

**Vermont Agency of Natural Resources
Department of Environmental Conservation
Watershed Management Division**

**Class I Determination Rulemaking Decision
Issued Pursuant to Section 7 of the Vermont Wetland Rules**

In the matter of:

Hartland Conservation Commission
Petition for the Classification of Eshqua Bog as a Class I Wetland
241 Garvin Hill Road, Hartland

File #2020-214

Date of Decision: August 13, 2021
Decision: Amend Rule

The Secretary may, upon a petition or on his or her own motion, determine whether any wetland is a Class I wetland, pursuant to 29 V.S.A. § 410. The Secretary may establish the necessary width of a buffer zone of any Class I wetland as part of any wetland determination pursuant to the Rules. Section 4.2 of the VWR

As required under 29 V.S.A. § 410 and Section 7 VWR, this wetland determination is based on an evaluation of the extent to which the wetland serves the functions and values of Rules, is **exceptional or irreplaceable in its contribution to Vermont's natural heritage** and, therefore, merits the highest level of protection. Public notice of this wetland determination has been given in accordance with Section 8.3 of the VWR.

Petition

1. A complete petition was received from Hartland Conservation Commission for a Wetland Determination 2020-214 on November 6, 2020. The Wetland Determination was put on notice from December 15, 2020 until February 1, 2021. A public meeting was held January 1, 2021 virtually.
2. The subject wetland is located south of the junction of Dunham Hill Road and Garvin Hill Road in Hartland. The address is 241 Garvin Hill Road. A map showing the approximate location of the Class I wetland is attached. The wetland is approximately 5 acres in size. The wetland includes a Rich Fen, Calcareous Red Maple-Tamarack Swamp, and a Seepage associated with a stream.
3. Rebecca Chalmers, District Wetlands Ecologist, conducted a site visit to the subject property on 9/12/2008 to participate in a botanical inventory sponsored by The New

England Wild Flower Society (now called Native Plant Trust) and has visited on other dates.

4. The petition is to reclassify the wetland to Class I and establish a buffer zone of 200 feet from the mapped wetland edge or to Garvin Road, whichever is lesser.
5. The wetland in question is not mapped or contiguous to a Class II wetland as shown on the Vermont Significant Wetland Inventory (VSWI) map. The wetland meets the following presumptions listed in VWR § 4.6: the wetland is of the same type and threshold size as those mapped on the VSWI maps or greater than 0.5 acres (VWR §4.6a), the wetland contains woody vegetation and is adjacent to a stream, river or open body of water (VWR §4.6b), and the wetland contains a species that appears in the NNHP database as rare, threatened, endangered or uncommon; or is a natural community type that is rare or uncommon (VWR §4.6g). The petition is to designate this wetland as Class I, increase the buffer zone to 200 feet or to distance where buffer meets Garvin Hill Road, and to add the wetland to the VSWI map.

The wetland in question is approximately 4.6 acres including a Rich Fen, Calcareous Red Maple-Tamarack Swamp, and Seeps. The wetland is in a depression at the base of a steep slope. The wetland has a small outlet stream and is a headwater for the watershed that drains into Happy Valley Brook and then Ottauquechee River. The main source of water for the wetland is calcium-rich groundwater entering the wetland along its southwest margins. The slow-moving water keeps the basin moist, creating a fen. The calcium rich water creates the conditions for a diverse array of rare and uncommon plant species.

6. Public comments were received from during the public comment period. A responsiveness summary is provided as Appendix A which includes a summary of comments and Agency responses.

Findings

As required by 10 V.S.A. § 914 and Section 8 of the VWR, this wetland determination is based on an evaluation of the functions and values of the subject wetland as described in Section 5 of the VWR. Section 5 provides that in evaluating whether a wetland is a Class II or a Class I wetland, the Secretary shall evaluate the functions that the wetland serves both as a discrete wetland and in conjunction with other wetlands by considering detailed functional criteria. Consideration shall be given to the number of and/or extent to which protected functions and values are provided by a wetland or wetland complex.

