

# DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT 696 VIRGINIA ROAD CONCORD, MASSACHUSSETTS 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.<sup>3</sup> 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.<sup>4</sup> For the purposes of this AJD, we have relied on section 10 of the Rivers and Harbors Act of 1899 (RHA),<sup>5</sup> 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 iurisdiction.

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

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> 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.).

<sup>3 33</sup> CFR 331.2.

<sup>&</sup>lt;sup>4</sup> Regulatory Guidance Letter 05-02.

<sup>&</sup>lt;sup>5</sup> 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.

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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 WATERS<sup>6</sup>: 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.<sup>7</sup> 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

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<sup>&</sup>lt;sup>6</sup> 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.

<sup>&</sup>lt;sup>7</sup> 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.

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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"). 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 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

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<sup>&</sup>lt;sup>8</sup> 51 FR 41217, November 13, 1986.

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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 Unites 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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- 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

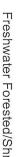


July 22, 2024

# Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland



Freshwater Emergent Wetland

Freshwater Pond

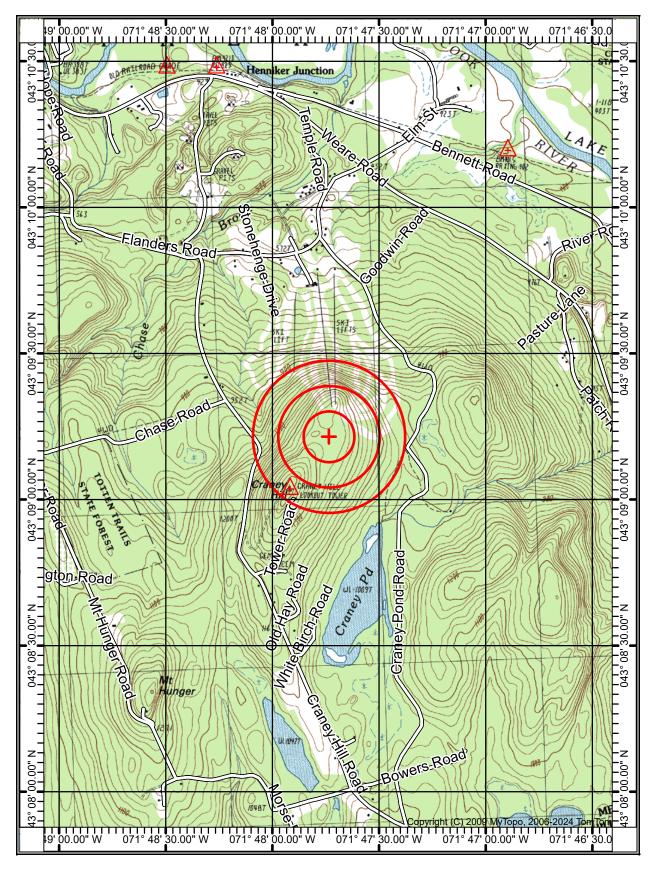
Freshwater Forested/Shrub Wetland

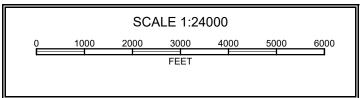
Lake

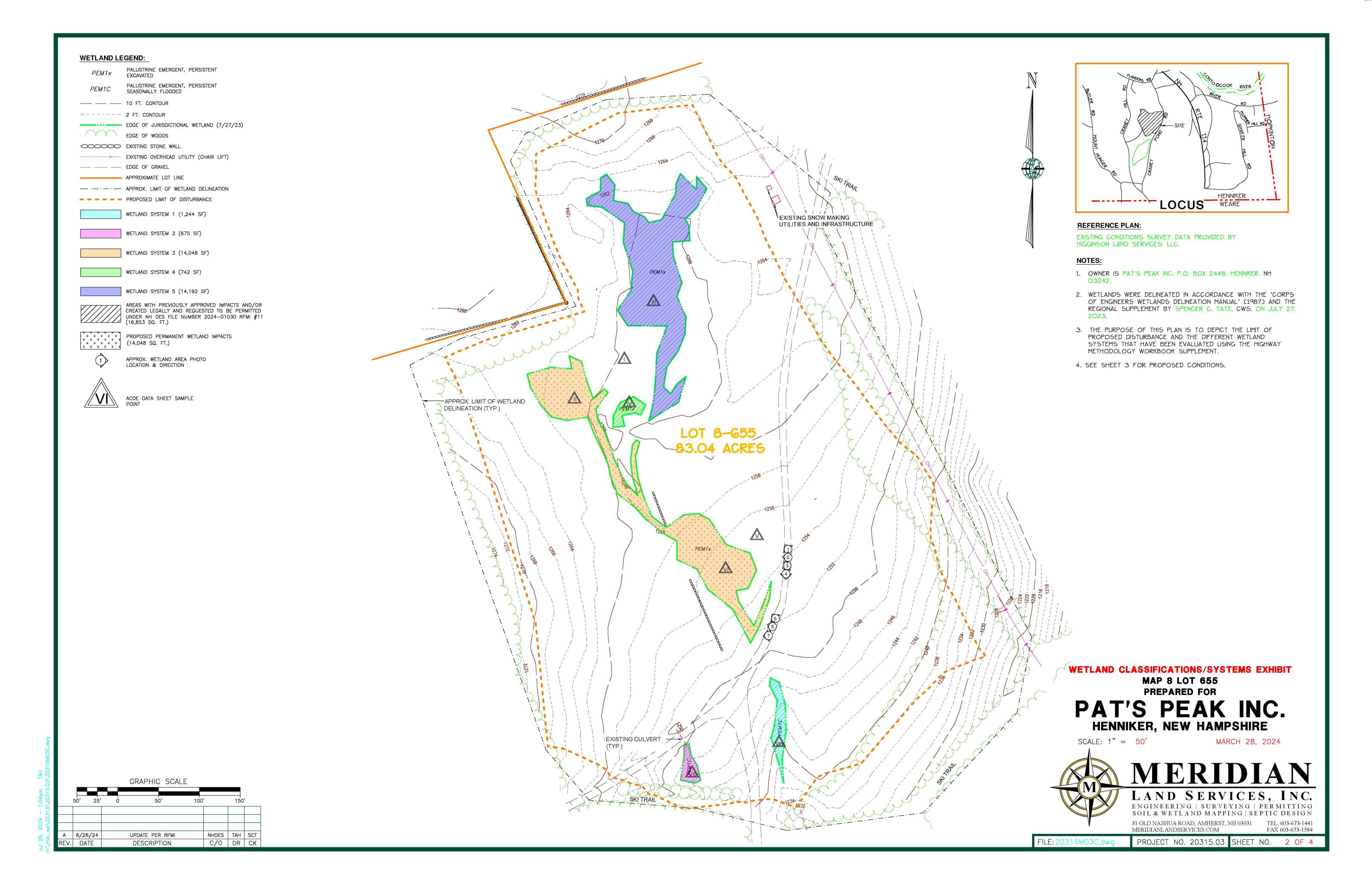
Other

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.







