

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Investigation pursuant to 30 V.S.A. §§ 30 and	)	
209 into whether the petitioner initiated site	)	
preparation at Apple Hill in Bennington,	)	Case No. 20-1611-INV
Vermont, for electric generation in violation of	)	
30 V.S.A. § 248(a)(2)	)	

**RESPONSES OF THE AGENCY OF NATURAL RESOURCES TO APPLE HILL
SOLAR LLC’S INFORMATION REQUESTS**

NOW COMES the Agency of Natural Resources (ANR or Agency) by and through its attorney, Donald J. Einhorn, and hereby responds to the December 12, 2020 request for information by Apple Hill Solar, LLC (“Petitioner” or “AHS”).

PROPOUNDING PARTY: Apple Hill Solar, LLC

RESPONDING PARTY: Vermont Agency of Natural Resources

SET NO: Sole Set

GENERAL OBJECTIONS

The following General Objections are made in response to each interrogatory, request to admit, or request to produce (the “Requests”) as if the objections were fully set forth therein. Any response is given without waiver of any objection, whether or not an objection is stated. The Agency reserves the right to later raise any additional, available objections.

1. The Agency objects to the Requests on the grounds and to the extent they call for responses that exceed the scope of the Agency’s testimony and exhibits or are neither relevant to the subject matter of the pending action nor reasonably calculated to lead to the discovery of admissible evidence.
2. The Agency objects to the Requests on the grounds and to the extent that they seek responses that are subject to any or all of the following privileges: (a) the attorney-client privilege; (b) attorney work product and trial preparation privileges; (c) executive or deliberative process privilege, or that are otherwise privileged or protected from disclosure. The Agency construes each of the Requests so as not to seek any information or materials that falls within each of these privileges. To the extent any information or materials protected by these privileges is inadvertently produced, such production is not to be construed as a waiver of such privilege or protection.
3. The Agency objects to the Requests on the grounds and to the extent that they are overbroad, unduly burdensome or oppressive, unreasonably cumulative or duplicative, and not proportional to the needs of the case.
4. The Agency objects to the Requests on the grounds and to the extent that they are vague, unintelligible, contain undefined terms, require speculation, or are otherwise incapable of a reasonable response.
5. The Agency objects to the Requests on the grounds and to the extent that they purport to impose obligations on the Agency that are beyond the scope of the Public Utility Commission Rules or the Vermont Rules of Civil Procedure or other applicable law, request information and/or documents that require an unreasonable investigation on the part of the Agency, or purport to require the Agency to create documents or perform new analyses responsive to any such Requests.
6. The Agency objects to the Requests to the extent that they seek the production of documents and information already in the possession of, or publicly available to, or readily obtainable to the Petitioner and its counsel, on the ground that with respect to such production, the Requests are thereby rendered unduly burdensome.
7. The Agency objects to the Requests to the extent that they seek the production of documents and information not within the Agency’s possession, custody, or control.

8. The Agency objects to the Requests to the extent that they call for a legal conclusion.
9. **The Agency repeats and re-asserts all objections which the Agency raised during the June 26, 2020 and December 4, 2020 proceedings in this matter, including but not limited to all arguments and objections with regard to: the lack of relevancy of the Section 248(b)(5) “undue adverse impact” standard of review to this investigation and injunction proceeding; the lack of applicability of any and all MOUs which may have been entered into between the Agency and Apple Solar and its related entities in connection with the underlying Section 248 proceedings concerning the Apple Hill site; the lack of applicability of the Agency’s Section 248 RTE Plant Guidance document to this investigation and injunction proceeding; and the inability of Apple Hill Solar, LLC and its related entities to challenge the Agency’s plant classification system and the ranking and status of the very rare (S1) Asters and rare (S2) Nimblewill with regard to that classification system and those plants rankings within that system and their presence at the Apple Hill site due to the prior admissions of those Apple Hill entities and the evidence which exists in the underlying Section 248 proceedings concerning the Apple Hill site.**

The Agency expressly reserves the right to supplement, clarify, revise, or correct any or all of the responses herein at any time. By making any response to the Requests, the Agency does not waive and hereby expressly reserves, the right to assert any and all objections as to the admissibility of such responses into evidence at the time of trial of this action, or in any other proceeding, on any and all grounds, including but not limited to competency, relevance, materiality, and privilege. The Agency also does not waive and hereby expressly reserves the right to object on any ground at any time to a demand for further responses to these requests or any other discovery procedures involving or relating to the subject matter of the Requests responded to herein. Further, the Agency provides the responses herein without in any manner, express or implied, admitting that the items in the Requests or in any response thereto are relevant or material to the subject matter of this proceeding.