1. The protected functions of the subject wetland include the following: water storage for flood water and storm runoff as described in Section 5.1 of the VWR; surface and groundwater protection (Section 5.2); fisheries habitat (Section 5.3); wildlife and migratory bird habitat (Section 5.4); exemplary wetland natural community (Section 5.5); rare, threatened and endangered species habitat (Section 5.6); education and research in natural science (Section 5.7); recreational value and economic benefits (Section 5.8); and open space and aesthetics (Section 5.9) and erosion control through binding and stabilizing the soil (Section 5.10).

2. The following protected functions are considered exemplary or irreplaceable: exemplary wetland natural community (Section 5.5); rare, threatened and endangered species habitat (Section 5.6); education and research in natural science (Section 5.7); recreational value and economic benefits (Section 5.8); open space and aesthetics (Section 5.9).

3. Water Storage for Flood Water and Storm Runoff

Wetlands that provide for the temporary storage of floodwater or stormwater runoff to the extent that they make an important contribution to reducing risks to public safety, reducing damage to public or private property reducing downstream erosion or enhancing the stability of habitat for aquatic life are significant wetlands. The wetland is significant for the water storage for flood water and storm runoff function as demonstrated in Section 15 of the petition and as confirmed through a site visit by Agency staff.

The wetland is bordered by steep slopes to the west, upgradient of the wetland. The soils around the wetland are well- to somewhat-excessively drained. The fen is very poorly drained, and thus retains water that runs off the surrounding steep slopes and well drained soils. There is a constricted outlet and acres of wetland area that provides stormwater storage. The wetland vegetation is dense, persistent emergent or woody vegetation that slows down stormwater runoff during peak flows and facilitates water removal by evaporation and transpiration. Stream banks susceptible to scouring and erosion are downstream of the wetland. History of downstream flood damage to public or private property. Important habitat for aquatic life is present downstream of the wetland.

4. Surface and Ground Water Protection

Wetlands that make an important contribution to the protection or enhancement of the quality of surface or of ground water are significant wetlands. The wetland is significant for the surface and ground water function as demonstrated in Section 16 of the petition and as confirmed through a site visit by Agency staff.

The wetland has a constricted outlet and a permanently saturated hydroperiod. Water travels through the wetland's dense, persistent vegetation at a low velocity and the wetland has a high amount of microtopography that helps slow and filter surface water. The wetland is large in size and naturally vegetated. Seeps and springs are present in the wetland, which is in a headwaters area and is adjacent to a small outlet stream.

5. Fish Habitat

Wetlands that are used for spawning by northern pike or that are important for providing fish habitat are significant wetlands. The wetland is significant for the water storage for the fish habitat function as demonstrated in Section 17 of the petition and as confirmed through a site visit by Agency staff.

The wetland provides cold spring discharge that lowers the temperature of receiving waters. The wetland contains woody vegetation that overhangs the banks of a stream and

provides shading that controls summer water temperature. The wetland is located along a tributary that supports downstream fish by providing cooler water and food sources.

6. **Wildlife Habitat**

Wetlands that support a significant number of breeding waterfowl, including all species of ducks, geese and swans, or broods of waterfowl or that provide important habitat for other wildlife and migratory birds are significant wetlands. The wetland is significant for the wildlife habitat function as demonstrated in Section 18 of the petition and as confirmed through a site visit by Agency staff. The following features were present and supported this determination of significance:

- Supports or has the habitat to support one or more breeding pairs of any migratory bird that requires wetland habitat for breeding, nesting, rearing of young, feeding, staging, roosting, or migration, including: common snipe, northern water thrush, northern harrier, spruce grouse, Cerulean warbler. The Common Yellow Throat, White-Throated sparrow, Black and White Warbler and Cedar Waxwing are known to nest in the wetland.
- Supports winter habitat for white-tailed deer. Evidence of use includes deer browsing, bark stripping, worn trails, and pellet piles.
- Provides important feeding habitat for black bear based on an assessment of use and presence of seep wetlands that provide early spring forage.
- Has the habitat to support muskrat, otter or mink. Good habitats for these species include deep marshes, wetlands adjacent to bodies of water including lakes, ponds, rivers and streams.
- Provides the following habitats that support the reproduction of Uncommon Vermont amphibian species including:
 - Wood Frog, Jefferson Salamander, Blue-spotted Salamander, or Spotted Salamander. Breeding habitat for these species includes vernal pools and small ponds.
 - Northern Dusky Salamander and the Spring Salamander. Habitat for these species includes headwater seeps, springs, and streams.
 - The Four-toed salamander or other amphibians found in Vermont of similar significance.
- Supports or has the habitat to support significant populations of Vermont amphibian species including, but not limited to Pickerel Frog, Northern Leopard Frog, Mink Frog, and others found in Vermont of similar significance. Good habitat for these types of species includes large marsh systems with open water components.
- Meets four or more of the following conditions indicative of wildlife habitat diversity:
 - Three or more wetland vegetation classes (greater than 1/2 acre) present including but not limited to: open water contiguous to, but not necessarily part of, the wetland, deep marsh, shallow marsh, shrub swamp, forested swamp, fen, or bog;
 - The dominant vegetation class is one of the following types: shrub swamp or forested swamp;
 - Located adjacent to a lake, pond, river or stream;
 - Fifty percent or more of surrounding habitat type is one or more of the following: forest, agricultural land, old field or open land;

- Emergent or woody vegetation occupies 26 to 75 percent of wetland, the rest is open water;
- One of the following:
 - iii. within 1/4 mile of other wetlands of different dominant classes or open water, but not hydrologically connected;
- Contains evidence that it is used by wetland dependent wildlife species, including Common Yellow Throat warbler.
- The habitat has the potential to support several species based on the assessment above.

7. Exemplary Wetland Natural Community

Wetlands that make an important contribution to Vermont's natural heritage are significant wetlands. These include wetlands that are identified as high quality examples of one of Vermont's recognized natural community types. This wetland is significant for the exemplary wetland natural community function as demonstrated in Section 19 of the petition and as confirmed through a site visit by Agency staff. This function is exemplary. The following features were present and supported this determination:

Eshqua Bog contains a Rich Fen natural community that is State Significant (S2 rank) identified by the Natural Heritage Information of the Vermont Fish and Wildlife Department. Rich Fens are rare at both state and global levels. Eshqua Bog's Rich Fen is an especially unusual, shrubby variation of a Rich Fen. Only a few other examples of this community type have been discovered in the State of Vermont. The wetland contains deep peat accumulation reflecting a long history of wetland formation.

Plant species growing in the rich fen include: fen sedge (*Carex interior*), yellow sedge (*Carex flava*), water avens (*Geum rivale*), green-keeled cotton grass (*Eriophorum viridicarinatum*), showy lady's slippers (*Cypripedium reginae*), Large yellow lady's-slipper (*Cypripedium parviflorum* var. *pubescens*), northern bog orchid (*Plantanthera huronensis*), white northern bog orchid (*Plantanthera dilatata*), pitcher plants (*Sarracenia purpurea*), buckbean (*Menyanthes trifoliata*), small cranberry (*Vaccinium oxycoccus*), marsh marigold (*Caltha palustris*), white turtlehead (*Chelone glabra*), yellow sedge (*Carex flava*), shrubby cinquefoil (*Dasiphora floribunda*), alder-leaved buckthorn (*Rhamnus alnifolia*),

8. Rare, Threatened, and Endangered Species Habitat

Wetlands that contain rare, threatened, or endangered species of plants or animals are significant wetlands. The wetland is significant for the rare, threatened and endangered species habitat function as demonstrated in Section 20 of the petition and as confirmed through a site visit by Agency staff. This function is exemplary. The following features were present and supported this determination of significance:

- There is creditable documentation that the wetland provides habitat for multiple uncommon species of plants or animals (S3 rank). Three uncommon (State rank S3) and wetland-dependent orchid species live in Eshqua Bog:

- Large yellow lady's-slipper (*Cypripedium parviflorum* var. *pubescens*) FAC (facultative wetland species)
- Showy lady's-slipper (*Cypripedium reginae*) FACW (facultative wet wetland species)
- Green Orchid (*Platanthera aquilonis*) FACW (facultative wet wetland species)
- The wetland contains three species on the federal or state threatened or endangered lists, as well as species that are rare in Vermont, and thus the wetland is automatically significant for this function. Three very rare (S1/S2) species historically were found in Eshqua Fen or its buffer zone:
 - Ground-fir (*Diphasiastrum sabinifolium*) S2
 - Northern ground-cedar (*Diphasiastrum complanatum*) S1S2
 - Swamp moonwort (*Botrychium tenebrosum*) S1 (in or near wetland buffer)
- There is creditable documentation that the wetland provides important habitat for any species listed as rare in Vermont (S1 or S2 ranks), state historic (SH rank), or rare to uncommon globally (G1, G2, or G3 ranks) by the Natural Heritage Information Project of the Vermont Fish and Wildlife Department;
- Three rare plants found at Eshqua Bog Natural Area are wetland dependent, accessible to viewing, and are a highly popular aesthetic, education and recreation attraction. The combination of this function with Open Space & Aesthetics, Education & Research, and Recreation & Economics values is greater than the sum of the functions separately. The combined strength of this with other functions and values makes the rare, threatened and endangered species habitat an exemplary function of the wetland.

9. Education and Research in Natural Sciences

Wetlands that provide, or are likely to provide, valuable resources for education or scientific research are significant wetlands. The wetland is significant for the education and research in natural sciences function as demonstrated in Section 21 of the petition and as confirmed through a site visit by Agency staff. This function is exemplary. The following features were present and supported this determination:

Owned by or leased to not just one, but two publicly accessible entities dedicated to education and research: The Native Plant Trust and The Nature Conservancy are co-owners of the Eshqua Bog Natural Area. Both are long standing, multi-state organizations that regularly provide field trips, natural history classes, nature appreciation events, and scientific research and conservation opportunities to the public, volunteers, and employees. TNC and Native Plant Trust are both committed to maintaining the ecological integrity of this exceptional natural area, and will continue to steward it by managing invasive plants, monitoring any future disturbances, or floral and hydrological changes that may occur. The protection of Eshqua Bog Natural Area as Class 1 will ensure future generations are able to enjoy this special area.

History of use for education or research: The Native Plant Trust monitors populations of rare orchids and other plants at the wetland, does botanical inventories that public volunteers may attend, and periodically offers credit courses at the wetland. The Native Plant Trust offers scientific botany courses and volunteer monitoring experiences at the Eshqua Bog Natural Area. Many volunteers and land stewards participate in these monitoring events and it brings together the community. The Nature Conservancy ensures the wetland is protected and manages the boardwalk and kiosk, provides volunteer opportunities to lead field trips and public opportunities to learn about and enjoy nature with others. The Nature Conservancy has created educational materials including brochures, online trail maps and orchid-blooming brochures, and kiosks to support the educational value of the natural area. In a typical year, volunteer The Nature Conservancy stewards give 3-4 different tours given to different groups, primarily during June. It is a great educational experience and the stewards know the main plant species and enjoy teaching people about them.

Local schools visit Eshqua Bog on field-trips. A trail counter installed by TNC found that between June and Dec 2018 there were 3,739 visitors, of which 3,014 were in June. In 2019 between Jan-Aug there were 3,123 visitors of which 2,128 came in June.

Has multiple characteristics making it valuable for education or research: several species of plants that are both showy and rare; multiple rare natural communities; and exceptionally physically accessible and freely open public accessibility make this wetland valuable for education and research. Three uncommon (State rank S3) wetland-dependent orchid species live in Eshqua Fen. Two very rare (S1/S2) species historically were found in Eshqua Fen or its buffer zone. Both landowners manage and protect this ecologically significant and rare Calcareous Red Maple-Tamarack Swamp/Rich Fen and the unique flora that the wetland contains.

