

Dispersal”), (3) NatureServe’s *Element Occurrence Data Standard*, February 6, 2002 (“Element Occurrence Data Standard”), (4) NatureServe’s, *Habitat-based Plant Element Occurrence Delimitation Guidance*, May 2020 (“Delimitation Guide”)², (5) NatureServe’s, *Ranking Species Occurrences: Generic Guidelines and Decision Key*, May 2020 (“Ranking Species Occurrence” and collectively with the Element Occurrence and the Delimitation Guidance, the “NatureServe Documents”) and (6) Nesom, G. L., *Review of the taxonomy of Aster sensu lato (Asteraceae: Astereae), emphasizing the New World species*, *Phytologia*, Vol. 77, No. 3, 141-297 (September 1994) (“*Phytologia Article*”).

Relevancy

With respect to relevancy, putting all jurisdictional issues aside, two questions that have to be answered in these proceedings are whether the landowner engaged in site preparation for the construction of an electric generating facility in violation of 30 V.S.A. §248(a)(2) and if so, whether such action resulted in irreparable harm to any proponent of the injunction.

Each of the Requested Documents is directly relevant to determining whether there is any irreparable harm to any proponent of the injunction, specifically with respect to the *Symphyotrichum urophyllum* (the “Aster”). On December 4, 2020, the Commission held a Preliminary Injunction Hearing (the “Hearing”) where ANR’s witness confirmed the standard that ANR was using to determine the existence of irreparable harm with respect to the Aster. That standard

² This document was initially introduced in these proceedings through the Prefiled Testimony of Jim McClammer dated December 3, 2020 where it was referenced on page 6 and again on page 8 with a link provided to the document in both instances. AHS is simply providing a copy to the parties.

is the “10% Rule” (i.e., there is no irreparable harm if less than 10% of an S1 (very rare) plant population of the site is impacted).³

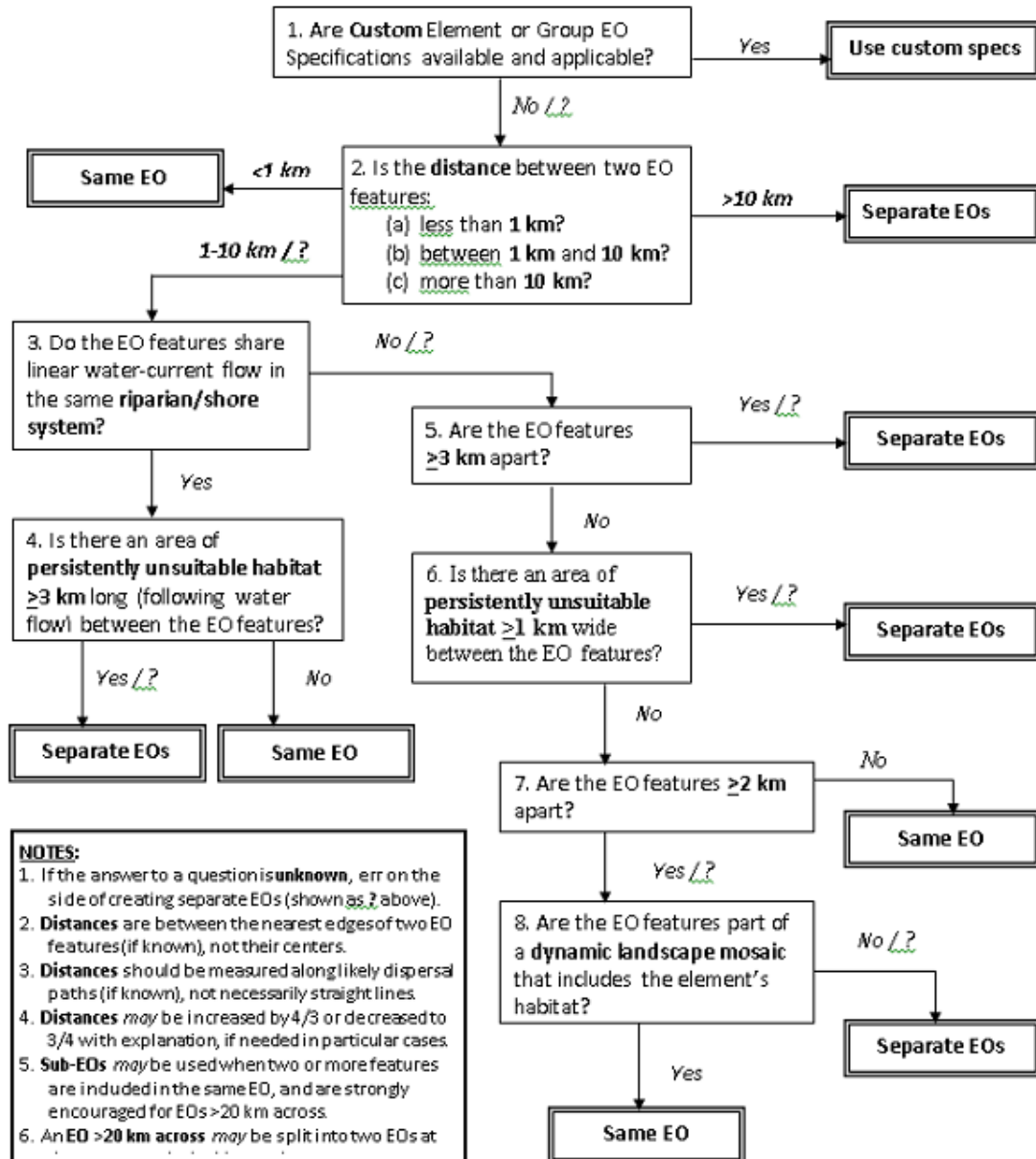
In order for the Commission to determine whether or not irreparable harm exists, the Commission must determine (1) whether ANR has the authority to protect plants that they rank as rare outside of Title 10, Ch. 123, 10 V.S.A. § 5401 et seq., (2) whether ANR’s purported ranking of the Aster as very rare (S1) is valid⁴, (3) the number of Asters individuals impacted by the activity and (4) the number of Aster individuals in the population. Issue (1) is a purely legal issue. Issue (2) is a factual issue that is informed by current internationally-accepted NatureServe standards outlined in the NatureServe Documents and used by ANR. The Plant Profile is relevant to this issue because it provides evidence on the distribution of the Aster. The *Phytologia* Article is also relevant to this issue because it speaks to the difficulty in delineating and recognizing aster species (see page 142) and cites many papers by John C. Semple, a preeminent expert on asters, who provides evidence (in the Plant Profile) that the Aster occurs in all of the New England states (see Plant Profile, data source and documentation tab), whereas the State Botanist, Mr. Bob Popp, falsely claims it is known only in Vermont (See Exhibit PLH-3, page 11, lines 7-8) and it is at the “very edge of its range in Vermont”. (See Discovery Response (as defined below) A.1.-13).

