

**HANSON CONSERVATION COMMISSION
MINUTES OF THE PUBLIC MEETING OF JUNE 1, 2022
SELECTMEN'S MEETING ROOM, HANSON TOWN HALL
542 LIBERTY STREET, HANSON, MA 02341**

Called to Order at 7:00 pm under M.G.L. c131, §40 and the Hanson By-Law 3-13, §5 and Rules and Regulations by Phil Clemons, Chairman, Selectmen's Meeting Room, Hanson Town Hall, Hanson, MA

Present: Phil Clemons, Chairman
Sharon LePorte Vice Chairman
David Mansfield, Clerk
Thomas Roffey, Jr., Member
Edwin Heal, Member
Frank Schellenger, Agent
Lan Woodward, Administrative Assistant

Also Present: Jennifer Pinkus, Woodman Terrace
Jay Beaulieu, Woodman Terrace
Mike Foley, Maquan Street
Susan Porazzo, Adams Circle
Kerry Glass, Hanson Building Department
Grace Rodrigues, High Street
Carol Rodrigues, High Street
Tom Grant, North-Eastern Tree
Steven Wry, Land Planning, Inc.

Minutes

May 18, 2022

Motion to approve May 18, 2022 Minutes by: Sharon LePorte
Second: Edwin Heal
Vote: 5-0-0

Public Hearings

7:00 PM Request for Determination for removal of two trees located on property and within 100' of bordering vegetated wetlands located at 240 Maquan Street, Map 71, Lot 19B for Mike Foley. **(New Hearing)**

Mr. Mansfield read the Public Hearing Notice and green cards were verified.

Mr. Foley presented plans to the Commission. Mr. Foley has two hazardous trees within 5' of his house which need to be removed that are within 100' of bordering vegetated wetlands. Agent Schellenger visited site and verified that the trees needed to be removed.

Chair Clemons asked if there were any questions, comments.

Motion to issue a variance for work within 50' buffer zone by: Sharon LePorte
Second: David Mansfield
Vote: 5-0-0

Motion to issue a Negative 3 Determination and approve project presented and to close hearing by:
Thomas Roffey, Jr.
Second: David Mansfield
Vote: 5-0-0

7:15 PM Request for Determination for removal of four trees located on property and repairs to boat house due to tree damage within 100' of bordering vegetated wetlands located at 42 Woodman Terrace, Map 70, Lot 48, for Jay Beaulieu. **(New Hearing)**

Mr. Mansfield read the Public Hearing Notice and green cards were verified.

Mr. Beaulieu presented plans to the Commission. He has four hazardous trees within 6' of his house that need removal and also repair to boat house due to storm damage which are within 100' of bordering vegetated wetlands. Agent Schellenger visited site and confirmed hazardous trees and needed boathouse repair to existing structure.

Chair Clemons asked if there were any questions, comments.

Motion to issue variance for work within 50' buffer zone by: Thomas Roffey, Jr.

Second: Edwin Heal

Vote: 5-0-0

Motion to close hearing and issue a Negative 3 Determination and approve project presented by: Sharon LePorte

Second: David Mansfield

Vote: 5-0-0

7:30 PM Continued Abbreviated Notice of Resource Area Delineation to determine the validity of a boundary of an isolated vegetated wetland resource area between and rear at 591 and 595 High Street, Map 64 and 73, Lot 8A and Lot 18A respectively, for Christine Clegg, Trustee, RLCR Realty Trust, represented by Land Planning, Inc., 1115 Main Street, Hanson, MA (DEP #SE175-0743)

*Chair Clemons noted that he filed a disclosure with Town Clerk regarding this hearing. He is awaiting update, but will recuse himself if/when there is a vote.

Mr. Wry presented updated plans to the Commission. Ivas Environmental Sciences performed a consultant review and reviewed all the wetland areas and provided a report. Mr. Wry made the changes recommended by Mr. Ivas which were located at back side of the wetland areas.