The well-documented use of this wetland for education or research, as well as ownership by publicly accessible entities dedicated to education and research, makes this function significant. The combination of this function with three showy rare wetland plants that are accessible, and a highly popular aesthetic, education and recreation attraction is greater than the sum of the functions separately. The combined strength of the Education and Research function with the other functions and values makes Education & Research an exemplary function of the wetland.

10. **Recreational Value and Economic Benefits**

Wetlands that provide substantial recreational values or economic benefits are significant wetlands. The wetland is significant for the recreational value and economic benefits function as demonstrated in Section 22 of the petition and as confirmed through a site visit by Agency staff. This function is exemplary. The following features were present and supported this determination:

- Used for, or contributes to, recreational activities: Eshqua is available all year for various outdoor pursuits including botanizing, birding (69 bird species have been documented), wildlife viewing (deer and bear have been observed), photography, hiking the half mile

trail as well as the boardwalk, hunting, snowshoeing and cross-country skiing creating great economic value for the area year-round.

- Provides economic benefits: the wetland provides economic benefits to the community due to the large number of people visiting. Eshqua Bog is a critical recreational use that draws visitors from all over the State of Vermont, over 30 US states and 10 or more countries. Between June and December 2018, 3,300 people visited Eshqua Bog, with 2,600 of those visitors during the month of June, when orchid flowering is at its peak.
- The history of use for recreation and its attendant economic benefits makes this function significant. The combination of this function with three showy rare wetland plants that are accessible and a highly popular aesthetic, education and recreation attraction is greater than the sum of the functions separately. The combined strength of this function with other functions and values makes Recreation & Economic Benefits an exemplary function of the wetland.

11. Open Space and Aesthetics

Wetlands that contribute substantially to the open-space and aesthetic character of the landscape are significant wetlands. The wetland is significant for the open space and aesthetics function as demonstrated in Section 23 of the petition and as confirmed through a site visit by Agency staff. This function is exemplary. The following features were present and supported this determination:

- Can be readily observed by the public and possesses special or unique aesthetic qualities; Eshqua Bog Natural Area is widely known for a spectacular June display of hundreds of Showy Lady's Slippers as well as smaller populations of Yellow Lady's Slippers, Pink Lady's Slippers, Northern Green Orchids and White Bog Orchids. Over 300 species of plants have been identified. The Eshqua Bog Natural Area is the only wetland in Vermont where visitors can experience the magnificent Showy Lady's Slippers, via a 480-foot, ADA compliant boardwalk which makes the wetland accessible to all. The boardwalk includes four observation platforms and three benches. It helps encourage viewing pleasure and recreational and educational opportunities while encouraging viewers to stay on the trail and avoid the trampling of rare species. It is open all year and there is no charge.
- Eshqua Bog Natural Area has been identified as important open space in the 2016 Hartland Town plan.
- The well-documented aesthetic appeal of the showy, rare plants in this beautiful and accessible wetland makes this function significant. The combination of three showy rare wetland plants that are accessible and a highly popular and often photographed aesthetic attraction is greater than the sum of the functions separately. The combined strength of the Open Space and Aesthetics function with the Rare, Threatened and Endangered Species and Education and Research functions makes Open Space and Aesthetics an exemplary function of the wetland.

12. Erosion Control through Binding and Stabilizing Soil

Wetlands that are important for erosion control are significant wetlands. Such wetlands are typically located along stream, river, pond or lake shorelines, where erosive forces are present. The wetland is significant for the erosion control through binding and stabilizing soil function as demonstrated in Section 24 of the petition and as confirmed through a site visit by Agency staff. The following features were present and supported this determination of significance:

- Erosive forces such as current energy are present and dense, persistent vegetation along a shoreline or stream bank that reduces an adjacent erosive force.
- Erosive forces of high current energy are present and good interspersions of persistent emergent vegetation and water along course of water flow.

