

February 4, 2021

Eric Scott Environmental Protection Specialist Colorado Division of Reclamation, Mining and Safety 1313 Sherman Street, Room 215 Denver, CO 80203

Subj: Adequacy Response to Second Review of a 112c Construction Materials Reclamation Permit Application Package, Kilgore Companies, LLC dba Peak Materials - Peak Ranch Resource, Permit M2020-041

Dear Mr. Scott:

This letter is in response to your letter of January 21, 2021.

EXHIBIT D - Mining Plan (Rule 6.4.4):

The current mining plan states that all material excavated from the proposed Peak Ranch site will be allowed to drain, then be transported off-site to the existing Maryland Creek Ranch site for processing, use, and sale. No material washing or processing is proposed under the Peak Ranch application.

In recent discussions with Summit County representatives, DRMS was informed that Summit County will require Peak Materials to submit and gain approval of a new conditional use permit for the Maryland Creek Ranch site prior to importing any raw material to that site. In addition, if Peak Materials fails to obtain a new CUP for the Maryland Creek Ranch site, the existing Maryland Creek Ranch CUP will remain in effect until its current expiration date. How does the applicant intend to address this issue and how will the process impact proposed activity at the Peak Ranch site? Please also add the new Conditional Use Permit for Maryland Creek Ranch to Exhibit M.

As with any construction materials operation in Colorado, Peak Ranch Resource requires several permits and approvals prior to operations. The 112 Reclamation Permit is only one of the required permits and it is one of the first being pursued by the applicant. Beginning with the 112 Reclamation Permit is the common industry practice and it is often preferred or even required by the local land use agencies (most commonly counties) who benefit from the efficiency of



considering the land use impacts of a fully-designed project that has been approved by the Division of Reclamation, Mining and Safety (the "Division") and the Mined Land Reclamation Board (the "Board").

In fact, the Summit County Development Code (the "Code") requires this approach. The Code permits mining operations in the zoning district for Peak Ranch Resource with approval of a conditional use permit. *See* Code § 3812.03(C). The Code further states that it is not intended to conflict with the Colorado Land Reclamation Act for the Extraction of Construction Materials (the "Act"), *id.* § 3812.04, and to achieve this goal it requires that applicants for county mining permits first obtain approval of a state mining permit from the Division, *id.* § 3812.04(B)(1)(a). More specifically, the Code requires that:

All applications for mining . . . permit shall <u>demonstrate</u> <u>compliance</u> with all State and Federal regulatory schemes applicable to the proposed operation <u>Such compliance will include</u>: a. <u>Permit approval</u> from the Colorado Division of Reclamation, Mining and Safety;

Id. § 3812.04(B)(1)(a) (emphasis added).

This county framework is consistent with the Act. In order to respect the responsibility and authority of both the Division and Board, and the local Board of County Commissioners, and to accommodate for local land use approvals, Section 109 of the Act provides that:

<u>The office</u> is responsible for the enforcement of reclamation permits only and <u>has no authority</u> or duty <u>to enforce other local</u>, state, or federal agency permits; [and]

<u>The operator</u> shall be <u>responsible</u> for assuring that the mining operation and the post mining land use <u>comply</u> with city, town, county, or city and <u>county land use regulations</u>....

C.R.S. §§ 34-32.5-104 & -109(3) (emphasis added). The Board's role as it relates to local land use matters is to provide notice of a mining permit application to the local county:

Upon receipt of an application for a reclamation permit, the board shall provide notice of such application to all counties in which proposed mining operations are located

Id. § 34-32.5-109(4). The Board then issues the mining permit where it complies with the Act and is not contrary to a local ordinance:

In the determination of whether the board . . . shall grant a permit to an operator, the applicant must comply with the requirements of this article The board . . . shall not deny a permit except on one or more of the following grounds: . . .

(c) Any part of the proposed mining operation, the reclamation program, or the proposed future use is contrary to the laws of this article.

(d) The proposed mining operation, the reclamation program, or the proposed future use is contrary to the laws and regulations of this state . . . including but not limited to all . . . local permits, licenses, and approvals



Id. § 34-32.5-115(4), (4)(c) & (4)(d). Here, no component of the proposed Peak Ranch Resource or Maryland Creek Ranch is contrary to the applicable laws or regulations of this state or the United States, or any federal, state or local permits, licenses or approvals, including the Summit County ordinance requiring a county mining permit or Conditional Use Permit for mining activities.

Peak Materials has committed to obtain a Conditional Use Permit (CUP) from Summit County for Peak Ranch Resource and to obtain an updated CUP for Maryland Creek Ranch to allow that site to accept and process the materials from Peak Ranch Resource. Peak Materials attended a pre-application meeting with Summit County about both CUP applications and, in that meeting, the Summit County staff indicated that they wanted Peak Materials to first obtain the 112 Reclamation Permit before submitting the CUP applications.

As required by the Code and requested by the County, the applicant will pursue a CUP for Peak Ranch Resource and a revised CUP for Maryland Creek Ranch following the approval of this 112 Reclamation Permit application. Consistent with its December 11, 2020 response to Summit County's comments, Peak Materials will demonstrate that both operations will be compatible with the Lower Blue Master Plan in their respective CUP applications. Peak Materials acknowledges that CUP approvals for both Peak Ranch Resource and Maryland Creek Ranch will be required before any operations at Peak Ranch Resource can begin.

The existing Summit County Conditional Use Permit for Maryland Creek Ranch places restrictions on the types of material that are allowed to be imported to that site. Specify the materials that will be imported to the existing Maryland Creek Ranch permit and identify the uses of the materials?

The existing Summit County Conditional Use Permit for Maryland Creek Ranch provides, in part, that: "No raw materials may be imported onto the site, with the exception of materials necessary for the production of concrete and asphalt and concrete and asphalt materials to be recycled. Inert fill material, as defined by the Colorado Department of Health in their policy statement dated October 20, 1993, may be brought on to the property provided it is used for the purpose of constructing finished lakeshore slopes and/or finished grades."

Peak Ranch Resource will send sand and gravel to Maryland Creek Ranch. This material will be used to produce a variety of construction material products including, but not limited to, concrete and asphalt, as well as pit run, crushed stone, washed stone, road base, sand, and binder.

Please be aware the processing of material, whether at Maryland Creek Ranch or another location, will be subject to the requirements of a Reclamation Permit as well as any requirements imposed by the local jurisdiction.

The applicant is aware of this requirement as it relates to the proposed Peak Ranch Resource and Maryland Creek Ranch projects. In addition to updating the CUP for Maryland Creek Ranch, Peak Materials will be submitting a Technical Revision application to the DRMS for the Maryland Creek Ranch 112 Reclamation Permit.



EXHIBIT E - Reclamation Plan (Rule 6.4.5):

How does the operator intend to demonstrate at the end of mining that the internal slopes of the exposed groundwater lakes comply with the sloping requirements of the provided reclamation plan? Because the unlined lakes will be full during mining and when complete, a routine visual observation and verification of the internal slopes will not be possible.

The mining cell slopes are installed at their final condition and location using clear staking of the slopes. This provides a target for the dragline operator to excavate to, as discussed in the previous adequacy response. Following mining and reclamation, the underwater slope can be confirmed using a simple depth finder to acoustically map the slope.

EXHIBIT G - Water Information (Rule 6.4.7):

As previously discussed, the recent restoration of the Town of Breckenridge's drainage easement across the site to a functional state may have adverse impacts on the extent of the existing wetland area. Due to the depth to groundwater measured in the area, the existing wetlands are believed to be primary surface-water fed, with a minimal, if any, groundwater component. However, the restored drainage easement will allow surface runoff to return directly to the Blue River as intended, rather than being dispersed across the northeast area of the proposed permit as it has done for the past several years (at least).

DRMS requests that the applicant commit to monitoring groundwater levels in the six existing wetland piezometers along with monitoring wells GW2 and GW5 (or all on-site wells for simplicity and consistency) on a monthly basis, rather than quarterly, as soon as practically possible. This additional water level data may help to identify the impacts, if any, to the wetland area from restoring the required drainage easement vs the proposed mining activity.

Monitoring of the groundwater level in the piezometers and monitoring wells will be conducted on a monthly basis as soon as is practically possible.

EXHIBIT J - Vegetation Information (Rule 6.4.10):

The total extent of the wetland area on site has been noted to vary somewhat over time, as may be expected due to changes in site topography made by the previous owners, precipitation levels, and the amount of surface water seasonally feeding into/through them from the previously discussed drainage easement. DRMS will defer to the US Army Corps of Engineers for the final determination of the extent of jurisdictional wetlands present within the permit area, as well as any subsequent permitting that may be required for any disturbance within jurisdictional wetland areas.

What is the most recent status of the site with respect to the required US ACOE jurisdictional determination and any potentially required permitting?



The US ACOE has assigned file number SPK-2020-00743 to the delineation request that we submitted. US ACOE is reviewing the delineation submittal and will field confirm it in the spring, when weather permits.

At the request of the US ACOE, Peak Materials provided the US ACOE with the wetland delineation under a different submittal type. Therefore, a revised Appendix J-1 has been provided to keep the DRMS application file up to date.

EXHIBIT L - Reclamation Costs (Rule 6.4.12):

DRMS has calculated the required reclamation bond for the proposed operation based on information provided in the application, adequacy response, and DRMS's estimate of the maximum allowed disturbance for the operation as proposed. The DRMS bond estimate was calculated using the CIRCES software based on the following assumptions:

- Maximum allowed disturbance for the site will be considered to be at the end of Phase I mining, when up to 54 acres may require replacement of overburden and topsoil, final grading, and revegetation. The total area requiring this work will decrease as the size of the proposed unlined lakes increases during Phase II of mining (if approved).
- Topsoil and overburden volumes, average haul distances, and equipment (truck, loader, and dozer) as provided in the initial adequacy response have been utilized. A water truck for dust control has also been included for these earthmoving tasks.
- *All internal slopes for Phase I mining will be mined at 3:1 or flatter.*
- *Revised seed mix/rates, mulching, and tree counts provided have been utilized, and an initial seeding failure rate of 25% has been assumed.*
- A permanent augmentation plan will be approved by the State Engineer's Office Division of Water Resources prior to exposure of any groundwater on-site
- No processing or stockpiling of processed material will take place on site
- All on-site support equipment brought to the site during operation—toilets, fuel trailers, etc, will be portable, and be able to be removed from the site by the owner for the amount stated in the provided estimate.

<u>The total bond required for the proposed permit utilizing the above assumptions is \$364,465.00.</u> If the applicant wishes to implement a "phased bonding" approach, significantly more specific detail will need to be provided for concurrent mining and reclamation plans, as well as commitments to maximum disturbed acreage for each proposed phase of mining/reclamation. A summary of the cost estimate provided has been attached to this letter. Detailed breakdowns for each task listed can be provided upon request.

Peak Materials accepts the Division's bond calculation of \$364,465.00.



EXHIBIT M - Other Permits and Licenses (Rule 6.4.13):

Please include the new Summit County Conditional Use Permit for Maryland Creek Ranch that will be required for the importation of raw material as previously discussed.

A revised Exhibit M is attached to this letter with the Maryland Creek Ranch CUP added to the list.

Thank you for your consideration. Please contact me if you have any further questions or concerns.

Sincerely,

Ben Langenfeld, P.E. Greg Lewicki and Associates



APPENDIX J-1: AQUATICS RESOURCE DELINEATION REPORT





Transmittal

Date: January 20, 2021

To: Ben Wilson, Project Manager U.S. Army Corps of Engineers Colorado West Regulatory Section

From: David Blauch, Vice President, Senior Ecologist, P.W.S. Dave@erccolorado.net, 303-679-4820 x102

Project: Aquatic Resource Delineation, Peak Ranch Resource, Summit County, CO SPK-2020-00743

On behalf of Peak Ranch Resource, Ecological Resource Consultants, Inc. (ERC) is submitting this Aquatic Resource Delineation (ARD) report to the U.S. Army Corps of Engineers (USACE) for the Peak Ranch Resource Site in Summit County, CO.

This report retracts and replaces the previous ARD report and Request for an Approved Jurisdictional Determination submitted to the USACE dated December 21, 2020. Based upon consultation with you on January 12, 2021, it was determined that the December 21, 2020 Request for an Approved Jurisdictional Determination should be retracted and a resubmittal of a Request for an Aquatic Resources Delineation Verification would be more appropriate for the Site at this time. With this submittal we are requesting an Aquatic Resource Delineation Verification and scheduling of a site visit to review the information as soon as weather permits in the spring of 2021.

This submittal should supersede all information related to the December 21, 2020 submittal.

Thank you for your assistance with this project and feel free to contact me with any questions and to schedule the site visit.

Enclosures:

- Aquatic Resource Delineation Verification Form, USACE Sacramento District
- Aquatic Resource Delineation Report dated January 20, 2021

REQUEST FOR AQUATIC RESOURCES DELINEATION VERIFICATION

OR JURISDICTIONAL DETERMINATION

A separate jurisdictional determination (JD) is not necessary to process a permit. An Approved Jurisdictional Determination (AJD) is required to definitively determine the extent of waters of the U.S. and is generally used to disclaim jurisdiction over aquatic resources that are not waters of the U.S., in cases where the review area contains no aquatic resources, and in cases when the recipient wishes to challenge the water of the U.S. determination on appeal. Either an Aquatic Resources Delineation Verification or a Preliminary Jurisdictional Determination (PJD) may be used when the recipient wishes to assume that aquatic resources are waters of the U.S. for the purposes of permitting. In some circumstances an AJD may require more information, a greater level of effort, and more time to produce. If you are unsure which product to request, please speak with your project manager or call the Sacramento District's general information line at (916) 557-5250.

