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EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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THE OFFICE OF APPEALS AND DISPUTE RESOLUTION

May 8, 2020

In the Matter of
518 South Ave LLC.

OADR Docket No. WET-2019-028
Weston, MA

RECOMMENDED FINAL DECISION

INTRODUCTION

A residents group ("Petitioners") brought this appeal to challenge the Superseding Order of Resource Area Delineation ("SORAD") that the Massachusetts Department of Environmental Protection's Northeast Regional Office ("MassDEP") issued to the Applicant, 518 South Ave., LLC ("Applicant"), the owner of the real property at the same address in Weston, Massachusetts. The SORAD was issued pursuant to the Wetlands Protection Act, G.L. c. 131 § 40, and the Wetlands Regulations, 310 CMR 10.00.

The Petitioners contend that the SORAD incorrectly identifies the unnamed stream on the Property ("Stream") as intermittent, and not perennial. A perennial stream is one that flows throughout the year, in contrast to an intermittent stream, which does not. The Weston Conservation Commission ("Commission") had previously determined that the Stream is intermittent, but the Petitioners appealed that determination to MassDEP, which concluded in the SORAD that the Stream is intermittent.

In its *de novo* appeal here, to the Office of Appeals and Dispute Resolution ("OADR"), the Petitioners contend that the stream should be determined to be perennial under applicable

regulations because they assert that its watershed size is equal to or greater than the minimum regulatory threshold of .5 square miles, while also having a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the United States Geological Survey ("USGS") StreamStats method. See 310 CMR 10.58(2)(a)1.c.i. Alternatively, they claim that if the Stream does not satisfy those criteria it is because the regulations are arbitrary and capricious, and thus void, despite the decision in a prior appeal upholding the regulation's validity under similar circumstances. See Matter of Alan Marks, Tri Street Partners, LLC, Docket No. WET 2018-009, Recommended Final Decision (May 09, 2019), adopted by Final Decision (June 18, 2019).

MassDEP and the Applicant disagree with the Petitioners. They contend that the Stream is intermittent according to the most recent USGS map and 310 CMR 10.58(2)(a)1.c. Alternatively, they contend that the Stream is intermittent pursuant to 310 CMR 10.58(2)(d) because it has been observed and recorded to be not flowing for at least four days in a consecutive twelve month period.

After holding an adjudicatory hearing and reviewing the entire administrative record, I recommend that MassDEP's Commissioner issue a Final Decision affirming the SORAD. The Applicant conclusively established the Stream's intermittency on the Property pursuant to 310 CMR 10.58(2)(d) by demonstrating that it was not flowing for at least four days in a twelve month period. The Applicant actually showed that it was not flowing on *ten* days during a consecutive twelve month period. In addition, the most recent USGS map does not depict the Stream on the Property, and thus it is presumptively intermittent pursuant to 310 CMR 10.58(2)(a)1.c; that was confirmed by the Applicant showing a minimum of four days of no flow. Given this is dispositive of the entire appeal, it is unnecessary, pursuant to the parties'

agreement, to reach the next phase of the litigation concerning the regulation's validity, including whether the prior decision in Matter of Tri-Street, supra determining the regulation is valid bars the Petitioners from bringing their claim to challenge the regulation's validity.

EVIDENCE

The evidence in the administrative record is derived from pre-filed written testimony and exhibits submitted by the parties. The testimony is sworn to under the penalties of perjury, and thus materially equivalent to an affidavit. Pre-filed testimony was filed on behalf of the witnesses identified below. The witnesses were required to be available for cross examination at the adjudicatory hearing, or their testimony would be stricken, absent the parties' agreement to the contrary.

For the Petitioners, testimony from the following witness is in the administrative record:

1. James Vernon. Vernon holds a BA degree in geology and mathematics and a PhD in geology. He is a senior hydrogeologist at Nobis Group, an environmental consulting firm, and has almost 30 years of experience as a hydrogeologist.

For the Applicant, testimony from the following witnesses is in the administrative record:

1. Robert A. Gemma. Gemma holds BS and MS degrees in civil engineering, with a specialization in surface and groundwater hydrology, river mechanics, and stream geomorphology. He is a licensed professional engineer and land surveyor. He is the founder, principal engineer, and President of MetroWest Engineering, Inc., a civil engineering firm. He has approximately 40 years of civil engineering experience.
2. Brian Nelson. Nelson is a project surveyor at MetroWest Engineering, Inc. He holds a BS degree in civil engineering and is a licensed professional engineer. He has approximately 20 years of experience in civil engineering.

3. Jonathan Buchman. Buchman is the President of Banner Construction Company, Inc. and manager of 518 South Ave., LLC. He holds two BS degrees, one in building construction technology and another in construction management. He has approximately 30 years of experience in the construction industry.

The following witness testified for MassDEP.

1. Kyle Lally. Lally is employed in the Wetlands and Waterways Program for MassDEP's Northeast Regional Office as an Environmental Analyst III, after previously working as a wetlands scientist with a surveying firm. He holds a BS degree in environmental science and an MS degree in environmental studies and conservation biology.