Interrogatories, Requests to Produce, and Requests to Admit

ANR MOU

Q.1-1. Admit that all of the conditions related to the Aster and the Nimblewill set forth in paragraphs 5 and 6 of the ANR MOU (the “RTE Conditions”) have been satisfied. If not admitted, please state with specificity which of the RTE Conditions ANR believes AHS has violated and list and provide all Evidence in support thereof.

A.1-1. Objection: The ANR MOU is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The MOU was entered into in Case No. 8454 and was terminated in accordance with its terms when the Commission denied the Apple Hill petition. In addition, pursuant to its terms, the MOU does not have precedential impact in any future proceedings, such as the Apple Hill site clearing investigation. Finally, the purpose of the MOU was to ensure that the proposed Apple Hill project would not result in an undue adverse impact on the natural environment, a standard of review which is established for the limited purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and not intended to apply to, or be relevant in, an investigation and review of activities which are violative of Section 248’s prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue.

Without waiving the objection, denied. There is no mention of either the Aster or Nimblewill in paragraphs 5 or 6 of the ANR MOU (which is defined by these discovery requests as “that certain Memorandum of Understanding, dated as of February 22, 2018 between AHS and ANR”). The Agency notes that the 2018 MOU superseded a prior MOU dated June 29, 2015 (2015 MOU), between ANR and AHS, and that the 2015 MOU paragraphs 5 and 6 speak to RTE plants. Language similar to that contained in the RTE plant provisions of the 2015 MOU appears in paragraph 14 of the 2018 MOU. With respect to the RTE plant language which appears in the 2018 MOU, there are a number of conditions for which the Agency has no proof as to whether they were fulfilled. Some examples of potential unsatisfied conditions include the following:

- 14.a.iv. – required tree and shrub removal within the Conservation Area;
- 14.a.iv. – requirement to avoid harm to Asters previously growing in the Conservation Area while conducting the tree and shrub removal;
- 14.a.iv. – requirement to clean all equipment prior to entry into the Conservation Area;
- 14.a.v. – requirement for Arrowwood to inspect perimeter fence prior to commencement of site work; and

- 14.a.v. – requirement to brief construction crew prior to commencement of site preparation activities.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-2. Admit that that the 2019 Report indicates that the transplantation of the Aster within the area of the solar arrays (i.e., within the Project fence line) were transplanted to the conservation areas established pursuant to the ANR MOU (the “Conservations Areas”) by the end of calendar year 2018.

A.1-2. Objection: The ANR MOU is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The MOU was entered into in Case No. 8454 and was terminated in accordance with its terms when the Commission denied the Apple Hill petition. In addition, pursuant to its terms, the MOU does not have precedential impact in any future proceedings, such as the Apple Hill site clearing investigation. Finally, the purpose of the MOU was to ensure that the proposed Apple Hill project would not result in an undue adverse impact on the natural environment, a standard of review which is established for the limited purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and not intended to apply to, or be relevant in, an investigation and review of activities which are violative of Section 248’s prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue.

Without waiving the objection, denied. While the 2019 Report indicates that a number of the Asters which had been identified up through fall 2018 had been transplanted at that time, this does not mean that all Asters have been transplanted. Since that time there have been two additional growing seasons. In addition, Apple Hill Solar filed an amended site plan on March 23, 2020 (Exhibit AHS-IJ-2) in Case No. 8454 which shows the proposed Project fence line as now being located further to the south and along the parcel’s southern boundary line. The 2019 Report (in Figure 1) referenced in the request clearly depicts the existence of Asters located within that area which were not moved according to the 2019 Report.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-3. Were more than 10% of the local Population of Asters impacted by transplanting them to the Conservation Areas?