Project/Site: Pat's Peak Sk	i Area	City/0	County: Henniker		Sampling Date:	7/23/24	
Applicant/Owner: Pat's Peal	κ, Inc.	City/0		State: NH	Sampling Poir	nt: I	
Investigator(s): Spencer C.							
Landform (hillslope, terrace, etc.	c.): TOP OF HIL	L Local rel	lief (concave, conve	x. none): CONVEX	Slo	<sub>pe (%):</sub> 0-3%	
Subregion (LRR or MLRA): L	RR R	Lat. 3.15332	Long:	-71.79521	Datur	WKID 4326	
Soil Map Unit Name: TUNBRIE							
Are climatic / hydrologic conditi							
Are Vegetation X, Soil X						No X	
Are Vegetation X, Soil X						110	
SUMMARY OF FINDING				ded, explain any answe		naturos oto	
SOMMAN OF FINDING			<u> </u>	<u> </u>	s, important re	atures, etc.	
Hydrophytic Vegetation Prese	ent? Yes _	No <u>×</u>	Is the Sampled A	rea ?	No. X		
Hydric Soil Present?		No X					
Wetland Hydrology Present?  Remarks: (Explain alternative		No X	If yes, optional We	etland Site ID:			
HYDROLOGY				0	-1	(	
Wetland Hydrology Indicato				-	ators (minimum of	two required)	
Primary Indicators (minimum	of one is required;		(50)	Surface Soil			
Surface Water (A1) High Water Table (A2)		Water-Stained Leave		Drainage Patterns (B10)			
Saturation (A3)		Aquatic Fauna (B13) Marl Deposits (B15)		Moss Trim Lines (B16)			
Water Marks (B1)		Hydrogen Sulfide Od		<ul><li>Dry-Season Water Table (C2)</li><li>Crayfish Burrows (C8)</li></ul>			
Sediment Deposits (B2)		Oxidized Rhizospher					
Drift Deposits (B3)		Presence of Reduce	•	· / <del></del>	Stressed Plants (D	• • • •	
Algal Mat or Crust (B4)		Recent Iron Reduction					
Iron Deposits (B5)		Thin Muck Surface (0	C7)	Shallow Aquitard (D3)			
Inundation Visible on Aer	ial Imagery (B7)	Other (Explain in Rei	marks)	Microtopographic Relief (D4)			
Sparsely Vegetated Cond	cave Surface (B8)			FAC-Neutra	l Test (D5)		
Field Observations:		V					
Surface Water Present?	Yes No _						
Water Table Present?		X Depth (inches):				×	
Saturation Present? (includes capillary fringe)	Yes No _	X Depth (inches):	Wetla	and Hydrology Preser	nt? Yes	. No <u>X</u>	
Describe Recorded Data (stre	am gauge, monito	ring well, aerial photos, pre	evious inspections), i	if available:			
Remarks:							
Remarks.							

20 ET DADILIS	Absolute			Dominance Test worksheet:	
Tree Stratum (Plot size: 30 FT. RADIUS)	% Cover	Species?	<u>Status</u>	Number of Deminant Species	
. <u>N/A</u>				That Are OBL, FACW, or FAC:	(A)
)				Total Number of Dominant	
k				Species Across All Strata:	(B)
k				Percent of Dominant Species That Are OBL FACW or FAC: 0%	
5				That Are OBL, FACW, or FAC: 076	(A/E
i				Prevalence Index worksheet:	
				Total % Cover of: Multiply by:	•
		= Total Cov	/er	OBL species x 1 =	
apling/Shrub Stratum (Plot size: 15 FT. RADIU\$				FACW species x 2 =	
N/A				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	1
•				X 2 - Dominance Test is >50%	
5 FT RADIUS		= Total Cov	/er	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
lerb Stratum (Plot size: 5 FT. RADIUS) PINUS STROBUS	5%	X	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide s	supportir
PLANTAGO (SP.)	2%		1700	data in Remarks or on a separate she	,
			FACIL	Problematic Hydrophytic Vegetation <sup>1</sup> (Ex	piain)
FESTUCA RUBRA	_ 2%		FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrolog	av must
BETULA POPULIFOLIA	1%		FAC	be present, unless disturbed or problematic.	,,
XYRIS TORTA	1%		OBL	Definitions of Vegetation Strata:	
5				Tree – Woody plants 3 in. (7.6 cm) or more in	diamet
				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.	
0				Herb – All herbaceous (non-woody) plants, re	egardles
1				of size, and woody plants less than 3.28 ft tall	
2.				Woody vines – All woody vines greater than	3.28 ft ir
	11%	= Total Cov		height.	
Voody Vine Stratum (Plot size: )		- 10tai 00v	.01		
NI/A					
2.					
3				Hydrophytic Vegetation	
l				Present? Yes No X	_
		= Total Cov	/er		

Profile Descr	ription: (Describe to the de	pth needed to docu	ment the indicator	or confirm the	absence of inc	Sampling Poi	
Depth	Matrix	-	ox Features			,	
(inches)	Color (moist) %	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup> T	exture	Remarks	3
0" - 14"	5Y 5/3	N/A		Ş	SL		
		-		- <u> </u>			
		· ·		<del></del>			
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	ncentration, D=Depletion, RN	M=Reduced Matrix, M	IS=Masked Sand G			Pore Lining, M=N	
Hydric Soil Ir						roblematic Hydri	
Histosol (			ow Surface (S8) ( <b>LR</b>	R R,		A10) (LRR K, L, I	
Histic Epi Black His	ipedon (A2)	MLRA 149E	s) face (S9) (LRR R, M			e Redox (A16) ( <b>LF</b> Peat or Peat (S3)	
	n Sulfide (A4)		Mineral (F1) (LRR M			e (S7) ( <b>LRR K, L</b> )	
	Layers (A5)	Loamy Gleyed				elow Surface (S8)	
	Below Dark Surface (A11)	Depleted Matri				urface (S9) ( <b>LRR</b>	
Thick Da	rk Surface (A12)	Redox Dark Si	urface (F6)	_		nese Masses (F12	
	ucky Mineral (S1)	Depleted Dark		_		oodplain Soils (F1	, ,
	leyed Matrix (S4)	Redox Depres	sions (F8)	_		c (TA6) ( <b>MLRA 1</b>	44A, 145, 149B
-	edox (S5)			_		Material (F21)	E40\
	Matrix (S6) face (S7) ( <b>LRR R, MLRA 14</b> 9	DP)		_		v Dark Surface (T ain in Remarks)	F12)
Daik Suii	iace (37) (LKK K, WILKA 14)	<b>,</b>		_	Other (Expla	iiii iii Keiliaiks)	
Indicators of	hydrophytic vegetation and v	vetland hydrology mu	ıst be present, unles	s disturbed or p	roblematic.		
	ayer (if observed):						
Type: N/A	4						
Depth (inc	hes):			Hy	dric Soil Pres	ent? Yes	No X
Remarks:	·						
NO REDOX	X FEATURED AND NO T	OPSOIL IN AREA	DUE TO PREVIO	US DISTURBA	ANCE		
NO NEDO							

Project/Site: Pat's Peak Ski Area	City/County: Henniker Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak, Inc.	City/County: Henniker Sampling Date: 7/23/24 State: NH Sampling Point: II Sampling Point: Henniker Sampling Point: State: NH Sampling Point: S
Investigator(s). Spencer C. Tate, CWS	Section Township Range:
Landform (hillsland, torrace, etc.): TOP OF HILL	Local relief (concave, convex, none): CONCAVE Slope (%): 0-5%  Long: -71.79513 Datum: WKID 4326  D-8%. VERY STONY NWI classification: PEM1x
2. Landion (IIIII) LER R L. 43.15392	2 -71.79513 Stope (%) WKID 4326
Subregion (LRR or MLRA): Lat:	Long: Datum: DEM1
Are climatic / hydrologic conditions on the site typical for this time of	
Are Vegetation X, Soil, or Hydrology significan	ntly 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 showi	ng sampling point locations, transects, important features, etc.
Lhadrachatic Vanctotics Broomt?	Is the Sampled Area
Hydrophytic Vegetation Present? Yes X No  Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	
Remarks: (Explain alternative procedures here or in a separate re	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	<del></del>
Surface Water (A1) X Water-Staine	
High Water Table (A2) Aquatic Faul	
X Saturation (A3) Marl Deposit	
Water Marks (B1) Hydrogen Si Sediment Deposits (B2) X Oxidized Rh	ulfide Odor (C1) Crayfish Burrows (C8)  izospheres on Living Roots (C3) _X Saturation Visible on Aerial Imagery (C9)
	Reduced Iron (C4)  Saturation Visible on Aerial Imagery (C9)  Stunted or Stressed Plants (D1)
	Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck S	
X   Inundation Visible on Aerial Imagery (B7)	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inch	
Water Table Present? Yes No X Depth (inch	
Saturation Present? Yes No X Depth (inch (includes capillary fringe)	nes): Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), if available:
Remarks:	
-MORE THAN ONE PRIMARY INDICATOR OF	F WETI AND HYDROLOGY PRESENT
WONE	WEIE/11/3 5.1.0200

<b>VEGETATION</b> –	Use	scientific	names	of	plants.