BACKGROUND

The Property consists of approximately 9.4 acres, as depicted on the most recent Existing Conditions Site Plan, dated April 10, 2019. Gemma PFT[1], ¶¶ 11 and 12, Exs. B, Q. A large bordering vegetated wetland ("BVW") travels from approximately the northeastern corner of the Property to the southern border. Id.; 310 CMR 10.55 (BVW performance standards). The BVW begins where the Property borders South Ave. at location 0+00 on Exhibit Q, and travels for approximately 600 feet to the southern boundary of the Property at location 6+00.[2] At station 6+00 there is a stone wall, after which the BVW continues on south for several hundred feet and travels under Wellesley Street at approximately location 18+70. Id.; Tr.[3], p. 13; Chalk 1. The Stream travels lies within the BVW with a southerly direction of flow.

[1] "PFT" is the acronym for "pre-filed testimony."
[2] The designation "0+00" indicates the baseline starting point for the Applicant's distance measurements for analyzing the Stream, where the first numeral indicates the hundreds of feet and the second and third numerals indicate distance in terms of the tens and ones numerals, respectively, from the 0+00 starting point. So, for example, a location of 5+00 would be located at 500 feet south of the Stream's intersection with South Ave., and a location of 5+52 would be at a location that is 552 feet south of the Stream's intersection with South Ave.
[3] "Tr." is the abbreviation for the transcript of testimony elicited at the adjudicatory hearing.

Data indicate that the Stream's contributing watershed is approximately .41 acres.[4] Gemma PFT, ¶ 15; Lally PFT, ¶ 37-39. The majority of the watershed lies on the north side of South Ave., where three intermittent streams come together at a confluence point, just to the northwest of where DiBenedetto Drive intersects South Ave., at the northern border of the Property. Gemma PFT, ¶ 16, Ex. Q; Lally PFT, ¶ 25, 34. Approximately a few hundred feet north of that point, the merged intermittent streams enter a 30-inch diameter corrugated metal pipe culvert in a BVW, which is marked as point A on Exhibit Q. Gemma PFT, ¶ 16. That culvert discharges into a storm drain that travels south under DiBenedetto Drive, and then under South Ave., where it opens on the south side of South Ave. and discharges onto the Property at point 0+00 of the Stream. Id.

The 600 foot Stream segment on the Property does not appear on the most recent USGS Natick topographic quadrangle map, dated 2018. Gemma PFT, ¶ 18, Ex. C; Lally PFT, ¶¶ 34-39. The three streams located on the northern side of South Ave. are identified on the 2018 USGS map as intermittent, with light blue, dashed lines. Id. Just to the southeast of the Property the USGS map shows an intermittent stream that flows from a pond on the Weston High School property. Lally PFT, ¶ 39. Field observations confirmed that after the Stream leaves the Property it flows into an intermittent stream that flows out of the pond on the high school property, which is located on Exhibit Q between locations 15+00 and 18+00. Lally PFT, ¶ 39. From there, the stream is intermittent until it intersects with Bogle Brook, which is a perennial stream. Gemma PFT, ¶ 18.

When this matter was before the Commission it issued an Order of Resource Area Determination ("ORAD") determining that the Stream segment on the Property is intermittent.

[4] The Petitioners reserved the right to challenge this watershed size in the next phase of this appeal, which is now unnecessary because of the determinations reached in this decision.

That determination was appealed by local residents to MassDEP, which, after investigating and conducting a site view, issued the SORAD affirming that the Stream on the Property was intermittent. The Petitioners appealed that decision to OADR. Prior to the adjudicatory hearing, the parties agreed upon an approach to litigate this appeal in phases. This is the first phase, and because this decision resolves the intermittency determination in favor of the Applicant, it is unnecessary to reach the later phases, as the parties agreed and as ordered in the Ruling and Order Partially Allowing MassDEP's and Applicant's Joint Motion in Response to Ruling and Order Dated October 11, 2019.

The issues that the parties agreed to litigate in this, the first phase, are as follows:

1. Whether the current USGS map or more recent map provided by the Department, pursuant to 310 CMR 10.58(2)(a)1.c, indicate the Unnamed Stream is intermittent?
    a. Is the Unnamed Stream not depicted on the most recent USGS map because flora obscured aerial views?

2. Is the Unnamed Stream intermittent pursuant to 310 CMR 10.58(2)(d) because it has been observed and recorded to be not flowing for four days in a twelve month period?

See Ruling and Order Partially Allowing MassDEP's and Applicant's Joint Motion in Response to Ruling and Order Dated October 11, 2019.

REGULATORY FRAMEWORK

Under the Wetlands Act and Regulations, a river is defined as a natural flowing body of water that empties to any ocean, lake, or other river and which flows throughout the year. G.L. c. 131 § 40 ("River"); 310 CMR 10.58(2)(a)1. Rivers include perennial streams because surface water flows within them throughout the year. Id.; 310 CMR 10.04 (definition of stream); G.L. c. 131 § 40 ("River"); see Matter of Robert Zeraschi, Docket No. 2006-115, Final Decision (December 8, 2008).