A.1-3. Objection: The request is vague in that it does not define “impacted,” nor does define what it means by the “local Population.” The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, answering this request would require an analysis that has not been performed and for which the Agency has insufficient information to perform. To conduct this analysis the Agency would need to know the total number of Aster plants at the site, information which the Agency has not received. In addition, the survival of transplants, reproduction and recruitment need to be monitored yearly for a minimum of five growing seasons. Since the Asters were transplanted in fall of 2017 and 2018, their survival has been monitored for only two (as to the 2017 transplants) and one (as to the 2018 transplants) according to the most recent (2019) monitoring report received by the Agency.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

CLASSIFICATIONS AND THRESHOLDS

Q.1-4. Please refer to the Guidance. List each member of (i) the Scientific Advisory Group on Flora and (ii) staff within ANR that worked on establishing the Guidance impact thresholds (i.e. 10% for S1 and 20% for S2), and their respective credentials.

A.1-4. Objection: The Guidance is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The Guidance exists for the purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and it is not intended to apply to, or be used in connection with, an investigation and review of activities which are violative of Section 248's prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue. The request is also vague in that it does not define what it means by the term "worked on."

Without waiving the objection, I established the thresholds. I consulted with several members of the Scientific Advisory Committee on Flora but do not recall specifically which ones. See **Attachment 1-4**, which lists the current members of the Scientific Advisory Committee on Flora (SAG / Flora) and identifies their credentials. Note that some members have been added since 2016, however, the majority of those listed were on the Committee at the time I consulted and established the thresholds. I also consulted with Everett Marshall who is the Department's Natural Heritage Coordinator/Information Manager and a biologist who is experienced with rare plants in Vermont.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-5. Please provide the studies referenced in Bob Popp’s live testimony in the hearing in these proceedings on December 4, 2020 that were relied upon by ANR in establishing the Guidance impact thresholds (i.e. 10% for S1 and 20% for S2).

A.1-5. Objection: The Guidance is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The Guidance exists for the purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and it is not intended to apply to, or be used in connection with, an investigation and review of activities which are violative of Section 248’s prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue.

Without waiving the objection, see the documents produced as **Attachments 1-5**. As I indicated in my testimony, there were no studies specific as to removal of rare plants. There were some studies concerning removal of percentages of seeds and some guidance in the removal of plants or plant parts. See the following which are attached: The New England Wildflower Society’s (now known as the Native Plant Trust) “Guidelines for ethical field research on rare plant species” which specify that no more than 10% of plants or plant parts should be affected by collections; State of Massachusetts “Guidelines for rare plant collecting in Massachusetts”; the research by Menges et al, which provides modeling as well as empirical data to support the 10% threshold. (Removal of seeds has a lower impact on a plant population than removal of entire plants. However, the widely accepted standard for seed collection is the 10/10 rule where no more than 10% of seed is collected in 10% of years.); and the Native Plant Trust’s New England Plant Conservation Collection Guidelines (current version attached), which strictly adheres to the 10% threshold.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-6. Admit that it is possible to impact greater than 10% of a S1 plant Population without having an undue adverse effect on that Population.

A.1-6. Objection: The reference to the phrase “undue adverse effect” calls for a legal conclusion. The “undue adverse effect” standard is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The standard exists for the purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and it is not intended to apply to, or be used in connection with, an investigation and review of activities which are violative of Section 248’s prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue. The request is vague in that it does not define the terms “impact,” nor does it explain what is meant by, or any parameters attributed to, the term “possible.” The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, denied. See the studies identified in my response to Q.1-5.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-7. Admit that it is possible to impact greater than 20% of a S2 plant Population without having an undue adverse effect on that Population.

A.1-7. Objection: The reference to the phrase “undue adverse effect” calls for a legal conclusion. The “undue adverse effect” standard is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The standard exists for the purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and it is not intended to apply to, or be used in connection with, an investigation and review of activities which are violative of Section 248’s prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue. The request is vague in that it does not define the terms “impact,” nor does it explain what is meant by, or any parameters attributed to, the term “possible.” The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, denied. See the studies identified in my response to Q.1-5.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-8. Admit that the classification of the Nimblewill and the Aster is not based upon any scientific basis or scientific evidence. If denied, produce all Evidence that support your denial.