<b>/EGETATION</b> – Use scientific names of plants				Sampling Point: II
<u>Tree Stratum</u> (Plot size: 30 FT. RADIUS )	Absolute	Dominant Species?		Dominance Test worksheet:
1. N/A			Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species That Are ORL FACW or FAC: 75%
5				That Are OBL, FACW, or FAC: 75% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )				FACW species x 2 =
1. BETULA POPULIFOLIA	30%	X	FAC	FAC species x 3 =
2. VACCINIUM CORYMBOSUM	15%	X	FACW	FACU species x 4 =
3. ACER RUBRUM	10%		FAC	UPL species x 5 =
4. PINUS STROBUS	5%		FACU	Column Totals: (A) (B)
5. QUERCUS RUBRA	<1%		FACU	Prevalence Index = B/A =
6.				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7	60%			X 2 - Dominance Test is >50%
5 FT RADIUS		= Total Cov	er/	3 - Prevalence Index is ≤3.0¹
Herb Stratum (Plot size: 5 FT. RADIUS )  1. FRAGARIA VIRGINIANA	60%	X	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
2. OSMUNDASTRUM CINNAMOMEUM	40%	$\frac{x}{x}$	FACW	data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. SPIRAEA TOMENTOSA	25%		FACW	Problematic Hydrophytic Vegetation (Explain)
3. SPIRAEA ALBA	5%		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
··	5%		OBL	be present, unless disturbed or problematic.
5. OSMUNDA SPECTABILIS	- <del>5</del> %		FAC	Definitions of Vegetation Strata:
6. ATHYRIUM ANGUSTUM			<u>FAC</u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
	140%	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30 FT. RADIUS )  1. N/A				
_				
2				
3				Hydrophytic Vegetation
4		= Total Cov		Present? Yes X No
4				

SOIL Sampling Point: II

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the	indicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Feature		. 2	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0" - 4"					-		ORGANICS AT VARIOUS STAGES OF DECOMPOSITION
4" - 6"	10YR 3/2					· <del></del>	LOAM
6" - 13"	2.5Y 7/2		10 YR 5/4	10	С	M	LS
					_		
	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	S=Maske	d Sand G	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil I				۰,	(00) (1.5		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) iipedon (A2)		Polyvalue Belo MLRA 149B		(S8) (LR	RR,	2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Coast Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black His			Thin Dark Surfa	,	LRR R. M	LRA 149B)	
	n Sulfide (A4)		Loamy Mucky				Dark Surface (S7) ( <b>LRR K, L</b> )
Stratified	Layers (A5)		Loamy Gleyed			,	Polyvalue Below Surface (S8) (LRR K, L)
X Depleted	l Below Dark Surface	(A11)	Depleted Matri	x (F3)			Thin Dark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Su				Iron-Manganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark		F7)		Piedmont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	edox (S5)						Red Parent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	LRA 1491	3)				<ul><li>Very Shallow Dark Surface (TF12)</li><li>Other (Explain in Remarks)</li></ul>
<sup>3</sup> Indicators of	hydrophytic vegetati	on and we	etland hydrology mu	st be pres	ent. unles	s disturbed	l or problematic.
Restrictive L	ayer (if observed):				,		
Type: N/							
	thes): N/A						Hydric Soil Present? Yes X No
Remarks:							

Project/Site: Pat's Peak Ski A	ırea	City/County: Henniker		Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak,	Inc.		State: NH	Sampling Point:
Investigator(s). Spencer C. Ta	ate, CWS	Section Township Ranc	ne.	
Landform (hillslone terrace etc.):	TOP OF HILL	ocal relief (concave, conve	v none): CONCAVE	Slope (%): 0-5%
Substantian (I BB as MI BA): LRR	R 43.15371	Janes	-71.79507	Glope (70)
Subregion (LRR or MLRA):	TOP OF HILL  R Lat: 43.15371  E-LYMAN-BECKET COMPLEX. 0-4	Long:		PFM1x
	s on the site typical for this time of y			
Are Vegetation X, Soil X	, or Hydrology $\frac{X}{X}$ significant	ly disturbed? Are "N	ormal Circumstances" p	resent? Yes No X
Are Vegetation X, Soil X	, or Hydrology $X$ naturally p	roblematic? (If need	ded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS	- Attach site map showin	g sampling point lo	cations, transects,	important features, etc.
Hydrophytic Vagatation Brospet	? Yes X No	Is the Sampled A	rea	
Hydric Soil Present?	Yes X No	within a Wetland	l? Yes X	No
Wetland Hydrology Present?	Yes X No	If ves. optional We	etland Site ID: WETLA	AND SYSTEM 5
Remarks: (Explain alternative pr	rocedures here or in a separate rep	ort.)	staria otto ib.	
HYDROLOGY Westland Hydrology Indicators			Sacandary Indias	tors (minimum of two required)
Wetland Hydrology Indicators:		<b>A</b>		tors (minimum of two required)
	one is required; check all that apply X Water-Staine		Surface Soil 0  X Drainage Patt	
Surface Water (A1) High Water Table (A2)	Aquatic Faun		Moss Trim Lir	
Saturation (A3)	Marl Deposits		X Dry-Season V	Vater Table (C2)
Water Marks (B1)	Hydrogen Sul		Crayfish Burre	
Sediment Deposits (B2)		cospheres on Living Roots	(C3) Saturation Vis	sible on Aerial Imagery (C9)
Drift Deposits (B3)		Reduced Iron (C4)		ressed Plants (D1)
Algal Mat or Crust (B4)		Reduction in Tilled Soils (C6		
Iron Deposits (B5)	Thin Muck Su		Shallow Aquit	
Inundation Visible on Aerial		n in Remarks)	X Microtopogra	
Sparsely Vegetated Concav	<u>e Surface (B8)</u>		FAC-Neutral	Test (D5)
	res No X Depth (inche	es):		
	res No X Depth (inche			
Saturation Present?	res No X Depth (inche	s): Wetl	and Hydrology Present	t? Yes <sup>X</sup> No
(includes capillary fringe)				
Describe Recorded Data (stream	n gauge, monitoring well, aerial pho	tos, previous inspections),	if available:	
Remarks:				
-PRIMARY INDICATOR	R AND MULTIPLE (>2) SI	ECONDARY INDICA	ATORS PRESEN	T AT SAMPLE SITE

'				
Tree Stratum (Plot size: 30 FT. RADIUS )		Dominant Species?		Dominance Test worksheet:
1. N/A	70 COVE	<u>Opecies:</u>	Status	Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6.				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
15 ET DADIUS		= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )				FACW species x 2 =
1. N/A				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4.				Column Totals: (A) (B)
				Prevalence Index = B/A =
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	/er	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 FT. RADIUS )				3 - Prevalence Index is ≤3.0 <sup>1</sup>
1. RHYNCHOSPORA CAPITELLATA	90%	X	OBL	<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
<sub>2.</sub> SCIRPUS (SP.)	10%		OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. SPIRAEA TOMENTOSA	10%		FACW	
CAREX (SP.)	10%			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
5. BETULA POPULIFOLIA	5%		FAC	be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
6. POPULUS TREMULOIDES	3%		FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. PINUS STROBUS	1%		FACU	at breast height (DBH), regardless of height.
8. PLANTAGO (SP.)	<1%			Sapling/shrub – Woody plants less than 3 in. DBH
9.				and greater than or equal to 3.28 ft (1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
				of size, and woody plants less than 3.28 ft tall.
11.				Woody vines – All woody vines greater than 3.28 ft in
12	120%			height.
00 FT BABILIO	12970	= Total Cov	/er	
Woody Vine Stratum (Plot size: 30 FT. RADIUS				
1. N/A				
2				
3				Hydrophytic
				Vegetation
4				Present? Yes X No
Develop (belode abote everbers bere everes)		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate		DECIES WIT		C FACULTATIVE STATUS
-CAREX EXCLUDED FROM HERB STRATUM AS UND	ELINED 25	ECIES WII	HVARYIN	G FACULTATIVE STATUS