Streams are defined as "a body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydraulic gradient, and which flows within, into or out of an Area Subject to Protection under M.G.L. c. 131 § 40. . . . Such a body of running water which does not flow throughout the year (i.e., which is intermittent) is a stream except for that portion upgradient of all bogs, swamps, wet meadows, and marshes." 310 CMR 10.04 (Stream). "Intermittent streams are not rivers . . . because surface water does not flow within them throughout the year." 310 CMR 10.58(2)(a)1.

Whether a stream is intermittent or perennial has important regulatory consequences. If a waterbody is perennial, under the Wetlands Regulations and Act it has a regulated bordering land area known as the Riverfront Area. The Riverfront Area is: "that area of land situated between a river's mean annual high-water line and a parallel line located two hundred feet away, measured outward horizontally from the river's mean annual high-water line." G.L. c. 131 § 40; 310 CMR 10.58(2)(a); 310 CMR 10.58(2)(c) ("The boundary of the Riverfront Area is a line parallel to the mean annual high water line, located at the outside edge of the riverfront area. At the point where a stream becomes perennial, the riverfront area begins at a line drawn as a semicircle with a 200 foot (25 foot in densely developed areas; 100 foot for new agriculture) radius around the point and connects to the parallel line perpendicular to the mean annual high water line which forms the outer boundary."); Matter of Skeffington, Docket No. WET 2009-049, Recommended Final Decision (March 30, 2010), adopted by Final Decision (April 9, 2010).

Riverfront Areas generally receive heightened protection which limits development under the Wetlands Act and the Regulations because of the environmental benefits they provide, including: protection of the water supply (including groundwater), flood control, storm damage prevention, protection of wildlife habitat (including fisheries and habitat within the Riverfront

Area), and maintenance of water temperatures. They are critical to preventing water pollution by filtering contaminants before they reach the river and groundwater. See generally 310 CMR 10.58(1) (discussing in detail environmental benefits of the Riverfront Area).

The Wetlands Regulations provide the following four tests for determining whether a waterbody is perennial. See Tri-Street Partners, supra. First, "[a] river or stream shown as perennial on the current [USGS] or more recent map provided by the Department is perennial." 310 CMR 10.58(2)(a)1.a.

Second, "[a] river or stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size greater than or equal to one square mile, is perennial." 310 CMR 10.58(2)(a)1.b.

The third test provides that "[a] stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size less than one square mile, is intermittent unless:

> i. The stream has a watershed size of at least 1/2 (0.50) square mile and has a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats method. The issuing authority shall find such streams to be perennial; or

310 CMR 10.58(2)(a)1.c.i (emphasis added). The fourth test, which is relevant but not directly at issue here, provides:

> ii. When the USGS StreamStats method cannot be used because the stream does not have a mapped and digitized centerline (including but not limited to streams located in the following basins: North Coastal Basin, Taunton Basin, Buzzards Bay Basin, Cape Cod and Islands Basin, and that portion of the South Coastal Basin that is south of the Jones River sub-basin), and the stream has a watershed size of at least 1/2 (0.50) square mile, and the surficial geology of the contributing drainage area to the stream at the project site contains 75% or more stratified drift, the issuing authority shall find such streams to be perennial. Stratified drift

> shall mean sand and gravel deposits that have been layered and sorted by glacial meltwater streams. Areal percentages of stratified drift may be determined using USGS surficial geologic maps, USGS Hydrological Atlases, Massachusetts Geographical Information System (MassGIS) surficial geology data layer, or other published or electronic surficial geological information from a credible source.

310 CMR 10.58(2)(a)1.c.ii. (emphasis added).

At the time these regulations were promulgated, StreamStats was a "new statistical tool developed by USGS that [could] be accessed through the USGS website." 2002 Regulatory Appendix, § A.2. StreamStats "incorporates watershed size and geology into its calculations, and can be used to analyze the probability that a stream flows on a year-round basis at a particular location." Id.

THE BURDEN OF PROOF

As the party bringing this de novo appeal, the Petitioners would typically have the burden of going forward by producing credible evidence from a competent source in support of their position. 310 CMR 10.03(2); see 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."). Specifically, the Petitioners would be required to present "credible evidence from a competent source in support of each claim of factual error, including any relevant expert report(s), plan(s), or photograph(s)." 310 CMR 10.05(7)(j)3.c. So long as the initial burden of production or going forward is met, which it was, 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).

Here, because the parties desired a phased approach that first required in this phase the litigation of affirmative defenses raised by the Applicant, the above burden of going forward was reversed, and it fell upon the Applicant and MassDEP. Both parties met that burden.

