating through the cracks. In addition, any penetration into the till layer, such as a building foundation or well, could serve as a conduit for contaminants to the aquifer. Longridge PFT, p. 10. Further the artesian pressure of this well does not render it uniquely invulnerable to contamination. Substances released in the recharge area, including oils and hazardous materials, could potentially impact the aquifer that supplies water to the spring. Longridge PFT, p. 10.

In addition, recharge areas for many public water systems, including springs and wells, extend outside Zone I areas and to areas at greater elevations. Longridge PFT, p. 10. The Zone I is designed to protect the aquifer itself, which is exposed and vulnerable to contamination. Longridge PFT, p. 10.

Frisch also inaccurately portrays the flow regime for springs. The flow regime for springs is perpendicular to the hydraulic gradient. That is why the Zone I shape for a spring is a square oriented in the direction of the hydraulic gradient. Longridge PFT, p. 11.

The DEP regulations and guidance require that suppliers of water must develop and implement drinking water source protection measures regardless of other purported mitigation measures. Longridge PFT, p. 3. Without full ownership or control of Zone I, uncontrolled land

uses could potentially threaten the water source. DEP does not allow an applicant to circumvent the Zone I requirements with the type of mitigation measures proposed by Frisch. Longridge PFT, p. 13. Moreover, DEP requires or encourages a number of the proposed mitigation measures, in addition to the Zone I requirements. Id. For example, each supplier of drinking water must prepare an emergency response plan.

For all the above reasons, there is not a preponderance of the evidence demonstrating that a reduced Zone I for Butterworth would sufficiently protect public health. Longridge PFT, ¶¶ 27-28, pp. 12-13. Indeed, perhaps what is most compelling is that Butterworth never submitted sufficient current evidence demonstrating that the spring would be safe notwithstanding its lack of ownership or control. Frisch's broad conclusory statements supported mostly by reports from the 1980s are inadequate.

In addition to the above evidentiary reasons, Butterworth's argument to waive the Zone I requirements under DWP Policy 94-03, § B.2, is not persuasive because that waiver provision is not applicable under the present circumstances. By its terms the provision applies to an existing PWS, which Butterworth's spring is not. In particular, the waiver provision in § B.2 applies when "a PWS cannot obtain ownership or control of the entire Zone I" for newly discovered wells or for existing wells." Exhibit 4; Doherty PFT, p. 7; Longridge PFT, p. 8. That §B.2 only applies to an existing PWS is further supported by the preceding provision, § B.1. That section specifically discusses regulatory remedies for noncompliant PWSs. The next section, §B.2, addresses waiver when those existing PWSs cannot obtain ownership or control of the entire Zone I and the other specified options are infeasible. These sections, §§B.1 and B.2, are not applicable to a new permit application like the one at issue in this appeal. Doherty PFT, pp. 7, 9.

Butterworth's argument also lacks persuasive force because there is no applicable waiver provision in the regulations, which are controlling over the policy.

CONCLUSION

For all the above reasons, I recommend that the DEP Commissioner issue a Final Decision affirming DEP's denial of the PWS permit.

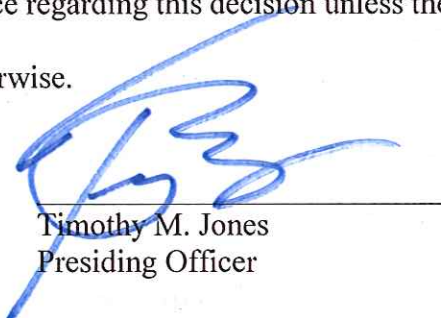
NOTICE- RECOMMENDED FINAL DECISION

This decision is a Recommended Final Decision of the Presiding Officer. It has been transmitted to the Commissioner for his Final Decision in this matter. This decision is therefore not a Final Decision subject to reconsideration under 310 CMR 1.01(14)(d), and may not be appealed to Superior Court pursuant to M.G.L. c. 30A. The Commissioner's Final Decision is subject to rights of reconsideration and court appeal and will contain a notice to that effect.

Because this matter has now been transmitted to the Commissioner, no party shall file a motion to renew or reargue this Recommended Final Decision or any part of it, and no party shall communicate with the Commissioner's office regarding this decision unless the Commissioner, in his sole discretion, directs otherwise.

Date:

2/28/17



Timothy M. Jones
Presiding Officer

SERVICE LIST

In The Matter Of:

Butterworth Water Company, Inc.

Docket No. 2016-016

File No. X268244

Adams

Representative

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