A.1-8. Objection: The request is argumentative. The request is not relevant to this proceeding in that the plant classifications have already been established and agreed to by Apple Hill Solar LLC and its affiliated entities (including but not limited to Chelsea Solar, Willow Road Solar, Otter Creek Solar, PLH, and Allco) in the underlying Section 248 proceedings concerning the Apple Hill site and other sites (e.g., See PUC Case Nos. 8302, 8454, 17-5024, and 19-0516). In addition to lack of relevance, this overly broad request is not proportional to the needs of the case, especially when the lack of relevance and prior admission of the classification, and agreement with it, by Apple Hill Solar, LLC and its affiliates is considered.

Without waiving the objection, denied. The state, national and global ranks are based on an internationally accepted methodology developed by NatureServe in collaboration with all the state, provincial and international Heritage Programs and Conservation Data Centers. Please see **Attachments 1-8** (NatureServe Conservation Status Assessments: Methodology for Assigning Ranks and NatureServe Conservation Status Assessments: Factors for Evaluating Species and Ecosystem Risk).

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-9. With reference to the Guidance, list all “isolating barriers” within 1 kilometer of the Project.

A.1-9. Objection: The Guidance is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The Guidance exists for the purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and it is not intended to apply to, or be used in connection with, an investigation and review of activities which are violative of Section 248’s prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue. The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, I have not performed an analysis of all “isolating barriers” within 1 kilometer of the Project. That said, as I testified during the injunction hearing on December 4, 2020, Routes 7 and 279 in the vicinity of the Apple Hill site would constitute isolating barriers.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-10. List all the purposes for which ANR uses its S1 to S5 plant classification system.

A.1-10. Objection: The request is not relevant to this proceeding and the plant classification system was agreed to by Apple Hill Solar LLC and its affiliated entities (including but not limited to Chelsea Solar, Willow Road Solar, Otter Creek Solar, PLH, and Allco) in the underlying Section 248 proceedings concerning the Apple Hill site and other sites (e.g., See PUC Case Nos. 8302, 8454, 17-5024, and 19-0516). In addition to lack of relevance, this overly broad and unduly burdensome request is not proportional to the needs of the case, especially when the lack of relevance and prior admission of, and agreement with, the classification system by Apple Hill Solar, LLC and its affiliates is considered.

Without waiving the objection, uses of the classification include the following:

- The classification is utilized to populate the Natural Resource Atlas which provides a geospatial layer available to anyone to determine whether there are any rare species, significant natural communities or any number of other resources on any land of interest in Vermont. It is also utilized for the Vermont Conservation Design which prioritizes landscapes for conservation.
- The ranking is provided to NatureServe via a regular data exchange to determine the status of species in every state and province in North America. This information is utilized by floras, websites, and most other accounts of species distribution. For example, the Flora of North America relies heavily on NatureServe information to determine habitat and distribution of species.
- S ranks in each state are relied on by US Fish and Wildlife Service (USFWS) when considering federal endangered species status for a taxon or conversely removing that status.
- The S rank is relied on by the Vermont Endangered Species Committee to inform decisions regarding listing or removing species from the state endangered species list.
- The State utilizes S ranks in prioritizing land for protection via acquisition or easement and to inform their management of state lands.
- The ranks are shared with conservation partners (The Nature Conservancy, VT Land Trust, Lake Champlain Land Trust, and other regional land trusts) to inform their acquisitions and their management activities.
- S ranks are utilized by county foresters in the Use Value Appraisal Program and to designate Ecologically Sensitive Treatment Areas.
- The classification is utilized by federal partners including Green Mt. National Forest, US Fish and Wildlife Service, Army Corps of Engineers and Natural Resource

Conservation Service (NRCS) to direct their management activities, and in the case of NRCS to direct landowner actions.

- S ranks are utilized by The Native Plant Trust to determine seed collection and monitoring needs for plants that are rare throughout New England.
- The classification is used by the major utilities in the state to inform their management of ROWs.
- S ranks are used for environmental review and permitting, including Act 250, Section 248, Aquatic Nuisance, Wetlands, Stream Alteration and Hydro Relicensing Permits.
- S-ranks have recently been reviewed by the Northeast Fish & Wildlife Diversity Technical Committee of the Northeast Association of Fish and Wildlife Agencies to identify regional Species of Greatest Conservation Need.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-11. Admit that prior to publishing its S1 to S5 plant classification systems, ANR did not prepare (i) an analysis of economic impact and the environmental impact of its S1 to S5 plant classification, (ii) an explanation of the strategy for maximizing public input on the its S1 to S5 plant classification, (iii) a brief summary of the scientific information upon which the S1 to S5 plant classification depends on for its validity, or (iv) an environmental impact analysis of its S1 to S5 plant classification. If denied, produce all Evidence that support your denial.