"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

I. A Preponderance Of The Evidence Demonstrates That The Stream Is Presumed To Be Intermittent According To USGS Mapping

One of the Petitioners' foundational claims in their Notice of Claim was that the USGS map did not demonstrate that the Stream was intermittent.[5] Notice of Claim, ¶ 23. Indeed, they

[5] The Petitioners purported to withdraw unilaterally their arguments relative to Issue #1 for purposes of summary decision and then after the adjudicatory hearing. Petitioners' Post-Hearing Brief, p. 2; Petitioners' Memorandum in

asserted in their Notice of Claim and in their Pre-Hearing Statement that the watershed north of South Ave. contained three *perennial*, streams despite the most recent USGS map depicting them as intermittent. Petitioners' Notice of Claim, pp. 4-6; Petitioners' Pre-Hearing Statement. The Petitioners also contended that the reason that the stream on the Property was not depicted was that foliage from the heavily wooded area "likely rendered the exact same stream course [as the northern streams] not distinct enough, on aerial photo, for mapping." They also made this claim for portions of the Stream south of the Property. Id. However, as discussed at the Pre-Hearing Conference, it is generally common knowledge that the aerial photography of streams for mapping is almost universally performed in the early Spring or late Fall at a time when the leaves have fallen and there is no foliage. See 310 CMR 1.01(13)(l) ("The Presiding Officers may utilize their experience, technical competence and specialized knowledge in the evaluation of the evidence.").

As a consequence of the Petitioners' position, the parties agreed to the designation of the following issue for adjudication:

1. Whether the current USGS map or more recent map provided by the Department, pursuant to 310 CMR 10.58(2)(a)1.c, indicate the Unnamed Stream is intermittent?
    a. Is the Unnamed Stream not depicted on the most recent USGS map because flora obscured aerial views?

Pursuant to the cited regulatory provision, a "stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed

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Opposition to the Applicant's and the Department's Motions for Summary Decision on Issue Number 2, p. 2. Despite that, Issue 1 remained an issue for adjudication, as established in the Pre-Hearing Conference and summarized in the Pre-Hearing Conference Report, for which there was no objection on that issue. Because Issue #1 remained an issue, the Petitioners purported withdrawal of their arguments amounts instead to a waiver on that issue. Given this and my findings on Issue #2, it is unnecessary to reach the Petitioners' argument that the regulation is invalid, as agreed to by the Petitioners when they concurred with approach to litigate this appeal in phases. Moreover, the validity of the regulation was previously litigated and resolved in Matter of Allen Marks, Tri-Street Partners, LLC, Docket No. 2018-009, Recommended Final Decision (May 09, 2019), adopted by Final Decision (June 18, 2019). The extent to which that decision precluded the Petitioners from litigating the validity of the regulation was an issue identified for adjudication in Phase II, and thus will not be reached in this phase.

size less than one square mile, is intermittent unless: i. The stream has a watershed size of at least 1/2 (0.50) square mile and has a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats method. The issuing authority shall find such streams to be perennial[.]"

Here, the USGS map designates intermittent streams as light blue, dashed lines, and perennial streams as light blue solid lines. Gemma PFT, ¶ 18, Ex. C. The three streams north of South Ave. are shown on the USGS map with light blue dashed lines, indicating they are intermittent. Gemma PFT, ¶ 18, Ex. C. On the Property itself, the Stream is not shown at all. To the south of the Property on the nearby high school property, the Stream remains not depicted on the map until it reappears at the southern end of the BVW and is depicted with dashed lines, which means it is intermittent until it intersects Bogle Brook, which is depicted as a perennial stream with a solid blue line. Gemma PFT, ¶¶ 15, 18; Applicant's Motion for Summary Decision, pp. 4, 6; Applicant's Pre-Hearing Statement.

The Petitioners did not submit any evidence that the streams were not depicted for any reason other than they are intermittent. Therefore, the streams that are not depicted are presumably intermittent pursuant to 310 CMR 10.58(2)(a)1.c. That presumption may be rebutted by a showing that "[t]he stream has a watershed size of at least 1/2 (0.50) square mile and has a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats method." The Petitioners specifically reserved their right to make that showing to rebut the intermittency presumption in the second phase of this litigation, which is no longer necessary and will not be reached because of the intermittency finding below, as the parties agreed.[6]

[6] The issue was identified as: "Whether application of the criteria in 310 CMR 10.58(2)(a)1.c.i demonstrate that the Unnamed Stream is perennial pursuant to that regulatory provision?"

II. A Preponderance Of The Evidence Demonstrates That The Unnamed Stream Was Not Flowing For At Least Four Days In A Consecutive Twelve Month Period, And Thus It is Intermittent

The Applicant and MassDEP contend that despite the Petitioners' belief that flow rate and watershed size may show the Stream is perennial, at the end of the day the Stream is intermittent because direct observational evidence shows that it does not flow throughout the year. The Petitioners disagree with the Applicant's and MassDEP's intermittency assertion, but they concede that if it is found the Stream does not flow at least four days during a twelve month period, that will render it unnecessary to reach the next phase of litigation and it will end this appeal.

The Applicant and MassDEP rely upon 310 CMR 10.58(2)(a)1.d to show intermittency. It provides in relevant part the following:

> the issuing authority shall find that any stream is intermittent based upon a documented field observation that the stream is not flowing. A documented field observation shall be made by a competent source and shall be based upon an observation made at least once per day, over four days in any consecutive 12 month period, during a non-drought period on a stream not significantly affected by drawdown from withdrawals of water supply wells, direct withdrawals, impoundments, or other human-made flow reductions or diversions. Field observations made after December 20, 2002 shall be documented by field notes and by dated photographs or video. Field observations made prior to December 20, 2002 shall be documented by credible evidence. All field observations shall be submitted to the issuing authority with a statement signed under the penalties of perjury attesting to the authenticity and veracity of the field notes, photographs or video and other credible evidence. Department staff, conservation commissioners, and conservation commission staff are competent sources; issuing authorities may consider evidence from other sources that are determined to be competent.