I am requesting the product indicated below from the U.S. Army Corps of Engineers, Sacramento District, for the review area located at:

Street Address:	City: County:
State: Zip: Section: Township:	Range:
Latitude (decimal degrees): Longitude (decima	al degrees):
The approximate size of the review area for the JD is a	acres. (Please attach location map)
Choose one:	Choose one product:
I own the review area	I am requesting an Aquatic Resources Delineation Verification
I hold an easement or development rights over the review area	I am requesting an Approved JD
I lease the review area	I am requesting a Preliminary JD
I plain to purchase the review area	about which product to request
Ather	about which product to request
Paggan for request: (shock all that apply)	
Leason for request. (Check all that apply)	w area for planning purposes
Lintend to construct/develop a project or perform activities in this	w area for planning purposes.
resources	s review area which would be designed to avoid all aqualic
I intend to construct/develop a project or perform activities in this	s review area which would be designed to avoid those aquatic
resources determined to be waters of the U.S.	······································
I intend to construct/develop a project or perform activities in this	s review area which may require authorization from the Corps; this
request is accompanied by my permit application.	
I intend to construct/develop a project or perform activities in a n	avigable water of the U.S. which is included on the district's list of
navigable waters under Section 10 of the Rivers and Harbors	Act of 1899 and/or is subject to the ebb and flow of the tide.
My lender, insurer, investors, local unit of government, etc. has i	ndicated that an aquatic resources delineation verification is
inadequate and is requiring a jurisdictional determination.	
I intend to contest jurisdiction over particular aquatic resources a	and request the Corps confirm that these aquatic resources are or
are not waters of the U.S.	
I believe that the review area may be comprised entirely of dry la	and.
Other:	·····
Attached Information:	the vertice and consistent with Man and Drewing Standards for
Maps depicting the general location and aquatic resources within the South Desifie Division Degulatory Program (Dublic Nation	n the review area consistent with Map and Drawing Standards for
http://www.spd.usaco.army.mil/Missions/Pogulatory/Public Notice	repluary 2010,
<pre>nttp://www.spu.usace.anny.mii/missions/rregulatory/Fublic-inc standards/)</pre>	lices-and-Reletences/Anticle/051527/updated-map-and-drawing-
Aquatic Resources Delineation Report if available, consistent w	ith the Sacramento District's Minimum Standards for Accentance
(Public Notice January 2016, http://l.usa.gov/1V68IYa)	
By signing below, you are indicating that you have the authority, or	are acting as the duly authorized agent of a person or entity with
such authority to and do hereby grant Corps personnel right of ent	try to legally access the review area. Your signature shall be an
affirmation that you possess the requisite property rights for this re	quest on the subject property.
\mathcal{T}	1 <u>}F</u> 3.
*Signature: <u>Lavid J. Dlauch</u> Da	te:
Name: Compan	y name:
Address:	
*Authorities: Rivers and Harbors Act. Section 10, 33 USC 403: Clean Water Act. Section 404, 33 US	C 1344: Marine Protection, Research, and Sanctuaries Act. Section 103, 33 USC 1413: Regulatory
Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.	
Principal Purpose: The information that you provide will be used in evaluating your request to determ	nne wnetner there are any aquatic resources within the project area subject to federal jurisdiction

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.



AQUATIC RESOURCE DELINEATION REPORT

FOR

PEAK RANCH RESOURCE SUMMIT COUNTY, COLORADO

JANUARY 20, 2021

Prepared For: Russell A. Larsen, Chief Operations Officer Kilgore Companies, LLC dba Peak Materials 1550 Wynkoop St., 3rd Floor Denver, CO 80202 Main: (970) 242-5370 russ.larsen@kilgorecompanies.com

ERC Project #1125-1803



EXECUTIVE SUMMARY

This report summarizes the delineation of aquatic resources completed by Ecological Resource Consultants, Inc. (ERC) for the Peak Ranch Resource Site (survey area). ERC conducted a formal routine onsite delineation of aquatic resources within the 78-acre survey area located on Highway 9 approximately 11.5 miles north of the Town of Silverthorne, Summit County, Colorado on August 28-29, 2018. In total, approximately 7.89 acres of Aquatic Resources were identified within the survey area including approximately 1,675 linear feet of stream channel comprising the main channel of the Blue River. Aquatic resources are identified as Aquatic Resources A, BR (*Blue River*), and ID (*Irrigation Ditch*). Aquatic Resource A comprises approximately 6.68 acres of PEM wetland habitat existing as a wet meadow situated within the northeast portion of the survey area. Aquatic Resource BR comprises approximately 1,675 linear feet or 1.01 acres of the main channel of the Blue River and a narrow (5-10-foot wide) palustrine shrub-scrub (PSS) riparian fringe extending landward from the ordinary high-water mark (OHWM) of the Blue River. Aquatic Resource ID comprises approximately 641 linear feet or 0.2 acres of man-made irrigation ditch located in the northwest portion of the survey area.

In November 2020, following the 2018 delineation by ERC, the Municipality of Breckenridge upgraded a drainage ditch under Nationwide Permit 3 – Maintenance. The ditch, which is maintained by the Municipality of Breckenridge under a decreed water right, was present prior to the 2018 delineation, however was in disrepair and non-functional. This upgraded ditch is likely now to collect hydrology and may alter the wetland characteristics described in this report.

All areas that have been investigated in the field are mapped on the Aquatic Resource Delineation Map (**Appendix A**).



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APPENDIX A

Aquatic Resource Delineation Map

APPENDIX B

Wetland Determination Data Forms



1.0 INTRODUCTION

This report summarizes the delineation of aquatic resources completed by Ecological Resource Consultants, Inc. (ERC) for the Peak Ranch Resource Site. The purpose of this report is to provide a formal delineation of aquatic resources within the approximately 78-acre survey area established for the Site. This report facilitates efforts to document aquatic resource boundary determinations for review by the U.S. Army Corps of Engineers (USACE).

Report Prepared for:

Russell A. Larsen, Chief Operations Officer Kilgore Companies, LLC dba Peak Materials 1550 Wynkoop St., 3rd Floor Denver, CO 80202 Main: (970) 242-5370 russ.larsen@kilgorecompanies.com

Consultant Contact Information:

Dave Blauch, Vice President Ecological Resource Consultants 2820 Wilderness Place Suite A Boulder, CO 80301 Main: (303) 679-4820 dave@erccolorado.net

2.0 LOCATION

The survey area is located on Highway 9 approximately 11.5 miles north of the Town of Silverthorne, Colorado in the *Middle Blue River* watershed (HUC 1401000205). The survey area is located on the west side of Highway 9 in the Blue River Valley between the Gore Range Mountains to the west, and the Williams Fork Mountains to the east. More specifically, the survey area is located in **Section 19 and 20**, **Township 3 South, Range 78 West** in Summit County (Latitude 39.775211° North, Longitude - 106.154839° West). From the intersection of Interstate 70 and Highway 9 in Silverthorne, the survey area can be accessed by heading north for approximately 11.5 miles on Highway 9. A gravel drive with a locked gate directly on the west side of Highway 9 provides access to the survey area. The survey area comprises 78 acres, including approximately 1,675 linear feet of the Blue River which forms the western boundary of the survey area. Refer to Figure 1 and Figure 2 for a location map and U.S. Geological Survey (USGS) topographic map of the survey area.











3.0 METHODOLOGY

The aquatic resource delineation was conducted following the methodology enumerated in the *1987 Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (herein referred to as "Supplement") (Environmental Laboratory 1987, USACE 2010). During the field inspection, dominant vegetation was recorded, representative hydrologic indicators were noted and soil samples were examined for hydric indicators. Delineation field work for the survey area was completed on August 28-29, 2018. The weather during the delineation was sunny and dry at approximately 70 degrees Fahrenheit. At the time of the field evaluation, the conditions observed within the survey area were typical for the region and sufficient indicators of vegetation, soils and hydrology were observed to make a wetland determination.

The USACE and the Environmental Protection Agency (USEPA) jointly define wetlands as: "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [40 CFR 230.3(t)]. Three general environmental parameters define a wetland. These parameters must include the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Except under certain situations, evidence of a minimum of one positive wetland indicator from each of the above parameters must be identified in order to make a positive wetland determination.

In addition, waters of the U.S. are also defined as areas that *"include essentially all surface waters such as rivers, streams and their tributaries, all wetlands adjacent to these waters, and all ponds, lakes and reservoirs"*. The boundaries of some waters of the U.S. (i.e., such as streams or lakes) are further defined by the ordinary high water mark (OHWM). The OHWM is characterized as "the line on the shores established by the fluctuations of water and indicated by physical characteristics such as: a clear natural line impressed on the bank, shelving, changes in the character of the soil, wetland vegetation, the presence of litter and debris, and other appropriate means that consider the characteristics of the surrounding areas" (USACE 2005). These definitions are the basis of this delineation method.

Areas that do not meet any one of the wetland parameters (hydrophytic vegetation, hydric soils and/or wetland hydrology) or non-vegetated stream channel (OHWM) were classified as a non-wetland (upland) and mapped as such.

Each wetland determination point was recorded using a hand-held Trimble GeoXH global positioning system (GPS) receiver. The resulting GPS data were post processed using GPS Pathfinder Office 5.85 software. Post processing differential correction provided an average horizontal mapping accuracy of +/-2 feet. Post-processed GPS data were imported into ArcMap Geographic Information Systems (GIS) (Version 10.5) for spatial analysis and mapping. All aquatic resources delineated within the survey area are depicted on the Aquatic Resource Delineation Map (**Appendix A**). Wetland Determination data sheets are provided in **Appendix B**.





4.0 EXISTING CONDITIONS

4.1 LANDSCAPE SETTING

The survey area is situated within the Southern Rocky Mountains ecoregion (Bailey 1976) at an approximate elevation of 8,235 feet above mean sea level (AMSL) within the Blue River Valley. The Blue River flows north parallel to the western boundary of the survey area and occurs within the survey area boundary in three separate areas for a total of 1,675 linear feet. Overall, the majority of the survey area appears to have been used for agricultural purposes and livestock pastures containing two abandoned residential homes, several agricultural outbuildings, and open agricultural land.

The landscape within the survey area is predominantly characterized by the Inter-Mountain Basins Montane Sagebrush Steppe (Comer et al. 2003). Mountain sagebrush habitats are always dominated by mountain big sagebrush (*Artemisia tridentata*), with a dense grass and herb component. This system shows an affinity for mild topography, fine soils, and some source of moisture in the soil or more mesic sites, zones of higher precipitation and areas of snow accumulation. A smaller percentage of the survey area is characterized by the Rocky Mountain Alpine-Montane Wet Meadow (Comer et al. 2003) vegetation community located in the northeast portion of the survey area. These are high-elevation communities dominated by herbaceous species found on wet sites with very low-gradient surface and subsurface flows. They occur as large meadows in montane or subalpine valleys, as narrow strips bordering ponds, lakes, and streams, and along toeslope steeps. Lastly, the Blue River Corridor occupies a narrow strip of land along the western boundary of the survey area and is characterized as Rocky Mountain Subalpine-Montane Riparian Woodland (Comer et al. 2003). This riparian woodland system is comprised of seasonally flooded forests and woodlands found at montane to subalpine elevations of the Rocky Mountains. This system contains the conifer and aspen woodlands that line montane streams.

4.2 AQUATIC RESOURCES

Delineated aquatic resources were classified according to physical and biological characteristics using the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin Classification System) (Cowardin et al. 1979). The Cowardin Classification System was developed by the US Fish and Wildlife Service (USFWS) as a standardized system to classify or describe wetland habitat types uniformly across the US. Within the survey area, habitat types were classified based on field evaluation. The wetland habitats within the survey that were classified using the Cowardin Classification System are summarized below in **Table 1**.



Aquatic		Clas			
Resource	ID	¹ Cowardin Location (lat/long)		Acres	Linear
Name					Feet
	BR1	R3/PSS (Blue River)	39.777788°N, -106.159031°W	0.72	835
BR -	BR2	R3/PSS (Blue River)	39.775367°N, -106.157775°W	0.13	228
	BR3	R3/PSS (Blue River)	39.772800°N, -106.157037°W	0.16	612
			Subtotal	1.01	1,675
А	А	PEM	39.776464°N, -106.158611°W	6.68	-
ID	ID	Ditch	39.777899°N, -106.158808°W	0.20	641
			TOTAL	7.89	2,316

Table 1. Summary of Aquatic Resources Delineated within the Survey Area.

Notes:

¹Habitat Type based on Cowardin et al. 1979.

A total of 7.89 acres of aquatic resources and 2,316 linear feet of stream channel (including 641 linear feet of man-made irrigation ditch) were delineated by ERC within the survey area. A description of the aquatic resource habitat types is provided as follows. Refer to **Table 2** for a list of vegetation identified within the survey area. The Aquatic Resource Delineation Map dated September 7, 2018 is provided in **Appendix A**.

AQUATIC RESOURCE A (6.68 ACRES)

Aquatic Resource A comprises PEM wet meadow habitat situated within the northeast portion of the survey area. The boundary of Aquatic Resource A was determined largely based on the presence of hydric soils. The vegetation community throughout the northeast portion of the survey area is very similar exhibiting a dominance of species ranging from OBL-FAC, especially in areas surrounding the south and west delineated boundaries of Aquatic Resource A. Therefore, hydric soils were the most useful indicator in determining the wetland/upland boundary of Aquatic Resource A. It appears that this area has been historically influenced by flood irrigation practices, as discontinuous man-made ditch segments were observed throughout Aquatic Resource A. In addition, the eastern boundary of Aquatic Resource A is formed by a ditch along the west side of Highway 9 that was likely originally built for surface water runoff from Highway 9 and surrounding upslope areas. Two culverts were observed that outlet into Aquatic Resource A is likely supported by surface water runoff from surrounding upslope areas, seasonal hydrology from snowmelt, and possible seepage from the ditch that forms the eastern boundary during high flows.

The vegetation community within Aquatic Resource A is dominated by species such as field meadow-foxtail (*Alopecurus pratensis*), Baltic rush (*Juncus balticus*), Canadian thistle (*Cirsium arvense*), leafy tussock sedge (*Carex aquatilis*), small-wing sedge (*Carex microptera*), and annual blue grass (*Poa annua*). The dominant vegetation within the wetland areas consists of hydrophytic species (OBL-FAC).

Soils within the wetland areas are either silt loam or silty clay loam textured meeting the criteria for the hydric soil indicator F6 (Redox Dark Surface) and/or F3 (Depleted Matrix). At the time of the delineation, primary wetland hydrology indicator of C3 (Oxidized Rhizospheres along Living Roots) was observed





throughout the wetland complex. The PEM habitat within Aquatic Resource A meets the criteria for wetland based on the presence of hydrophytic vegetation, hydric soils and wetland hydrology.

Aquatic Resource A comprises a total of 6.68 acres within the survey area. Refer to **Photos 1-6** below for characteristics of Aquatic Resource A.



Photo 1. Overview west of the southern portion of Aquatic Resource A (boundary depicted by the blue line). The vegetation community in this area is very similar which is evident in the photo. Wetland data point DP-A1a and paired upland data points DP-A1b and DP-A1c shown above.



Photo 2. View west at the central portion of Aquatic Resource A. The ditch that forms the eastern boundary (boundary depicted in blue) can be seen in the foreground and typical wet meadow in the background. Wetland data point DP-A3a and paired upland point DP-A3b shown above.



Photo 3. Overview south from the northwestern boundary of Aquatic Resource A (western boundary depicted in blue). A discontinuous ditch likely used for flood irrigation forms the boundary in this area. Similar vegetation communities between the upland wetland boundary are evident in this photo. Wetland data point DP-A5a and paired upland DP-A5b shown above.



