



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742

CENAE-RDC

4 September 2024

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Pre-2015 Regulatory Regime
Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322
(2023),¹ NAE-2023-02400 MFR 1 of 1²

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.³ AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.⁴ For the purposes of this AJD, we have relied on section 10 of the Rivers and Harbors Act of 1899 (RHA),⁵ the Clean Water Act (CWA) implementing regulations published by the Department of the Army in 1986 and amended in 1993 (references 2.a. and 2.b. respectively), the 2008 *Rapanos-Carabell* guidance (reference 2.c.), and other applicable guidance, relevant case law and longstanding practice, (collectively the pre-2015 regulatory regime), and the *Sackett* decision (reference 2.d.) in evaluating jurisdiction.

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. The features addressed in this AJD were evaluated consistent with the definition of “waters of the United States” found in the pre-2015 regulatory regime and consistent with the Supreme Court’s decision in *Sackett*. This AJD did not rely on the 2023 “Revised Definition of ‘Waters of the United States,’” as

¹ While the Supreme Court’s decision in *Sackett* had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.

² When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, interstate water, or territorial seas that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).

³ 33 CFR 331.2.

⁴ Regulatory Guidance Letter 05-02.

⁵ USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

amended on 8 September 2023 (Amended 2023 Rule) because, as of the date of this decision, the Amended 2023 Rule is not applicable in this state due to litigation.

1. SUMMARY OF CONCLUSIONS.

- a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).
 - i. Wetland 1 non-jurisdictional. This wetland is a PEM1C 1,244 square feet in size. Its hydrology comes from a combination of groundwater and shallow ledge. It is surrounded by a scrub shrub upland with some bare soils. The wetland was created by excavation.
 - ii. Wetland 2 non-jurisdictional. This wetland is a PEM1C wetland 675 square feet in size. Its hydrology comes from a combination of groundwater and shallow ledge. It is surrounded by a scrub shrub upland with some bare soils. The wetland was created by excavation as a result of an on-going ski resort.
 - iii. Wetland 3 non-jurisdictional. This wetland is a PEM1x wetland 14,048 square feet in size. Its hydrology comes from a combination of groundwater and shallow ledge. It is surrounded by a scrub shrub upland with some bare soils. The wetland was created by excavation as a result of an on-going ski resort.
 - iv. Wetland 4 non-jurisdictional. This wetland is a PEM1x wetland 742 square feet in size. Its hydrology comes from a combination of groundwater and shallow ledge. It is surrounded by a scrub shrub upland with some bare soils. The wetland was created by excavation as a result of an on-going ski resort.
 - v. Wetland 5 non-jurisdictional. This wetland is a PEM1x wetland 14,192 square feet in size. Its hydrology comes from a combination of groundwater and shallow ledge. It is surrounded by a scrub shrub upland with some bare soils. The wetland was created by excavation as a result of an on-going ski resort.

2. REFERENCES.

- a. Final Rule for Regulatory Programs of the Corps of Engineers, 51 FR 41206 (November 13, 1986).
- b. Clean Water Act Regulatory Programs, 58 FR 45008 (August 25, 1993).

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- c. U.S. EPA & U.S. Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States* (December 2, 2008)
 - d. *Sackett v. EPA*, 598 U.S. ___, 143 S. Ct. 1322 (2023)
- 3. REVIEW AREA. The site is an 83 acre lot located on top of a mountain within an existing ski resort. The center of the review area coordinates are 43.153069, -71.795108 which is located off of Flanders Road in Henniker, NH. This location was forested shortly after 1998 and remains mostly cleared of trees. It is a mix of bare soils to scrub shrub uplands. There are also stockpiles of mined dirt and logs.
 - 4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), INTERSTATE WATER, OR THE TERRITORIAL SEAS TO WHICH THE AQUATIC RESOURCE IS CONNECTED. N/A
 - 5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, INTERSTATE WATER, OR THE TERRITORIAL SEAS. N/A
 - 6. SECTION 10 JURISDICTIONAL WATERS⁶: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.⁷ N/A
 - 7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the pre-2015 regulatory regime. The rationale should also include a written description of, or reference to a map in the

⁶ 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.

⁷ This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

- a. TNWs (a)(1): N/A
- b. Interstate Waters (a)(2): N/A
- c. Other Waters (a)(3): N/A
- d. Impoundments (a)(4): N/A
- e. Tributaries (a)(5): N/A
- f. The territorial seas (a)(6): N/A
- g. Adjacent wetlands (a)(7): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

- a. Describe aquatic resources and other features within the review area identified as “generally non-jurisdictional” in the preamble to the 1986 regulations (referred to as “preamble waters”).⁸ Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA as a preamble water. NA
- b. Describe aquatic resources and features within the review area identified as “generally not jurisdictional” in the *Rapanos* guidance. Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA based on the criteria listed in the guidance.