Chair Clemons stated that the Applicant funded a 3rd party independent review which was performed in order to have proper base to move forward.

Agent Schellenger stated that Ivas Environmental Sciences was very thorough with the review and the changes were modest. This ANRAD can be approved.

Chair Clemons asked if there were any questions, comments.

Grace Rodrigues, High Street – You are just approving where the natural resources area, where does our property stand?

Steven Wry, Land Planning, Inc. – It is here on the revised plan if you would like to see.

Motion to close hearing and approve the Plan and issue an Order of Resource Area Delineation by: David Mansfield

Second: Edwin Heal

Vote: 4-0-1

Appointments - (None)

Discussions

Property Management Update

Smitty's Bog: Alton J. Smith Reserve "Smitty's Bog" sign draft to be reviewed by Mr. Rhodes, Rhodes Family Trust.

Motion to approve sign as designed and specified pending approval from Mr. Rhodes, Rhodes Family Trust by: Thomas Roffey, Jr.

Second: Sharon LePorte

Vote: 5-0-0

-Bay Circuit Trail Relocation Bid Openings

Chair Clemons stated we received 5 bids for the project. The staff has created a list of bids that were received.

Mr. Mansfield stated the Commission would need to open bids, then references would need to be verified. If all 5 bids are qualified, the bid is awarded to the lowest qualified bidder. Tonight we are just announcing the bids.

<u>Bid</u>	<u>Received</u>	<u>BID Amount</u>
T Ford Company, Inc.	05.26.22	\$146,000.00
Dandel Construction	05.26.22	\$ 94,785.00
EM Lofgren Civil Contracting	05.27.22	\$269,822.00
D'Allessandro Crop.	05.27.22	\$453,842.00
Northeastern Tree	05.27.22	\$92,800.00

The Commission reviewed the grant application budget worksheet and 2 of the bids fall within the range. Mr. Mansfield stated that we would verify the references of the 2 lowest bidders.

Mr. Grant of North-Eastern Tree was present. He described previous projects that North-Eastern Tree has completed and company locations.

Chair Clemons asked if there were any additional comments, questions. The Commission will await the information from analysis and review.

Discussion on curb cut process for project.

Motion to request curb cut on Pierce Avenue by: Thomas Roffey, Jr.

Second: Sharon LePorte

Vote: 5-0-0

Open Space Acquisition Update

No new update(s).

Old Business/New Business

Invoice for Public Hearing Notice (Hanson Express) for **240 Maquan Street**, Map 71 Lot 19B, Request Determination Applicability – **Signed**

Invoice for Public Hearing Notice (Hanson Express) for **42 Woodman Terrace**, Map 70, Lot 48, Request Determination Applicability - **Signed**

Invoice for Stepping Stones (Dandel Construction, Inc.) Rocky Run – **Held until June 15, 2022 meeting**

Invoice for Reimbursement (Staff) Town Forest Bog Bridge Project – **Signed**

Invoice for Mileage Reimbursement (Agent) – **Signed**

Adjournment

Motion to adjourn at 8:12 PM by: Thomas Roffey, Jr.

Second: Sharon LePorte

Vote: 5-0-0



**Ivas Environmental
Environmental Sciences
Wetlands and Planning Services**

**315 Winter Street
Norwell MA 02061-1401
781.659.1690, spivas@comcast.net**

597595
High Street
RECEIVED
MAY - 1 2022
HANSON CONSERVATION COMMISSION

**Town of Hanson Conservation Commission
542 Liberty Street
Hanson MA 02341**

27 May 22

RE: Consultant Review, High Street Lots, Map 64, Lot 8A and Map 73, Lot 18

Dear Mr. Chairperson and Members of the Commission,

This letter report provides the results of a Consultant Review of two parcels located with an access between #s 591 and 595 High Street in Hanson. The lots are Map 64, Lot 8A and Map 73, Lot 18 that are located to the east of High Street, and south of Independence Ave in Hanson.

