

Tuesday, 7/14/20

TO: Site Evaluation Committee c/o Administrator Pamela Monroe  
 TO: Counsel for the Public Attorney Heather Neville  
 FROM: Suzanne Fournier, Coordinator of Brox Environmental Citizens (Milford, NH)  
 RE: Comments on Arrowwood Environmental report – Chinook Solar Project

Dear Ms. Monroe & Ms. Neville:

After reading the Independent Environmental Review: Chinook Solar dated July 8, 2020 by Arrowwood Environmental (AE), I have several comments for your consideration:

- (a) With regard to rare, threatened, and endangered (RTE) animals, I found Section 8.1 is not up to par with the review of other topics, especially as compared to Section 8.2 RTE Plants. RTE animals were not surveyed or studied, though they should be.
- (b) The wetlands discussed in Section 6.1 are indeed a Priority Resource Area per the current DES definition found in Env-Wt 103.69 because the Natural Heritage Bureau reported the presence of RTE animals. It is an error for the report to conclude that there are no Priority Resource Area wetlands on the Property and to not give them special consideration.
- (c) There is a discomfoting and pervasive theme running throughout the report that prior and continuing environmental degradation, particularly due to logging, is tacitly deemed acceptable by the reviewers as a basis to then conclude that there would be no further unreasonable, adverse impacts should the Project move forward.

#### Detailed Comments

**(a) With regard to rare, threatened, and endangered (RTE) animals, I found Section 8.1 is not up to par with the review of other topics, especially as compared to Section 8.2 RTE Plants. RTE animals were not surveyed or studied, though they should be.**

AE's report Section 8.2 pertains to RTE *plants*. It correctly notes that "No inventories for rare plants were conducted by the Applicant as part of the environmental assessment of the Project." And that "the New Hampshire NHB did not request that a rare plant inventory be conducted for the Project."

The authors state that it is their "opinion that, for a project of this scale, a rare *plant* inventory should have been conducted for the following reasons. First, our knowledge of the distribution and abundance of rare plant species in New Hampshire is incomplete. Therefore, using this knowledge as the basis for determining if an inventory is necessary will inherently result in underreporting of rare species." [emphasis added]

The fact is that the same point about lack of knowledge and underreporting about RTE *plants* likewise is true for RTE *animals*. This is evident in the standard disclaimer provided by the Natural Heritage Bureau on the agency's report forms reporting on both plants and animals that notes that "many areas have never been surveyed":

"A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present."

However, AE's report's section on RTE animals notes that because of the previous NHB records of the Blanding's Turtle and Wood Turtle that "the Applicant assumed their presence." *Assuming* the presence of those two turtle species is reasonable, but seriously incomplete, since the acknowledgment of two species does nothing to rule out the presence of other RTE animal species that might also be in the Project area, particularly other species who rely on similar habitats, such as Spotted Turtles and Eastern Hognose Snakes.

The fact is that there was no inventory, no survey, and no study of RTE animals conducted by the Applicant and that is at least as deficient as not having conducted an inventory/survey of RTE plants.

AE's environmental assessment of RTE animals, therefore, is based solely on the hit-or-miss rare-animal sightings that were unsystematically reported to the State, documenting only that some RTE animals were observed on site or in the vicinity, but not based on the results of a properly-conducted survey.

Unfortunately the RTE animals' use of the Property was not studied, as was made clear should be done in the NH Supreme Court order in Fournier, et al Case No. 2018-0617.

The NH Supreme Court acknowledged that, with a study of RTE animals, a Project may be able to be designed to avoid adverse impacts to them. And Justice Hantz- Marconi added in her separate concurring opinion that without a study, the State has no way of knowing what standard of harm-avoidance to RTE animals was being used. [see pages 5 and 8 of the SC's order – online here:

<https://www.courts.state.nh.us/supreme/finalorders/2019/november/20180617.pdf>

Subsequently on June 2, 2020 DES amended its rule that pertains to RTE animals applicable to alteration of terrain (AoT) permit applications – Env-Wq 1503.19 (h) – that now requires a survey/study as part of all AoT applications, which is a recognition that reliance on existing NHB reports is insufficient.

Without such a survey/study, the conditions being provided by the Applicant that are based on NH Fish & Game's input (see report section 8.1.2) are not necessarily the complete "wildlife protection measures" that they need to be. The proposed conditions also involve forms of "take" that are forbidden by RSA 212-A that includes harassment or interference, such as an exclusionary silt fence barrier that prevents the natural movement of the RTE species.

Therefore, without knowing the RTE animals' use of the Project site and vicinity, including all of the vernal pools (of both high and poor quality), wetlands as well as the uplands, measures to protect RTE animals are just a shot-in-the-dark.

AE's report [see Vernal Pools 6.3] fails to mention that the amphibians who rely on the pools are also a main food source for the Blanding's Turtles and other RTE reptiles. That's because whether or not the vernal pool is of high quality or of long enough hydroperiod, the eggs deposited by amphibians become the necessary nutrients that sustain, for example, Blanding's Turtles in early spring. This crucial connection between Blanding's Turtles and vernal pools with their dependent amphibians lacks emphasis in the report. A study of the RTE turtles' use of the vernal pools and the uplands connecting them is fundamental to understanding potential adverse impacts to the RTE turtles.