A.1-11. Objection: The request is not relevant to this proceeding. The plant classification system was agreed to by Apple Hill Solar LLC and its affiliated entities (including but not limited to Chelsea Solar, Willow Road Solar, Otter Creek Solar, PLH, and Allco) in the underlying Section 248 proceedings concerning the Apple Hill site and other sites (e.g., See PUC Case Nos. 8302, 8454, 17-5024, and 19-0516). In addition to lack of relevance, this overly broad and unduly burdensome request is not proportional to the needs of the case, especially when the lack of relevance and prior admission of, and agreement with, the classification system by Apple Hill Solar, LLC and its affiliates is considered. The request is vague in that it does not define “publishing.” The request is argumentative in that by incorporating elements of 3 V.S.A. § 838(a), a statute which is limited to procedures related the filing of proposed rules, it implies that the referenced document is, or is intended to be, a rule, when the Agency has never contended the document is a rule and has, in fact, specifically taken the position that the document is not a rule. Finally, the request is not relevant because it references elements of a statutory scheme which governs rules and the document identified in the request is not a rule.

Without waiving the objection, admitted.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

HABITAT

Q.1-12. Admit that prior to publishing its Guidance, ANR did not prepare (i) an analysis of economic impact and the environmental impact of its Guidance, (ii) an explanation of the strategy for maximizing public input on the its Guidance, (iii) a brief summary of the scientific information upon which the Guidance depends for its validity, or (iv) an environmental impact analysis of its Guidance. If denied, produce all Evidence that support your denial.

A.1-12. Objection: The Guidance is not relevant to Case No. 20-1611-INV, the Apple Hill site clearing investigation. The Guidance exists for the purpose of reviewing a project seeking a certificate of public good in the context of 30 V.S.A. § 248, and it is not intended to apply to, or be used in connection with, an investigation and review of activities which are violative of Section 248's prohibition of site clearing without a certificate of public good, including but not limited to a determination as to whether an injunction prohibiting such activities should issue. In addition to lack of relevance, this overly broad and unduly burdensome request is not proportional to the needs of the case. The request is vague in that it does not define "publishing." The request is argumentative in that by incorporating elements of 3 V.S.A. § 838(a), a statute which is limited to procedures related the filing of proposed rules, it implies that the Guidance is, or is intended to be, a rule, when the Agency has never contended the Guidance document is a rule and has, in fact, specifically taken the position that the document is not a rule, a fact which is further established by the document itself which, on its face, states that it is a guidance document. Finally, the request is not relevant because it references elements of a statutory scheme which governs rules and the document identified in the request is not a rule.

Without waiving the objection, admitted.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-13. Admit that the Aster occurs in Vermont in field, meadow, scrub and wooded habitats on poorly-drained to excessively-drained soils (i.e., they tolerate broad ecological conditions).

A.1-13. Objection: The request is vague and requires speculation in that it does not identify with specificity the particular characteristics of the locations (i.e., field, meadow, etc.) which it references. In addition, where the Aster may or may not occur in Vermont is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the very rare (S1) Asters are present.

Without waiving the objection, neither admitted nor denied. The Aster is most typically associated with mid-western glades and savannas. It is on the very edge of its range in Vermont, and as such it is associated with disturbance to create openings and lessen the competition. In addition to an affinity for limy soils, the disturbance generated openings are the common habitat feature of the Aster.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-14. Admit that the Flora of North America confirms that the Aster occurs in a wide variety of habitats.

A.1-14. Objection: Whether or not the Aster occurs in a wide variety of habitats is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the very rare (S1) Asters are present.