³ See Tr. page 152-153.

⁴ ANR has made the argument that both its rare plant classification system and its ranking of the Aster cannot be disputed because these “facts” have been admitted by AHS. None of the Respondents have acknowledged the legitimacy of the ANR’s system or the Aster classification and has, in fact, adamantly disputed both, including by filing a lawsuit in Vermont Superior Court challenging both. The Respondents only acknowledge that ANR uses ANR’s system. The fact that AHS signed a Memorandum of Understanding with ANR regarding the treatment of the Aster does not constitute an admission as to the validity of either the ranking system or the Aster’s rank within such system.

Issue (3) requires a factual determination of the number of Aster individuals in the local “population” that may have been impacted and such information had not been compiled as of the date of the Hearing, which is one of the reasons why the record remained opened beyond the date of the Hearing and why AHS filed Exhibit PLH-TMM-5.

Issue (4) also requires a factual determination of the total number of Aster individuals in the local “population”. The NatureServe Documents provide the accepted methodologies that are relevant in determining what constitutes the population and the number of individual plants in the population. The Delimitation Guidance is already in evidence, AHS is simply providing a copy to the parties. ANR has argued that Aster individuals found at the Chelsea and Apple Hill solar sites (the “Eastern Asters”) are a distinct population from those found at the Warner, Stark and Battle Creek solar sites (the “Western Asters”). Based on the NatureServe’s standards, however, it is abundantly clear that because these occurrences are less than one kilometer apart, they are part of the same population as demonstrated in the Plant Element Occurrence Decision Tree found in the Delimitation Guidance:



See 2020 Delimitation Guidance, Page 13.

The Record Remains Open

The record in these proceedings remains open with respect to any issue arising out of the ANR discovery responses (the “Discovery Responses”).⁵ Notwithstanding ANR’s argument to the contrary, each of the Requested Documents relates directly to the Discovery Responses and are being presented in response thereto.