Therefore, in my opinion there is no solid basis for the report to conclude (8.1.3) that "the measures that have been presented at this time *appear* to address the major issues related to potential Blanding's and Wood turtle impacts." [emphasis added] Even with "more specific details" as requested in the report, there is little basis to conclude that "if these measures are undertaken, it is our opinion that the Project will not result in unreasonable, adverse impacts to these [RTE turtle] species."

The SEC ought to require a full survey to identify all RTE animals that may be using the Property and most importantly require a study of how they are using it, in order to have the knowledge to make an assessment of potential impacts. While RTE *plants* deserve a survey, so do RTE *animals* deserve not only a survey, but also a study to understand their use of the land as they meander through the Project area.

**(b) The wetlands discussed in Section 6.1 are indeed a Priority Resource Area per the current DES definition found in Env-Wt 103.69 because the Natural Heritage Bureau reported the presence of RTE animals. It is an error for the report to conclude that there are no Priority Resource Area wetlands on the Property and to not give them special consideration.**

The AE report states that their independent analysis has confirmed that there are no Priority Resource Area wetlands, but to confirm that would mean to ignore the following information from DES:

A Priority Resource Area "has one or more of the following characteristics: 1) Protected species ...." [reference: DES Fact Sheet WD-25 issued 2020 – "Wetlands Permitting: Priority Resource Area].

The fact sheet continues with this information:

"Protected species and habitat (Env-Wt 103.68 (sic – correct is 103.69) includes *any threatened or endangered species, eagle species, ..., as identified by the Natural Heritage Bureau (NHB).*" [emphasis added] [reference: DES Fact Sheet WD-25 issued 2020 – "Wetlands Permitting: Priority Resource Area].

The Applicant's Appendix 15 H does not have a section on Priority Resource Areas, but it does have Table 1 showing whether or not there were any "wildlife observations." Table 1 indicates that there were none. But it is not *observations* by the Applicant that define

wetlands as Priority Resource Areas, but rather the NHB's report of sightings. Because there were sightings of RTE reported by NHB, the wetlands of the Project are classified as Priority Resource Areas and are supposed to be given special consideration. This is particularly important for the 3,021 square feet of wetlands that AE calculated should be reported as wetland impact, and also for the 2.68 acres of wetland buffer to be impacted.

The science about wetlands is that they are not protected without adequate buffers, and therefore, wetlands suffer degradation as a result. According to DES – Chapter 2.4 Wetlands Protection, SECTION 2: ENVIRONMENTAL CHARACTERISTICS ZONING available at [www.des.nh.gov/organization/divisions/water/wmb/repp](http://www.des.nh.gov/organization/divisions/water/wmb/repp) [p. 200] quote:

The ability of vegetated wetland buffers to provide water quality protection increases with the size of the buffer. At 100 feet, most of the contaminants and nutrients have been removed (Chase *et al*, 1997). Protection of buffers will reduce wetland impacts by moderating the effects of stormwater runoff, including stabilizing soil to prevent erosion; filtering suspended solids, nutrients, and harmful or toxic substances; and moderating water level fluctuations.

However, wetland buffers to support wildlife may need to be much larger. Buffers also provide essential habitat for wetland-associated species for use in feeding, roosting, breeding and rearing of young, and cover for safety, mobility, and thermal protection.

There were two RTE animal species identified on NHB19-0727 dated 3/5/2019 – Blanding's Turtle and Wood Turtle -- making the wetlands on the Project site "Priority Resource Areas" by definition. Therefore, both the wetlands and their buffers on the Project site ought to be given special attention due to the status of the wetlands as Priority Resource Areas.

**(c) There is a discomfoting and pervasive theme running throughout the report that prior and continuing environmental degradation, particularly due to logging, is tacitly deemed acceptable by the reviewers as a basis to then conclude that there would be no further unreasonable, adverse impacts should the Project move forward.**

With such resigned acceptance and justification, prior and continuing acts causing environmental degradation, such as active logging, are rewarded rather than discouraged. Unfortunately for NH's environment, future applicants will learn that it is easier to ask for acceptance and forgiveness than to ask for permission.

I believe that to give a pass to environmental degradation that was avoidable in the first place because it should have been studied first, is unreasonable, and therefore, results in unreasonable adverse impacts tied to the Project, as is demonstrated throughout the AE report as follows:

**Bats** – The bat assessment by NEES states that the "primary threat to the four foliage-roosting bats (eastern bat, hoary bat, silver-haired bat, and tri colored bat) with regard to the Project is direct mortality and indirect impacts caused by tree-removal activities during the summer breeding season." [reference: bat assessment p.16]

The bat assessment does not acknowledge that there was logging in 2018/2019 during the active bat season that took place outside of the safe timeline. [see records of logging in Docket No. 2019-02, Comments, Tab 3, 2/27/20, public comment by Suzanne Fournier]

The breeding bats would have been put in danger. But only looking forward, the AE report states that: “If the Applicant maintains their commitment to limit tree removal to the non-active season (November 01 – March 31), it is my opinion there is relatively little risk that the Project would have a detrimental impact on these [bat] species and thus generate an unreasonable adverse effect.” (pp. 15-16)

I believe that the report cannot reasonably conclude that the Project has “relatively little risk that the Project would have a detrimental impact on these species and thus generate an unreasonable adverse effect,” because the bats were already put at risk while the Project was already a Project, even though the Applicant may have lacked sufficient authoritative influence over the activities of the individual landowners who chose to log during the active bat season.