The Secretary shall also determine whether the wetland is exceptional or irreplaceable based on an evaluation of the extent to which the wetland contributes to Vermont's natural heritage. In determining whether a wetland is exceptional and/or irreplaceable in its contribution to Vermont's natural heritage the Secretary shall, at a minimum, consider whether the wetland is categorized as one or more of the following: Representative Example of Wetland Type; Rare Community Type; and Community Assemblage/Wetland Complex. The exceptional or irreplaceable characteristics of the wetland include the following:

13. Rare Community Type

Wetlands that are considered irreplaceable for this criteria contain unique or rare wetland community types which may be slow-forming or near the extent of its natural range.

Eshqua Bog contains a Rich Fen natural community that is State Significant (S2 rank) identified by the Natural Heritage Information of the Vermont Fish and Wildlife Department. Rich Fens are rare at both state and global levels. Eshqua Bog's Rich Fen is an especially unique variation of a Rich fen: it is a shrubby Rich Fen. Only a few other examples of this community type have been discovered in the State of Vermont. The wetland contains deep peat accumulation and is thus a slow-forming wetland community type. The wetland is 5 acres in size and is a rare community type that is accessible for public viewing due to a boardwalk and conservation easement.

Determination of Wetland Classification

Based on the petition dated November 6, 2020, information obtained during a site visit by Wetlands Program staff, comments received during the public notice period and an evaluation of the functions and values of the wetland and the natural heritage value of the wetland, the Secretary has determined that the wetland under consideration is a Class I wetland.

Required Buffer Zone

In order to protect the functions that make the wetland exceptional or irreplaceable, the Secretary has determined that a 200' buffer zone is required for the wetland. Research correlating plant biodiversity in wetlands with buffer width suggest that wetlands require buffers of at least 200 ft

to protect sensitive plants (Hruby, T. 2013. [Update on Wetland Buffers: The State of the Science, Final Report](https://apps.ecology.wa.gov/publications/documents/1306011.pdf), October 2013. Washington State Department of Ecology Publication #13-06-11. <https://apps.ecology.wa.gov/publications/documents/1306011.pdf>).

Effect of Class I Wetland Determination

Activity in a Class I wetland or its associated buffer zone is prohibited unless it is an allowed use under the VWR, or unless it is authorized by a permit, conditional use determination or order issued by the Secretary. The Secretary may impose any permit conditions as necessary to achieve the purposes of the VWR. Section 9.1 of the VWR. This Determination does not relieve the petitioner or any other person of the responsibility to comply with all other applicable federal, state or local laws.

Peter Walke, Commissioner
Department of Environmental Conservation

By _____
Laura Lapierre, Program Manager
Wetlands Program

Dated at Montpelier, Vermont
This thirteenth day of August 2021

Appendices
Public Comment Responsiveness Summary
Class I boundary map
Petition and Petition Attachments

Appendix A Public Comment Responsiveness Summary

The Vermont Agency of Natural Resources (“Agency”), in accordance with § 7 of the 201 Vermont Wetland Rules held a public comment period for the above petition from 12/15/2020 to 2/1/2021. One public meeting was held by the Vermont Wetlands Program of VT DEC during the public comment period. The meeting was held virtually on Wednesday January 20, 2021 at 5 pm. In attendance was Rob Anderegg, Hartland Conservation Commission (presenter); Megan Gordon and Lynn McNamara, The Nature Conservancy; Bud Sechler, Native Plant Trust; Susan and Dean Greenberg, The Nature Conservancy volunteer stewards; Marie Caduto, State of Vermont Watershed Planner; Rebecca Chalmers and Laura Lapierre, State of Vermont Wetland Program; Jenevera Wetmore, Ted Elliman, and Phil Hobbie. The following is a summary of comments received during the public comment period and the Department’s responses to those comments. Where appropriate, comments have been paraphrased, consolidated, and categorized for clarity.

Comment 1: This wetland has been in the watershed basin plan since 2010 as a potential Class I wetland. This bog is special, when I moved to the area I was immediately told that it is a “must go see” wetland especially during orchid blooming season. For the habitat, water quality, and educational reasons it deserves to be classified as Class I. The wetland offers a unique way to help people understand wetlands and bogs. It provides unique opportunities for people to learn from and interact with the wetland.