Photo 4. Overview north of a typical man-made ditch for flood irrigation and/or a water source for livestock within Aquatic Resource A. This area is still currently in use as a horse pasture which is evident in this photo.





Photo 5. Overview north of the southeastern boundary of Aquatic Resource A where it begins from a culvert under Highway 9. The ditch that forms much of the eastern boundary can be seen at the right of photo (boundary depicted in blue).



Photo 6. Overview east from the western boundary of Aquatic Resource A (boundary depicted in blue). The vegetation community was very similar in this area, therefore the wetland/upland boundary was determined based on hydric soils. Wetland data point DP-A6a and paired upland data point DP-A6b shown above.

AQUATIC RESOURCE BR (1.01 ACRES, 1,675 LINEAR FEET)

Aquatic Resource BR comprises the main channel of the Blue River, defined by OHWM and the associated 5-10 feet wide PSS riparian fringe extending landward from the OHWM. Aquatic Resource BR was mapped as occurring within the survey area in three separate areas identified as BR1, BR2, and BR3 for a total of 1,675 linear feet. The main channel of Blue River through this area is approximately 50 feet wide with varying depths. The stream channel itself is unvegetated within the OHWM and mainly comprises larger boulder and cobble material. Vegetation within the PSS riparian fringe is dominated by midstory shrub species such as speckled alder (Alnus incana), Drummond's willow (Salix drummondiana), geyer willow (Salix geyeriana), and an herbaceous understory dominated by reed canary grass (Phalaris arundinacea), black bent (Agrostis gigantea), dagger-leaf rush (Juncus ensifolius), and sedges (Carex spp.). Soils/substrate within the riparian fringe comprise boulders, cobbles, and gravels near the active channel, and moving landward mostly coarse sands and gravels. Some areas with dense herbaceous understory exhibit a dark organic layer at the surface, but soils through the riparian fringe are shallow and sandy with no hydric soil indicators observed. Generally, the Blue River corridor along the southern portion of the western boundary of the survey area is deeply entrenched with a much narrower riparian fringe. Moving north the river becomes wider and shallower with a wider riparian fringe and more established midstory shrub and herbaceous understory vegetation. Hydrology within the riparian fringe appears to be solely supported by flows from the Blue River during periods of high flows and/or capillary fringe.

Aquatic Resource BR comprises a total of 1.01 acres and/or 1,675 linear feet within the survey area. Refer to **Photos 7-10** below for characteristics of Aquatic Resource BR.



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Photo 7. View north of the east bank of the Blue River in the northern portion of the survey area (BR1). The blue line depicts approximate OHWM and a PSS riparian fringe dominated by midstory shrubs and an herbaceous understory is evident in the background of this photo.



Photo 9. View north of the southern portion of the Blue River along the western boundary of the survey area (BR3). This portion of the Blue River is steeper and more entrenched with a narrow (if any) PSS riparian fringe.



Photo 8. View west from the east bank looking down at the Blue River corridor. The OHWM of the Blue River is depicted in blue and the yellow line depicts the extents of the 5-10-foot-wide PSS riparian fringe.



Photo 10. View north at the central portion of the Blue River along the western boundary of the survey area (BR2). A steep bank abuts the narrow PSS riparian fringe in this area that abruptly transitions to uplands indicated by overstory canopy trees that are rooted in uplands (right side of photo).

AQUATIC RESOURCE ID (0.2 ACRES, 641 LINEAR FEET)

Aquatic Resource ID comprises an unnamed, man-made irrigation ditch within the northwest portion of the survey area. The ditch is approximately 6 feet wide and 6 feet deep on both banks with an OHWM at approximately 2 feet up on the banks defined by OHWM indicators such as scour and lack of vegetation. Vegetation along the bank is dominated by midstory shrub species such as Drummond's willow with an herbaceous understory dominated by reed canary grass. The ditch substrate is primarily small cobbles and gravels, approximately 4 inches of surface water in localized depressions was observed in portions of the ditch at the time of the delineation.

Aquatic Resource ID comprises a total of 0.2 acres and/or 641 linear feet within the survey area. Refer to **Photos 11-12** below for characteristics of Aquatic Resource B.





Photo 11. View north at Aquatic Resource ID within the survey area. The OHWM at approximately 2 feet above the ditch bottom is depicted above in blue.



Photo 12. View south at Aquatic Resource ID within the survey area. Midstory shrubs and herbaceous vegetation along the ditch banks, and cobble substrate is evident in this photo.

4.3 UPLAND HABITAT

The aquatic resource delineation identified approximately 70 acres of upland habitat within the survey area characterized as Inter-Mountain Basins Montane Sagebrush Steppe and Rocky Mountain Alpine-Montane Wet Meadow (Comer et al. 2003). Overall, the majority of land within the survey has been used for agriculture (mainly livestock) and may be somewhat overgrazed and/or degraded. Topography across upland habitats is relatively flat throughout a majority of the survey area. A summary of upland habitat within the survey area is provided as follows.

Inter-Mountain Basins Montane Sagebrush Steppe

This vegetation community occupies the majority of the survey area and includes lands that are currently used for horse pasture, as much of this community is fragmented by fences for rotational grazing. In general, this community exhibits more shrub species and more established herbaceous vegetation along the southern and western portions, due to it not being used as pasture in recent time. The central and northern portions of the community have been subject to heavy grazing and represents a more degraded form of this vegetation community. Vegetation across this community is dominated by small (typically less than 2 feet in height) shrub species such as big sagebrush and rubber rabbitbrush (Ericameria nauseosa) intermixed with a herbaceous understory dominated by species such as rocky mountain fescue (Festuca saximontana), mountain brome (Bromus marginatus), common yarrow (Achillea millefolium), and varileaf cinquefoil (Potentilla diversifolia) comprising approximately 50%-60% ground cover with the remaining ground cover comprised of exposed surface soil and rock. The western extents of this upland community within the survey area comprise the shoulder slope and partially down the slope to the riparian corridor of the Blue River. This shoulder slope/hillslope area is entirely uplands with a similar vegetation community, however, exhibits overstory canopy tree cover of Engelmann spruce (Picea engelmannii) and narrowleaf cottonwood (Populus angustifolia), with sparse shrub cover of species such as woods' rose (Rosa woodsii), intermixed with smaller percentages of the species described above. Soils within this community are silt loam to loam textured, dry, loamy, and light colored underlain by larger rock. An upland ditch exists within



this community in the central western portion of the survey area. The ditch appears to be man-made, excavated in uplands, and used in the past for agricultural purposes. The ditch is fragmented by a farm road without a culvert and no indicators of OHWM or regular flow were observed. See wetland determination data form *DP-U3* in **Appendix B** and *Photo 15* for characteristics of the upland ditch.

Rocky Mountain Alpine-Montane Wet Meadow

This vegetation community occupies a much smaller percentage of uplands within the survey area located surrounding the western and southern boundaries of Aquatic Resource A. The vegetation community of uplands surrounding Aquatic Resource A is very similar to Aquatic Resource A dominated by hydrophytic species such as field meadow-foxtail, baltic rush, Canadian thistle, mountain brome, and slender wild rye (*Elymus trachycaulus*). While these areas have a vegetation community dominated by hydrophytes, they lack any positive indicators for hydric soils and wetland hydrology thus do not meet the parameters for wetland per USACE technical guidelines and procedures (Environmental Laboratory 1987, USACE 2010). Additionally, these areas lack a defined bed, back, OHWM or indicators of relatively permanent flow thus do not meet the criteria for stream channel. Baltic rush (FACW) does not appear to be a good wetland indicator species in this area as it is growing in both wetlands and uplands throughout the northeast portion of the survey area, and most other dominant species in uplands dominated by hydrophytes have an indicator status of FAC, indicating only seasonally moist conditions. Soils throughout uplands in this community are mostly silt loam textured, dry, and light colored.

The upland habitats across the survey area are dominated by FACW-UPL species with dry, light colored silt loam soils. Hydric soils and wetland hydrology were not present in the upland habitats across the survey area.





Photo 13. View east across the central portion of the survey area comprising the sagebrush steppe vegetation community. This photo represents a degraded form of this community with a decreased shrub component due to heavy grazing.



Photo 14. View east across the northern portion of the survey area. This area appeared to be the most overgrazed and/or degraded as herbaceous and shrub cover was low. Approximate location of upland data point DP-U2 shown above.



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Photo 15. View west at the upland ditch in the central portion of the survey area. The ditch was fragmented and discontinuous with no indicators of OHWM and/or regular flow observed. Approximate location of upland data point DP-U3 shown above.



Photo 16. View west from the southeast corner of the survey area comprising the sagebrush steppe vegetation community. Low shrubs and exposed rock are evident in this photo. Approximate location of upland data point DP-U5 shown above.



Photo 17. View west across the central portion of the survey area. This photo is representative of an upland area dominated with hydrophytes in the wet meadow vegetation community. Approximate location of upland data point DP-U6 shown above.



Photo 18. View south at the sagebrush steppe vegetation community along the shoulder slope to the Blue River riparian corridor. Overstory canopy spruce trees can be seen in the background.



Scien	tific Name	Common Name WIS*			
Achillea	millefolium	Common Yarrow	FACU		
Agrostis	s gigantea	Black Bent	FAC		
Alnus	; incana	Speckled Alder	FACW		
Alopecurus	arundinaceus	Creeping Meadow-Foxtail	FAC		
Alopecuri	us pratensis	Field Meadow-Foxtail	FAC		
Artemisio	a tridentata	Big Sagebrush	UPL		
Bromus ı	marginatus	Mountain Brome	UPL		
Calamagros	tis canadensis	Bluejoint	FACW		
Carex	aquatilis	Leafy Tussock Sedge	OBL		
Carex n	nicroptera	Small-Wing Sedge	FACU		
Chamaenerio	n angustifolium	Narrow-Leaf Fireweed	FACU		
Cirsiun	n arvense	Canadian Thistle	FAC		
Descura	inia incana	Mountain Tansy-Mustard	FACU		
Elymus trachycaulus		Slender Wild Rye	FAC		
Ericameria nauseosa		Rubber Rabbitbrush	UPL		
Erigeron caespitosus		Tufted Fleabane	UPL		
Festuca saximontana		Rocky Mountain Fescue	UPL		
Juncus balticus		Baltic Rush	FACW		
Juncus biglumis		Two-Flower Rush	OBL		
Juncus	ensifolius	Dagger-Leaf Rush	FACW		
Phalaris c	arundinacea	Reed Canary Grass	FACW		
Picea en	ngelmannii	Engelmann's Spruce	FAC		
Роа	annua	Annual Blue Grass	FAC		
Populus d	angustifolia	Narrow-leaf Cottonwood	FACW		
Potentilla	diversifolia	Varileaf Cinquefoil	UPL		
Rosa	woodsii	Woods' Rose	FACU		
Rume	x crispus	Curly Dock	FAC		
Salix drur	nmondiana	Drummond's Willow	FACW		
Salix g	eyeriana	Geyer's Willow	FACW		
* Wetland Indi	icator Status (WIS) -	– Western Mountains, Valleys and C	oast Region:		
OBL	= occurs in aqua	tic resources > 99% of time			
FACW	= occurs in aqua	itic resources 67-99% of time			
FAC	= occurs in aqua	itic resources 34-00% of time			
UPL	nds > 99% of time				

Table 2. Plant Species Found Within the Survey Area.



4.4 BRECKENRIDGE PROJECT WORK

In November 2020, following the 2018 delineation by ERC, the Municipality of Breckenridge upgraded a drainage ditch under Nationwide Permit 3 – Maintenance. This ditch is likely to collect hydrology and may alter the wetland characteristics described in this report. The Aquatic Resources Map (**Appendix A**) shows the location of this ditch as it crosses the survey area. Refer to **Photos 19-25** below for the easement completed by the Municipality of Breckenridge (location of ditch indicated by blue arrow). Photos 19-20 show conditions prior to excavation of the ditch; photos 21-25 show the ditch following trenching and excavation activities.









Photo 21.

Photo 22.



Peak Ranch Resource Aquatic Resource Delineation Report





Photo 24.



Photo 25.



This report has been prepared by:

ECOLOGICAL RESOURCE CONSULTANTS, INC.

Reviewed and approved by:

David J. Blauch, V.P., Senior Ecologist (PWS # 2130)





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APPENDIX A

	BR1
CA Manaz	WE
B. C.	· · · · · ·

Summary of Aquatic Resources Delineated within the Survey Area

Aquatic	п	c	Acres	Linear	
Name		Cowardin ¹	Location (lat/long)	Acies	Feet
	BR1	R3/PSS (Blue River)	39.777788°N, 106.159031°W	0.72	835
DD	BR2	R3/PSS (Blue River)	39.775367°N, 106.157775°W	0.13	228
DR	BR3	R3/PSS (Blue River)	39.772800°N, 106.157037°W	0.16	612
			Subtotal	1.01	1,675
Α		PEM	39.776464°N, 106.158611°W	6.68	
ID		Ditch	39777899°N, 106.158808°W	0.20	641
			TOTAL	7.88	2,316

Notes:

1-Habitat Type based on Cowardin et al. 1979

NOTES:

1.THE AQUATIC RESOURCE DELINEATION WAS CONDUCTED BY ECOLOGICAL RESOURCE CONSULTANTS INC., (ERC) ON BEHALF OF PEAK MATERIALS, LLC.

2.THE SURVEY AREA IS LOCATED IN SUMMIT COUNTY, COLORADO. SECTIONS 19 AND 20, TOWNSHIP 3 SOUTH RANGE 78 WEST (LATITUDE 39.775244 NORTH, LONGITUDE -106.155181 WEST).

3.WETLAND LOCATIONS WERE FIELD DELINEATED BY ERC ON AUGUST 28-29, 2018 USING THE US ARMY CORPS OF ENGINEERS (USACE) REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: WESTERN MOUNTAINS, VALLEYS, AND COAST REGION (VERSION 2.0) MAY 2010).

4.GPS FIELD FLAG LOCATIONS DEPICT THE BOUNDARY OF AQUATIC RESOURCES WITHIN THE SURVEY AREA. THESE AREAS HAVE BEEN FIELD DELINEATED WITH HAND-HELD SUB-METER ACCURACY GPS EQUIPMENT (+/- 2 FEET). WETLAND DELINEATION MAPPING WAS PREPARED BY ERC USING GIS.

5.SATELLITE IMAGERY WAS OBTAINED FROM USGS (2017 USDA-FSA-APFO).

6.THE PROJECTED COORDINATE SYSTEM FOR THE WETLAND DELINEATION MAPPING IS: NAD_1983_STATEPLANE_COLORADO_CENTRAL_FIPS_0502_FEET.

7.A WETLAND DELINEATION REPORT HAS BEEN COMPLETED FOR THIS PROJECT BY ERC, DATED DECEMBER 3, 2020.