310 CMR 10.58 (emphasis added).

There is no dispute that the Applicant's engineers, Gemma and Nelson, are competent sources to make the required documented field observations. Gemma monitored the Stream over a relatively long period of time. He observed that in June and July of 2019 Stream flow had reduced substantially. By August 27, 2019, the width of the flowing channel was reduced to 2 to 3 inches, and the depth of flow was less than one inch. Gemma PFT, ¶ 20. Following that period, Gemma and Nelson observed and documented no flow within the channel of the Stream on 10 different days between September 23 and October 10, 2019. Gemma PFT, ¶¶ 21-28, Exs. D-N; Nelson PFT, ¶¶ 6-8. Gemma personally observed no flow on more than seven days in September and October 2019 (September 23 and 24, and October 1, 2, 3, 4, and 10). Id.; Gemma Rebuttal PFT, ¶¶ 15, 21, 29, and 41. Nelson observed no flow on three different days than Gemma (September 25, 26, and 30). Nelson PFT, ¶¶ 6-8. The no-flow conditions were documented with photographs and field notes from multiple points approximately 25 to 50 feet apart over the 10 days. Id. The points were identified and recorded on a map of the Stream, and corresponded to field notes and photographs. Exhibits Q and R. The photographs, field notes, and sworn testimony confirm that water in the Stream channel was not flowing; it was primarily dry, with only occasional, isolated, and non-contiguous small pools, which can also be accurately characterized as puddles, i.e. small isolated areas of non-flowing water. Gemma PFT, ¶ 29; Exs. D-N, R, Q; Tr., pp. 66-68, 83-84. The Stream observation points were generally between locations 0+00 and 3+00 and then between 15+00 and 18+70, with some for approximately 200 feet after point 18+70. Id.

The evidence obtained by the Applicant's engineers was corroborated by the Applicant's Manager, Buchman, through individual, daily videos showing no flow on 16 days between September 23 and October 16 from location 0+00 down to approximately 1+00. Several of those

observation dates coincide with the days the Stream was observed and recorded by the Applicant's engineers, specifically September 23, 25, 26, and 30 and October 1, 2, 3, and 4, 2019, between points 0+00 and 1+00. Buchman PFT, ¶¶ 8-23, Exs. A-R; Gemma PFT, Ex. Q; Tr., p. 15.

The Petitioners responded to this evidentiary showing, contending that flow cannot be accurately discerned because they are still photographs, as opposed to a video that may be more likely to show movement. This argument is unpersuasive for a number of reasons. First, the still photographs are corroborated by field notes and sworn testimony from Gemma, Nelson, and Buchman. Second, they are also substantially corroborated by Nelson's photographs and Buchman's videos, which were taken on 5 of the same dates as Gemma's recorded observations: September 23 and 24 and October 1-4. Third, the photographs were taken at a series of close, sequential locations separated by approximately 25 to 50 feet along the Stream; they were identified and marked on the Applicant's Exhibits Q and R, and tied into contemporaneous field notes; and finally they were attested to by the sworn testimony of the witnesses who took the photographs. The observations provide a sequential pictorial summary view of a stream bed that was almost entirely dry, and only contained sporadic small, separate, isolated, pools with calm surfaces. Gemma Rebuttal PFT, ¶¶23-24. "When surface water is not flowing within an intermittent stream, it may remain in isolated pools or it may be absent. When surface water is present in contiguous and connected pool/riffle systems, it shall be determined to be flowing." 310 CMR 10.58(2)(a)1. There is no evidence of contiguous, connected pool/riffle systems,

which would demonstrate flow; instead the photographs generally show isolated, non-flowing small pools and a dry stream bed.[7]

The lack of flow was also corroborated by the Property's gradient, which would make it exceedingly difficult, as Gemma testified without rebuttal, for the observed small volumes of water actually to flow. The change in gradient from the northern end of the Stream on the Property (location 0+00) to where it travels into a culvert under Wellesley street 1,580 feet away is 2.66 feet, making the change in gradient .0017 feet per foot. Id.

Despite the Applicant's persuasive documentation and sworn testimony from three witnesses, the Petitioners have honed in on the Applicant's failure to produce "any documentary evidence" showing that the stream was not flowing between Station 3+00 and 15+00. In particular, the Petitioners accurately point out that there are no notes, photographs, or videos documenting direct observations of no-flow conditions between Station 3+00 and the Property's southern border approximately 300 feet away at point 6+00. Instead, the Applicant's next documented points of direct observation are south of the Applicant's Property between points 15+00 and 18+00.