Documents reviewed include:

- ANRAD Conservation Filing Plan, located at High St., Hanson MA, Prepared for RCLR Trust, 475 High Street, Hanson MA Scale 1" = 60', May 31, 2022 (sic) by Land Planning, Inc., 1115 Main Street, Hanson MA 02341, 781.294.4144.
- Detailed plan of wetland flags #s 20 - 65 provided by Land Planning.
- MassDEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Forms prepared by Ken Thomson/Botanist at High St., Hanson. Two forms at WF 24 (upland and wetland).

Review comments include:

1. The large wetland area (Flag numbers 20 KT through 65 KT) is extant between the elevations of 112 and 108 feet on what appears to be a wide "shelf" along a long, gradual, slope that continues down-gradient past the westerly edge of the parcels that are oriented generally east-west from High Street.
2. The wetland is a Freshwater Wetland under Section 2 of the General Bylaws of the Town of Hanson Article 3-13. It is not an Isolated Land Subject to Flooding under the Wetlands Protection Act (WPA) since it does not appear to contain water that is six inches deep at least once a year and a volume of 1/4 acre-foot: the Freshwater Wetland does not contain areas that are devoid of vegetation with gray or blackened leaves on the surface of the ground.
3. The area is an unusual wetland, as it is a depressed area along a hillside where upland soils exist both up- and down-gradient of the wetland. In addition, this wetland has a number of what appear to be old drainage channels that also may be considered "overflow" channels, particularly on its west side, that have grown in to support upland vegetation in the past few hundred years.
4. The site is quite deceiving with regard to way-finding. Old pathways/woods roads near the subject site lead offsite more than on site.

5. While MassDEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Forms were provided, they were not completed so that the data within the forms could be verified in the field. Specifically,

- No flags were found for the center of the test plots near Wetland Flag 24, either down- or up-gradient (in and out of the wetland) in the field. These flags are important to the reviewer for they show the locations of the two observation plots that are used to fill out Section I of the Forms. Without these two locations, the forms are useless in the field.
- Similarly, soils tests in Section II of the forms should be completed in the center of the test plots. **It is impossible to verify soils tests if the location of the data shown on the Forms is not known.** In order to compensate for the lack of flags, soils tests were taken by this reviewer at about 30 feet up- and down-gradient from the Wetland Flag # 24 to verify hydric and upland soil types (see notes in Exhibit A, attached).
- The center of the test plots should have been placed on the ANRAD Conservation Filing Plan. [NB: the guidelines for the location of these center flags require that the flags be placed at least 30 feet away from the delineation flags, both up- and down-gradient from the delineation line, due to the maximum size of the test plots for overstory trees.

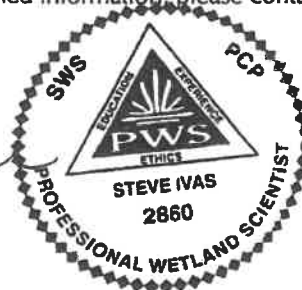

6. Specific locations where changes to the flag locations are recommended include the following (see Exhibit A, attached for additional details):

- A. Remove # 54 KT from plan, and having wetland line move from 53 directly across to # 55 KT.
- B. Remove #s 59 KT and 60 KT, and having line run from # 58 KT to 61 KT.
- C. Remove 62 KT and replacing with 62R about 18 feet up-gradient, due to soils and vegetation.

7. No changes are suggested for #s 71 KT through 74 KT.

If you have any questions regarding the above or attached information, please contact me.

Thanks kindly,



Steve Ivas

Encl: Exhibit A, Consultant Review - Wetlands Delineation on Parcels between 591 and 595 High St.