Without waiving the objection, neither admitted nor denied. See the relevant section of *Flora of North America* (Volume 20, *Magnoliophyta: Asteridae, part 7: Asteraceae, part 2* (pages 506-507) which details the distribution of the Aster and was produced as Attachment 2-9 to the Agency's responses to the second round discovery requests in Warner Solar (Case No. 19-0516), which responses have also been filed in this matter. The referenced section of *Flora of North America* speaks for itself. The Aster occurs over an expansive range throughout North America including Canada, as noted, and it can therefore be expected to occupy numerous habitat types throughout its range.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-15. Admit that the Aster occurs on roadsides and along railroads, habitats similar to those found near the Chelsea and Warner project sites, which contain the Aster.

A.1-15. Objection: The request is vague and requires speculation in that it does not identify with specificity the particular characteristics of the locations (i.e., roadsides and railroads or “habitats similar to...”) which it references. The request also requires the Agency to conduct a new analysis which has not been performed. In addition, the request is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the very rare (S1) Asters are present.

Without waiving the objection, admitted in part and denied in part. The Aster occurs along a railroad right-of-way at the Warner site. I am not aware of any roadside occurrences in Vermont, other than what Arrowwood identified along the interconnection Route for the Apple Hill solar project.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-16. Please estimate the number of acres of suitable habitat identified in 1-8 that are available to the Aster in Vermont.

A.1-16. Objection: The request requires speculation and requires the Agency to conduct a new analysis which has not been performed. In addition, the request is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the very rare (S1) Asters are present.

Without waiving the objection, I have not performed such an analysis. In any event, the results would be purely speculative as there are numerous competing pressures that determine plant distribution.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-17. Admit that the Aster has similar dispersal mechanisms that are found in its closely related species, *Symphyotrichum cordifolium*.

A.1-17. Objection: The request requires the Agency to conduct a new analysis which has not been performed. The request is also not relevant to this proceeding in that this proceeding concerns the white arrow-leaved aster (*Symphyotrichum urophyllum*), and not a different aster species, whether or not “closely related” (also objected to here as a vague and undefined term), which Apple Hill Solar LLC (and its affiliated entities, including but not limited to Chelsea Solar, Willow Road Solar, PLH, and Allco) has identified and agreed as being present at the Apple Hill site in the underlying Section 248 proceedings concerning the Apple Hill site (See PUC Case Nos. 8302, 8454, and 17-5024). In addition to lack of relevance, this overly broad and unduly burdensome request is not proportional to the needs of the case, especially when the lack of relevance and prior admission of, and agreement with, the rarity and presence of the species at issue by Apple Hill Solar, LLC and its affiliates is considered.

Without waiving the objection, neither admitted nor denied. I have no first-hand knowledge nor have I read any studies concerning the similarity between the dispersal mechanism of either species.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-18. Explain how the habitat at the Apple Hill site is different from the habitat at the Warner project site.

A.1-18. Objection: The word “habitat” is vague and not defined and requires speculation. The request also requires the Agency to conduct a new analysis which has not been performed. In addition, “habitat” at the Warner site is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the very rare (S1) Asters are present.

Without waiving the objection, I have not visited the Apple Hill site and therefore would be required to speculate as to the particular attributes of the habitat there and whether it is similar or different than the habitat at the Warner site. That said, I am aware that both sites are recently disturbed and are underlain by calcareous bedrock which are two of the habitat conditions for the Aster in Vermont.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-19. How did you distinguish the Aster identified on or near the Apple Hill and Warner project sites from similar asters, particularly *Symphyotrichum cordifolium*?

A.1-19. Objection: The request requires the Agency to conduct a new analysis which has not been performed. The request is also not relevant to this proceeding in that this proceeding concerns the Apple Hill site and the white arrow-leaved aster (*Symphyotrichum urophyllum*), and not a different aster species, whether or not “similar” (also objected to here as a vague and undefined term), which Apple Hill Solar LLC (and its affiliated entities, including but not limited to Chelsea Solar, Willow Road Solar, PLH, and Allco) has identified and agreed is present at the Apple Hill site in the underlying Section 248 proceedings concerning the Apple Hill site (See PUC Case Nos. 8302, 8454, and 17-5024). In addition to lack of relevance, this overly broad and unduly burdensome request is not proportional to the needs of the case, especially when the lack of relevance and prior admission of, and agreement to, the presence of the white arrow-leaved aster by Apple Hill Solar, LLC and its affiliates is considered.