Wetland 1 is a PEM1C 1,244 square feet in size.

Wetland 2 is a PEM1C wetland 675 square feet in size.

Wetland 3 is a PEM1x wetland 14,048 square feet in size.

Wetland 4 is a PEM1x wetland 742 square feet in size.

Wetland 5 is a PEM1x wetland 14,192 square feet in size.

These wetlands are non-jurisdictional as they are wetlands that do not have a continuous surface connection to a relatively permanent body of water connected

⁸ 51 FR 41217, November 13, 1986.

to traditional interstate navigable waters. Nor are they adjacent waters that are bordering, contiguous, or neighboring to a water of the United States even when taking into separation by barriers, river berms, or beach dunes.

- c. Describe aquatic resources and features identified within the review area as waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA. Include the size of the waste treatment system within the review area and describe how it was determined to be a waste treatment system. N/A
- d. Describe aquatic resources and features within the review area determined to be prior converted cropland in accordance with the 1993 regulations (reference 2.b.). Include the size of the aquatic resource or feature within the review area and describe how it was determined to be prior converted cropland. N/A
- e. Describe aquatic resources (i.e. lakes and ponds) within the review area, which do not have a nexus to interstate or foreign commerce, and prior to the January 2001 Supreme Court decision in “*SWANCC*,” would have been jurisdictional based solely on the “Migratory Bird Rule.” Include the size of the aquatic resource or feature, and how it was determined to be an “isolated water” in accordance with *SWANCC*. N/A
- f. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the pre-2015 regulatory regime consistent with the Supreme Court’s decision in *Sackett* (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).
Wetland 1 is a PEM1C 1,244 square feet in size.
Wetland 2 is a PEM1C wetland 675 square feet in size.
Wetland 3 is a PEM1x wetland 14,048 square feet in size.
Wetland 4 is PEM1x wetland 742 square feet in size.
Wetland 5 is a PEM1x wetland 14,192 square feet in size.

These wetlands do not meet the pre-2015 regulatory regime definition of waters of the United States as defined by 40 CFR 230.3 (s) including Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of 40 CFR 230.3 (s); waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

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9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

- a. National Wetland Inventory Mapper dated July 22, 2024
- b. USGS Topographic Map
- c. WETLANDS CLASSIFICATIONS/SYSTEMS EXHIBIT MAP 8 LOT 655 PAT'S PEAK INC. HENNICKER, NEW HAMPSHIRE plan dated MARCH 28, 2024
- d. Wetland Delineation sheets on 24 pages dated 7/23/2024 (There were some errors in the forms however the errors were not going to change the delineation determination.)
- e. Photographs of the sampling points.

10. OTHER SUPPORTING INFORMATION. N/A

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.