There are several reasons why the Petitioners' assertions are unpersuasive. First, the administrative record includes more than a preponderance of evidence demonstrating that the section of the Stream between Stations 3+00 and 15+00 was inaccessible (without additional equipment and clothing and alteration or destruction of wetland flora) to *all* parties because of the extremely dense vegetation in a boggy area of the BVW. Vegetation included buckthorn, bittersweet, vines, and poison ivy. Tr., pp. 49, 65-66. Gemma testified that the BVW is one of

[7] What amounts to "flow" in a waterbody "throughout the year" is not commonly understood nor readily capable of proof. Instead, it is generally a matter of scientific judgment and expertise. See e.g., Matter of Soursourian, Docket No. WET 2013-028, Recommended Final Decision (June 13, 2014), adopted by Final Decision (June 19, 2014).

the more "impenetrable vegetated wetlands [he has] ever traversed in [his] 35 years of experience." Lally confirmed this on behalf of MassDEP, testifying that generally beginning at location 3+00 they had to terminate their attempt to traverse the entire length of the Stream. Id. at pp. 99-105. From that point they had to walk parallel to the stream bed at distances ranging from 15 to 50, or 60, feet away. Id. at pp. 105-106. Buchman also corroborated this testimony. Tr., p. 18.

The Petitioners have not countered with any evidence undermining the asserted difficulties with accessing the Stream after location 3+00, and all the way down to the southern end of the BVW at approximately location 15+00. Ordinarily, a party that raises accessibility issues in this type of appeal should also take other reasonable measures to attempt to access and record direct personal observations of stream flow for the stream segment that is difficult to access. In this appeal, however, that is unnecessary because of the overwhelming preponderance of circumstantial evidence—discussed above and below—leading to the reasonable inference that the unobserved portion of the Stream was not flowing on the same days that the nearby upstream and downstream segments were directly observed to have no flow.

Second, to address its acknowledged inability to document the inaccessible Stream segment the Applicant extensively documented stream conditions north of Station 3+00 and to the south of the impenetrable BVW between locations 15+00 down to location 18+00, to Location U on Exhibit Q during each of the 10 days when the Applicant and its engineers documented conditions at the site. Exhibit Q; Gemma PFT, Exs. D-N. For those areas, the Applicant's experts took photographs and contemporaneous notes at approximately 25 to 50 foot intervals of the no-flow conditions on each day for 10 days for areas north of location 3+00 and immediately south of 15+00. The observations provide a sequential pictorial summary view of a

stream bed that was almost entirely dry, and only contained sporadic small, separate, isolated, pools with calm surfaces, demonstrating no flow. Gemma Rebuttal PFT, pp 10-15; Gemma PFT, pp. 5-8.

Third, these no-flow conditions were observed nearby in adjacent upstream *and* downstream segments along with the almost complete lack of hydraulic gradient for the inaccessible section, evidencing that there was also no flow for the inaccessible portion of the Stream.[8] Indeed, although it is possible for a stream's flow status (flow or no-flow) to change along the length of a stream[9], the confirmed intermittency immediately upstream and downstream of the inaccessible Stream segment lead to the reasonable inference that the flow in the inaccessible portion corresponds to the upstream and downstream conditions; that is, when there is no flow immediately upstream and downstream, there is no flow in the inaccessible portion. This is corroborated by (1) the almost complete lack of a hydraulic gradient in the inaccessible portion, (2) the absence of the stream on the USGS map (indicating presumptive intermittency) and (3) the complete absence of evidence in the administrative record showing flow for the inaccessible Stream segment on days when no flow was observed immediately upstream and downstream.

Last, this finding for the inaccessible portion is also confirmed by the Wetlands Regulations, which dictate that is unlikely for a perennial stream to flow into an intermittent stream, but the converse, an intermittent stream flowing into a perennial stream is not as

[8] Matter of Tri-Street, supra. ("In fact, in order for water in a waterbody to be considered flowing it must be as a result of hydraulic gradient. See Matter of Pyramid Mall of Hadley Newco, LLC, Docket No. 2006-49, Final Decision (September 24, 2010). Water that moves without hydraulic gradient is not considered to be flowing. Id.").

[9] See Matter of Tri-Street, supra. (citing Matter of Martha Jean Eakin, Docket No. 2002-013, Recommended Final Decision, (April 12, 2005), adopted by Final Decision (June 8, 2005) (a stream may vary from being perennial to intermittent and vice versa); Matter of Robert Winter, Docket No. 2002-010, Recommended Final Decision, (May 15, 2003), adopted by Final Decision (August 11, 2003) (same).

improbable; the Wetlands Regulations provide: "[d]ownstream of the first point of perennial flow, a stream normally remains a river except where interrupted by a lake or pond." Likewise, the regulations define river as any natural flowing body of water that empties to any ocean, lake, pond, or other river and which flows throughout the year." 310 CMR 10.58(2)(a)1 (emphasis added). "Intermittent streams are not rivers as defined herein because surface water does not flow within them throughout the year." Id. "Rivers begin at the point an intermittent stream becomes perennial or at the point a perennial stream flows from a spring, pond, or lake." Id. Thus, according to this provision, if the Stream segment between Station 3+00 and 6+00 were truly perennial, "normally" it would "remain" perennial, instead of becoming intermittent, as in this appeal. 310 CMR 10.58(2)(a)1. Gemma Rebuttal PFT, ¶ 26; Tr., pp. 72-73; Buchman PFT, ¶¶ 8-23, Exs. A-R.