Response 1: The Agency makes note of the commenter’s reason for support of the reclassification.

Comment 2: In a typical year we (volunteer The Nature Conservancy stewards) give 3-4 different tours given to different groups, primarily during June. It is a great educational experience. We know the main plant species and enjoy teaching people about them.

Response 2: The Agency makes note of the joint landowner’s and volunteer wetland educator’s reasons for support of the reclassification.

Comment 3: Sharing written comments from visitor books: “fascinating”, “wonderful”, “interesting”, “informative”, “such a treasure”, “thank you for your efforts”, “always awesome”, “great little ecosystem”, “we love it here”, “coolest spot ever”, “worth coming back”, and “amazing”. Whenever we see people at the bog, they also make statements echoing those log book comments. As volunteer The Nature Conservancy stewards we support the petition.

Response 3: The Agency makes note of the joint landowner’s and volunteer steward’s support in the reclassification.

Comment 4: The Nature Conservancy wholeheartedly supports the petition. Almost the entire area to be reclassified is on our property.

Response 4: The Agency makes note of the landowner’s support in the reclassification.

Comment 5: The Native Plant Trust wholeheartedly supports the petition. The Native Plant Trust co-owns the land with The Nature Conservancy. The Ecological Program Coordinator monitors and manages the Eshqua Bog area and works with stewards and volunteers doing invasive plant control. Eshqua Bog is a special place and a great example of a rich fen. Eshqua has unique place as being educational and for research, and very accessible to the public.

Response 5: The Agency makes note of the landowner's support in the reclassification.

Comment 6: The boardwalk makes the wetland accessible to anyone to help them make a close connection with the rare plants. This is a unique experience. Most wetland habitats you need to wear waders and hike.

Response 6: The Agency takes note of the information about the accessibility of Eshqua Bog to visitors.

Comment 7: The Nature Conservancy has a counter that senses movement when people come through the boardwalk. 2018 was the first year the counter was used. The counter gets removed at times and replaced. Peak visitation is in June. Biggest problem they have is parking. The parking area is only big enough for 4 vehicles. In June there are a lot of vehicles parked along the roads. Use of the bog was discouraged in 2020. Between June and Dec 2018 there were 3,739 visitors, of which 3,014 were in June. In 2019 between Jan-Aug there were 3,123 visitors of which 2,128 came in June. 2020 June-July 1,546 of which 1,235 in June. All tours were canceled 2020 because of Covid. Previous to 2018 there was a sign in book - but the majority of people don't sign in.

Response 7: The Agency takes note of the information about the number and timing of visitors to Eshqua Bog.

Comment 8: It seems like once social media started, more people became aware of the bog and that increased use, my impression of about 12 years ago. Proximity to Woodstock gives Eshqua Bog publicity. Volunteer stewards have spent many hours working on wall lettuce, coltsfoot, garlic mustard control. Eshqua Bog was on TV shortly after the new boardwalk on WCAX on their Solstice special article. Friends from CA had heard about it from the newspapers there - an AP article went around the country.

Response 8: The Agency takes note of the information about the publicity of Eshqua Bog and the volunteer efforts to manage invasive species in the wetland.

Comment 9: The Petitioner stated that the landowner organizations walked around to review the wetland polygons to see if they were a part of the wetland. Functionally there were some spots that were not included, such as a spot more like a ditch left over from road building that we did not include and a tiny little basin that was separate from the fen. We decided to petition for the fen and its outlet. Polygons were from the ANR Heritage data and the VSWI. In spring there is a flow of water from the South end to the northern end but it is very intermittent and some years not there at all.

Response 9: The Agency takes note of the information about the polygon location.

Response 10: When asked whether the property boundary and the buffer coincide the Petitioner said, yes, along the road. There is a 200 ft buffer around all of the wetland except not on the opposite side of Garvin Hill Road, which is the downhill side and on neighboring properties so it seemed appropriate to exclude those from the 200' buffer.

Response 10 by Agency: The Agency takes note of the buffer distance and location.