PAT PEAK

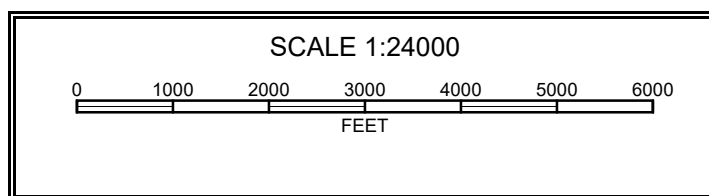
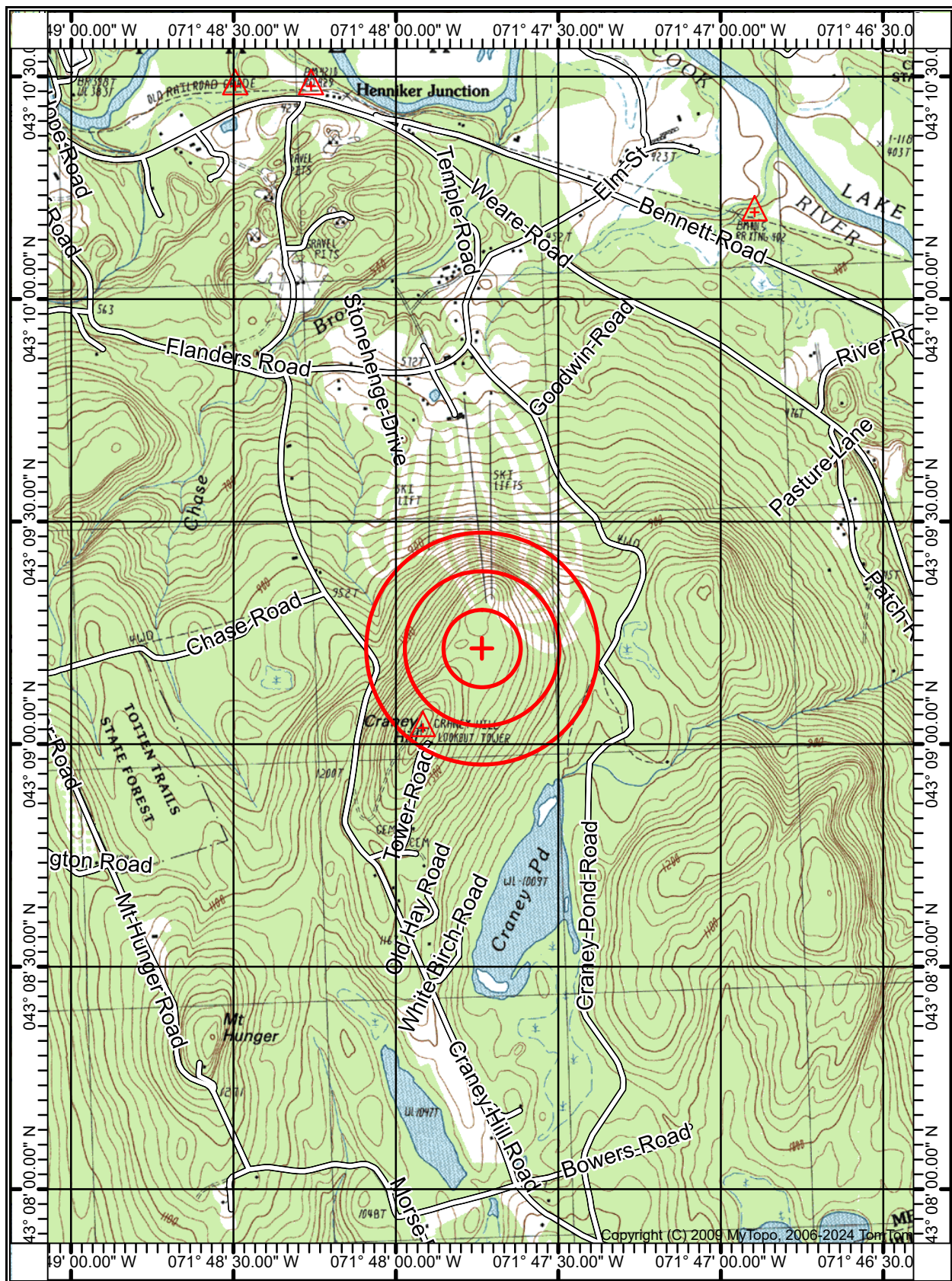


July 22, 2024

Wetlands

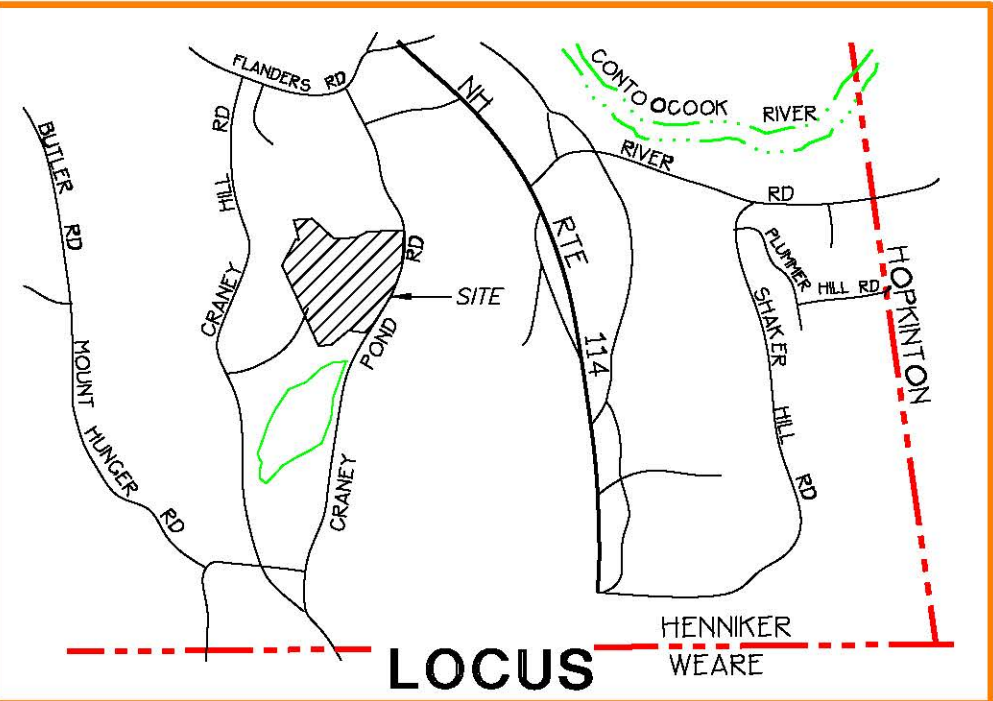
- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
|  | Estuarine and Marine Wetland |  | Freshwater Pond |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



WETLAND LEGEND:

- PEM1x PALUSTRINE EMERGENT, PERSISTENT EXCAVATED
- PEM1C PALUSTRINE EMERGENT, PERSISTENT SEASONALLY FLOODED
- 10 FT. CONTOUR
- 2 FT. CONTOUR
- EDGE OF JURISDICTIONAL WETLAND (7/27/23)
- EDGE OF WOODS
- EXISTING STONE WALL
- EXISTING OVERHEAD UTILITY (CHAIR LIFT)
- EDGE OF GRAVEL
- APPROXIMATE LOT LINE
- APPROX. LIMIT OF WETLAND DELINEATION
- PROPOSED LIMIT OF DISTURBANCE
- WETLAND SYSTEM 1 (1,244 SF)
- WETLAND SYSTEM 2 (675 SF)
- WETLAND SYSTEM 3 (14,048 SF)
- WETLAND SYSTEM 4 (742 SF)
- WETLAND SYSTEM 5 (14,192 SF)
- AREAS WITH PREVIOUSLY APPROVED IMPACTS AND/OR CREATED LEGALLY AND REQUESTED TO BE PERMITTED UNDER NH DES FILE NUMBER 2024-01030 RFMI #11 (16,853 SQ. FT.)
- PROPOSED PERMANENT WETLAND IMPACTS (14,048 SQ. FT.)
- APPROX. WETLAND AREA PHOTO LOCATION & DIRECTION
- ACOE DATA SHEET SAMPLE POINT



- REFERENCE PLAN:**
- EXISTING CONDITIONS SURVEY DATA PROVIDED BY HIGGINSON LAND SERVICES, LLC.
- NOTES:**
- OWNER IS PAT'S PEAK INC, P.O. BOX 244B, HENNIKER, NH 03242.
 - WETLANDS WERE DELINEATED IN ACCORDANCE WITH THE 'CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL' (1987) AND THE REGIONAL SUPPLEMENT BY SPENCER C. TATE, CWS, ON JULY 27, 2023.
 - THE PURPOSE OF THIS PLAN IS TO DEPICT THE LIMIT OF PROPOSED DISTURBANCE AND THE DIFFERENT WETLAND SYSTEMS THAT HAVE BEEN EVALUATED USING THE HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT.
 - SEE SHEET 3 FOR PROPOSED CONDITIONS.

WETLAND CLASSIFICATIONS/SYSTEMS EXHIBIT

MAP 8 LOT 655

PREPARED FOR

PAT'S PEAK INC.

HENNIKER, NEW HAMPSHIRE

SCALE: 1" = 50'

MARCH 28, 2024

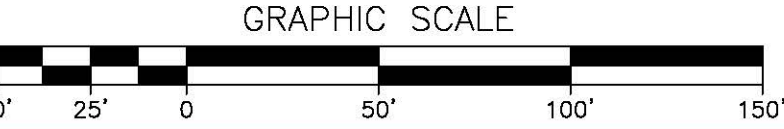


MERIDIAN

LAND SERVICES, INC.

ENGINEERING | SURVEYING | PERMITTING
SOIL & WETLAND MAPPING | SEPTIC DESIGN

31 OLD NASHUA ROAD, AMHERST, NH 03031 TEL. 603-673-1441
MERIDIANLANDSERVICES.COM FAX 603-673-1584



REV.	DATE	DESCRIPTION	NHDES C/O	TAH DR	SCT CK
A	6/26/24	UPDATE PER RFMI			

Jul 25, 2024 - 1:04pm TAH
H:\m16-wp\20315\20315.03\20315M03C.dwg

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
 Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: I
 Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): TOP OF HILL Local relief (concave, convex, none): CONVEX Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR R Lat: 3.15332 Long: -71.79521 Datum: WKID 4326
 Soil Map Unit Name: TUNBRIDGE-LYMAN-BECKET COMPLEX. 0-8% VERY STONY NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation X, Soil X, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>x</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: I

Tree Stratum (Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 FT. RADIUS</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5 FT. RADIUS</u>)				
1. <u>PINUS STROBUS</u>	<u>5%</u>	<u>X</u>	<u>FACU</u>	
2. <u>PLANTAGO (SP.)</u>	<u>2%</u>			
3. <u>FESTUCA RUBRA</u>	<u>2%</u>		<u>FACU</u>	
4. <u>BETULA POPULIFOLIA</u>	<u>1%</u>		<u>FAC</u>	
5. <u>XYRIS TORTA</u>	<u>1%</u>		<u>OBL</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>11%</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: _____)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) POLYTRICHUM COMMUNE (HAIRCAP MOSS) OBSERVED IN 5 FT. RADIUS AT 2% COVERAGE				

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

NO REDOX FEATURED AND NO TOPSOIL IN AREA DUE TO PREVIOUS DISTURBANCE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
 Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: II
 Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): TOP OF HILL Local relief (concave, convex, none): CONCAVE Slope (%): 0-5%
 Subregion (LRR or MLRA): LRR R Lat: 43.15392 Long: -71.79513 Datum: WKID 4326
 Soil Map Unit Name: TUNBRIDGE-LYMAN-BECKET COMPLEX. 0-8%. VERY STONY NWI classification: PEM1x

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WETLAND SYSTEM 3</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)		<u>Secondary Indicators</u> (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: -MORE THAN ONE PRIMARY INDICATOR OF WETLAND HYDROLOGY PRESENT		

VEGETATION – Use scientific names of plants.