The Plant Profile demonstrates that the Aster is known in over half the states in the United States of America and in Canada. The Plant Profile directly contradicts (i) Mr. Popp’s testimony that the Aster is rare due to its purported restricted distribution to only Bennington County in Vermont (not other states in New England as demonstrated in the Plant Profile), (ii) due to the purported limited number of occurrences, ANR’s inference that an impact to the AHS population will reduce the probability of the persistence of the population and eventually the species and (iii) Mr. Popp’s conclusion in the Discovery Responses that the Aster is at the “very edge of its range in Vermont”. The Plant Profile is being presented by AHS in direct response to Discovery Responses A.1-8, A.1-13, A.1-14 and A.1-24.

The *Phytologia* Article speaks to the difficulty in delineating and recognizing aster species (see page 142) which we have argued may be the reason the Aster is “known” by ANR to occur in only Bennington County. We have argued that the Aster is overlooked and when found is likely to be misidentified. The *Phytologia* Article is being presented by AHS in direct response to Discovery Responses to Q.1-19.

⁵ See, Investigation pursuant to 30 V.S.A. §§ 30 and 209 into whether the petitioner-initiated site preparation at Apple Hill in Bennington, Vermont, for electric generation in violation of 30 V.S.A. § 248(a)(2), Case No. 20-1611-INV, Tr. 12/4/20 at 221.

The NatureServe Documents provide the standard to determine if two occurrences belong to the same population (see the Delimitation Guidance) and the likelihood a population will be extirpated (see the Ranking Species Occurrence). These are extremely pertinent and are being presented by AHS in direct response to Discovery Responses A.1-3, A.1-9, A.1-15, A.1-16, A.1-17, A.1-18, A.1-20, and A.1-25. It should be noted that ANR's witness describes NatureServe's methodology as "internationally accepted" (See Discovery Response A.1-8) and NatureServe as the organization that ANR relies on to coordinate its rare plant ranking methodology (See Exhibit PLH-3, page 12, lines 2-4) so there should be no question as to the relevance or foundation of the NatureServe Documents. On the one hand, ANR claims to rely on NatureServe's methodologies to rank these plants yet, on the other hand, it willfully ignores NatureServe's methodologies in determining (i) the number of known Aster populations, and (ii) the probability the AHS population may be extirpated.

Each of the Requested Documents Contain Pertinent Facts Concerning the Aster

ANR argues that none of the Requested Documents are "facts" for purposes of V.R.E. 201. However, each of the Requested Documents contain relevant facts related to the Aster's status and whether the activity in question caused irreparable harm. Each of the Requested Documents contain facts describing either (i) the laws of nature or (ii) the habits and qualities of common animals. Each of these two categories of facts have been deemed to be of sufficient notoriety to be deemed common knowledge within Vermont for which the Commission must take administrative notice. See *Jarvis v. Koss*, 139 Vt. 254, 255, 427 A.2d 364 (1981) (the habits and qualities of common animals) and *McKirryher v. Yager*, 112 Vt. 336, 340, 24 A.2d 331 (1942) (the laws of nature).

The Plant Profile is a government document containing a number of facts concerning the habits and qualities of the Aster. ANR's argument that there is no "fact" offered by this document rings hollow as this document is essentially a "fact sheet" on the Aster. AHS is requesting that the Commission take notice of all of the facts on the fact sheet including, without limitation, the fact that (i) the Aster is known from all of the New England States, more than half of the states in the United States of America and Canada, and (ii) John C. Semple, a recognized expert on the Aster, provided most of the distribution data for New England.

The Deer Seed Dispersal describes both the laws of nature as well as the habits and qualities of the white-tailed deer. AHS is requesting that the Commission take notice of all of the facts contained therein, including, without limitation, the fact that white-tailed deer have tremendous potential for effecting long-distance seed dispersal via ingestion and defecation (see page 1) of asters (in this study *Aster lanceolatus*, a synonym of *Symphotrichum lanceolatum*, see page 5). This is relevant because it is specific biological information on aster seed dispersal mechanisms and distances, which support our conclusion, based on NatureServe's standards, that the Eastern Asters and the Western Asters are part of the same population due to the fact that Route 7 is not wide enough to serve as a barrier to gene flow. In addition to seed dispersal by wind (*See* Tr. 158-159) and deer, Aster pollen is dispersed by bees (*See* Exhibit ANR-RP-5 at 3) and the movement of all of these vectors are not restricted by Route 7.