Prepared By:	MAP LEGEND			AQUATIC RESOURCE DE
ERC	Project Area	Breckenridge Easement	Delineated Aquatic Resource	
2820 Wilderness Place, Suite A	• Field Flag Location & ID	Ditch	PEM	PEAK R
Boulder, CO 80301 (303) 679-4820	Data Point Location & ID DP-04	Stream	PSS	
ERC #1125-1803		Culvert		





APPENDIX B

Project/Site: Peak Ranch Resource	City/County: Summ	nit County	Sampling Date: 8/29/2018
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-A1a
Investigator(s): K. Medash	Section, Township,	, Range: <u>Section 20, Township</u>	o 3 South, Range 78 West
Landform (hillslope, terrace, etc.): Valley Bottom	Local relief (conca	ve, convex, none): <u>Concave</u>	Slope (%): <u>1-2%</u>
Subregion (LRR): <u>Rock Mountain Range and Forest Region (LRR E)</u> Lat: <u>39</u>	.775914° N	Long: <u>-106.153321° W</u>	Datum: NAD83
Soil Map Unit Name: Handran gravelly loam, 0 to 3 percent slopes		NWI classifica	ation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 N	lo (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? NO	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? NO (If needed, explain any answer	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling poir	nt locations, transects,	, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖌 No	
Hydric Soil Present?	Yes 🖌 No	Is the Sampled Area
Wetland Hydrology Present?	Yes 🖌 No	within a Wetland? Yes <u>V</u> No
Remarks:		

PEM wetland, wet meadow located in horse pasture. Pair with upland data points DP-A1b and DP-A1c.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 2 (A	4)
2.					
3				I otal Number of Dominant	2)
	·				5)
4	·			Percent of Dominant Species	
		= Total Co	ver	That Are OBL, FACW, or FAC: 100% (A	4/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2					
3.				OBL species x 1 =	
1				FACW species x 2 =	
4	·			FAC species x 3 =	
5	·			FACU species x 4 =	
		= Total Co	ver	LIPL species x 5 =	
Herb Stratum (Plot size:)					
1. Alopecurus pratensis	50	Yes	FAC	Column Totals: (A) ((B)
2. Juncus balticus	25	Yes	FACW	Prevalence Index = B/A =	
3. Poa annua	15	No	FAC	Hydrophytic Vegetation Indicators:	
Juncus biglumis	10	No	OBL	1. Deniel Test for Undersite the Versetzier	
5	·			✓ 2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 ¹	
7				4 - Morphological Adaptations ¹ (Provide suppor	rtina
8.				data in Remarks or on a separate sheet)	Ũ
9				5 - Wetland Non-Vascular Plants ¹	
10				Problematic Hydrophytic Vegetation ¹ (Explain)	
IU	·			¹ Indiactors of hydric soil and watland hydrology mus	~ +
11	·			be present unless disturbed or problematic	SL
	100%	= Total Cov	/er		
Woody Vine Stratum (Plot size:)					
1				Hydrophytic	
2				Vegetation	
		= Total Cov	/er	Present? Yes <u>V</u> No	
% Bare Ground in Herb Stratum 0%	-	10101 00	•••		
Remarks:				1	

Vegetation community is typical of the southern portion of Aquatic Resource A as well as surrounding uplands, wetland/upland boundary determined based on the presence of hydric soils. Meets the criteria for hydrophytic vegetation.

SOIL

								,
Depth (inches)	<u>Matrix</u>	0/	Redo	ox Feature	S Turno ¹	1 0 0 2	Taytura	Demodra
(inches)		<u>%</u>		<u> </u>	<u>Type</u>			Remarks
0-5	10YR 2/2	80%	7.5YR 4/4	_ 20%	<u> </u>	PL, M	Silt loam	Distinct concentrations
5-20	10YR 3/2	75%	7.5YR 4/4	25%	<u>C</u>	M	Silty clay loam	Distinct concentrations
		- <u> </u>						
Type: C=C	oncentration, D=Dep	letion, RM	I=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains. ² Loo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to al	I LRRs, unless othe	rwise not	ed.)		Indicato	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox ((S5)			2 cr	n Muck (A10)
Histic E	pipedon (A2)		Stripped Matrix	(S6)			Rec	I Parent Material (TF2)
Black H	istic (A3)		Loamy Mucky	Mineral (F	1) (excep	t MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	<u>2)</u>		Oth	er (Explain in Remarks)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matri	x (F3)				
Thick Da	ark Surface (A12)		🖌 Redox Dark Sı	urface (F6)		³ Indicato	ors of hydrophytic vegetation and
Sandy M	Aucky Mineral (S1)		Depleted Dark	Surface (I	=7)		wetla	nd hydrology must be present,
Sandy C	Gleyed Matrix (S4)		Redox Depress	sions (F8)			unles	s disturbed or problematic.
Restrictive	Layer (if present):							
Туре:								
Depth (in	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks [.]	,						-	

Soils are typical of hydric soils found in the southern portion of Aquatic Resource A. Vegetation communities across this area were very similar; therefore the presence of hydric soils was largely used to establish the wetland/upland boundary of Aquatic Resource A. Meets the criteria for hydric soil.

HYDROLOGY

Wetland Hydrology Indicat	ors:				
Primary Indicators (minimum	of one require	Secondary Indicators (2 or more required)			
Surface Water (A1)			water-Stained Leaves (B9) (MLRA 1, 2,		
High Water Table (A2)			MLRA 1, 2, 4A, and 4B)	4A, and 4B)	
Saturation (A3)			Salt Crust (B11)	Drainage Patterns (B10)	
Water Marks (B1)			Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)	
Sediment Deposits (B2)			Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		✓	Oxidized Rhizospheres along Livi	ing Roots (C3) Geomorphic Position (D2)	
Algal Mat or Crust (B4)			Presence of Reduced Iron (C4)	Shallow Aquitard (D3)	
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)			oils (C6) FAC-Neutral Test (D5)		
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1		Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)		
Inundation Visible on Ae	rial Imagery (B	37)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)	
Sparsely Vegetated Con	cave Surface ((B8)			
Field Observations:					_
Surface Water Present?	Yes	No 🗸	Depth (inches):		
Water Table Present?	Yes	No 🗸	Depth (inches):	1	
Saturation Present? (includes capillary fringe)	Yes	No 🖌	Depth (inches):	Wetland Hydrology Present? Yes <u>V</u> No	
Describe Recorded Data (str	eam gauge, m	onitoring v	vell, aerial photos, previous inspec	ctions), if available:	
Remarks:					
In addition to hydrology indica when the water levels are low	ator C3, wetlan and hydric so	id hydrolog ils and hy	gy is assumed to be present given drophytic vegetation are present. N	that the delineation was performed late in the growing season Meets the criteria for wetland hydrology.	

Project/Site: Peak Ranch Resource	City/County: Sur	nmit County	Sampling Date:	8/29/2018
Applicant/Owner: Peak Materials		State: CC) Sampling Point:	DP-A1b
Investigator(s): K. Medash	Section, Townsh	ip, Range: <u>Section 20,</u>	Township 3 South, Range	78 West
Landform (hillslope, terrace, etc.): Hillslope	Local relief (con	cave, convex, none): <u> </u>	None Slo	ope (%): <u>2-3%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	775852° N	Long: <u>-106.153</u>	J117° W Datu	um: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI	classification: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No (If no, exp	lain in Remarks.)	/
Are Vegetation, Soil, or Hydrology significantly	disturbed? NO	Are "Normal Circumst	ances" present? Yes 🚺	No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	(If needed, explain any	y answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	g sampling po	oint locations, tran	nsects, important fe	atures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No∕ No√	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

Upland data point located in a horse pasture. This area exhibits hydrophytic vegetation, but underlying hydric soils are not present, therefore considered upland. Pair with wetland data point DP-A1a.

VEGETATION – Use scientific names of plants.

	Absolute	Dominan	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2.				
3	_			I otal Number of Dominant
				Species Across Air Strata (B)
4				Percent of Dominant Species
		= Total Co	over	That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				
3.				OBL species x 1 =
4				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
		= Total Co	over	
Herb Stratum (Plot size:)				
1. Alopecurus pratensis		Yes	FAC	Column Totals: (A) (B)
2. Juncus balticus	30	Yes	FACW	Prevalence Index = B/A =
3. Bromus marginatus	10	No	UPL	Hydrophytic Vegetation Indicators:
4	_			1. Danid Toot for Hydronbytic Vogetation
0				<u>✓</u> 2 - Dominance Test is >50%
6				3 - Prevalence Index is $\leq 3.0^{1}$
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
14				¹ Indicators of hydric soil and wetland hydrology must
11				be present, unless disturbed or problematic.
	90%	= Total Co	ver	
1				Hydrophytic
2				Vegetation
		= Total Co	ver	Present? Yes ▼ NO
% Bare Ground in Herb Stratum 10%		-		
Remarks:				

Vegetation community is typical of areas around the south and west Aquatic Resource A boundary. Even though the area exhibits hydrophytic vegetation, hydric soils are not present. Further, the vegetation community in this area appeared to be stressed and/or dead indicating a lack of sufficient water to support these species. Meets the criteria for hydrophytic vegetation.

Profile Desc	ription: (Describe	to the depth	needed to docum	nent the i	ndicator	or confirm	the absence of in	dicators.)			
Depth	Matrix		Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	3		
0-12	10YR 4/3	100%					Silt loam				
							. <u></u>				
							·				
							. <u></u>				
1											
'Type: C=Co	oncentration, D=Depl	letion, RM=R	Reduced Matrix, CS	=Covered	d or Coate	d Sand Gr	rains. ² Location	: PL=Pore Lining,	M=Matrix.		
Hydric Soil	indicators: (Applica	able to all Li	RRs, unless other	wise not	ed.)		Indicators for	r Problematic Hy	dric Soils":		
Histosol	(A1)	_	Sandy Redox (S	\$5)			2 cm Muc	:k (A10)			
Histic Ep	oipedon (A2)		Stripped Matrix	(S6)			Red Pare	nt Material (TF2)			
Black Hi	stic (A3)	_	Loamy Mucky N	lineral (F	1) (except	MLRA 1)	Very Sha	llow Dark Surface	(TF12)		
Hydroge	n Sulfide (A4)	_	Loamy Gleyed N	Aatrix (F2	2)		Other (Ex	plain in Remarks)			
Depleted	Below Dark Surface	e (A11)	_ Depleted Matrix	(F3)							
Thick Da	ark Surface (A12)	_	_ Redox Dark Sur	face (F6)			³ Indicators of	hydrophytic vegeta	ation and		
Sandy M	lucky Mineral (S1)	_	Depleted Dark S	Surface (F	7)		wetland hy	drology must be p	resent,		
Sandy G	leyed Matrix (S4)		_ Redox Depressi	ons (F8)			unless dist	urbed or problema	atic.		
Restrictive I	_ayer (if present):										
Type: Co	arse Rock Fragments	5							1		
Depth (ind	ches): <u>12"+</u>						Hydric Soil Pres	ent? Yes	No		
Remarks:							•				
Soils were dry meet the crite	y and loamy with a ro ria for hydric soil.	ock layer at 1	2". Rock layer is no	ot as pron	ninent in n	earby hyd	ric soils within Aqua	tic Resource A bou	undary. Does not		
1											

HYDROLOGY

Wetland Hydrology Indicate	ors:		
Primary Indicators (minimum	of one required; chec	k all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	_	Water-Stained Leaves (B9) (exc	ept Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	_	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	_	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	_	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	_	Oxidized Rhizospheres along Liv	ing Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	_	Shallow Aquitard (D3)	
Iron Deposits (B5)	_	oils (C6) FAC-Neutral Test (D5)	
Surface Soil Cracks (B6)	I	(LRR A) Raised Ant Mounds (D6) (LRR A)	
Inundation Visible on Ae	rial Imagery (B7)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Con	cave Surface (B8)		
Field Observations:			
Surface Water Present?	Yes No 🗸	Depth (inches):	
Water Table Present?	Yes No 🗹	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes No 🖌	Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (str	eam gauge, monitorin	g well, aerial photos, previous inspe	ctions), if available:
Remarks:			
Data point located in an uplar criteria for wetland hydrology.	ıd area exhibiting a do	ominance of hydrophytic vegetation,	no hydrology indicators were observed. Does not meet the

Project/Site: Peak Ranch Resource	City/County: Sun	nmit County	Sampling Date: 8/29/2018
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-A1c
Investigator(s): K. Medash	Section, Townshi	ip, Range: <u>Section 20, Township</u>	3 South, Range 78 West
Landform (hillslope, terrace, etc.): Valley Bottom	Local relief (cond	cave, convex, none): <u>Concave</u>	Slope (%): <u>1-2%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	775622° N	Long: <u>-106.153335° W</u>	Datum: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI classifica	ation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? NO	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	(If needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling po	oint locations, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u> </u>	Is the Sampled Area	Yee	
Wetland Hydrology Present?	Yes No 🖌		Tes	
Remarks:				

Upland data point in a horse pasture. This area exhibits hydrophytic vegetation, but underlying hydric soils are not present, therefore considered upland. Pair with wetland data point DP-A1a.

VEGETATION – Use scientific names of plants.

	Absolute	Dominan	t Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species			
1				That Are OBL, FACW, or FAC: 2 (/	A)		
2				Total Number of Dominant			
3				Species Across All Strata: 2 (I	B)		
4				Percent of Dominant Species			
		= Total Co	over	That Are OBL, FACW, or FAC: 100% (/	A/B)		
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:			
1				Total % Cover of Multiply by			
2				$\frac{1}{OBl} \text{ species} \qquad \text{ y 1 =}$			
3							
4							
5				FAC species X 3 =			
		= Total Co	over	FACU species x 4 =			
Herb Stratum (Plot size:)		-		UPL species x 5 =			
1. Alopecurus pratensis	40	Yes	FAC	Column Totals: (A)	(B)		
2. Juncus balticus	40	Yes	FACW	Prevalence Index = B/A =			
3. Rumex crispus	10	No	FAC	Hydrophytic Vegetation Indicators:			
4				1 - Rapid Test for Hydrophytic Vegetation			
5.				\checkmark 2 - Dominance Test is >50%			
6.				$3 - \text{Prevalence Index is } \leq 30^1$			
7				4 Morphological Adaptations ¹ (Provide suppo	rting		
8				data in Remarks or on a separate sheet)	Jung		
9				5 - Wetland Non-Vascular Plants ¹			
10				Problematic Hydrophytic Vegetation ¹ (Explain))		
11				¹ Indicators of hydric soil and wetland hydrology mu	ıst		
11	90%	- Total Ca		be present, unless disturbed or problematic.			
Woody Vine Stratum (Plot size:)			IVEI				
1.				Hydrophytic			
2				Vegetation			
		= Total Co		Present? Yes <u>V</u> No			
% Bare Ground in Herb Stratum <u>10%</u>							
Remarks:							

Even though a dominance of hydrophytic vegetation is present, most species are FAC and underlying hydric soils are not present. Juncus balticus (FACW) does not appear to be a good indicator species in this area as it is growing in sporadic patches throughout the survey area, often in uplands next to FACU-UPL species as well as in wetland areas. Meets the criteria for hydrophytic vegetation.