 Sampling Point: II

Tree Stratum (Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
Sapling/Shrub Stratum (Plot size: <u>15 FT. RADIUS</u>)																		
1. <u>BETULA POPULIFOLIA</u>	<u>30%</u>	<u>X</u>	<u>FAC</u>															
2. <u>VACCINIUM CORYMBOSUM</u>	<u>15%</u>	<u>X</u>	<u>FACW</u>															
3. <u>ACER RUBRUM</u>	<u>10%</u>		<u>FAC</u>															
4. <u>PINUS STROBUS</u>	<u>5%</u>		<u>FACU</u>															
5. <u>QUERCUS RUBRA</u>	<u><1%</u>		<u>FACU</u>															
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 FT. RADIUS</u>)																		
1. <u>FRAGARIA VIRGINIANA</u>	<u>60%</u>	<u>X</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>OSMUNDASTRUM CINNAMOMEUM</u>	<u>40%</u>	<u>X</u>	<u>FACW</u>															
3. <u>SPIRAEA TOMENTOSA</u>	<u>25%</u>		<u>FACW</u>															
4. <u>SPIRAEA ALBA</u>	<u>5%</u>		<u>FACW</u>															
5. <u>OSMUNDA SPECTABILIS</u>	<u>5%</u>		<u>OBL</u>															
6. <u>ATHYRIUM ANGUSTUM</u>	<u>5%</u>		<u>FAC</u>															
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
_____ = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 FT. RADIUS</u>)																		
1. <u>N/A</u>				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
2. _____																		
3. _____																		
4. _____																		
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) -HAIRCAP MOSS TOTAL GROUND COVER (80%) DOMINANT BUT NOT INCLUDED IN WORKSHEET BECAUSE NON-VASCULAR																		

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
 Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: III
 Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): TOP OF HILL Local relief (concave, convex, none): CONCAVE Slope (%): 0-5%
 Subregion (LRR or MLRA): LRR R Lat: 43.15371 Long: -71.79507 Datum: WKID 4326
 Soil Map Unit Name: TUNBRIDGE-LYMAN-BECKET COMPLEX. 0-8% VERY STONY NWI classification: PEM1x

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation X, Soil X, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WETLAND SYSTEM 5</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) ___ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) <u>X</u> Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) <u>X</u> Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: -PRIMARY INDICATOR AND MULTIPLE (>2) SECONDARY INDICATORS PRESENT AT SAMPLE SITE		

Sampling Point: III

<u>Tree Stratum</u>	(Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	N/A				Prevalence Index worksheet: Total % Cover of: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2.					
3.					
4.					
5.					
6.					
7.					
		_____ = Total Cover			
<u>Sapling/Shrub Stratum</u>	(Plot size: <u>15 FT. RADIUS</u>)				Hydrophytic Vegetation Indicators: ____ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> ____ 2 - Dominance Test is >50% ____ 3 - Prevalence Index is ≤3.0¹ ____ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	N/A				
2.					
3.					
4.					
5.					
6.					
7.					
		_____ = Total Cover			
<u>Herb Stratum</u>	(Plot size: <u>5 FT. RADIUS</u>)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1.	RHYNCHOSPORA CAPITELLATA	90%	X	OBL	
2.	SCIRPUS (SP.)	10%		OBL	
3.	SPIRAEA TOMENTOSA	10%		FACW	
4.	CAREX (SP.)	10%			
5.	BETULA POPULIFOLIA	5%		FAC	
6.	POPULUS TREMULOIDES	3%		FACU	
7.	PINUS STROBUS	1%		FACU	
8.	PLANTAGO (SP.)	<1%			
9.					
10.					
11.					
12.					
		129%		= Total Cover	
<u>Woody Vine Stratum</u>	(Plot size: <u>30 FT. RADIUS</u>)				
1.	N/A				
2.					
3.					
4.					
		_____ = Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.) -CAREX EXCLUDED FROM HERB STRATUM AS UNDEFINED SPECIES WITH VARYING FACULTATIVE STATUS					

SOIL

Sampling Point: III

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input checked="" type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No

Remarks:

- NO TOP SOIL WITHIN EXCAVATED AREA
- REDOX TO SURFACE OF TEST PIT
- PROFESSIONAL JUDGEMENT ASSUMES REMOVED A-HORIZON THAT WAS "DARK"
- A11 INDICATOR WOULD HAVE BEEN PRESENT IF UNDISTURBED

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
 Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: IV
 Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): TOP OF HILL Local relief (concave, convex, none): CONCAVE Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR R Lat: 43.15322 Long: -71.79515 Datum: WKID 4326
 Soil Map Unit Name: PILLSBURY FINE SANDY LOAM. 0-8% VERY STONY NWI classification: PEM1x

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation X, Soil X, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WETLAND SYSTEM 4</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)		<u>Secondary Indicators</u> (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: -MULTIPLE INDICATORS FOR WETLAND HYDROLOGY PRESENT		

VEGETATION – Use scientific names of plants.