The Element Occurrence Data Standard includes facts concerning both the laws of nature and the habits and qualities of the Aster. This document serves as the basis for determining whether individuals of the same species known from two localities (in this instance the Eastern Asters and the Western Asters) should be treated as a single occurrence (population) or two separate occurrences (populations) for conservation planning purposes. AHS is requesting that the Commission take notice of the facts therein that (i) an element occurrence (EO) is the area of land

in which an element (a “species” in this instance) occurs, and that it often corresponds with area in which a local population occurs (p. 10 & 22), (ii) two distinct EOs are typically separated, either by barriers or breaks, or by specified distances across intervening areas (p. 23-24), (iii) “barriers are those that almost completely prevent movement or dispersal of the Element, thereby obstructing or severely limiting gene flow” (p. 24), (iv) the purpose of “EO ranks is to provide a succinct assessment of ESTIMATED VIABILITY, or PROBABILITY OF PERSISTENCE (based on condition, size, and landscape context) of occurrences of a given Element. In other words, EO ranks provide an assessment of the likelihood that if current conditions prevail an occurrence will persist for a defined period of time, typically 20-100 years” (p. 36), and (v) “[for] species, (population) size of an EO can be determined in several ways. Most commonly, information on both population abundance and the area of occupancy is used to calculate population size” (p 44).

The Delimitation Guidance refines the element occurrence data standards and includes facts concerning the laws of nature and the habits and qualities of plants. AHS is requesting that the Commission take notice of the facts therein that (i) one kilometer minimum separation distance between two EOs (promulgated in the Element Occurrence Data Standard above) is inappropriately small for plants scattered in large areas of apparently suitable habitat (p. 2), as is the case here, (ii) “[n]arrow dispersal barriers are important for many animals, but for vascular plants, there seem to be few cases in which narrow barriers would justify treatment of quite nearby plants in different EOs” (p. 4), and (iii) plant occurrences that are less than one kilometer apart belong to the same population, **regardless of the suitability of the habitat** (p. 13).

The Ranking Species Occurrences includes facts concerning both the laws of nature and the habits and qualities of plants. AHS is requesting that the Commission take notice of (i) page

5, which states "[o]ccurrence ranks are best determined by persons who have a good understanding of the population characteristics of the species or who at least have good basic knowledge of the biology and ecology of the group of organisms to which the species belongs", (ii) pages 11-12, which relate problems with previous occurrence rank specifications and concludes "past efforts to establish useful, reliable, and stable occurrence rank criteria were largely unsuccessful", (iii) pages 14-15, which speak to the preference of applying a generic approach to occurrence ranking and indicates, for example, a plant population assigned an Occurrence Ranking of "4" means if current conditions prevail, its persistence for the foreseeable future (i.e., at least 20 - 30 years) is reasonably certain⁶.

The *Phytologia* Article, a monograph on the Aster genus by Guy L. Nesom, contains a multitude of facts concerning the Aster and is perhaps the most comprehensive assessment of the plant that exists. This document includes facts concerning both the laws of nature and the habits and qualities of the Aster. Respondents are requesting that the Commission take notice of (i) page 142, which speaks to the difficulty in delineating and recognizing aster species, (ii) page 294, where Nesom makes taxonomic and nomenclatural decisions to place the white arrow-leaved aster in the genus *Symphyotrichum*, and (iii) pages 240-241, where Nesom cites a number of papers by John C. Semple.

Conclusion

VRE 201(d) requires the Commission to take administrative notice if requested by a party and it has been supplied with the necessary information. Respondents have provided the

⁶ The AHS Aster population can be assigned an Occurrence Ranking of a least "4" (See Exhibit AH-JM-5).

Commission with the necessary information required to take administrative notice of the Requested Documents. There can be no question that the documents that the Respondents seek to introduce into evidence in this Docket pertaining to the Aster are highly material given that the purported impact on the Aster is one of the material issues in these proceedings. A reasonably prudent person charged with assessing the purported impacts on the Aster would take into account these highly relevant facts concerning the Aster population. Moreover, the practice of taking administrative notice is founded on the assumption that certain matters are not controversial and therefore need not be established for legal purposes by presenting contested evidence to a trier of fact.⁷ The purpose of administrative notice is “to save the time and trouble that it would take to present evidence of matters, the truth of which no one can legitimately challenge.”⁸

Respectfully submitted,

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⁷ Amended Petition of Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc., Docket 7862, Order of 3/29/13 at 5.

⁸ Jack H. Friedenthal, Mary Kay Kane, Arthur R. Miller, Civil Procedure § 5.22 (2nd ed. 1993).