Depth	Matrix		Redox	Features			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
-10	10YR 4/3	100%					Silt loam
	<u> </u>						
	_						
Гуре: С=С	Concentration, D=De	pletion, RM=	Reduced Matrix, CS=	Covered	or Coate	d Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
ydric Soil	Indicators: (Applie	cable to all	LRRs, unless otherv	vise note	d.)		Indicators for Problematic Hydric Soils":
Histoso	ol (A1)		Sandy Redox (S	5)			2 cm Muck (A10)
Histic E	Epipedon (A2)		Stripped Matrix (S6)			Red Parent Material (TF2)
Black H	listic (A3)		Loamy Mucky Mi	neral (F1) (except	MLRA 1)) Very Shallow Dark Surface (TF12)
_ Hydrog	en Sulfide (A4)		Loamy Gleyed M	latrix (F2)			Other (Explain in Remarks)
Deplete	ed Below Dark Surface	ce (A11)	Depleted Matrix ((F3)			
Thick D	ark Surface (A12)		Redox Dark Surf	ace (F6)			³ Indicators of hydrophytic vegetation and
Sandv	Mucky Mineral (S1)		Depleted Dark S	urface (F	7)		wetland hydrology must be present.
Sandy	Gleyed Matrix (S4)		Redox Depressio	ons (F8)	,		unless disturbed or problematic.
estrictive	Layer (if present):						
Type: <u>C</u>	oarse Rock Fragmen	ts					
Depth (ir	nches): <u>10"+</u>						Hydric Soil Present? Yes No
lemarks:							
oils were d egetation c	ry and loamy underla ommunity similar to a	ain by rock. Aquatic Res	This characteristic is t ource A without hydrid	ypical of c soils. Do	upland ar bes not m	eas aroun eet the cri	nd Aquatic Resource A that exhibit a hydrophytic iteria for hydric soil.
YDROLO	DGY						
etland Hy	drology Indicators	•					

Primary Indicators (minimum of one required;	check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (exce	pt Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Livi	ng Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled So	pils (C6) FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)	Frost-Heave Hummocks (D7)	
Sparsely Vegetated Concave Surface (B	8)	
Field Observations:		
Surface Water Present? Yes N	o Depth (inches):	
Water Table Present? Yes N	o Depth (inches):	1
Saturation Present? Yes N (includes capillary fringe)	o 🖌 Depth (inches):	Wetland Hydrology Present? Yes No _
Describe Recorded Data (stream gauge, mor	itoring well, aerial photos, previous inspec	tions), if available:
Remarks:		
No hydrology indicators observed. Does not r	neet the criteria for wetland hydrology.	

Project/Site: Peak Ranch Resource			City/County: Summit County					Sampling Date: <u>8/29/2018</u>		
Applicant/Owner: Peak Materials						State: CO	Sar	mpling Poi	nt: DP-A2a	
Investigator(s): <u>K</u> . Medash			Section	n, Township	o, Range: _	Section 20, T	ownship 3 S	South, Ran	ige 78 West	
Landform (hillslope, terrace, etc.): Hillslop	be		Local	relief (conc	ave, conve	x, none): <u>N</u>	one		Slope (%): 2-4%	
Subregion (LRR):Rock Mountain Range and F	Forest Region (LRR	E) Lat: <u>39.</u>	776587	° N	Lon	g: <u>-106.1536</u>	61° W	D	atum: NAD83	
Soil Map Unit Name: Handran gravelly loa	m, 0 to 3 percent	slopes				NWI d	classification	n: PEM1C	;	
Are climatic / hydrologic conditions on the Are Vegetation Soil or Hy	site typical for th	is time of ye significantly	ear? Ye disturb	ed? NO	No Are "Norm	(If no, expla	ain in Rema	ırks.) ent? Yes	V No	
Are Vegetation, Soil, or Hy	/drology	naturally pro	oblemat	ic? NO	(If needed	, explain any	answers in	Remarks.	.)	
SUMMARY OF FINDINGS – Atta	ach site map	showing	g sam	pling poi	int locat	ions, tran	sects, in	portant	features, etc.	
Hydrophytic Vegetation Present?	Yes _ ✔ I	No								
Hydric Soil Present?	Yes 🖌 I	No		Is the Sam	ipled Area	Va		Na		
Wetland Hydrology Present?	Yes 🖌 🖌	No		within a w	retiand?	Ye	s	NO		

PFM wetland	wet meadow	located in horse	nasture Pai	r with upland o	data point DP-A2b
	wormoudow		publicito. I ui	n with aplana .	

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2.				
3				Total Number of Dominant
· · · · · · · · · · · · · · · · · · ·				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
		= Total Co	over	That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet
1				
2.				
3				OBL species x 1 =
				FACW species x 2 =
4				FAC species x 3 =
5				
		= Total Co	ver	
Herb Stratum (Plot size:)				UPL species x 5 =
1. Carex aquatilis	80	Yes	OBL	Column Totals: (A) (B)
2. Cirsium arvense	20	Yes	FAC	Dravalance Index - P/A -
3				Hydrophytic Vagatation Indicators:
				Hydrophytic vegetation indicators.
4				1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is >50%
6				3 - Prevalence Index is $≤3.0^1$
7				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
11				be present unless disturbed or problematic
	100%	= Total Co	ver	
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
		= Total Co	/er	Present? Yes <u>V</u> No
% Bare Ground in Herb Stratum 0%		1010100		
Remarks:				1

Remarks:

There are several areas throughout Aquatic Resource A that exhibit nearly monocultures of sedge (Carex spp.) species, this vegetation community is typical of those localized areas. Meets the criteria for hydrophytic vegetation.

SOIL

Profile Desc	ription: (Describe	to the dep	oth needed to docur	nent the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s	<u> </u>		
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type'		Texture	Remarks
0-14	10YR 3/2	_ 65%	7.5YR 4/6	35%	<u> </u>	PL, M	Silty clay loam	Prominent concentrations
14-20	10YR 4/2	60%	7.5YR 4/6	40%	<u>C</u>	M	Silty clay loam	Prominent concentrations
						·		
						·		
¹ Type: C=C	oncentration D=Der	oletion RM	=Reduced Matrix CS	S=Covere	d or Coate	ed Sand Gr	ains ² Loo	cation: PI =Pore Lining M=Matrix
Hydric Soil	Indicators: (Applic	cable to all	LRRs, unless other	rwise not	ed.)		Indicato	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandv Redox (S5)			2 cr	n Muck (A10)
Histic Ep	pipedon (A2)		Stripped Matrix	(S6)			Red	Parent Material (TF2)
Black Hi	stic (A3)		Loamy Mucky	Mineral (F	1) (excep	t MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)		Loamy Gleyed	Matrix (F2	<u>2)</u>		Oth	er (Explain in Remarks)
Depleted	Below Dark Surfac	ce (A11)	Depleted Matrix	(F3)				
Thick Da	ark Surface (A12)		✓ Redox Dark Su	rface (F6))		³ Indicato	ors of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted Dark	Surface (I	=7)		wetla	nd hydrology must be present,
Sandy G	Bleyed Matrix (S4)		Redox Depress	ions (F8)			unles	s disturbed or problematic.
Restrictive	_ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes V No
Remarks:								
Soils were de	pleted in matrix colo	or with mot	tling throughout the p	rofile. Thi	s profile d	escription a	appears to be t	ypical soil conditions throughout the
majority of Ac	jualic Resource A. I	vieets the t						
HYDROLO	GY							
Wetland Hy	drology Indicators							
Primary India	cators (minimum of	One require	d. check all that ann	V)			Seco	adary Indicators (2 or more required)
Surface	Mator (A1)		Water Sta	y) inod Loay	(P0) (vcont	<u> </u>	(ator Stained Leaves (R9) (ML RA 1 2
Surface	tor Table (A2)				res(D9)(e)	scept	V	$(\mathbf{M} = \mathbf{A} + \mathbf{A})$
	(A2)		NILKA Salt Crust	(P11)	aliu 4D)			4A, aliu 4D)
Saturation	$\operatorname{Dr}(A3)$			(DTT) vortobrate	oc (P13)		D	railage Fallerins (BT0)
	at Denosite (B2)		Hydrogen		dor(C1)			aturation Visible on Aerial Imageny (CQ)
Sedimer	(B2)			Suillue O		Living Poo	(C3)	comorphic Position (D2)
	at or Crust (B4)			of Reduce	ad Iron (C		iis (C3) <u> </u>	bellow Aquitard (D3)
	at of Clust (D4)		Presence		ion in Tille	+) d Saile (C6		
Surface	Soil Cracks (B6)		Recent int	Stresser	l Plante (F) <u> </u>	AC-Neutral Test (D3)
	on Visible on Aerial	Imageny (B	T) Other (Events)	oliesseu	amarke)		, <u> </u>	rost-Heave Hummocks (D7)
Inditidation	Vegetated Concav	nnagery (L			sinarks)		'	
Field Obser	vegetated Concav		(60)					
Surface Wat	or Procent?		No 🖌 Donth (in	choc):				
Water Table	Drocont?	/00	No V Depth (in	ches).		-		
							م برای البری	
(includes car	resent?	res		cnes):		Wetla	and Hydrolog	y Present? Yes _ V _ No
Describe Re	corded Data (stream	n gauge, m	onitoring well, aerial	photos, pi	revious ins	spections),	if available:	
Remarks:								
Hydrology ap	pears to be support	ed by surfa	ce water runoff from	surroundi	ng upslop	e areas, se	asonal hydrolo	ogy from snowmelt, and influenced by
past flood irrig	gation practices (sm	nall man-ma	ade ditches, depressi	ons, etc).	There are	e several m	an made ditche	es and micro-depressions throughout
wetland hydro	ology.	surrace wa	ter nows/ponding dur	nıg spring	runon an	ia aanng ex	a eme precipità	ation events, weets the chiteria for

Project/Site: Peak Ranch Resource	City/County: Su	ummit County	/	Sampling Date:	8/29/2018
Applicant/Owner: Peak Materials			State: CO	Sampling Point:	DP-A2b
Investigator(s): K. Medash	Section, Towns	hip, Range:	Section 20, Township	p 3 South, Range	78 West
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, convex, none): <u>None</u> Slope (%				
Subregion (LRR): <u>Rock Mountain Range and Forest Region (LRR E)</u> Lat: <u>39.</u>	776584° N	Lor	ng: <u>-106.153382° W</u>	Datu	m: <u>NAD83</u>
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>			NWI classific	ation: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No	_ (If no, explain in R	emarks.)	1
Are Vegetation, Soil, or Hydrology significantly	disturbed? NC	Are "Norm	na l Circumstances" p	oresent? Yes <u> </u>	No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	(If needed	l, explain any answei	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	g sampling p	oint locat	ions, transects,	, important fe	atures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ✓ No Yes No ✓ Yes No ✓	Is the Sampled Area within a Wetland?	Yes	No
Remarks:				

Upland data point in horse pasture at a slightly higher landscape position than surrounding area to the north and west (Aquatic Resource A). Pair with wetland data point DP-A2a.

VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 2 (A	A)
2.					
3				I otal Number of Dominant Species Across All Strata: 2 (F	۵۱
· · · · · · · · · · · · · · · · · · ·				Species Across Air Strata (e	D)
4				Percent of Dominant Species	
		= Total Co	over	That Are OBL, FACW, or FAC: 100% (A	4/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2					
3.				OBL species x 1 =	
1				FACW species x 2 =	
-				FAC species x 3 =	
5				FACU species x 4 =	
		= Total Co	over	LIPL species x 5 =	
Herb Stratum (Plot size:)			54014		
1. Juncus balticus		Yes	FACW		(B)
2. Cirsium arvense	30	Yes	FAC	Prevalence Index = B/A =	
3. Alopecurus pratensis	10	No	FAC	Hydrophytic Vegetation Indicators:	
4.				1 - Rapid Test for Hydrophytic Vegetation	
5				\sim 2 Dominance Test is >50%	
6				$\mathbf{\underline{v}}$ 2 - Dominance results > 50 %	
7				3 - Prevalence Index Is ≤3.0	
/				4 - Morphological Adaptations' (Provide support	rting
8				E Wetland Non Vaccular Dianta ¹	
9					
10				Problematic Hydrophytic Vegetation (Explain)	
11				¹ Indicators of hydric soil and wetland hydrology mus	st
	100%	= Total Co	ver	be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)					
1.				Hydrophytic	
2				Vegetation	
		- Total Ori		Present? Yes 🖌 No	
% Bare Ground in Herb Stratum ^{0%}			ver		
Remarks:				1	

Even though the vegetation community meets the dominance test for hydrophytic vegetation; it is mostly because of the presence of Baltic Rush (FACW) which does not seem to be a good indicator in this area given that it was observed growing in conjunction with FACU-UPL species and in wetlands. Further, underlying hydric soils and/or wetland hydrology are not present. Meets the criteria for hydrophytic vegetation.