Profile Desc							
(inches) 0" - 10"	Color (moist) % 2.5Y 6/2	Color (moist) 7.5YR 5/6	20	<u>Type<sup>1</sup></u> C	_ <u>Loc²</u> M	LS Texture	Remarks
0 - 10	2.31 0/2	7.5110.00		- <del></del>			
	-			_			
¹Type: C=Co	oncentration, D=Depletion, RM	=Reduced Matrix, M	S=Maske	d Sand G	rains.		Profe Lining, M=Matrix.
Black His Hydroge Stratified X Depleted Thick Da Sandy M Sandy G X Sandy R Stripped	bipedon (A2) stic (A3) In Sulfide (A4) Id Layers (A5) Id Below Dark Surface (A11) In Surface (A12) In Surface (A12) In Surface (A13) In Surface (A14) In Surface (A15) In Surface (A16)	Polyvalue Belov MLRA 149B Thin Dark Surfa Loamy Mucky M Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Su Redox Depress	) Aineral (F Matrix (F (F3) rface (F6 Surface (	(LRR R, N F1) (LRR 2) ) F7)	/ILRA 149B)	Coast Prairi 5 cm Mucky Dark Surface Polyvalue B Thin Dark S Iron-Mangar Piedmont Fl Mesic Spod Red Parent Very Shallor	(A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) r Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L) selow Surface (S8) (LRR K, L) surface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) loodplain Soils (F19) (MLRA 149B) ic (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks)
	f hydrophytic vegetation and w	etland hydrology mus	st be pres	ent, unle	ss disturbed	or problematic.	
Type: N/	Layer (if observed): A Ches): N/A					Hydric Soil Pres	ent? Yes X No
	NO TOP SOIL WITH	IN EXCAVATE	ED AR	EΑ			
	EDOX TO SURFAC						
	ROFESSIONAL JU HAT WAS "DARK"	DGEMENT AS	SSUMI	ES RE	MOVED	A-HORIZON	1
-A	11 INDICATOR WC	OULD HAVE BI	EEN F	PRESE	NT IF U	NDISTURBE	:D

Project/Site: Pat's Peak Ski Area	City/County: He	nniker	Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak, Inc.	City/County: He	State: NH	Sampling Point: IV
Investigator(s): Spencer C. Tate, CWS	Section Townshi	n Range:	
Landform (hillslope, terrace, etc.): TOP OF HILL  Subregion (LRR or MLRA): LRR R  Lat: 4  Soil Map Unit Name: PILLSBURY FINE SANDY LOAM.	Local relief (concave	convex none). CONCAVE	Slope (%): 0-3%
Subragion (LRB or MLRA): LRR R	43.15322	-71.79515	Glope (70):
Sublegion (LRR of MLRA) Lat	0-8% VERY STONY	Long.	Datum:
Soil Map Unit Name: The South Time SAME FEATURE	X	INVI Classific	cation: · · ·
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation $\frac{X}{Y}$ , Soil $\frac{X}{Y}$ , or Hydrology $\frac{X}{Y}$	_ significantly disturbed?	Are "Normal Circumstances"	
Are Vegetation $X$ , Soil $X$ , or Hydrology $X$	_ naturally problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing sampling po	int locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes X	No. Is the Sar	npled Area	
Hydric Soil Present? Yes X	No   willing v	Vetland? Yes X	
Hydric Soil Present?  Wetland Hydrology Present?  Yes X  Yes X	No If yes, opti	onal Wetland Site ID: WETL	AND SYSTEM 4
Remarks: (Explain alternative procedures here or in a s	separate report.)		
HADBOI OCA			
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check a	all that apply)	X Surface Soil	
l	Vater-Stained Leaves (B9)	X Drainage Pa	
	quatic Fauna (B13)	Moss Trim L	
	farl Deposits (B15)		Water Table (C2)
	lydrogen Sulfide Odor (C1)	Crayfish Bur	
· · · · · ·	Oxidized Rhizospheres on Living	· · · —	isible on Aerial Imagery (C9)
	resence of Reduced Iron (C4)		tressed Plants (D1)
	ecent Iron Reduction in Tilled S hin Muck Surface (C7)	oils (C6) X Geomorphic Shallow Aqu	
	Other (Explain in Remarks)	X Microtopogra	
X Sparsely Vegetated Concave Surface (B8)	,	FAC-Neutral	
Field Observations:			
Surface Water Present? Yes No X I	Depth (inches):		
Water Table Present? Yes No X	Depth (inches):		V
Saturation Present? Yes No X [ (includes capillary fringe)	Depth (inches):	Wetland Hydrology Preser	nt? Yes ^ No
Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous inspe	ctions), if available:	
Remarks:			
-MULTIPLE INDICATORS FOR WETLAI	ND HYDROLOGY PRE	SENT	

Tree Stratum (Plot size: 30 FT. RADIUS )	
1. N/A Number of Dominant Species That Are OBL, FACW, or FAC: 2	(A)
2 Total Number of Dominant	
3 Species Across All Strata:	(B)
4. Percent of Dominant Species	
5 That Are OBL, FACW, or FAC: 100%	(A/B)
6	
7	
7	
= Total Cover OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )  FACW species x 2 =	
1. N/A FAC species x 3 =	
2. FACU species x 4 =	
3	
4 Column Totals: (A)	_ (B)
5 Prevalence Index = B/A =	_
6. Hydrophytic Vegetation Indicators:	
1 - Rapid Test for Hydrophytic Vegetation	
X 2 - Dominance Test is >50%	
2. Drawalance Index: in <2.01	
Herb Stratum (Plot size: 5 FT. RADIUS )  SCIRPUS (SP.)  30% X  OBL  3 - Prevalence Index is \$\(\frac{1}{2}\).0  4 - Morphological Adaptations (Provide sup data in Remarks or on a separate sheet)	orting
2. SOLIDAGO GIGANTEA  10% X  FACW  Problematic Hydrophytic Vegetation¹ (Explain to the content of the content o	n)
3. PLANTAGO (SP.) 5%	'
	nust
4. RHYNCHOSPORA CAPITELLATA  5%  OBL be present, unless disturbed or problematic.	
5. VACCINIUM OXYCOCCOS 5% OBL Definitions of Vegetation Strata:	
6. ACER RUBRUM <1% FAC	
7	meter
0	21.1
9 Sapling/shrub – Woody plants less than 3 in. DI and greater than or equal to 3.28 ft (1 m) tall.	<b>э</b> П
	dloog
of size, and woody plants less than 3.28 ft tall	uless
11 Of size, and woody plants less than 3.20 it tall.	0.44 in
12. Woody vines – All woody vines greater than 3.2 height.	3 11 111
55% = Total Cover	
Woody Vine Stratum (Plot size: 30 FT. RADIUS )	
1. <u>N/A</u>	
2	
3 Hydrophytic	
Vegetation	
FIESEIII: 165 NO	
= 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	
OBSERVED EVERYORT OF EGIES WITH GOVER OF 10%. EXCESSED FROM TOTAL GOVER AND DOMINANCE TEST	ļ
	ļ