Without waiving the objection, I have not personally observed the white arrow-leaved aster at the Apple Hill site and relied on the petitioner’s consulting botanists to confirm the identification there. The white arrow-leaved aster is closely related to heart-leaved aster (*Symphyotrichum cordifolium*) and therefore at the Warner site, where I did personally observe the white arrow-leaved aster, I relied on a suite of characteristics, primarily the reproductive structures. I based my identification on the morphology of the involucre bracts of the flowers and the cauline leaves. This allowed me to distinguish between the two species for reproductive individuals.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-20. List the particular habitat requirements of the Aster in Vermont.

A.1-20. Objection: The request, and what the habitat requirements of the Asters are in Vermont, is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the very rare (S1) Asters are present. The word “habitat” is vague and not defined and requires speculation. The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, see my response to Q.1-18.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-21. List the particular habitat requirements of the Nimblewill in Vermont.

A.1-21. Objection: The request, and what the habitat requirements of the Nimblewill is in Vermont, is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the rare (S2) Nimblewill are present. The word “habitat” is vague and not defined and requires speculation. The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, the habitat for Nimblewill in Vermont is poorly defined and best described as moist to wet, typically disturbed areas.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-22. Are the Asters currently subject to habitat loss in Vermont? If so, explain why.

A.1-22. Objection: The request is vague in that word “habitat” is not defined and requires speculation. The request also requires the Agency to conduct a new analysis which has not been performed. The request, and whether or not the Asters are subject to, or experiencing, habitat loss in Vermont, is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that very rare (S1) asters are present.

Without waiving the objection, I do not have enough data to determine whether this is the case. However, two of the three presently known populations in Vermont (the Apple Hill and Warner populations) are threatened by development and associated clearing and earth disturbance.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-23. Are the Nimblewills currently subject to habitat loss in Vermont? If so, explain why.

A.1-23. Objection: The request, and whether the Nimblewill is subject to habitat loss in Vermont, is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that the rare (S2) Nimblewill are present. The word “habitat” is vague and not defined and requires speculation. The request also requires the Agency to conduct a new analysis which has not been performed.

Without waiving the objection, I do not have enough data to determine whether this is the case. Although there is ample habitat for the Nimblewill in Vermont, the plant is typically short lived and relies on openings and disturbance to persist.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-24. Are the Asters at very high risk of extinction in Vermont? If so, explain why.

A.1-24. Objection: The request is vague in that phrase “very high risk” is not defined and requires speculation. The request also requires the Agency to conduct a new analysis which has not been performed. The request, and whether or not the Asters are at risk of extinction in Vermont, is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, where Apple Hill Solar, LLC and its related entities have admitted that very rare (S1) Asters are present.

Without waiving the objection, at present I have insufficient information to reach that conclusion. The Aster is at the edge of its range in Vermont and as such its persistence in our flora remains uncertain. In order to determine whether a species is at risk of extinction, the Agency would need evidence of decline in either the number or the size of populations or a discernible lack of reproduction.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Q.1-25. Admit that the area containing the local Aster Population found at the Project site could be as large as or larger than 776.28 acres.

A.1-25. Objection: The request requires speculation and analysis which has not been performed. In addition, the request is not relevant to this proceeding which is an investigation and review of site clearing activities at the Apple Hill site, including but not limited to a determination as to whether an injunction prohibiting such activities should issue, where Apple Hill Solar, LLC and its related entities have admitted that very rare (S1) Asters are present.

Without waiving the objection, I have not performed such an analysis and, in any event, any attempt at such an analysis would be purely speculative and nonsensical for the reasons I explained on page 1, lines 17-22, and page 2, lines 1-5, in my December 8, 2020 surrebuttal testimony which has been filed in Case No. 19-0516-PET.

Person Responsible: Robert Popp
Title: Botanist, Vermont Fish and Wildlife Department

Requests to Produce

1. Please produce all documents requested in the preceding questions.

See **Attachments** referenced in the individual responses.

2. Please produce any and all documents identified, referenced, relied upon, or referred to in responding to these information requests.

See **Attachments** referenced in the individual responses.

3. Please produce any and all documents you expect to offer as exhibits at the technical hearings of these proceedings.

This request is not relevant as the hearings have already concluded.

Dated at Waterbury, Vermont, this eighth day of January, 2021.

As to objections:



By: _____

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