File: E:\2022\Wetlands\Hanson\High St.\Consultant Review\27 May 22.wpd

Exhibit A

Consultant Review - Wetlands Delineation on Parcels between 591 and 595 High Street, Hanson

The consultant review occurred on 20 and 24 May, 22. Weather conditions on 20 May were temperatures in the 60s, fog early, partly cloudy skies, and no wind at ground level. On the 24th of May, temperatures were in the mid-50s, it was breezy, and cloudy, and S. Wry, from Land Planning Inc. accompanied this writer to point out the locations of the two wetland areas in the early part of the day. Results/observations are noted below, according to flag numbers. All flag numbers end with "KT." The flag numbers (only) are used below.

- | Flag No. | Observation |
|----------|--|
| 20 | On American witch hazel (<i>Hamamelis virginiana</i> , FACU) at sweet pepperbush (<i>Clethra alnifolia</i> , FAC) / dangle-berry (<i>Gaylussacia frondosa</i> , FAC) transition, with a down-gradient overstory of red maple (<i>Acer rubrum</i> , FAC) and one black oak (<i>Quercus velutina</i> , UPL) at split boulder, with sapling/shrub stories red maple, eastern white pine (<i>Pinus strobus</i> , FACU), sweet pepperbush, dangle-berry, with herbaceous story of dangle-berry and sweet pepperbush. |
| 21 | On American witch hazel with overstory of white oak (<i>Quercus alba</i> , FACU) down-gradient, black oak, red maple, eastern white pine, shrub story of highbush blueberry (<i>Vaccinium corymbosum</i> , FACW), American witch hazel, sweet pepperbush,, and a herbaceous story of sweet pepperbush, dangle-berry, false lily-of-the-valley or Canadian mayflower (<i>Maianthemum canadense</i> , FACU), Princess-pine (<i>Lycopodium obscurum</i> , FACU), cinnamon fern (<i>Osmunda cinnamomea</i> , FACW), and sparse wild sarsaparilla (<i>Aralia nudicaulis</i> , FACU). Overstory up-gradient is a mix of American beech (<i>Fagus grandifolia</i> , FACU) and eastern white pine, while the sapling/shrub story is quite open, with American beech and witch hazel, and the herbaceous story is American starflower (<i>Trientalis borealis</i> , FACW), Canadian mayflower, and Indian-cucumber root (<i>Medeola virginiana</i> , FACU).

NB: There appears to be a very old "overflow channel" that leads down-gradient, into an upland area emanating from near this wetland area at this location. |
| 22. | On one-inch white pine snag with up-gradient Overstory of eastern white pine, American beech, few red maples, sapling/shrub story is eastern white pine, witch hazel, and American beech, herbaceous story is Canada mayflower, very sparse gold-thread (<i>Coptis trifolia</i> , FACW), and sparse sweet pepperbush. Relatively open shrub story. Down-gradient wetland shows large boulders at surface (as does most of the wetland area, fines having ben removed). Overstory is American beech, eastern white pine, and red maple, shrub/sapling story is sweet pepperbush, with the herbaceous story as sweet pepperbush, Canada mayflower, and wild sarsaparilla. |
| 23. | On American witch hazel at top of a small slope, with characteristics the same as above in # 22. |
| 24. | MA DEP BVW Delineation Field Forms filled out for # 24, however:
1. No flags were left in the field to show where the center of the two test points are/were;
2. No indication was placed on the survey map as to where the two test plots were/are;
Therefore, all the detailed information is a waste of time, since it cannot be verified at the locations where it was taken. Attempted to find red maple sapling that is noted on the forms, and failed.

Instead, paced off 30 feet both ways (up- and down-gradient) from flag 24, and found upland soils (yellow) on the upland side, and black over gleyed soil, i.e., hydric soils on the wetland side. |
| 25. | On American witch hazel at toe of slope, with down-gradient overstory of eastern white pine, red maple, and one American beech, shrub story of sweet pepperbush and American witch hazel, and sweet pepperbush dominant in the herbaceous story. Up-gradient, overstory is eastern white pine and red maple, shrub/sapling story is eastern white pine and American beech, and herbaceous story is sweet pepperbush and Canada mayflower. |

