

Damon, Jessica

From: Peter Guldberg <pguldberg@techenv.com>
Sent: Wednesday, February 19, 2020 11:17 AM
To: Beyer, Jim R
Cc: Damon, Jessica; Marc Wallace
Subject: RE: Silver Maple Wind - sound analysis

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February 19, 2020

Jim and Jessica-

With this latest turn of events, I have gone back and reviewed Eddie Duncan's Memo of February 7 that presents additional sound modeling for the Project. Assuming only the Clifton Ordinance applies and there is no quantitative penalty regarding SDRS, RSG's additional modeling answers all the questions I posed in my January 28 memo to you both. His third set of modeling using the sound power and ground reflection assumptions we recommended (Table 3 results) reveal that NRO on Turbine 1 is not necessary, and thus the issues about wind direction sector width and wind speed are moot. If you need anything further, let me know.

Best regards,

Peter H. Guldberg, INCE, CCM
Senior Consultant

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From: Beyer, Jim R [mailto:Jim.R.Beyer@maine.gov]
Sent: Tuesday, February 18, 2020 1:54 PM
To: Peter Guldberg <pguldberg@techenv.com>; paulfuller0123@gmail.com; Michael Carey <michael.carey@swebdevelopment.ca>
Cc: Damon, Jessica <Jessica.Damon@maine.gov>
Subject: FW: SDRS - Clifton Land Use Ordinance Rationale

Gentlemen,

I am sorry we keep going back and forth on the issue of what noise requirements apply to the Silver Maple Wind project, but it took a while for me to get all the facts. Nick Livesay, the Bureau Director's, response is below. The Department will apply the Town of Clifton's Ordinance.

James R. Beyer
Regional Licensing and Compliance Manager
Bureau of Land Resources
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From: Livesay, Nick <Nick.Livesay@maine.gov>
Sent: Friday, February 14, 2020 3:10 PM
To: Beyer, Jim R <Jim.R.Beyer@maine.gov>
Subject: RE: SDRS - Clifton Land Use Ordinance Rationale

Jim:

The Clifton Land Use Ordinance and its noise standards satisfy the criteria in Ch. 375 that trigger Department application of the municipal standard. Clifton's ordinance also contains specific provisions on the measurement of compliance in Appendix A. In applying the town's standards the compliance monitoring is effectively incorporated into these standards. The result is we should apply the Town's ordinance with regard to the regulation of sound in full; this includes Appendix A.

Nick

From: Beyer, Jim R <Jim.R.Beyer@maine.gov>
Sent: Thursday, February 13, 2020 4:13 PM
To: Livesay, Nick <Nick.Livesay@maine.gov>
Subject: FW: SDRS - Clifton Land Use Ordinance Rationale

For our discussion on Silver Maple Wind and noise

James R. Beyer
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From: Michael Carey <michael.carey@swebdevelopment.ca>
Sent: Tuesday, February 11, 2020 1:53 PM
To: Damon, Jessica <Jessica.Damon@maine.gov>; Beyer, Jim R <Jim.R.Beyer@maine.gov>
Cc: Eddie Duncan <Eddie.Duncan@rsginc.com>; paul fuller <paulfuller0123@gmail.com>
Subject: SDRS - Clifton Land Use Ordinance Rationale

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Hello Jessica and Jim,

Below is our rationale for employing the Clifton Ordinance for the Silver Maple sound requirements toward SDRS. Credit to Eddie Duncan from RSG for compiling this rationale.

The applicability of Chapter 375 (10) B states:

- (1) This regulation applies to proposed developments within municipalities without a local quantifiable noise standard and in unorganized areas of the State. When a proposed development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which (1) contains limits that are not higher than the sound level limits contained in this regulation by more than 5 dBA, and (2) **limits or addresses** the various types of noises contained in this regulation or all the types of noises generated by the development, that local standard, rather than this regulation, shall be applied by the Department within that municipality for each of the types of sounds the ordinance regulates. This regulation applies to developments located within one municipality when the noise produced by the development is received in another municipality and, in these cases, the Department will also take into consideration the municipalities' quantifiable noise standards, if any.

Clifton limits overall sound levels from wind turbines in Section 14.8.6.1.3 and 14.8.6.1.4:

14.8.6.1.3. *Within 100 ft of a Sensitive Receptor on non-participating or non-project parcels the average L_{90A} (10 minute) sound limit is 35 dBA. Compliance is as determined in **Article 14.8.A (Appendix A)**.*

14.8.6.1.4. *At the property line of non-participating or non-project parcels the average L_{90A} (10 minute) sound limit is 45 dBA. Compliance is as determined in **Article 14.8.A (Appendix A)**.*

Clifton limits tonality in Section 14.8.6.1.5:

14.8.6.1.5. *A 5 dB penalty is applied for tones as defined in **Article 18**, tonal penalty, actually measured at a measurement point. The 5 dB penalty shall be added to any average 10-minute sound level (L_{90A} 10-min) for which a tonal sound occurs.*

Clifton addresses SDRS in 14.8.A.7.11 by requiring the that you report SDRS through post-construction monitoring:

14.8.A.7.11. *All short duration repetitive events characterized by event amplitude. Amplitude is defined as the peak event amplitude minus the average minima sound level immediately before and after the event, as measured at an interval of 50 milliseconds ("ms") or less, A-weighted and fast time response, i.e. 125 ms. For each 10-minute measurement interval short duration repetitive sound events shall be reported by number for each observed amplitude integer above 5 dBA.*

Therefore, the Clifton ordinance contains limits that are not higher than the sound level limits in Chapter 375 and limits or address the various types of sounds contained in Chapter 375.

The Town of Clifton addresses SDRS it by requiring that it be quantified in post-construction monitoring. Further, their overall sound level limit is set comparatively low, 35 dBA. Therefore any potential penalty for SDRS is already accounted for in the lower overall sound level limit.

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