Further, the Petitioners failed to produce any evidence showing flow in the Stream on the same 10 days of no-flow documented by the Applicant and its experts. Indeed, the Petitioners' expert only visited the Property on two occasions (October 25 and November 20), and neither of those days was during the 10 days documented by the Applicant. Tr., pp. 87-88. Two other dates that the Stream was viewed by Petitioners' experts they were recorded by witnesses who did not testify or swear or affirm to their veracity.

The Petitioners' experts *did observe flow* on days *other than* when no flow was observed by the Applicant's experts. But that has almost no relevance to determining whether the Stream was not flowing on at least the minimum number of days observed by the Applicant and its experts. See Matter of Tri-Street, supra. (rejecting direct evidence of flow to show stream is perennial (footnote 3); "proving that a stream is perennial by direct observation requires multiple observations made in the late summer and early fall months over many years . . . ."); Matter of

Jan Williamson-Barberry Homes, LLC, Docket WET 2014-014, Recommended Final Decision (March 27, 2015), adopted by Corrected Final Decision (June 1, 2015) ("Unfortunately, proving that a stream is perennial by direct observation requires multiple observations made in the late summer and early fall months over many years, and the Department could not craft a workable provision to accommodate those timeframes. . . . Thus, the absence of a methodology in the regulations to classify a stream as perennial based on field indicators or observations was intentional, and is not susceptible to a contrary interpretation."). While Vernon testified that it is "possible" that the Stream was flowing between 3+00 and 15+00 on the 10 days of no-flow recorded by the Applicant, he offered no evidence in support of that possibility, and indeed he failed to offer any observations of that section of the Stream. I therefore do not credit his unsupported, conclusory position.

The Petitioners' reliance upon the decision in Matter of Soursourian, Docket No. WET 2013-028, Recommended Final Decision (June 13, 2014), adopted by Final Decision (June 19, 2014), is misplaced. In Soursourian there was an inadequate evidentiary showing that arose out of the applicant's reliance upon multiple layers of hearsay concerning unidentified portions of the stream segment at issue that purported to depict large, deep pools of water as not flowing. Aside from multiple layers of unreliable hearsay, it was unclear what the photographs depicted, where they were taken, by whom they were taken, and when they were taken. Here, in contrast, the Applicant has provided photographs, videos, contemporaneous field notes that corroborate each other and were sworn to as evidence by the witnesses who created those evidentiary items and recorded their personal first-hand observations. Moreover, these pieces of evidence were further buttressed with (1) the most recent USGS map showing presumptive intermittency, (2) an

almost nonexistent hydraulic gradient, and (3) a prima facie showing of inaccessibility for the unobserved stream segment.

Last, I attach very little weight to the Petitioners' expert's testimony. While Vernon is very qualified based upon education and experience, his testimony in this appeal was replete with statements unsupported by a proper factual foundation, leading him to make conclusory, unsupported statements and opinions.[10] See Lightlab Imaging, Inc. v. Axsun Techs., Inc., 469 Mass. 181, 191 (2014). Indeed, among the five foundational requirements for reliability of expert testimony is that the proponent must demonstrate that the facts or data in the record are sufficient to enable the witness to give an opinion that does not amount to speculation. Id. Much of the Petitioners' expert testimony is based on nothing more than conclusory statements based upon speculation and conjecture, and not appropriate facts and data. See Vernon PFT, ¶¶ 9-14 (using equivocal descriptors not based upon a proper factual foundation, including "probably," "possible," "potential," "likely," "may," "could").

The Petitioners respond to the abundance of evidence showing no flow by arguing alternatively that even if there is at times no flow in the Stream, that is because of a supposed artificial impediment to flow on the north side of South Ave; the Petitioners contend that the stream flow conditions are artificially impacted by elevation changes that were made to construct South Ave. and DiBenedetto Drive. As a consequence, the Petitioners seek to avail themselves of the regulatory provision which requires that the observations of no flow must be "made . . . on a stream not significantly affected by drawdown from withdrawals of water supply wells, direct withdrawals, impoundments, or other human-made flow reductions or diversions." 310 CMR

[10] Despite the insufficient evidentiary foundation in Vernon's testimony, I deny the Applicant's Motion to Strike paragraphs 16, 17, 18, 35, 39-44, 46, and 48 and Exhibit D, and instead have declined to attach weight to Vernon's testimony because of these evidentiary flaws and because much of this testimony is irrelevant to the issues in this phase of the appeal.

10.58(2)(a)1.d. The Petitioners argue that the intersection of South Ave. and DiBenedetto Drive serves to essentially impound the three intermittent streams that lie to the north of South Ave. MassDEP and the Applicant disagree, contending there is no impoundment and that the intermittent streams to the north flow without any significant impediment through the culvert that travels under DiBenedetto Drive and South Ave., and then onto the Property. I agree with the Applicant and MassDEP.