Exhibit A - Review of High Street Lots, Hanson - 24 May 22 - Page 2/5

26. On one-inch American beech, with Up-gradient overstory of white pine northern red oak, and red maple, shrub/sapling story of red maple (sparse) and sweet pepperbush, and a herbaceous story of sweet pepperbush, starflower, Princess-pine, and partridge-berry (*Mitchella repens*, FACU). The down-gradient overstory is similar, eastern white pine and red maple, while the shrub/sapling story is sweet pepperbush and American beech, and the herbaceous story is low bush blueberry (*Vaccinium angustifolium*, FACU), sweet pepperbush, and starflower.
27. On sweet pepperbush with the same details as above.
28. On three-inch American beech, with the down-gradient overstory as green ash (*Fraxinus pennsylvanica*), red maple, eastern white pine, and northern red oak, the shrub/sapling story as sweet pepperbush, witch hazel and American beech, and the up-gradient herbaceous story as cinnamon fern, Canada mayflower, and New York fern (*Thelypteris noveboracensis*, FAC). The up-gradient overstory is eastern white pine, American beech, red maple and northern red oak, while the sapling/shrub story is American witch hazel, sweet pepperbush, and eastern white pine. The up-gradient herbaceous story is Canada mayflower, sparse white oak (*Quercus alba*, FACU), American witch hazel, low and bush blueberry.
- 29./30. These two flags are quite close to one another, so they are taken together. The down-gradient overstory here is dominated by red maple, with American beech, eastern white pine and northern red oak also noted. The sapling/shrub story is sweet pepperbush, dangle-berry and a few northern red oaks. The down-gradient herbaceous story is sweet pepperbush and dangle-berry. The up-gradient overstory is a mix of eastern white pine, northern red oak, American beech, and a few red maples. The up-gradient shrub/sapling story is witch hazel, sweet pepperbush,, and dangle-berry. The up-gradient herbaceous story is sweet pepperbush, Canada Mayflower, and low bush blueberry.
31. On two-inch American beech at edge of upland "lobe" at toe of slope.
32. On one-inch American beech by twin snag of northern red oak, with much less dense shrub story up-gradient.
33. On half-inch Sassafras (*Sassafras albidum*, FACU), at transition to less dense shrub story.
34. On two-inch American beech with easily walked-through shrub story up-gradient. Down-gradient, the shrub story is quite dense.
35. On American witch hazel at Northern red oak mature blow-down. Down-gradient overstory is red maple and eastern white pine, the sapling/shrub story is American witch hazel and sweet pepperbush, and the herbaceous story is sweet pepperbush, Canada mayflower, and sparse white oak.
36. On five (5) inch American beech, as above in # 35.
37. On American witch hazel at the edge of cinnamon fern up-gradient and the edge of gold thread up-gradient.
38. On American beech at boulder area, up-gradient has nearly no herbaceous story - only a few greenbrier (*Smilax rotundifolia*, FAC), a few sweet pepperbush, and a few wild sarsaparilla.
39. On sweet pepperbush at downed red maple with large cinnamon fern down-gradient, and edge of shrub story about 20 ft up-gradient.
40. On two-inch sassafras at top of slope, very dense sweet pepperbush down-gradient, also open overstory down-gradient across to flag 48.