Sampling	Point:	IV

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the i	ndicator	or confirm	the absence of indic	cators.)
Depth	Matrix			x Features		. 2	_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	450/	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0"-12"	2.5Y 6/3		5YR 5/6	15%	<u>C</u>	M	<u>SL</u>	
								_
					-			
			-		-	· ——		
								_
			•			. ———		
								_
1- 0.0							21	
Hydric Soil	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	S=Masked	Sand G	rains.		ore Lining, M=Matrix. blematic Hydric Soils <sup>3</sup> :
-			Daharahaa Daha	0(	(OO) (I D	D D		
Histosol			Polyvalue Belo MLRA 149B		(58) ( <b>LR</b>	кк,		10) (LRR K, L, MLRA 149B)
Black Hi	pipedon (A2)		Thin Dark Surfa	,	RRR M	I RΔ 149R		Redox (A16) ( <b>LRR K, L, R</b> ) eat or Peat (S3) ( <b>LRR K, L, R</b> )
	n Sulfide (A4)		Loamy Mucky I					S7) (LRR K, L)
	Layers (A5)		Loamy Gleyed			<b>-</b> , <b>-</b> ,		ow Surface (S8) (LRR K, L)
	d Below Dark Surface	(A11)	Depleted Matrix		,		· ·	ace (S9) (LRR K, L)
	ark Surface (A12)	` ,	Redox Dark Su					se Masses (F12) (LRR K, L, R)
Sandy M	lucky Mineral (S1)		Depleted Dark	Surface (F	7)		Piedmont Floo	dplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matrix (S4)		X Redox Depress	sions (F8)			Mesic Spodic	(TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy R	edox (S5)						Red Parent Ma	aterial (F21)
Stripped	Matrix (S6)							Dark Surface (TF12)
Dark Su	rface (S7) ( <b>LRR R, M</b>	LRA 149	3)				Other (Explain	in Remarks)
31 11								
	f hydrophytic vegetati -ayer (if observed):	on and w	etiand nydrology mus	st be prese	ent, unies	s disturbed	or problematic.	
Type: <u>N/</u>								<b>Y</b>
Depth (inc	ches): N/A		<u></u>				Hydric Soil Presen	t? Yes <u>^ No</u>
Remarks:							1	
NO T								
	OP SOIL	^ \	-D					
	IOUSLY EXC							
-KEDC	OX <12" FROM	1 501L	SURFACE					

Project/Site: Pat's Peak Ski Area	City/County: H	lenniker	Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak, Inc.	City/County: H	State: NH	Sampling Point: V
Investigator(s): Spencer C. Tate, CWS	Section, Towns	ship. Range:	
Landform (hillslope, terrace, etc.): GRADUAL HIL			Slope (%): 5-8%
Subregion (LRR or MLRA): LRR R	43.15327	Long: -71.79470	Datum: WKID 4326
Soil Map Unit Name: PILLSBURY FINE SANDY LOA	AM. 0-8% VERY STONY	Long	cation:
Are climatic / hydrologic conditions on the site typical			
Are Vegetation X , Soil X , or Hydrology			
Are Vegetation, Soil, or Hydrology		(If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site			
		ampled Area	
Hydrophytic Vegetation Present?  Yes   Yes		ampled Area i Wetland? Yes	No X
Hydric Soil Present? Yes	NO <u>/</u>		
Wetland Hydrology Present?  Yes X  Remarks: (Explain alternative procedures here or in		ptional Wetland Site ID:	
HYDROLOGY		Casandani ladia	atoma (animina una af tura una unima di
Wetland Hydrology Indicators:	المراجعة عاملا المراجعة	·	ators (minimum of two required)
Primary Indicators (minimum of one is required; che			Cracks (B6)
	Water-Stained Leaves (B9) Aquatic Fauna (B13)	X Drainage Pa	
	_ Marl Deposits (B15)		Water Table (C2)
	_ Hydrogen Sulfide Odor (C1)	Crayfish Bu	
	_ Oxidized Rhizospheres on Livir		/isible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4)	= : :	Stressed Plants (D1)
	_ Recent Iron Reduction in Tilled		Position (D2)
Iron Deposits (B5)	_ Thin Muck Surface (C7)	Shallow Aq	uitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	X Microtopogi	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)
Field Observations:			
	Depth (inches):  Depth (inches):		
	Depth (inches):		nt? Yes X No
(includes capillary fringe)			iit: 165 NO
Describe Recorded Data (stream gauge, monitoring	y well, aerial photos, previous insp	pections), if available:	
Remarks:			
->2 SECONDARY INDICATORS PRE	SENT FOR HYDROLOG	GY	

<b>VEGETATION –</b>	Use scientific	names of	plants.
		Hallioo oi	piarito.

<u>Tree Stratum</u> (Plot size: 30 FT. RADIUS )	Absolute	Dominant		Dominance Test worksheet:
1. N/A	% Cover	Species?	Status	Number of Dominant Species That Are ORL FACW or FAC: 2
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL FACW or FAC: 66% (A/B)
5				That Are OBL, FACW, or FAC: 60% (A/B)
6				Prevalence Index worksheet:
7	<del></del>			Total % Cover of: Multiply by:
		= Total Cov	er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )				FACW species x 2 =
1. BETULA POPULIFOLIA	20%	X	FAC	FAC species x 3 =
2. VACCINIUM CORYMBOSUM	10%	X	FACW	FACU species x 4 =
3. ACER RUBRUM	5%		FAC	UPL species x 5 =
4. POPULUS TREMULOIDES	5%		FACU	Column Totals: (A) (B)
5. SALIX DISCOLOR	5%		FACW	Prevalence Index = B/A =
6. PINUS STROBUS	<1%		FACU	Hydrophytic Vegetation Indicators:
7	-			1 - Rapid Test for Hydrophytic Vegetation
7	45%	= Total Cov	· · ·	X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 FT. RADIUS)		= TOTAL COV	'ei	3 - Prevalence Index is ≤3.0¹
1. FRAGARIA VIRGINIANA	35%	Х	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. SPIRAEA TOMENTOSA	15%		FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. SPIRAEA ALBA	15%		FACW	
4 ONOCLEA SENSIBILIS	5%		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. VACCINIUM CORYMBOSUM	5%		FACW	
6. POTENTILLA SIMPLEX	5%		FACU	Definitions of Vegetation Strata:
7.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	80%	= Total Cov	ver	height.
Woody Vine Stratum (Plot size: 30 FT. RADIUS )				
1				
_				
2		-		
3			-	Hydrophytic Vegetation
4	·			Present? Yes X No
Pemarka: (Inglude photo numbers have as an acceptant		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate s-LIVERMORT SPECIES (70%) COVERAGE V	,	LOT AND	NOT IN	ICLUDED IN DOMINANCE TEST
( , , , , , , , , , , , , , , , , , , ,		-		-

US Army Corps of Engineers

C	$\overline{}$	•	
	. ,		

Sampling Point: V

Depth	ription: (Describe to the de Matrix	Redox F	eatures			ŕ
(inches)	Color (moist) %	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0" - 14"	2.5Y 6/3	7.5YR 5/6	<u>C</u>	<u>M</u>	LS	REDOX @ 8"
		·				
	oncentration, D=Depletion, RN	1=Reduced Matrix, MS=N	/lasked Sand G	rains.		: PL=Pore Lining, M=Matrix.
Hydric Soil I		Debayalya Dalayy C	turfood (CO) (LE	ID D		for Problematic Hydric Soils <sup>3</sup> :
Histosol Histic Ep	pipedon (A2)	Polyvalue Below S MLRA 149B)	unace (56) (LR	KK,		Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Prairie Redox (A16) ( <b>LRR K, L, R</b> )
Black Hi		Thin Dark Surface				Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) d Layers (A5)	Loamy Mucky Mine Loamy Gleyed Mat		N, L)		Surface (S7) (LRR K, L) Ilue Below Surface (S8) (LRR K, L)
	d Below Dark Surface (A11)	Depleted Matrix (F				ark Surface (S9) (LRR K, L)
	ark Surface (A12)	Redox Dark Surface				anganese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1) Bleyed Matrix (S4)	Depleted Dark Surface Redox Depressions				ont Floodplain Soils (F19) ( <b>MLRA 149B</b> ) Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Redox (S5)	Redex Bepressions	3 (1 0)			arent Material (F21)
	Matrix (S6)					hallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, MLRA 149	<b>/B</b> )			Other	(Explain in Remarks)
	f hydrophytic vegetation and v	etland hydrology must be	e present, unles	ss disturbed	or problemation	<b>)</b> .
Restrictive I Type: N/	Layer (if observed): ∆					
	ches): N/A				Hydric Soil	Present? Yes No _X
Remarks:	cnes):				Tiyano con	11050HC 105 NO
-POORL	Y DRAINED NON-HYDRIC SO	)IL				