SOIL

Brofile Dece	rintion: (Decoribed	to the den	th pooded to decur	nont tha i	ndiaatar	or confirm	the abconce	of indicators)
Profile Desc	nption: (Describe)	to the dep	In needed to docum	nent the I	nuicator	or confirm	i the absence	of indicators.)
Depth (inches)	<u>Matrix</u>	0/2	Color (moist)	x Features	S Type ¹	loc^2	Texture	Pemarks
0-10	10YR 3/3	100%			турс		Silt loam	Remarks
10.20	10110 0/0	050/		<u> </u>			Cilt le em	
10-20	10YR 3/3	95%	7.5YR 4/4	5%	<u> </u>		Slit loam	Faint concentrations
1 Type: C=Co	ncentration D=Depl	etion RM	=Reduced Matrix CS	S=Covered	d or Coate	ed Sand Gr	ains ² Lo	cation: PL=Pore Lining M=Matrix
Hvdric Soil I	ndicators: (Applica	able to all	LRRs. unless other	rwise not	ed.)		Indicate	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S	S5)	,		2 c	m Muck (A10)
Histic Ep	ipedon (A2)		Stripped Matrix	(S6)			2 e	d Parent Material (TF2)
Black His	stic (A3)		Loamy Mucky N	Vineral (F	1) (excep	t MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)		Loamy Gleyed	Matrix (F2	2)		Oth	ner (Explain in Remarks)
Depleted	Below Dark Surface	e (A11)	Depleted Matrix	(F3)				
Thick Da	rk Surface (A12)		Redox Dark Su	rface (F6)			³ Indicate	ors of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark S	Surface (F	7)		wetla	and hydrology must be present,
Sandy G	leyed Matrix (S4)		Redox Depress	sions (F8)			unle	ss disturbed or problematic.
Restrictive L	ayer (if present):							
Туре:								
Depth (inc	hes):						Hydric Soi	I Present? Yes No _♥
Remarks:								
Soils were dry	/ and loamy, with so	me faint re	dox concentrations lo	ower in the	e profile li	kely due to	location in clo	ose proximity to Aquatic Resource A
boundary. The similar Does	e boundary of Aquati	for hydric	e A was largely estal	blished ba	ised on th	e presence	e of hydric soil	s since the vegetation community is
Similar. Doco	not meet the ontena	ior nyano						
	0)/							
HIDROLO	GY							
Wetland Hyd	trology Indicators:							
Primary Indic	ators (minimum of o	ne require	d; check all that apply	y)			Seco	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Stai	ined Leave	es (B9) (e	except	<u> </u>	Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ter Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
Saturatio	on (A3)		Salt Crust	(B11)			[Drainage Patterns (B10)
Water M	arks (B1)		Aquatic Inv	vertebrate	s (B13)		[Dry-Season Water Table (C2)
Sedimen	t Deposits (B2)		Hydrogen	Sulfide Od	dor (C1)		5	Saturation Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Oxidized F	Rhizosphe	res along	Living Roc	ots (C3) 0	Geomorphic Position (D2)
Algal Ma	t or Crust (B4)		Presence	of Reduce	d Iron (C	4)	5	Shallow Aquitard (D3)
Iron Dep	osits (B5)		Recent Iro	n Reducti	on in Tille	d Soils (C6	6) <u> </u>	FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A) F	Raised Ant Mounds (D6) (LRR A)
Inundatio	on Visible on Aerial I	magery (B	7) Other (Exp	olain in Re	marks)		F	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	Surface (B8)					
Field Observ	vations:							
Surface Wate	er Present? Ye	es	No 🗹 Depth (ind	ches):				
Water Table	Present? Ye	es	No Depth (ind	ches):				-
Saturation Pr	resent? Yo	es	No 🗸 Depth (ind	ches):		Wetla	and Hydroloc	av Present? Yes No
(includes cap	illary fringe)			/-			,	
Describe Rec	corded Data (stream	gauge, mo	onitoring well, aerial p	photos, pr	evious ins	spections),	if available:	

Remarks:

Data point located in a horse pasture at a microtopographic high point, no hydrology indicators were observed. Does not meet the criteria for wetland hydrology.

Project/Site: Peak Ranch Resource	Cit	y/County: <u>Summit</u>	: County	Sa	ampling Date: <u>8/29/2018</u>
Applicant/Owner: Peak Materials			State:	CO Sa	ampling Point: <u>DP-A3a</u>
Investigator(s): <u>K. Medash</u>	Se	ction, Township, F	Range: Section 2	20, Township 3	South, Range 78 West
Landform (hillslope, terrace, etc.): Hillslope	Lo	cal relief (concave	e, convex, none)	: None	Slope (%): <u>1-2%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (L	RR E) Lat: <u>39.777</u>	′207° N	Long: <u>-106.</u>	153776° W	Datum: NAD83
Soil Map Unit Name: Handran gravelly loam, 0 to 3 perc	ent slopes		N	IWI classification	on: PEM1C
Are climatic / hydrologic conditions on the site typical fo Are Vegetation, Soil, or Hydrology Are Vegetation Soil or Hydrology	r this time of year? significantly dis	Yes <u>/</u> No sturbed? NO An	(If no, e e "Normal Circur	explain in Rem mstances" pres	narks.) sent? Yes <u>/</u> No
SUMMARY OF FINDINGS – Attach site m	ap showing s	ampling point	t locations, t	ransects, ii	mportant features, etc.
Hydrophytic Vegetation Present? Yes 🗸	No	la tha Sampl	od Aroo		
Hydric Soil Present? Yes <u>✓</u>	No	within a Wet	eu Area land?	Yes 🗸	No
Wetland Hydrology Present? Yes 🗸	No			103	

PFM Wetland	wet meadow	located in horse	e pasture. Pa	air with upland	d data point	DP-A3b
			pusture. I d	an whith uplant	a uutu ponn	

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3.				Species Across All Strata: 4 (B)
4				()
		= Total Co	ver	Percent of Dominant Species That Are OBL_EACW_or_EAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)		-		Bravalance Index workshoot:
1				
2				I Otal % Cover of:Multiply by:
3				OBL species x 1 =
۵ ۸				FACW species x 2 =
+				FAC species x 3 =
5				FACU species x 4 =
Horb Stratum (Plot size:		= Total Co	over	UPL species x 5 =
<u> Carey aquatilis</u>	35	Voc	OBI	$\begin{array}{c} c = c \\ c = c \\$
		<u> </u>		
2. Alopecurus pratensis		res		Prevalence Index = B/A =
3. Juncus balticus	20	Yes	FACW	Hydrophytic Vegetation Indicators:
4. Cirsium arvense	20	Yes	FAC	✓ 1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is $≤3.0^1$
7				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
···-	95%	- Total Car		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:		- 10tal C0	vei	
1				Under sche 41 -
··				Hydrophytic Vegetation
۲۲۰				Present? Yes V No
% Bare Ground in Herb Stratum ^{5%}		= Total Co	ver	
Remarks:				

Remarks:

Vegetation community is typical of the central portion of Aquatic Resource A, which appears to be frequently grazed. Bare ground consists of exposed surface soil and/or thatch. Meets the criteria for hydrophytic vegetation.

SOIL

	cription: (Describe to	the denth r	needed to docum	nent the i	indicator	or confirm f	the absence	of indicators)	
Denth	Matriv	ine depuiri	Redo	x Feature	s			or malcators.	
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	<u>Type¹</u>	Loc ²	Texture	Remarks	
0-10	10YR 3/2	70% 7.	5YR 4/6	30%	С	PL, M	Silt loam	Prominent concentrations	
10-20	10YR 3/2	60% 7.	5YR 4/6	40%	С	М	Silty clay loam	Prominent concentrations	
					·				
					·				
					·				
¹ Type: C=C	Concentration, D=Depleti	on, RM=Re	duced Matrix, CS	=Covered	d or Coate	ed Sand Grai	ins. ² Lo	cation: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Applicab	le to all LRI	Rs, unless other	wise not	ed.)		Indicate	ors for Problematic Hydric Soils":	
HISTOSO	il (A1) Ininodon (A2)		Sandy Redox (S	(S6)			2 c	m Muck (A10) d Paront Matorial (TE2)	
HISUCE	listic (A3)		Loamy Mucky M	(30) Aineral (F				ny Shallow Dark Surface (TE12)	
Hvdrog	en Sulfide (A4)		Loamy Gleved I	Matrix (F2				per (Explain in Remarks)	
Deplete	ed Below Dark Surface (A11) 🗸	Depleted Matrix	(F3)	-)		0		
Thick D	ark Surface (A12)	$\overline{\checkmark}$	Redox Dark Su	face (F6)			³ Indicat	ors of hydrophytic vegetation and	
Sandy I	Mucky Mineral (S1)		Depleted Dark S	Surface (F	7)		wetland hydrology must be present.		
Sandy	Gleyed Matrix (S4)		Redox Depress	ions (F8)	,		unle	ss disturbed or problematic.	
Restrictive	Layer (if present):								
Туре:			_					1	
Depth (ir	nches):		_				Hydric Soi	I Present? Yes 🖌 No	
Remarks:									
Soils are typ exhibiting sir	ical of the majority of Aq milar characteristics to th	uatic Resou ne above. M	urce A. The bound eets the criteria f	dary of Ac or hydric :	quatic Res soil.	ource A was	s defined lar	gely based on the presence of hydric soils	
HYDROLC	DGY								
Wetland Hy	/drology Indicators:								
Primary Indi	icators (minimum of one	required; cl	neck all that apply	/)			Seco	ondary Indicators (2 or more required)	
Surface	e Water (A1)		Water-Stai	ned Leav	es (B9) (e	xcept	\	Nater-Stained Leaves (B9) (MLRA 1, 2,	
High W	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)	
Saturat	ion (A3)		Salt Crust	(B11)			[Drainage Patterns (B10)	
Water M	Water Marks (B1) Aquatic Invertebrates (B13)						[Dry-Season Water Table (C2)	
Sedime	ent Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		5	Saturation Visible on Aerial Imagery (C9)	
Drift De	eposits (B3)		✓ Oxidized F	Rhizosphe	res along	Living Roots	s (C3) (Geomorphic Position (D2)	
Algal M	lat or Crust (B4)		Presence	of Reduce	ed Iron (C4	4)	\$	Shallow Aquitard (D3)	
Iron De	posits (B5)		Recent Iro	n Reducti	on in Tille	d Soils (C6)	F	FAC-Neutral Test (D5)	
Surface	e Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A)	F	Raised Ant Mounds (D6) (LRR A)	
Inundat	tion Visible on Aerial Ima	agery (B7)	Other (Exp	lain in Re	emarks)		F	Frost-Heave Hummocks (D7)	
Sparsel	ly Vegetated Concave S	urface (B8)							
Field Obser	rvations:								

	ouve ound	00 (00)				
Field Observations:						
Surface Water Present?	Yes	No	Depth (inches):			
Water Table Present?	Yes	No	Depth (inches):		1	
Saturation Present?	Yes	No 🖌	Depth (inches):	Wetland Hydrology Present?	Yes 🖌	No
(includes capillary fringe)						
Describe Recorded Data (stre	eam gauge	, monitoring	well, aerial photos, previous inspe	ctions), if available:		

Remarks:

Hydrology appears to be supported by surface water runoff from surrounding upslope areas, seasonal hydrology from snowmelt, and possible seepage from the ditch to the east during high flows. The water table appears to lie well below the surface in this area. Hydrology can also be assumed given the delineation was performed late in the growing season when the water levels are low and hydrophytic vegetation and hydric soils persist. Meets the criteria for wetland hydrology.

Project/Site: Peak Ranch Resource	City/County: Summi	it County	Sampling Date: 8/29/2018
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-A3b
Investigator(s): K. Medash	Section, Township,	Range: Section 20, Township	o 3 South, Range 78 West
Landform (hillslope, terrace, etc.): <u>Roadside Terrace</u>	Local relief (concav	e, convex, none): Convex	Slope (%): <u>4-6%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	.777287° N	Long: <u>-106.153617° W</u>	Datum: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI classifica	ation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No	o (If no, explain in Re	emarks.)
Are vegetation, Soil, or Hydrology significantly	oblematic? NO (If	needed explain any answer	resent? res <u>v</u> No
SUMMARY OF FINDINGS – Attach site map showing	sampling poin	t locations, transects,	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

Upland data point on the roadside terrace/berm of Highway 9 at a higher landscape position than the wet meadow (Aquatic Resource A) to the west. Pair with wetland data point DP-A3a.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2.				
3				For the second s
4				Percent of Dominant Species
		= Total Co	ver	That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
<u>Sapling/Shrub Stratum</u> (Piol Size)	25	Voo		Prevalence Index worksheet:
		165		Total % Cover of Multiply by
2				$\frac{1}{1} \frac{1}{1} \frac{1}$
3				
4.				FACW species x 2 =
5				FAC species x 3 =
···	25%	- Total Ca		FACU species x 4 =
Herb Stratum (Plot size:			vei	UPL species x 5 =
1 Bromus marginatus	75	Yes	UPL	Column Totals: (A) (B)
2. Elymus trachycaulus	20	Yes	FAC	
				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				$3 - Prevalence Index is \leq 3.0^{1}$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
0				5 - Wetland Non-Vascular Plants ¹
3 10				Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
11				be present, unless disturbed or problematic.
	95%	= Total Cov	ver	
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
		= Total Cov	/er	
% Bare Ground in Herb Stratum <u>5%</u>				
Remarks:				

Vegetation community is typical of the roadside along the eastern boundary of Aquatic Resource A. This area is 4-5' higher in elevation and is generally a different (upland) vegetation community than surrounding area to the west. Does not meet the criteria for hydrophytic vegetation.

Profile Desc	cription: (Describe	to the depth	needed to docu	ment the i	indicator	or confirm	the absenc	e of indicators.)
Depth	epth Matrix Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 4/4	100%					Gravelly loam	
		·			·			
·		·			<u> </u>			
					·			
<u> </u>		·			<u> </u>			
		. <u> </u>						
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, C	S=Covere	d or Coate	d Sand Gr	ains. ² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless othe	rwise not	ed.)		Indicat	tors for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Sandy Redox (S5)			2 0	cm Muck (A10)
Histic E	pipedon (A2)	_	Stripped Matrix	(S6)			Re	ed Parent Material (TF2)
Black H	istic (A3)	_	Loamy Mucky I	Mineral (F	1) (except	MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)	_	Loamy Gleyed	Matrix (F2	2)		Ot	her (Explain in Remarks)
Deplete	d Below Dark Surface	e (A11)	_ Depleted Matrix	x (F3)				
Thick Da	ark Surface (A12)	_	Redox Dark Su	irface (F6)	1		³ Indica	tors of hydrophytic vegetation and
Sandy N	/lucky Mineral (S1)	—	Depleted Dark	Surface (F	-7)		wet	land hydrology must be present,
Sandy G	Gleyed Matrix (S4)		Redox Depress	sions (F8)			unle	ess disturbed or problematic.
Restrictive	Layer (if present):							
Туре:								/
Depth (in	ches):						Hydric So	il Present? Yes No
Remarks:								
Soils were lo	amy, dry, light-colore	d, and grave	Ily likely due to loc	ation on th	he roadsid	e. Does no	ot meet the cr	iteria for hydric soil.
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of o	ne required;	check all that app	y)			Sec	ondary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
Saturati	on (A3)		Salt Crust	(B11)				Drainage Patterns (B10)
Water M	larks (B1)		Aquatic In	vertebrate	es (B13)			Dry-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Der	posits (B3)		Oxidized I	Rhizosphe	res alona	Livina Roo	ots (C3)	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	-) -)		Shallow Aquitard (D3)
Iron Der	posits (B5)		Recent Iro	on Reducti	on in Tille	, d Soils (C6	;)	FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A))	Raised Ant Mounds (D6) (LRR A)
Inundati	on Visible on Aerial I	magery (B7)	Other (Ex	nlain in Re	marks)	.) (=,)	Frost-Heave Hummocks (D7)
<u> </u>	Vegetated Concave	Surface (B			maritoj			
Eield Obser	vations:)					
	valions.	N						
Surface wat	er Present?			cnes):		-		
Water Table	Present? Y	es No	o <u> </u>	ches):		-		/
Saturation P	resent? Y	es N	o 🖌 Depth (in	ches):		_ Wetla	and Hydrolo	gy Present? Yes No
Describe Pe	piliary tringe)		itoring well serial	nhotos pr	evious ine	nections)	if available:	
Describe Ne		gauge, mon	acing well, acidi	μιστοδ, μι		peccions),		
<u> </u>								
Remarks:			- defide to	. I.a. and			a an a tao at a a	
wetland hydr	cated in an upland ar ology.	ea on the roa	adside in a convex	andscap	e position,	no hydrolo	ogy indicators	s observed. Does not meet the criteria for