And yet the bat assessment provides acceptance of the prior logging’s effects on bats, characterizing the extensive habitat loss as “unrelated to the Chinook Project.” But is it truly unrelated?

Comment: Impact on bats -- negative and unreasonable

**Deer** – AE report Section 5.1.2 makes a blunt, factual admission that “The northern portion of the Project area was clear cut ... *subsequent to the Applicant’s forest analysis in 2017.*” [emphasis added]

“Based on the June 8, 2020 site review, it is likely that previous to forest clearing activities, significant forested areas in the northern Project limits of disturbance provided appropriate coniferous forest structure and functioned as DWA [Deer Wintering Area] habitat.” Those deforested DWAs are now gone, yet the loss is accepted and forgiven?

Comment: Impact on deer -- negative and unreasonable

**Bears** – 5.3.3 “The Project site is under active forest management resulting in only small remnants of mature forest remaining on the Project site.” And concludes, now that the damage is already done, “that the Project does not contain bear habitat in the form of significant mast stands and that the Project will have no impact on this resource.” Correct – the active forest management has eliminated mast trees as the food source in bear habitat. Is what was avoidable loss to be accepted and forgiven?

Comment: Impact on bears -- negative and unreasonable

**Wetlands** – 6.1.1 “In the case of this Project, it appears that the significant changes in wetland delineation boundary lines may be due to the ongoing logging that has occurred on site.” Nevertheless, AE seems to find the deforestation impacts to wetlands to be acceptable.

Comment: Impact on wetlands -- negative and unreasonable

**Vernal Pools** – 6.3 “The uplands around the pools are therefore critical to the wildlife habitat [of amphibian indicator species] that the pools provide and integral to the functioning of the pool.”

And from 6.3.2. “While the Applicant avoided direct impacts to [vernal pools] with the proposed layout, no analysis was conducted on potential impacts to vernal pool buffers.”

“The forest within the Project area has been heavily managed as a timber resource for many years with varying amounts of deforestation and regeneration.”

“The main reason that the proposed solar facility would have such a low impact on the upland habitat around these vernal pools is that *the previous logging has resulted in the (temporary) elimination of most of the habitat.*” [emphasis added]

This means that much of the upland/buffer habitat of the vernal pools has been destroyed. AE concludes this way: “Due to pre-construction forest management activities, the upland habitat to these pools has been significantly impacted.” The Project, though, is seemingly unaffected, and not held accountable for the destruction to upland vernal pool habitat.

Comment: Impact on vernal pools – negative and unreasonable

**Natural Communities 7.1.2** – “We concur with NHB [Natural Heritage Bureau] that the site contains areas of Hemlock-beech-oak-pine forest. However, the site also contains areas of the Hemlock forest natural community.” “Localized logging has impacted both of these communities ....” Does the Project get a pass for this damage to natural communities too?

Comment: Impact on natural communities – negative and unreasonable

**RTE Animals 8.1** The Blanding’s turtle “often travels between wetland habitats using the intervening upland areas ....” However, the AE report did not address the effects of the prior and recent logging on the “intervening upland areas” and thereby how the changes to habitat have affected the RTE turtles.

Food is a key component of habitat. The AE’s report did not adequately acknowledge that the loss of amphibians due to prior, current, or planned disturbances is a direct threat to the survival of the endangered Blanding’s Turtle who depends on the eggs of amphibians in early spring.

Who is responsible for this degraded upland habitat utilized by the RTE animals; is it not the Applicant, not the Project?

Comment: Impact on RTE animals -- negative and unreasonable

**RTE Plants 8.2** The AE report did not address the effects of all of the prior and recent logging on rare plants which were never even inventoried. Does the Applicant bear no responsibility for being blind to potential RTE plants?

Comment: Impact on RTE Plants -- negative and unreasonable

While it may be convenient for the Applicant to point to the landowners as the problem for all of the above-listed impacts, the Project – including the natural resources on site – is the responsibility of the Applicant and we know that here the extensive logging has had tangible damaging effects on the myriad of natural resources on the Project site.

I would ask that the SEC consider how the Applicant may be properly held accountable for the environmental degradation that has already occurred and may still be occurring (has the logging stopped?) The SEC has leverage to require things like restoration and mitigation of past damage, and shrinkage and redesign of the Project, for it to possibly become more environmentally sustainable.

Thank you for your consideration of my comments regarding (a) RTE animals, (b) Priority Resource Area wetlands, and (c) the theme of resigned acceptance rather than expected accountability for what was avoidable environmental degradation.

Respectfully submitted,

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