Project/Site: Pat's Peak S	3ki Area	City/County: He	nniker	Samo	oling Date: 7/	23/24
Applicant/Owner: Pat's Peak,	, Inc.	City/County: He	State:	NH Sar	nolina Point:	VI
Investigator(s): Spencer C. T	ate, CWS	Section Townshi	n Range		1 3 - 1	
Landform (hillslope terrace etc.	GRADUAL HILLSLO	OPE Local relief (concave	convex none). CO	NCAVE	Slone	(%)· 5-8%
Subragion (LDB or MLDA). LRI	R R Lat. 43.	Local Teller (corleave	-, convex, none)		Olope	WKID 4326
Landform (hillslope, terrace, etc. Subregion (LRR or MLRA): LRI Soil Map Unit Name: PILLSBU	IRY FINE SANDY I O	AM 0-8% VERY STO	Long:		Datum PFM1x	
Soil Map Unit Name:	51(111112 5/1112 1 25/	X X	INVV	/I classification		
Are climatic / hydrologic conditio		•				V
Are Vegetation $X$ , Soil $X$						_ No <u>^</u>
Are Vegetation, Soil	, or Hydrology na	aturally problematic?	(If needed, explain a	ny answers in Re	emarks.)	
SUMMARY OF FINDINGS	S – Attach site map s	showing sampling po	int locations, tra	ansects, imp	ortant feat	ures, etc.
Hydrophytic Vegetation Preser	nt? Yes X	Is the Sar	npled Area			
Hvdric Soil Present?	Yes X No	,	Vetland? Ye	es X No	o	
Hydric Soil Present? Wetland Hydrology Present?	Yes X No	X If yes, opt	ional Wetland Site ID:	WETLAND S	SYSTEM 3	
Remarks: (Explain alternative	procedures here or in a sep	arate report.)	0110.110.1111			
HYDROLOGY						
Wetland Hydrology Indicator	<u>s:</u>		Second	lary Indicators (m	ninimum of tw	o required)
Primary Indicators (minimum of		hat apply)		rface Soil Cracks		<u> </u>
Surface Water (A1)	•	er-Stained Leaves (B9)		ainage Patterns (		
High Water Table (A2)		atic Fauna (B13)		ss Trim Lines (B		
Saturation (A3)	Marl	Deposits (B15)		/-Season Water <sup>-</sup>		
Water Marks (B1)	Hydr	ogen Sulfide Odor (C1)		ayfish Burrows (C		
Sediment Deposits (B2)		ized Rhizospheres on Living	· · · —	turation Visible o	_	ery (C9)
Drift Deposits (B3)	· · · · · · · · · · · · · · · · · · ·	ence of Reduced Iron (C4)		inted or Stressed		
Algal Mat or Crust (B4) Iron Deposits (B5)		ent Iron Reduction in Tilled S Muck Surface (C7)		omorphic Positio allow Aquitard (D		
X Inundation Visible on Aeria		r (Explain in Remarks)		crotopographic R		
Sparsely Vegetated Conca	• · · · —	(=/,		C-Neutral Test ([		
Field Observations:			<u> </u>	·		
Surface Water Present?	Yes No X Dep					
Water Table Present?	Yes No X Dep	oth (inches):			V	
Saturation Present? (includes capillary fringe) Describe Recorded Data (strea	Yes No X Dep		Wetland Hydrolog	y Present? Yo	es X I	No
Describe Recorded Data (silea	IIII gauge, monitoring wen, a	lenai priotos, previous mape	Ellons), ii avaliable.			
Remarks: -PRIMARY AND SECO						
-PRIMART AND SECO	NUART INDICATOR	KS WITHIN SAMPL	I AREA			

	<u>'</u>	Absolute	Dominant	Indicator	
That Are OBL, FACW, or FAC: 4 (A)  Total Number of Dominant Species Across All Stratata: 4 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)  Percent of Dominant Species That Are OBL, FACW, or FACW (B/B)  Percent of Dominant Species That Are OBL, FACW, or FAC	<u>Tree Stratum</u> (Plot size: 30 FT. RADIUS )				Dominance Test worksheet:
Species Across All Strata:   4   (B)	1				
Species Across All Strata:   4   (B)	2				Total Number of Dominant
That Are OBL, FACW, or FAC:   10U%   (A/B)	3				1
That Are OBL, FACW, or FAC:   10U%   (A/B)	4				Percent of Dominant Species
Prevalence Index worksheet:   Total % Cover of:   Multiply by:					
Total % Cover of:					Prevalence Index worksheet:
Sapling/Shrub Stratum   (Plot size: 15 FT. RADIUS   FACW	7				
BETULA POPULIFOLIA   25%   X   FAC   FACU			= Total Cov	/er	
BETULA POPULIFOLIA   25%   X   FAC   FACU	Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )				FACW species x 2 =
ACER RUBRUM   5%	1. BETULA POPULIFOLIA	25%	X	FAC	
Column Totals:	2. PINUS STROBUS	5%		FACU	
Prevalence Index = B/A =	3. ACER RUBRUM	5%		FAC	
Prevalence Index = B/A =	4.				Column Totals: (A) (B)
Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Deminance 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)  1 - Rapid Test for Hydrophytic Vegetation  2 - Definitions of Vegetation Strates  1 - Rapid Test for Hydrophytic Vegetation  1 - Rapid Test for Hydrophytic Vegetation  2 - Definitions of Vegetation Strates  1 - Rapid Test for Hydrophytic Vegetation  2 - Provide supporting data in Remarks or on a separate sheet)  — Problematic Hydrophytic Vegetation¹ (Explain)  1 - FACW  1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  2 - Definitions of Vegetation Strates  2 - Definitions of Vegetation Strates  3 - Prevalence Index is ≤3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  — Problematic Hydrophytic Vegetation¹ (Explain)  5 - FACW  5 - FA					Prevalence Index = B/A =
The contract of the contrac					Hydrophytic Vegetation Indicators:
Acer   Solid   Soli	7.		·		
Herb Stratum (Plot size: 5 FT. RADIUS   30% X FACW   4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)   4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)   Problematic Hydrophytic Vegetation¹ (Explain)   3 ACER RUBRUM   20% X FAC   1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.   5% FACU   5% FACU   5%   FACU   5%   FACU   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		35%	= Total Cov	/er	<del></del>
SOLIDAGO GIGANTEA  30% X FACW data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  ACER RUBRUM  SPIRAEA TOMENTOSA  FACW  SPIRAEA TOMENTOSA  FACW  FACW  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  FRAGARIA VIRGINIANA  CAREX (SP.)  PINUS STROBUS  VACCINIUM CORYMBOSUM  SPIRAEA TOMENTOSA  FACU  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	Herb Stratum (Plot size: 5 FT. RADIUS )				<del></del>
2. SPIRAEA ALBA 2. SPIRAEA ALBA 3. ACER RUBRUM 2. SPIRAEA TOMENTOSA 4. SPIRAEA TOMENTOSA 5. FRAGARIA VIRGINIANA 5. CAREX (SP.) 7. PINUS STROBUS 7. VACCINIUM CORYMBOSUM  20% X FAC 5% FACW 5% FACW 5% FACU 5%	1. SOLIDAGO GIGANTEA	30%	Χ	FACW	
SPIRAEA TOMENTOSA  5% FACW be present, unless disturbed or problematic.  FACU  CAREX (SP.)  PINUS STROBUS  VACCINIUM CORYMBOSUM  5% FACU  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	2. SPIRAEA ALBA	20%	X	FACW	
4. SPIRAEA TOMENTOSA 5% FACW be present, unless disturbed or problematic.  5% FACU CAREX (SP.)  PINUS STROBUS 3% FACU Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  VACCINIUM CORYMBOSUM  5% FACU 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	3. ACER RUBRUM	20%	X	FAC	
FRAGARIA VIRGINIANA  5% CAREX (SP.)  PINUS STROBUS  VACCINIUM CORYMBOSUM  5% FACU 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	4. SPIRAEA TOMENTOSA	5%		FACW	
CAREX (SP.)  PINUS STROBUS  VACCINIUM CORYMBOSUM  5%  FACU  FACU  FACW  FACW  FACW  Sapling/shrub – Woody plants less than 3 in. DBH	5. FRAGARIA VIRGINIANA	5%		FACU	
7. PINUS STROBUS  3% FACU at breast height (DBH), regardless of height.  VACCINIUM CORYMBOSUM  5 PACU Sapling/shrub – 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	6. CAREX (SP.)	5%			Definitions of vegetation Strata:
8. VACCINIUM CORYMBOSUM	7. PINUS STROBUS	3%		FACU	
Sapling/snrub – Woody plants less than 3 in. DBH	•••	<1%		FACW	
and greater than or equal to 3.28 ft (1 m) tall.	9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10 Herb – All herbaceous (non-woody) plants, regardless	10.				Herb – All herbaceous (non-woody) plants, regardless
of size, and woody plants less than 3.28 ft tall.					
Was desirable All and the first and the constant has a confidence of the confidence	12.				Woody vines – All woody vines greater than 3.28 ft in
88% = Total Cover height.		88%	= Total Cov	/er	height.
	Woody Vine Stratum (Plot size: 30 FT. RADIUS )		- 1016. 01.		
	, N/A				
					Uudranhidia
Vegetation					Vegetation
4 Present? Yes X No	4			·or	Present? Yes No
Remarks: (Include photo numbers here or on a separate sheet.)	Remarks: (Include photo numbers here or on a separate		= 10(a) 000	/ei	
-CAREX EXCLUDED FROM HERB STRATUM AS UNDEFINED SPECIES WITH VARYING FACULTATIVE STATUS			PECIES WIT	ΓΗ VARYIN	NG FACULTATIVE STATUS