 Sampling Point: IV

Tree Stratum (Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
				Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div> OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 FT. RADIUS</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5 FT. RADIUS</u>)				
1. <u>SCIRPUS (SP.)</u>	<u>30%</u>	<u>X</u>	<u>OBL</u>	
2. <u>SOLIDAGO GIGANTEA</u>	<u>10%</u>	<u>X</u>	<u>FACW</u>	
3. <u>PLANTAGO (SP.)</u>	<u>5%</u>			
4. <u>RHYNCHOSPORA CAPITELLATA</u>	<u>5%</u>		<u>OBL</u>	
5. <u>VACCINIUM OXYCOCCOS</u>	<u>5%</u>		<u>OBL</u>	
6. <u>ACER RUBRUM</u>	<u><1%</u>		<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>55%</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>30 FT. RADIUS</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				

_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) -PLANTAGO EXCLUDED FROM DOMINANCE TEST AS UNDEFINED SPECIES WITH VARYING FACULTATIVE STATUS --OBSERVED LIVERWORT SPECIES WITH COVER OF 10%. EXCLUDED FROM TOTAL COVER AND DOMINANCE TEST				

SOIL

Sampling Point: IV

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input checked="" type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No

Remarks:

- NO TOP SOIL
- PREVIOUSLY EXCAVATED
- REDOX <12" FROM SOIL SURFACE

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: V
Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
Landform (hillslope, terrace, etc.): GRADUAL HILLSLOPE Local relief (concave, convex, none): NONE Slope (%): 5-8%
Subregion (LRR or MLRA): LRR R Lat: 43.15327 Long: -71.79470 Datum: WKID 4326
Soil Map Unit Name: PILLSBURY FINE SANDY LOAM. 0-8% VERY STONY NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	<u>X</u> Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	<u>X</u> Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	<u>X</u> Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: ->2 SECONDARY INDICATORS PRESENT FOR HYDROLOGY		

VEGETATION – Use scientific names of plants.

Sampling Point: V

Tree Stratum (Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
_____ = Total Cover																				
_____ = Total Cover																				
_____ = Total Cover																				
_____ = Total Cover																				
_____ = Total Cover																				
_____ = Total Cover																				
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>BETULA POPULIFOLIA</u>	<u>20%</u>	<u>X</u>	<u>FAC</u>																	
2. <u>VACCINIUM CORYMBOSUM</u>	<u>10%</u>	<u>X</u>	<u>FACW</u>																	
3. <u>ACER RUBRUM</u>	<u>5%</u>		<u>FAC</u>																	
4. <u>POPULUS TREMULOIDES</u>	<u>5%</u>		<u>FACU</u>																	
5. <u>SALIX DISCOLOR</u>	<u>5%</u>		<u>FACW</u>																	
6. <u>PINUS STROBUS</u>	<u><1%</u>		<u>FACU</u>																	
_____ = Total Cover																				
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>FRAGARIA VIRGINIANA</u>	<u>35%</u>	<u>X</u>	<u>FACU</u>																	
2. <u>SPIRAEA TOMENTOSA</u>	<u>15%</u>		<u>FACW</u>																	
3. <u>SPIRAEA ALBA</u>	<u>15%</u>		<u>FACW</u>																	
4. <u>ONOCLEA SENSIBILIS</u>	<u>5%</u>		<u>FACW</u>																	
5. <u>VACCINIUM CORYMBOSUM</u>	<u>5%</u>		<u>FACW</u>																	
6. <u>POTENTILLA SIMPLEX</u>	<u>5%</u>		<u>FACU</u>																	
_____ = Total Cover																				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
_____ = Total Cover																				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. _____																				
2. _____																				
3. _____																				
_____ = Total Cover																				
Woody Vine Stratum (Plot size: <u>30 FT. RADIUS</u>) 1. _____ 2. _____ 3. _____ 4. _____ _____ = Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
-LIVERMORT SPECIES (70%) COVERAGE WITHIN PLOT AND NOT INCLUDED IN DOMINANCE TEST

SOIL

Sampling Point: V

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes _____ No X

Remarks:

-POORLY DRAINED NON-HYDRIC SOIL

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: VI
Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
Landform (hillslope, terrace, etc.): GRADUAL HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5-8%
Subregion (LRR or MLRA): LRR R Lat: 43.15277 Long: -71.79494 Datum: WKID 4326
Soil Map Unit Name: PILLSBURY FINE SANDY LOAM. 0-8% VERY STONY NWI classification: PEM1x

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WETLAND SYSTEM 3</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	<u>X</u> Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	<u>X</u> Oxidized Rhizospheres on Living Roots (C3)	<u>X</u> Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
<u>X</u> Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	<u>X</u> Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: -PRIMARY AND SECONDARY INDICATORS WITHIN SAMPLE AREA		

Sampling Point: VI

Tree Stratum (Plot size: 30 FT. RADIUS)		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
			= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS)		Absolute % Cover	Dominant Species?	Indicator Status
1.	BETULA POPULIFOLIA	25%	X	FAC
2.	PINUS STROBUS	5%		FACU
3.	ACER RUBRUM	5%		FAC
4.				
5.				
6.				
7.				
		35%	= Total Cover	
Herb Stratum (Plot size: 5 FT. RADIUS)		Absolute % Cover	Dominant Species?	Indicator Status
1.	SOLIDAGO GIGANTEA	30%	X	FACW
2.	SPIRAEA ALBA	20%	X	FACW
3.	ACER RUBRUM	20%	X	FAC
4.	SPIRAEA TOMENTOSA	5%		FACW
5.	FRAGARIA VIRGINIANA	5%		FACU
6.	CAREX (SP.)	5%		
7.	PINUS STROBUS	3%		FACU
8.	VACCINIUM CORYMBOSUM	<1%		FACW
9.				
10.				
11.				
12.				
		88%	= Total Cover	
Woody Vine Stratum (Plot size: 30 FT. RADIUS)		Absolute % Cover	Dominant Species?	Indicator Status
1.	N/A			
2.				
3.				
4.				
			= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species x 1 =

FACW species x 2 =

FAC species x 3 =

FACU species x 4 =

UPL species x 5 =

Column Totals: (A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0¹

☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

-CAREX EXCLUDED FROM HERB STRATUM AS UNDEFINED SPECIES WITH VARYING FACULTATIVE STATUS

-HAIRCAP MOSS TOTAL GROUND COVER (90%) DOMINANT BUT NOT INCLUDED IN WORKSHEET BECAUSE NON-VASCULAR

SOIL

Sampling Point: VI

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input checked="" type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
 Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: VII
 Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5-10%
 Subregion (LRR or MLRA): LRR R Lat: 43.15222 Long: -71.79483 Datum: WKID 4326
 Soil Map Unit Name: PILLSBURY FINE SANDY LOAM. 0-8% VERY STONY NWI classification: PEM1c

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation X, Soil X, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WETLAND SYSTEM 2</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)		<u>Secondary Indicators</u> (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: -PRIMARY INDICATORS AND MULTIPLE (>2) SECONDARY INDICATORS PRESENT AT SAMPLE SITE		

VEGETATION – Use scientific names of plants.

 Sampling Point: VII

Tree Stratum (Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>1</u></td> <td>x 1 = <u>1</u></td> </tr> <tr> <td>FACW species <u>38</u></td> <td>x 2 = <u>76</u></td> </tr> <tr> <td>FAC species <u>17</u></td> <td>x 3 = <u>51</u></td> </tr> <tr> <td>FACU species <u>52</u></td> <td>x 4 = <u>208</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>108</u> (A)</td> <td><u>336</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.111</u>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>38</u>	x 2 = <u>76</u>	FAC species <u>17</u>	x 3 = <u>51</u>	FACU species <u>52</u>	x 4 = <u>208</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>108</u> (A)	<u>336</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>1</u>	x 1 = <u>1</u>																	
FACW species <u>38</u>	x 2 = <u>76</u>																	
FAC species <u>17</u>	x 3 = <u>51</u>																	
FACU species <u>52</u>	x 4 = <u>208</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>108</u> (A)	<u>336</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 FT. RADIUS</u>)																		
1. <u>PINUS STROBUS</u>	<u>15%</u>	<u>X</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>BETULA POPULIFOLIA</u>	<u>15%</u>	<u>X</u>	<u>FAC</u>															
3. <u>PINUS RESINOSA</u>	<u>5%</u>		<u>FACU</u>															
4. <u>ACER RUBRUM</u>	<u>1%</u>		<u>FAC</u>															
5. _____																		
6. _____																		
7. _____																		
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 FT. RADIUS</u>)																		
1. <u>SPIRAEA TOMENTOSA</u>	<u>25%</u>	<u>X</u>	<u>FACW</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.														
2. <u>FRAGARIA VIRGINIANA</u>	<u>25%</u>	<u>X</u>	<u>FACU</u>															
3. <u>SOLIDAGO GIGANTEA</u>	<u>5%</u>		<u>FACW</u>															
4. <u>ONOCLEA SENSIBILIS</u>	<u>5%</u>		<u>FACW</u>															
5. <u>SPIRAEA ALBA</u>	<u>3%</u>		<u>FACW</u>															
6. <u>POTENTILLA SIMPLEX</u>	<u>3%</u>		<u>FACU</u>															
7. <u>RUBUS IDAEUS</u>	<u>3%</u>		<u>FACU</u>															
8. <u>SCIRPUS (SP.)</u>	<u>1%</u>		<u>OBL</u>															
9. <u>ACER RUBRUM</u>	<u>1%</u>		<u>FAC</u>															
10. <u>PINUS STROBUS</u>	<u>1%</u>		<u>FACU</u>															
11. <u>PLANTAGO (SP.)</u>	<u><1%</u>																	
12. _____																		
_____ = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 FT. RADIUS</u>)																		
1. <u>N/A</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														
2. _____																		
3. _____																		
4. _____																		
_____ = Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