Impoundment is not defined in the Wetlands Act or the Wetlands Regulations, but it has been defined in Massachusetts case law in a similar context: "An 'impoundment' is 'a body of water formed by impounding (as by a dam).' 'To impound' means 'to collect (water) for irrigation, hydroelectric use, flood control, or similar purpose: confine and store (water) in an impound.' The noun 'impound' means 'a reservoir for impounding.'" Warcewicz v. Department of Environmental Protection, 410 Mass. 548, 551, 574 N.E.2d 364, 366 (1991) (quoting Webster's Third New International Dictionary 1136 (1966)).

Gemma, the Applicant's expert, testified that the roads are constructed at an elevation approximately level with the land on the north side of South Ave. and the west side of DiBenedetto Drive. Gemma Rebuttal PFT, ¶ 6. Gemma calculated the grade change between the roads and the area where the northern intermittent streams are located, and determined that the grade change is approximately 4 feet over a distance of approximately 80 feet, leading to a slope of only 5%, which is similar to the typical slope that is created in a store parking lot for drainage purposes. Tr., pp. 31-43, 74-75; Gemma Rebuttal PFT, ¶ 6. Gemma also testified that despite spending a substantial amount of time in the area, he has never observed water being stored or impounded behind South Ave. and DiBenedetto Drive. If it truly acted as an impoundment, one would observe water being stored, or detained, behind the roads. Gemma

PFT, ¶ 17; Gemma Rebuttal PFT, ¶ 6; Tr., pp. 75, 80-81. This was true during periods ranging from little to no precipitation to periods with greater precipitation. Gemma testified and demonstrated how the three intermittent streams north of South Ave. all flow towards the culvert in the BVW to the north and not towards the corner formed by the intersection of DiBenedetto Drive and South Ave. Tr., pp. 37, 42-43. Indeed, Gemma demonstrated that two streams *flow west and north* to the culvert, and the third flows south to the culvert. Id. From there water just to the north of DiBenedetto Drive and South Ave. flow without any significant impediment into the culvert, under the roads, and onto the Property. Id.

The Petitioners' attempt to show otherwise is unavailing. Their expert only testified that the road "appears to be" built on fill and "is likely" serving as an impoundment and "may be" significantly affecting the Stream. This is another area in which Vernon's testimony is replete with speculative testimony, as evidenced by the qualifiers of "presumably," "possibly," "apparently," etc. Vernon PFT, ¶¶ 12-13 Such speculation may be the consequence of Vernon's failure to visit the Property on more than two occasions, but nevertheless, I attach no weight to it because it is based upon an inadequate evidentiary foundation and is speculative.

Thus, the Petitioners have failed to demonstrate that the street elevations create an impoundment or other man-made flow reduction that "significantly affects" the Stream pursuant to 310 CMR 10.58(2)(a)1.d. This also true with respect to a point in the culvert shortly after the intake point within the BVW approximately 300 feet north of the Property where the Petitioners assert that there is a faulty connection in the culvert that prevents the flow of water and causes it to be impounded north of South Ave. At that point there are two interconnecting thirty inch pipes that are slightly offset from each other and not perfectly connected. Gemma Rebuttal PFT, ¶¶ 4, 7, 8, 18, Ex. Q; Tr., p. 43. Gemma's direct observations at the site demonstrated that water

flowed from one pipe into the other before discharging onto the Property. Id.; Tr., pp. 42-43. While some of the water flowed around and below the first section of the pipe, it still flowed directly into the second section of pipe which is lower in elevation than the first section. Vernon's testimony corroborated this, i.e. water flowed from one pipe to the other. Vernon PFT, ¶¶ 20-21. Vernon only testified that there was the "potential for water leakage." Id. In fact, no flooding or impoundment of water from the disconnection has been observed. Gemma Rebuttal PFT, ¶¶ 7-8; Tr., pp. 42-43. Any water that did not flow from one pipe into the other, would flow to the northwest back to the open culvert, and away from the intersection of South Ave. and DiBenedetto Drive. Tr., pp. 75-81. As further proof that there was no significant impediment to flow, Gemma observed the northern wetland to be mostly dry around the time that observations of the Stream were recorded, and not serving as an impoundment to water. Tr., pp. 42-49.

In sum, and based upon all of the above evidence, both Gemma and Lally testified that in their opinions there is no doubt that the Stream on the Property is intermittent. Gemma Rebuttal PFT, ¶ 40; Tr., pp. 72-73; Lally Rebuttal PFT, ¶¶ 5, 11; Tr., pp. 109-110.

CONCLUSION

For all the above reasons, I recommend that MassDEP's Commissioner issue a Final Decision affirming the SORAD. The Applicant conclusively established the Stream's intermittency on the Property pursuant to 310 CMR 10.58(2)(d) by demonstrating that it was not flowing for at least four days in a twelve month period. The Applicant actually showed that it was not flowing on ten days during a consecutive twelve month period. In addition, the most recent USGS map does not depict the Stream on the Property, which means that it is presumptively intermittent pursuant to 310 CMR 10.58(2)(a)1.c, which was confirmed by the Applicant showing a minimum of four days of intermittency.

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: May 8, 2020

Timothy M. Jones
Presiding Officer

SERVICE LIST

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Docket No. WET-2019-028	File No. 337-1358 Weston, MA
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May 8, 2020