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

	VI
Sampling Point:	V I

SOIL

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the	indicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Feature			
(inches) 0" - 5"	2.5Y 5/3	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u> <u>Remarks</u> LS
			7.5\/D.5/0				
<u>5" - 14"</u>	2.5Y 6/2		7.5YR 5/6	20	<u>C</u>	<u>M</u>	<u>LS</u>
						· ——	
					_		
				-	-		<del></del>
				_			
1			Dadward M. C.	C M- '	4010		21 continue DI Describition M. M. C.
Hydric Soil I	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	S=Maske	d Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Belo	w Surface	(S8) (I R	R R.	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B		(00) (=::	,	Coast Prairie Redox (A16) (LRR K, L, R)
Black Hi			Thin Dark Surfa				
	n Sulfide (A4)		Loamy Mucky I			K, L)	Dark Surface (S7) (LRR K, L)
	d Layers (A5)	. (	Loamy Gleyed		2)		Polyvalue Below Surface (S8) (LRR K, L)
	d Below Dark Surface ark Surface (A12)	(A11)	Depleted Matrix Redox Dark Su		١		Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)
	fucky Mineral (S1)		Depleted Dark	•	•		Piedmont Floodplain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4)		Redox Depress				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
X Sandy R	tedox (S5)						Red Parent Material (F21)
	Matrix (S6)						Very Shallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, M	LRA 1491	3)				Other (Explain in Remarks)
<sup>3</sup> Indicators of	f hydrophytic vegetati	on and we	etland hydrology mus	st be pres	ent, unles	s disturbed	d or problematic.
Restrictive L	_ayer (if observed):		, 0,	•	<u> </u>		
Type: <u>N//</u>							V
Depth (inc	ches): N/A						Hydric Soil Present? Yes X No
Remarks:							1

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
0 0 7 / 014/0	Section, Township, Range:
Landform (hillslope, terrace, etc.): $\frac{\text{HILLSLOPE}}{\text{Subregion (LRR or MLRA): }} \underbrace{\text{LRR R}}_{\text{Soil Map Unit Name: }} \underbrace{\text{PILLSBURY FINE SANDY LOAM. 0}}_{\text{Are climatic / hydrologic conditions on the site typical for this time of Are Vegetation \underbrace{X}_{\text{NSOil }}_{\text{NSOil }} \underbrace{X}_{\text{NSOIl }} \underbrace{X}$	Local relief (concave, convex, none):       CONCAVE       Slope (%):       5-10%         2       Long:       -71.79483       Datum:       WKID 4326         0-8% VERY STONY       NWI classification:       PEM1c
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: WETLAND SYSTEM 2
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Sediment Deposits (B2) X Oxidized Rh Drift Deposits (B3) Presence of	Drainage Patterns (B10)  Moss Trim Lines (B16)  Dry-Season Water Table (C2)  Sulfide Odor (C1)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Reduced Iron (C4)  Reduction in Tilled Soils (C6)  Sulface (C7)  Drainage Patterns (B10)  A comparison of the
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:  Surface Water Present? Yes No _X Depth (inched)  Water Table Present? Yes No _X Depth (inched)  Saturation Present? Yes No _X Depth (inched)  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial ph	hes): Wetland Hydrology Present? Yes X No
Remarks: -PRIMARY INDICATORS AND MULTIPLE (>2)	SECONDARY INDICATORS PRESENT AT SAMPLE SITE

<u>'</u>				
<u>Tree Stratum</u> (Plot size: 30 FT. RADIUS )		Dominant Species?		Dominance Test worksheet:
1. N/A				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				. ,
3				Total Number of Dominant Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species 1
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )				FACW species 38 x 2 = 76
1 PINUS STROBUS	15%	Χ	FACU	FAC species 17 x 3 = 51
2. BETULA POPULIFOLIA	15%	X	FAC	FACU species <u>52</u>
3. PINUS RESINOSA	5%		FACU	UPL species $\frac{0}{109}$ $x = \frac{0}{336}$
4. ACER RUBRUM	1%		FAC	Column Totals: <u>108</u> (A) <u>336</u> (B)
5				Prevalence Index = B/A = 3.111
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
	36%	= Total Cov	er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 FT. RADIUS )			-	3 - Prevalence Index is ≤3.0¹
1 SPIRAEA TOMENTOSA	25%	Χ	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
2. FRAGARIA VIRGINIANA	25%	X	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. SOLIDAGO GIGANTEA	5%		FACW	
4. ONOCLEA SENSIBILIS	5%		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
SPIRAEA ALBA	3%		FACW	
6. POTENTILLA SIMPLEX	3%		FACU	Definitions of Vegetation Strata:
7. RUBUS IDAEUS	3%		FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. SCIRPUS (SP.)	1%		OBL	Sapling/shrub – Woody plants less than 3 in. DBH
9. ACER RUBRUM	1%		FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. PINUS STROBUS	1%		FACU	Herb – All herbaceous (non-woody) plants, regardless
11. PLANTAGO (SP.)	<1%			of size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in
	72%	= Total Cov	er	height.
Woody Vine Stratum (Plot size: 30 FT. RADIUS )				
1. N/A				
2				
3				Hydrophytic
4				Vegetation
		= Total Cov	er	100
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

Sampling Point: VII

SOIL

	cription: (Describe to the de	-			r or confirm	the absence of ind	licators.)	
Depth (inches)	Matrix Color (moist) %	Color (moist)	ox Featur %	es Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0" - 5"	2.5Y 5/3	Color (molecy				LS	romano	
5" - 14"	2.5Y 6/2	7.5YR 5/6	20	С	M	LS		
		-						
		-						
		-						
		-						
		_						
		-						
		-						
		-				<del></del>		
		-						
		-						
1Type: C=C	oncentration, D=Depletion, RI		 IS-Maskı	ad Sand (		<sup>2</sup> l ocation: Pl –	Pore Lining, M=Matrix.	
Hydric Soil		vi–ineduced iviatilix, ivi	O-IVIASKE	ou Sanu C	Jianis.		roblematic Hydric Soils <sup>3</sup> :	
Histosol		Polyvalue Belo		e (S8) ( <b>L</b> l	RR R,		A10) (LRR K, L, MLRA 149	
	oipedon (A2) stic (A3)	MLRA 149B Thin Dark Surf	•	(LRR R, I	MLRA 149B		e Redox (A16) ( <b>LRR K, L, R</b> Peat or Peat (S3) ( <b>LRR K,</b>	
Hydroge	en Sulfide (A4)	Loamy Mucky	Mineral (F	F1) (LRR		Dark Surface	e (S7) ( <b>LRR K, L</b> )	
	d Layers (A5) d Below Dark Surface (A11)	Loamy Gleyed Depleted Matri		<sup>-</sup> 2)		·	elow Surface (S8) ( <b>LRR K,</b> l urface (S9) ( <b>LRR K, L</b> )	L)
	ark Surface (A12)	Redox Dark Su		6)			ese Masses (F12) (LRR K,	, L, R)
	Mucky Mineral (S1)	Depleted Dark					oodplain Soils (F19) (MLRA	
	Gleyed Matrix (S4) Redox (S5)	Redox Depress	sions (F8	)			c (TA6) ( <b>MLRA 144A, 145,</b> Material (F21)	149B)
Stripped	Matrix (S6)					Very Shallow	v Dark Surface (TF12)	
Dark Su	rface (S7) (LRR R, MLRA 14	<b>∌B</b> )				Other (Expla	in in Remarks)	
<sup>3</sup> Indicators of	f hydrophytic vegetation and v	wetland hydrology mu	st be pre	sent, unle	ss disturbed	or problematic.		
	Layer (if observed):							
Type: N/						Hydric Soil Prese	onta Vac X Na	
Depth (ind	ches): N/A					nyuric Soil Frese	ent? Yes 🔨 No _	
Remarks.								