Exhibit A - Review of High Street Lots, Hanson - 24 May 22 - Page 3/5

41. On American witch hazel at top of slope at 12-inch eastern white pine with sweet pepperbush, cinnamon fern, with sparse wild sarsaparilla at herbaceous story, and less dense sweet pepperbush with dangle-berry and wild sarsaparilla among herbaceous at up-gradient area, eastern white pine, American beech, northern red oak, sassafras, low bush blueberry and wild sarsaparilla in herbaceous story up-gradient.
- 42./ 43 Taken together. Completely different up- and down-gradient: down-gradient cinnamon fern, sweet pepperbush, dangle-berry, greenbrier. Up-gradient sweet pepperbush only.
44. Follows cinnamon fern to corner with greenbrier, on downed branch, with wintergreen or eastern teaberry (*Gaultheria procumbens*, FACU) observed up-gradient.
- 45./46. Taken together. On downed American beech, down-gradient overstory is tupelo (*Nyssa sylvatica*, FAC), red maple. Sapling/shrub story is tupelo, sparse eastern white pine, one sassafras, sparse American beech, sparse American witch hazel, and the herbaceous story is Indian-cucumber, cinnamon fern, dangle-berry, Princess-pine, and pink lady's slipper (*Cypripedium acaule*, FACW). Up-gradient overstory is northern red oak, eastern white pine, American beech. The sapling/shrub stories are much less dense than in the wetland area, and are American beech, American witch hazel, and dangle-berry. The up-gradient herbaceous story Canada mayflower, dangle-berry, eastern white pine, wild sarsaparilla, and what appears to be Pennsylvania sedge (*Carex pensylvanica*, UPL).
47. On American witch hazel. Soil test found gley (gray color) within six (6) inches of ground elevation. Within about eight (8) ft of flag is channel that may be old historical overflow channel that only shows highbush blueberry, Canada mayflower, northern red oak, dangle-berry, red maple. Channel appears to have been drying out for many years - was it an overflow channel for the wetland? NB: site is above another wetland area about 250+ ft down-gradient, offsite to the west.
48. On three-inch eastern white pine, at elevation change, with a denser shrub story in wetland. Down-gradient herbaceous story is sweet pepperbush, dangle-berry, Canada mayflower, starflower, sparse white oak, very sparse Indian-cucumber, sparse wild sarsaparilla, New York fern, and sparse American beech. Shrub story down-gradient is tupelo, sparse eastern white pine, sparse American witch hazel, with the overstory as red maple, and eastern white pine.
48. (sic) On American witch hazel, with nearly no herbaceous story, shrub story in up-gradient location. Shrub story stops abruptly here.
49. On American witch hazel at top of slope at edge of sweet pepperbush.
50. On six-inch red maple at top of slope, opposite # 37 (narrowest wetland area), up-gradient overstory is black oak, red maple, and American beech. Down-gradient herbaceous story is-sparse Canada mayflower, sweet pepperbush, starflower. The down-gradient shrub story is sweet pepperbush and very sparse American beech.
51. On sweet pepperbush, up-gradient overstory is northern red oak, eastern white pine, and open area. Shrub story is dangle-berry with small amount of sweet pepperbush. Some Canada mayflower on ground cover. The wetland area has larger sweet pepperbush, and there is a discernable micro-topographical change from wetland to upland. **Soils test done about ten feet up-gradient of flag at pink pin, found dark yellow soil at about six inch depth (upland soils).**
52. On three inch eastern white pine at top of slope (small slope, as all have been, usually less than one foot). **Did soil test just down-gradient, found gley soils six inches deep.**
53. On highbush blueberry near split boulder about eight (8 ft) down-gradient. There is a sweet pepperbush / dangle-berry transition line just up-gradient of flag.