Project/Site: Peak Ranch Resource	City/County: Sur	nmit County	Sampling Date: 8/29/2018
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-A4a
Investigator(s): K. Medash	Section, Townsh	ip, Range: <u>Section 20, Townshi</u>	p 3 South, Range 78 West
Landform (hillslope, terrace, etc.): Hillslope	Local relief (con	cave, convex, none): <u>None</u>	Slope (%): <u>1-2%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	778295° N	Long: <u>-106.154450° W</u>	Datum: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI classific	ation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? NO	Are "Normal Circumstances" p	oresent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling po	oint locations, transects	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✓ No Yes _ ✓ No Yes _ ✓ No	Is the Sampled Area within a Wetland?	Yes 🖌 No
Remarks:			

PEM Wetland, wet meadow in horse pasture near the northern boundary of the survey area. The wetland continues offsite to the north. Pair with upland data point DP-A4b.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: <u>3</u> (A)
2				Total Number of Dominant
3.				Species Across All Strata: 3 (B)
4				
T		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)				Brevalence Index worksheet:
1				
2				I otal % Cover of: Multiply by:
3				OBL species x 1 =
A.				FACW species x 2 =
+				FAC species x 3 =
5				FACU species x 4 =
Harb Stratum (Diet size)		= Total Co	ver	UPL species x 5 =
Alonocurus pratonsis	40	Voc	EAC	Column Totals: (A) (B)
	- +0	165		
2. Juncus balticus		Yes	FACW	Prevalence Index = B/A =
3. Carex aquatilis	20	Yes	OBL	Hydrophytic Vegetation Indicators:
4. Calamagrostis canadensis	10	No	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Rumex crispus	10	No	FAC	$\sqrt{2}$ - Dominance Test is >50%
6				$3 - Prevalence Index is \leq 3.0^{1}$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
····	100%	- Total Car		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size)	10070		ver	
1				
				Hydrophytic Vegetation
Z				Present? Yes No
% Bare Ground in Herb Stratum 0%		= Total Cov	/er	
Remarks:				1

Vegetation community is representative of the northern portion of Aquatic Resource A and continues offsite to the north. Meets the criteria for hydrophytic vegetation.

SOIL

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the i	indicator	or confirm	the absence	of indicators.)
Depth	<u>Matrix</u>	0/	Redo	<u>x Feature</u>	<u>s</u>	12	T 4	Demode
(incnes) 0-8	10VR 3/2	<u> </u>	7 5VR 1/6	20%	C		<u>lexture</u>	Remarks Prominent concentrations
0-0	10111 0/2		7.511(4/0	- 20%	· ·	. <u> </u>		
8-20	10YR 4/2		7.5YR 4/6	30%	<u> </u>	<u>IM</u>	Silty clay loam	Prominent concentrations
					·			
					<u> </u>	·		
					. <u> </u>	·		
¹ Type: C=Co	ncentration, D=Dep	pletion, RM	=Reduced Matrix, C	S=Covere	d or Coat	ed Sand Gr	ains. ² Loo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	cable to all	LRRs, unless othe	rwise not	ed.)		Indicato	rs for Problematic Hydric Soils":
Histosol	(A1)		Sandy Redox (S5)			2 cr	n Muck (A10)
Histic Ep	stic (A3)		Stripped Matrix	(50) Mineral (F				Arent Material (TF2)
Hvdroae	n Sulfide (A4)		Loamy Gleved	Matrix (F2	1) (excep 2)		Oth	er (Explain in Remarks)
Depleted	Below Dark Surfac	ce (A11)	✓ Depleted Matri	x (F3)	-,			. (
Thick Da	rk Surface (A12)	· · ·	Redox Dark Su	Irface (F6))		³ Indicato	rs of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface (F	7)		wetla	nd hydrology must be present,
Sandy G	leyed Matrix (S4)		Redox Depress	sions (F8)			unles	s disturbed or problematic.
Restrictive L	ayer (if present):							
Туре:								
Depth (inc	:hes):						Hydric Soil	Present? Yes <u>V</u> No
Remarks:								
Solls were de	ep with consistent r	nottling thro	bughout the profile a	nd higher	clay conte	ent lower in	the profile, wh	ich is typical soil conditions for a majority
		o ontonia ioi						
HYDROLO	GY							
Wetland Hyd	Irology Indicators	:						
Primary Indic	ators (minimum of	one require	d; check all that app	ly)			Seco	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (except	V	/ater-Stained Leaves (B9) (MLRA 1, 2,
 High Wa	ter Table (A2)		MLRA	1, 2, 4A, a	and 4B)	•		4A, and 4B)
Saturatio	n (A3)		Salt Crust	(B11)			D	rainage Patterns (B10)
Water Mater M	arks (B1)		Aquatic In	vertebrate	es (B13)		C	ry-Season Water Table (C2)
Sedimen	t Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		S	aturation Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		✓ Oxidized I	Rhizosphe	res along	Living Roo	ots (C3) G	eomorphic Position (D2)
Algal Ma	t or Crust (B4)		Presence	of Reduce	ed Iron (C	4)	S	hallow Aquitard (D3)
Iron Dep	osits (B5)		Recent Irc	on Reducti	ion in Tille	ed Soils (C6	5) <u>√</u> F	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (E	01) (LRR A)) _ R	aised Ant Mounds (D6) (LRR A)
Inundatio	on Visible on Aerial	Imagery (B	7) Other (Ex	plain in Re	emarks)		F	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	'e Surface (B8)					
Field Observ	vations:							
Surface Wate	er Present?	/es	No <u>V</u> Depth (in	iches):		_		
Water Table	Present?	res	No <u> </u>	ches):				
Saturation Pr	esent?	res	No 🖌 Depth (in	iches):		Wetla	and Hydrolog	y Present? Yes <u>Y</u> No
Describe Rec	corded Data (strean	n gauge, m	onitoring well, aerial	photos, pr	evious in	spections),	if available:	
	<u> </u>		J ,			- //		
Remarks:								
Hydrology ap	pears to be support	ed by surfa	ce water runofff from	n surround	ing upslo	pe areas, se	easonal hydrol	ogy from snowmelt, and possible
seepage from	a roadside ditch th	at forms the	e eastern boundary o	of Aquatic	Resource	e A. Meets t	he criteria for	vetland hydrology.

Project/Site: Peak Ranch Resource	City/County: S	ummit County	,	_ Sampling Date	e: 8/29/2018
Applicant/Owner: Peak Materials			State: CO	_ Sampling Poin	t: DP-A4b
Investigator(s): K. Medash	Section, Town	ship, Range:	Section 20, Townsl	hip 3 South, Rang	ge 78 West
Landform (hillslope, terrace, etc.): <u>Hillslope</u>	Local relief (co	oncave, conve	ex, none): <u>None</u>		Slope (%): <u>4-6%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	.778318° N	Lor	ng: <u>-106.154240° V</u>	V Da	atum: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>			NWI classif	ication: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No	_ (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? \mathbf{N}	O Are "Norn	nal Circumstances"	present? Yes _	✓ No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	O (If needed	, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	a samplina i	ooint locat	ions. transect	s. important	features. etc.

Hydrophytic Vegetation Present?	Yes	No✓				
Hydric Soil Present?	Yes	No	Is the Sampled Area		1	
Wetland Hydrology Present?	Yes	No 🖌	within a Wetland?	Yes	No _ ¥	
Remarks:						

Upland data point on the roadside berm of Highway 9 at a higher landscape position than surrounding area to the west. Pair with wetland data point DP-A4a.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Deminent
3				Species Across All Strata: 3 (B)
A.				
۹				Percent of Dominant Species
Sanling/Shruh Stratum (Plot size:		= 1 otal Co	ver	That Are OBL, FACW, or FAC: 33% (A/B)
<u>Saping/Sindo Stratum</u> (Hot size:)	25	Yes	UPI	Prevalence Index worksheet:
Soliy drummondiana		<u>No</u>		Total % Cover of: Multiply by:
		110	FACIN	OBL species x 1 =
3				$EACW$ species $x^2 =$
4				
5.				FAC species x 3 =
	35%	= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size:)				UPL species x 5 =
1. Bromus marginatus	60	Yes	UPL	Column Totals: (A) (B)
2. Cirsium arvense	20	Yes	FAC	Descriptions hadren D/A
Chamaenerion angustifolium	10	No	FACU	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4				1 Denid Test for Lludrents tie Verstetien
				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
•••	90%	- Total Car		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	0070		/er	
1				
I				Hydrophytic Vogetation
2				Present? Yes No
% Bare Ground in Herb Stratum <u>10%</u>		= Total Cov	/er	
Remarks:				1

Vegetation is representative of the roadside along the west side of Highway 9. Some willow (Salix spp.) are present along the roadside; however, the herbaceous understory is predominantly FAC-UPL species and underlying hydric soils are not present. Does not meet the criteria for hydrophytic vegetation.

Profile Des	cription: (Describe	to the depth	needed to docu	ment the	indicator	or confirm	n the absenc	e of indicators.)
Depth	Matrix		Rede	ox Feature	S1	. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc	Texture	Remarks
0-20	10YR 4/3	100%					Gravelly loam	
				_	- <u> </u>			
		·						
		·						
		·						
		·						
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, C	S=Covere	d or Coate	d Sand Gr	ains. ² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application)	able to all L	RRs, unless othe	erwise not	ed.)		Indicat	tors for Problematic Hydric Soils ³ :
Histoso	(A1)	_	Sandy Redox	(S5)			2 0	cm Muck (A10)
Histic E	pipedon (A2)	—	Stripped Matrix	(S6)			Re	ed Parent Material (TF2)
Black H	istic (A3)	_	Loamy Mucky	Mineral (F	1) (except	MLRA 1)	Ve	ery Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		_ Loamy Gleyed	Matrix (F2	<u>2)</u>		Ot	her (Explain in Remarks)
Deplete	d Below Dark Surface	e (A11)	Depleted Matri Dedex Dark St	х (F3) unfoco (ГС)			³ Indiaa	tors of hydrophytic vegetation and
Thick D	Ark Surface (ATZ)	_	_ Redux Dark St	Surface (FO)) =7)		muica	lors of hydrophylic vegetation and
Sandy (Sleved Matrix (S4)		Depieted Dark	sions (F8)	')		unle	ess disturbed or problematic
Restrictive	l aver (if present):							
Type:								
Dopth (in	abaa):						Lludria Sa	il Procent? Yes No
	ches).						nyuric So	I Present? Tes No
Remarks:			e vel livelu elve te l		41			at the suite via fau la valuia a sil
Solis were di	y, loose, and loarny v	with some gr	aver likely due to i	ocation on	line roaus			
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of o	ne required;	check all that app	ly)			Sec	ondary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ained Leav	res (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1. 2. 4A. a	and 4B)			4A. and 4B)
Saturati	on (A3)		Salt Crus	t (B11)	,			Drainage Patterns (B10)
Water M	larks (B1)		Aquatic Ir	vertebrate	es (B13)			Dry-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift De	nosits (B3)		Oxidized	Rhizosphe	eres along	l iving Roo	ots (C3)	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	gee)		Shallow Aquitard (D3)
Iron Dei	posits (B5)		Recent In	on Reducti	ion in Tille	d Soils (C6	3)	EAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundati	on Visible on Aerial I	magery (B7)	Other (Ex	nlain in Re	emarks)	.) (=,	/	Frost-Heave Hummocks (D7)
Sparsel	v Vegetated Concave	Surface (B		plainini	inano)			
Field Obser	vations:		,					
Surface Wet	valions.	00 N	Donth (ir	vohoo):				
vvater Table	Present? Y	es N	o <u> </u>	iches):		-		
Saturation P	resent? Y	es No	o 🖌 Depth (ir	nches):		_ Wetla	and Hydrolo	gy Present? Yes No _V
Describe Re	corded Data (stream	gauge. mon	itoring well. aerial	photos. pr	evious ins	pections).	if available:	
		J	J,	,, p.		, <i>,</i> ,		
Remarka:								
Data point lo	cated on a roadside k	herm at a bio	her landscape po	sition than	surroundi	na area to	the west No	hydrology indicators observed. Doos not
meet the crite	eria for wetland hydro	ology.	nor landscape po		Sanounun	ng area tu	THE WEST INU	nyarology maloators observed. Does ful

Project/Site: Peak Ranch Resource	City/County: Summit County Sampling Date: 8/29/2018				
Applicant/Owner: Peak Materials	State: <u>CO</u> Sampling Point: <u>DP-A5a</u>				
Investigator(s): K. Medash	Section, Township, Range: Section 20, Township 3 South, Range 78 West				
Landform (hillslope, terrace, etc.): Valley Bottom	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>1-2%</u>				
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39	0.778592° N Long: <u>-106.155122° W</u> Datum: <u>NAD83</u>				
Soil Map Unit Name: Handran gravelly loam, 0 to 3 percent slopes	NWI classification: PEM1C				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes \checkmark No (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes \checkmark No Are Vegetation, Soil, or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes _ ✓ _ No Hydric Soil Present? Yes _ ✓ _ No Wetland Hydrology Present? Yes _ ✓ _ No Remarks: Yes _ ✓ _ No	Is the Sampled Area within a Wetland? Yes <u>V</u> No				

PEM Wetland, wet meadow located in horse pasture. Pair with upland data point DP-A5b.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Tatal Number of Deminant
3.				Species Across All Strata: 3 (B)
A.	·			
4	·			Percent of Dominant Species
Sopling/Shrub Stratum (Diat size:		= 1 otal Co	ver	That Are OBL, FACW, or FAC: _67% (A/B)
				Prevalence Index worksheet:
1	·			Total % Cover of: Multiply by:
2	·			OBL species x 1 =
3				
4				
5.				FAC species x 3 =
		= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size:)		. 10101-00		UPL species x 5 =
1. Juncus balticus	40	Yes	FACW	Column Totals: (A) (B)
2. Alopecurus pratensis	25	Yes	FAC	
3 Carex microptera	20	Yes	FACU	Hydrophytic Vegetation Indicators:
Cirsium arvense	10	No	FAC	1 Banid Test for Hydrophytic Vegetation
5	·			
0	·			3 - Prevalence Index is ≤3.0
/	·			4 - Morphological Adaptations ¹ (Provide supporting
8	·			
9				5 - Wetland Non-Vascular Plants
10				Problematic Hydrophytic Vegetation' (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
	95%	= Total Co	/er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		-		
1.				Hydrophytic
2				Vegetation
		- Total Car	/or	Present? Yes 🖌 No
% Bare Ground in Herb Stratum 5%		- 10tai 00		
Remarks:				

Vegetation community is typical of the western portion of Aquatic Resource A. The western wetland/upland boundary of Aquatic Resource A was established mainly on the presence of hydric soils - the vegetation community is very similar along the wetland/upland boundary. Meets the criteria for hydrophytic vegetation.