Project/Site: Pat's Peak Ski Area	City/County: Hen	niker	Sampling Date: 7/23/24
Applicant/Owner: Pat's Peak, Inc.	, ,	State: NH	_ Sampling Date: 7/23/24 Sampling Point: VIII
	Section, Township		<u> </u>
· · · · · · · · · · · · · · · · · · ·	1 1 1 6 /	convex none): CONCAV	E Slope (%): 5-10%
Subregion (LRR or MLRA): LRR R Lat: 43.152	<u>141</u>	71 79447	Slope (%) WKID 4326
Subregion (LRR or MLRA): Lat:	/FDV CTONIV	Long:	Datum: WKID 4326
Soil Map Unit Name: MARLOW FINE SANDY LOAM. 15-25% V			
Are climatic / hydrologic conditions on the site typical for this time	-		
Are Vegetation $X$ , Soil $X$ , or Hydrology $X$ significant	cantly disturbed?	Are "Normal Circumstances"	present? Yes No X
Are Vegetation, Soil, or Hydrology natura	ally problematic? (	If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing sampling poir	nt locations, transects	s, important features, etc.
	Is the Samp	nled Δrea	
Hydrophytic Vegetation Present? Yes X No  Hydric Soil Present? Yes X No	within a We	etland? Yes X	No
Hydric Soil Present?  Wetland Hydrology Present?  Yes X  No  Yes X  No		nal Wetland Site ID: WETL	
Remarks: (Explain alternative procedures here or in a separate	If yes, option	nai vvetiand Site ID:	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	ipply)	•	l Cracks (B6)
Surface Water (A1) Water-Sta	ained Leaves (B9)	X Drainage Pa	
High Water Table (A2) Aquatic F		Moss Trim I	
Saturation (A3) Marl Dep	osits (B15)	Dry-Season	Water Table (C2)
1 1	n Sulfide Odor (C1)	Crayfish Bu	
	Rhizospheres on Living F	· /	/isible on Aerial Imagery (C9)
	e of Reduced Iron (C4) on Reduction in Tilled So		Stressed Plants (D1)
<u> </u>	k Surface (C7)	ils (C6) $\underline{X}$ Geomorphic $\underline{X}$ Shallow Aqı	
	(or) (plain in Remarks)		raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	,prairi iri rioritatilo)	FAC-Neutra	
Field Observations:			
Surface Water Present? Yes No X Depth (in	nches):		
Water Table Present? Yes No X Depth (in			
Saturation Present? Yes No X Depth (in	nches):	Wetland Hydrology Prese	nt? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspect	ions), if available:	
	, p	,,	
Remarks: - PRIMARY INDICATOR AND MULTIPLE SEC	CONDARY INDICA	ATORS PRESENT A	T SAMPLE SITE

Tree Stratum (Plot size: 30 FT. RADIUS )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
4 N/A				Number of Dominant Species That Are OBL, FACW, or FAC:  (A)
2				, , ,
3.				Total Number of Dominant Species Across All Strata:  4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50% (A/B)
6.				Providence in devine desk sets
7				Prevalence Index worksheet:  Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species 7 x 1 = 7
Sapling/Shrub Stratum (Plot size: 15 FT. RADIUS )				FACW species 45
<sub>1</sub> BETULA POPULIFOLIA	10%	X	FAC	FAC species 12 x 3 = 36
2 PINUS STROBUS	5%	X	FACU	FACU species <u>50</u> x 4 = <u>200</u>
3			-	UPL species $0 \times 5 = 0$
				Column Totals: <u>114</u> (A) <u>333</u> (B)
4				Prevalence Index = B/A = 2.9
6				Hydrophytic Vegetation Indicators:
7.	-			1 - Rapid Test for Hydrophytic Vegetation
	15%	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size: 5 FT. RADIUS )				X 3 - Prevalence Index is ≤3.0¹
1. FRAGARIA VIRGINIANA	40%	X	FACU	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. RUBUS HISPIDUS	30%	X	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. SOLIDAGO GIGANTEA	10%		FACW	1
4. SPIRAEA TOMENTOSA	5%		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. POPULUS TREMULOIDES	5%		FACU	Definitions of Vegetation Strata:
<sub>6.</sub> JUNCUS CANADENSIS	3%		OBL	_
7. SPARGANIUM (SP.)	3%		OBL	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8. EUTROCHIUM PURPUREUM	1%		FAC	
9 ACER RUBRUM	1%		FAC	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10. LYTHRUM SALICARIA	1%		OBL	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
·-·	99	= Total Cov	/er	height.
Woody Vine Stratum (Plot size: 30 FT. RADIUS )		- 10tai 00v	.01	
<sub>1</sub> N/A				
2				
3.				Hydrophytic
4.				Vegetation
		= Total Cov	/er	Present? Yes X No
Remarks: (Include photo numbers here or on a separate				

Sampling Point: VIII

SOIL

	Matrix		dox Featur		. 2	<b>-</b> .		<b>.</b>	
(inches) 0"-10"	Color (moist) 9	% Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture SL	FILL	Remarks	
								\	
10"-16"	5Y 5/2	7.5Y 5/6		<u>C</u>	_ <u>M</u>	L (FIRM)	REDO	X A I 9"	
						21			
Type: C=Co <b>lydric Soil</b> l	oncentration, D=Depletion Indicators:	ı, RM=Reduced Matrix, I	MS=Maske	ed Sand (	3rains.			Lining, M=Mat matic Hydric 3	
Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy R Stripped	pipedon (A2) stic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface (A1 ark Surface (A12) flucky Mineral (S1) Bleyed Matrix (S4) edox (S5) Matrix (S6) rface (S7) (LRR R, MLRA	Thin Dark Sur Loamy Mucky Loamy Gleyer Depleted Mat Redox Dark S Depleted Dari Redox Depres	Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)		<ul> <li>2 cm Muck (A10) (LRR K, L, MLRA 149B)</li> <li>Coast Prairie Redox (A16) (LRR K, L, R)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</li> <li>Dark Surface (S7) (LRR K, L)</li> <li>Polyvalue Below Surface (S8) (LRR K, L)</li> <li>Thin Dark Surface (S9) (LRR K, L)</li> <li>Iron-Manganese Masses (F12) (LRR K, L, R)</li> <li>Piedmont Floodplain Soils (F19) (MLRA 149B)</li> <li>Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</li> <li>Red Parent Material (F21)</li> <li>Very Shallow Dark Surface (TF12)</li> <li>Other (Explain in Remarks)</li> </ul>				
	f hydrophytic vegetation a	nd wetland hydrology m	ust be pres	sent, unle	ess disturbed	or problemation	i.		
Restrictive I Type: <u>N/</u>	Layer (if observed):								
						Hydric Soil	Present?	ves X	No
Depth (ind	ches): N/A					Tiyane 30ii	i resent:	168	
Remarks:									

Office: 31 Old Nashua Road, Suite 2, Amherst, NH 03031 Mailing: PO Box 118, Milford, NH 03055 Phone: 603-673-1441 \* Fax 603-673-1584 www.MeridianLandServices.com

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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