54. On sweet pepperbush, recommend removing 54 from plan due to vegetation apparent: the line should go directly across to # 55.
55. On American witch hazel, found deep black hydric soils in hollow over gley soils in front of split boulder (east side of boulder).
56. On 1.5 inch tupelo at extent of cinnamon fern up-gradient at transition to hay-scented fern (*Dennstaedtia punctilobula*, UPL) and dangle-berry. Also near old overflow channel?
57. On six foot high tupelo at top of slope at sweet pepperbush / dangle-berry transition, with one large northern red oak in wetland resource area. Also sassafras, red maple, in shrub story along with American witch hazel, eastern white pine in sapling story in wetland. NB: upland vegetation a lot less dense than wetland.
58. On American witch hazel at mature eastern white pine, at entrance to another possible overflow channel.
59. On half-inch red maple at large red maple (> 20 inches).
- Suggest removing #s 59 and 60, and proceeding direct from 58 to 61, as vegetation shows dominant wetland indicator vegetation, although there is a small rise in the land form. The vegetation includes on large yellow birch (*Betula alleghaniensis*, FACW) and sweet pepperbush and Canada mayflower that dominate the herbaceous story on the land form.**
60. On American witch hazel.
61. On one inch American beech in what appears to be another historical overflow or drainage channel that also shows gray leaves (i.e., leaves that have been at the bottom of water for an extended time during the growing season.)
62. On highbush blueberry at extent of channel with five inch American beech up-gradient. **Found hydric soils about 18 ft up-gradient of 62, placed 62R on 2.5 inch tupelo at extent of sweet pepperbush.**
63. On American witch hazel at about a 30-inch eastern white pine in wetland area. Note that there is a depression about 20 ft NW with gleyed soils and branches in it, however the sweet pepperbush does not reach this much-less vegetated depression. It was kept out of the main wetland due to not being connected with soils.
64. On sweet pepperbush near edge of sweet pepperbush down-gradient, up-gradient simply not very dense, and sweet pepperbush ends a few feet up-gradient, which has a lower elevation. Wetland has overstory of red maple and white pine, sapling story is American beech, shrub story is dense sweet pepperbush. Herbaceous story is dense sweet pepperbush with some New York fern and sparse wild sarsaparilla. Many oak seedlings in the **non-wetland area, again, which is down-gradient from the flag.**
65. On three inch white pine at sweet pepperbush/dangleberry transition. Highbush blueberry and American beech notable in the non-wetland area, which is lower in elevation than the wetland (an unusual situation, but not unique on the South Shore), With red maple dominating the overstory and sweet pepperbush dense in the shrub and herbaceous story.

Flag 65 connects to Flag 20, completing the enclosed wetland.

Exhibit A - Review of High Street Lots, Hanson - 24 May 22 - Page 5/5

Four flags offsite, near the NW corner of the site, just behind residences on Independence Ave. Spoke to Mike Govoni, 31 Independence Ave, who asked what I was doing in his back yard. He understood, and had no issues with me being there.

71. On American witch hazel at top of slope. Red maple and tupelo in wetland overstory, with sweet pepperbush and highbush blueberry in shrub story, and sweet pepperbush and cinnamon fern in wetland herbaceous story. Red maple, eastern white pine, and northern red oak in up-gradient overstory, American witch hazel and sparse sweet pepperbush in up-gradient shrub story, and sparse cinnamon fern and sweet pepperbush in up-gradient herbaceous story.
72. On highbush blueberry snag, with tupelo and red maple in down-gradient overstory, sweet pepperbush and very sparse American beech in down-gradient shrub story, and sweet pepperbush and cinnamon fern (sparse) in down-gradient herbaceous story. In up-gradient overstory, black birch (*Betula lenta*, FACU), northern red oak, eastern white pine, and red maple. American witch hazel and sweet pepperbush in sapling/shrub story up-gradient, and sweet pepperbush dominates the herbaceous story.
73. On one-inch American beech, at edge of cinnamon fern up-gradient. Down-gradient overstory is red maple and tupelo, sweet pepperbush in the shrub and herbaceous story, and cinnamon fern in the herbaceous. The up-gradient overstory is northern red oak, sparse tupelo, American beech, and red maple. The up-gradient shrub story is American beech and sweet pepperbush, and the sweet pepperbush dominates the herbaceous story.
74. On red maple snag, Up-gradient overstory is red maple, eastern white pine, and tupelo, with highbush blueberry in the shrub story (very sparse), with American beech, and Indian cucumber root in the up-gradient herbaceous story with sweet pepperbush and dangle-berry. Down-gradient, shrub story is sweet pepperbush, sparse American witch hazel, and cinnamon fern in the herbaceous story.

Soils tests just down-gradient of flag show gleyed soils close to the surface of the ground.