 - 35% COVERAGE LIVERWORT SPECIES NOT INCLUDED IN HERB STRATUM

 -CIRCULAR DATA PLOTS USED EXTENDING INTO UPLAND AREAS
 -DISTURBED SOILS (SECTION F)
 -BEST PROFESSIONAL JUDGEMENT AREA AS WETLAND

SOIL

Sampling Point: VII

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input checked="" type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Pat's Peak Ski Area City/County: Henniker Sampling Date: 7/23/24
 Applicant/Owner: Pat's Peak, Inc. State: NH Sampling Point: VIII
 Investigator(s): Spencer C. Tate, CWS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5-10%
 Subregion (LRR or MLRA): LRR R Lat: 43.15241 Long: -71.79447 Datum: WKID 4326
 Soil Map Unit Name: MARLOW FINE SANDY LOAM. 15-25% VERY STONY NWI classification: PEM1c

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>WETLAND SYSTEM 1</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply)		<u>Secondary Indicators</u> (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: - PRIMARY INDICATOR AND MULTIPLE SECONDARY INDICATORS PRESENT AT SAMPLE SITE		

VEGETATION – Use scientific names of plants.

 Sampling Point: VIII

Tree Stratum (Plot size: <u>30 FT. RADIUS</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>7</u></td> <td>x 1 = <u>7</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>12</u></td> <td>x 3 = <u>36</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>114</u> (A)</td> <td><u>333</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.9</u>	Total % Cover of:	Multiply by:	OBL species <u>7</u>	x 1 = <u>7</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>12</u>	x 3 = <u>36</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>114</u> (A)	<u>333</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>7</u>	x 1 = <u>7</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>12</u>	x 3 = <u>36</u>																	
FACU species <u>50</u>	x 4 = <u>200</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>114</u> (A)	<u>333</u> (B)																	
_____ = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 FT. RADIUS</u>)																		
1. <u>BETULA POPULIFOLIA</u>	<u>10%</u>	<u>X</u>	<u>FAC</u>															
2. <u>PINUS STROBUS</u>	<u>5%</u>	<u>X</u>	<u>FACU</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5 FT. RADIUS</u>)																		
1. <u>FRAGARIA VIRGINIANA</u>	<u>40%</u>	<u>X</u>	<u>FACU</u>															
2. <u>RUBUS HISPIDUS</u>	<u>30%</u>	<u>X</u>	<u>FACW</u>															
3. <u>SOLIDAGO GIGANTEA</u>	<u>10%</u>		<u>FACW</u>															
4. <u>SPIRAEA TOMENTOSA</u>	<u>5%</u>		<u>FACW</u>															
5. <u>POPULUS TREMULOIDES</u>	<u>5%</u>		<u>FACU</u>															
6. <u>JUNCUS CANADENSIS</u>	<u>3%</u>		<u>OBL</u>															
7. <u>SPARGANIUM (SP.)</u>	<u>3%</u>		<u>OBL</u>															
8. <u>EUTROCHIMUM PURPUREUM</u>	<u>1%</u>		<u>FAC</u>															
9. <u>ACER RUBRUM</u>	<u>1%</u>		<u>FAC</u>															
10. <u>LYTHRUM SALICARIA</u>	<u>1%</u>		<u>OBL</u>															
11. _____																		
12. _____																		
_____ = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 FT. RADIUS</u>)																		
1. <u>N/A</u>																		
2. _____																		
3. _____																		
4. _____																		
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: VIII

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes X No

Remarks:



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#1 – Sample Point I



#2 – Sample Point I Ground Cover





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#3 – Sample Point II Vegetation



#4 – Sample Point III Location





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#5 – Sample Point IV Ground Cover



#6 – Sample Point V Location





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#7 – Sample Point VI Ground Cover



#8 – Sample Point VIII Radius Veg Plot



****NO PHOTOS FOR SAMPLE POINT VII SHOWN WITHIN PHOTO PAGES**