SOIL

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	ox Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/2	80%	7.5YR 4/6	20%	<u> </u>	PL, M	Silt loam	Prominent concentrations
10-20	10YR 3/2	70%	7.5YR 4/6	30%	<u>C</u>	M	Silty clay loam	Prominent concentrations
¹ Type: C=Co	oncentration, D=Dep	letion, RM	=Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	ains. ² Loo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to al	LRRs, unless othe	rwise not	ed.)		Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox ((S5)			2 cr	n Muck (A10)
Histic Ep	oipedon (A2)		Stripped Matrix	(S6)			Red	Parent Material (TF2)
Black Hi	stic (A3)		Loamy Mucky	Mineral (F	1) (except	MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)	- () ()	Loamy Gleyed	Matrix (F2	.)		Oth	er (Explain in Remarks)
Depleted	Below Dark Surfac	æ (A11)	Depleted Matri	X (F3) urfaco (E6)			³ Indicato	are of hydrophytic vogotation and
Sandy M	fucky Mineral (S1)		Depleted Dark	Surface (F	7)		wetla	nd hydrology must be present
Sandy G	Bleved Matrix (S4)		Redox Depres	sions (F8)	,,		unles	s disturbed or problematic.
Restrictive I	_ayer (if present):			(-)				
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks:	,							
Soils are repr	esentative of a majo	ority of Aqu	atic Resource A. Me	ets the crit	eria for h	dric soil.		
					-			
HYDROLO	GY							
Wetland Hye	drology Indicators:							
Primary Indic	cators (minimum of c	one require	d; check all that app	ly)			Secor	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ained Leav	es (B9) (e	xcept	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
Saturatio	on (A3)		Salt Crust	t (B11)			D	rainage Patterns (B10)
Water M	arks (B1)		Aquatic Ir	vertebrate	s (B13)		D	ry-Season Water Table (C2)
Sedimer	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		S	aturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized	Rhizosphe	res along	Living Roo	ots (C3) G	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	+)	S	hallow Aquitard (D3)
Iron Dep	osits (B5)		Recent Ire	on Reducti	on in Tille	d Soils (C6	5) F	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A)) R	aised Ant Mounds (D6) (LRR A)
Inundatio	on Visible on Aerial	Imagery (E	37) Other (Ex	plain in Re	marks)		F	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface	(B8)					
Field Obser	vations:							
Surface Wate	er Present? Y	'es	No V Depth (ir	nches):				
Water Table	Present? Y	′es	No <u> </u>	nches):				
Saturation P	resent? Y	′es	No 🖌 Depth (ir	nches):		_ Wetla	and Hydrolog	y Present? Yes 🚩 No
Describe Re	corded Data (stream	n gauge, m	onitoring well. aerial	photos. pr	evious ins	pections).	if available:	
		5		,, , , ,		,		
Remarks [.]								
Hvdrology an	pears to be support	ed by surfa	ice water runoff from	surroundi	na upsion	e areas, se	asonal hydrolo	bay from snow melt, and influenced by
past flood irrig	gation practices. The	e western l	poundary in this area	is formed	by a man	-made, dis	continuous dite	ch that influences surface water flows and
ponding. Mee	ets the criteria for we	tland hydr	ology.					

Project/Site: Peak Ranch Resource	City/County: Sun	nmit County	Sampling Date: 8/29/2018
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-A5b
Investigator(s): K. Medash	Section, Townsh	ip, Range: <u>Section 20, Townshi</u>	o 3 South, Range 78 West
Landform (hillslope, terrace, etc.): <u>Hillslope</u>	Local relief (con	cave, convex, none): <u>None</u>	Slope (%): <u>1-2%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	.778533° N	Long: <u>-106.155316° W</u>	Datum: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI classific	ation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? NO	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? NO	(If needed, explain any answer	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling po	oint locations, transects,	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes N Yes N Yes N	No No∕ No∕	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

Upland data point located in horse pasture. Data point does exhibit a dominance of hydrophytic vegetation; however, is considered upland because underlying hydric soil are not present. Pair with wetland data point DP-A5a.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 2 (A)	
2.					
3				I otal Number of Dominant	
·				(B)	
4				Percent of Dominant Species	
		= Total Co	ver	That Are OBL, FACW, or FAC: 67% (A/E	3)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2					
3.				OBL species x 1 =	
4				FACW species x 2 =	
-				FAC species x 3 =	
5				FACU species x 4 =	
		= Total Co	ver	LIPL species x 5 =	
Herb Stratum (Plot size:)					
1. Bromus marginatus		Yes)
2. Juncus balticus	20	Yes	FACW	Prevalence Index = B/A =	
3. Cirsium arvense	20	Yes	FAC	Hydronhytic Vegetation Indicators:	
Alopecurus pratensis	10	No	FAC	A Denid Test for Undersity tie Manufacture	
- Elymus trachycaulus	10	No	FAC		
5				✓ 2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 ¹	
7				4 - Morphological Adaptations ¹ (Provide supportir	ng
8				data in Remarks or on a separate sheet)	Ũ
9				5 - Wetland Non-Vascular Plants ¹	
10				Problematic Hydrophytic Vegetation ¹ (Explain)	
				¹ Indicators of hydric soil and wetland hydrology must	
11				be present unless disturbed or problematic	
	85%	= Total Co	/er		
Woody Vine Stratum (Plot size:)					
1				Hydrophytic	
2				Vegetation	
		= Total Co	/er	Present? Yes ¥ No	
% Bare Ground in Herb Stratum <u>15%</u>					
Remarks:				4	

Even though a dominance of hydrophytic vegetation is present, this area is considered upland. The vegetation community in uplands surrounding the wetland/upland boundary of Aquatic Resource A is very similar, and the boundary was determined by the presence of hydric soils. Meets the criteria for hydrophytic vegetation.

Profile Des	cription: (Describe	to the dept	h needed to docu	ment the i	ndicator	or confirn	m the absence of indicators.)
Depth	Matrix		Redo	ox Feature	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-12	10YR 3/3	100%					Silt loam
12-20	10YR 4/4	100%					Silt loam
							· ·
							· _ _
							·
¹ Type: C=C	Concentration, D=Dep	letion, RM=	Reduced Matrix, C	S=Covered	d or Coate	d Sand G	arains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all	LRRs, unless othe	rwise not	ed.)		Indicators for Problematic Hydric Soils ³ :
Histoso	l (A1)		Sandy Redox ((S5)			2 cm Muck (A10)
Histic E	pipedon (A2)		Stripped Matrix	(S6)			Red Parent Material (TF2)
Black H	listic (A3)		Loamy Mucky	Mineral (F	1) (except	MLRA 1)) Very Shallow Dark Surface (TF12)
Hydrog	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	!)		Other (Explain in Remarks)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matri	x (F3)	,		<u> </u>
Thick D	ark Surface (A12)		Redox Dark Su	urface (F6)			³ Indicators of hydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Depleted Dark	Surface (F	7)		wetland bydrology must be present
Sandy (Cleved Matrix (S4)		Depicted Dark	sione (E8)	')		unless disturbed or problematic
Restrictive	Laver (if present):			3013 (1 0)			
Type.							
Depth (in	iches):						Hydric Soil Present? Yes No
Remarks:	,						
Soils were d	ry loamy and light-c	olored which	h is typical of upland	de eurroun	dina Aaus	tic Resou	Irce A exhibiting a dominance of hydronhytic vegetation
Does not me	et the criteria for hvd	lric soil.			ang Aque		
	····,·						
HYDROLC	OGY						
Wetland Hy	drology Indicators:						

Primary Indicators (minimum	Secondary Indicators (2 or more required)				
Surface Water (A1) Water-Stained Leaves (B9) (except				Water-Stained Leaves (B9) (MLRA 1, 2,	
High Water Table (A2) MLRA 1, 2, 4A, and 4B)				4A, and 4B)	
Saturation (A3)			Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)			Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (B2)			Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			Oxidized Rhizospheres along Livi	ng Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)			Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5)			Recent Iron Reduction in Tilled Se	oils (C6)	FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Ae	rial Imagery	(B7)	Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated Cor	icave Surfac	æ (B8)			
Field Observations:					
Surface Water Present?	Yes	No 🗸	Depth (inches):		
Water Table Present?	Yes	No	Depth (inches):		1
Saturation Present? (includes capillary fringe)	Yes	No 🖌	_ Depth (inches):	Wetland Hy	drology Present? Yes No 🖌
Describe Recorded Data (str	eam gauge,	monitoring	well, aerial photos, previous inspec	ctions), if availa	able:
Remarks:					
Data point located in horse p	basture, no h	ydrology inc	licators observed. Does not meet th	he criteria for v	vetland hydrology.

Project/Site: Peak Ranch Resource	City/County:	Summit County		Sampling Da	ite: 8/29/2018	
Applicant/Owner: Peak Materials		Sta	ate: <u>CO</u>	_ Sampling Po	int: DP-A6a	
Investigator(s): K. Medash	Section, Tow	nship, Range: <u>Sect</u>	ion 20, Towns	hip 3 South, Rar	nge 78 West	
Landform (hillslope, terrace, etc.): Valley Bottom	Local relief (concave, convex, no	one): <u>Concav</u>	/e	Slope (%): <u>1-2%</u>	
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E)	Lat: <u>39.776939° N</u>	Long:	106.154648° V	V [Datum: NAD83	
Soil Map Unit Name: Handran gravelly loam, 0 to 3 percent slo	opes		NWI classi	fication: PEM10	>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🖌 No (If no, explain in Remarks.) Are Vegetation, Soil, or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes 🔨 No						
Are Vegetation, Soil, or Hydrology na	turally problematic? N	O (If needed, exp	lain any answ	vers in Remarks	.)	
SUMMARY OF FINDINGS – Attach site map s	howing sampling	point location	s, transect	s, importan	t features, etc.	
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes No	Is the	Sampled Area				
Wetland Hydrology Present? Yes <u>✓</u> No	within	a wetland?	Yes	<u> </u>		

PEM Wetland, wet meadow located in horse pasture. Pair with upland data point DP-A6b.

VEGETATION - Use scientific names of plants.

Remarks:

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:) 1.	<u>% Cover</u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: ³ (A	A)
2.				(-,
3				Total Number of Dominant Species Across All Strata: 3 (B	3)
4					,
		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A	√B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2				OBL species $x = 1 = 1$	
3				FACW species x 2 =	
4				FAC species x 3 =	
5					
		= Total Co	over		
Herb Stratum (Plot size:)	40	Voc	EAC		(B)
	- 40	Vec			(В)
2. Juncus bancus	- 20	Vec		Prevalence Index = B/A =	
3. Poa annua	- 20	res		Hydrophytic Vegetation Indicators:	
4. Aiopecurus arundinaceus		<u>No</u>	FAC	1 - Rapid Test for Hydrophytic Vegetation	
5. Rumex crispus	5	No	FAC	✓ 2 - Dominance Test is >50%	
6				3 - Prevalence Index is ≤3.0 ¹	
7				4 - Morphological Adaptations ¹ (Provide suppor	rting
8				data in Remarks or on a separate sheet)	
9				5 - Wetland Non-Vascular Plants ¹	
10				Problematic Hydrophytic Vegetation ¹ (Explain)	
11				¹ Indicators of hydric soil and wetland hydrology mus	st
	100%	= Total Co	ver	be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)					
1				Hydrophytic	
2				Vegetation	
		= Total Co	ver		
% Bare Ground in Herb Stratum 0%					
Remarks.					

The vegetation community is representative of wetland areas within the southwestern boundary of Aquatic Resource A. A similar vegetation community is present in uplands along the western boundary of Aquatic Resource A; however, hydric soils were not present in the upland areas. The western boundary of Aquatic Resource A was delineated largely based on the presence of hydric soils. Meets the criteria for hydrophytic vegetation.

SOIL

Profile Des	cription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirn	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/2	75%	7.5YR 4/6	25%	<u>C</u>	PL, M	Silt loam	Prominent concentrations
10-20	10YR 3/2	60%	7.5YR 4/6	40%	<u>C</u>	<u>M</u>	Silty clay loam	Prominent concentrations
¹ Type: C=C	oncentration, D=Dep	letion, RM	I=Reduced Matrix, CS	S=Covere	d or Coate	ed Sand G	rains. ² Loo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to al	I LRRs, unless othe	rwise not	ted.)		Indicato	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)			2 cm	n Muck (A10)
Histic E	pipedon (A2)		Stripped Matrix	(S6)			Red	Parent Material (TF2)
Black H	istic (A3)		Loamy Mucky N	Mineral (F	1) (excep	t MLRA 1)	Ver	y Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	2)		Oth	er (Explain in Remarks)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix	k (F3)				
Thick D	ark Surface (A12)		🖌 Redox Dark Su	rface (F6))		³ Indicato	ors of hydrophytic vegetation and
Sandy M	/lucky Mineral (S1)		Depleted Dark	Surface (I	F7)		wetla	nd hydrology must be present,
Sandy C	Gleyed Matrix (S4)		Redox Depress	sions (F8)			unles	ss disturbed or problematic.
Restrictive	Layer (if present):							
Туре:								
Depth (in	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks:							1	

Soils are representative of the majority of Aquatic Resource A. The western boundary of Aquatic Resource A was determined largely based on the presence of hydric soils given that the vegetation community is similar throughout wetlands/uplands in this portion of the survey area. Meets the criteria for hydric soil.

HYDROLOGY

Wetland Hydrology Indicate	ors:					
Primary Indicators (minimum of one required; check all that apply)					Secondary Indicators (2 or more required)	
Surface Water (A1) Water-Stained Leaves (B9) (except			pt	Water-Stained Leaves (B9) (MLRA 1, 2,		
High Water Table (A2) MLRA 1, 2, 4A, and 4B)				4A, and 4B)		
Saturation (A3)				Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)				Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (B2)				Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)			✓	Oxidized Rhizospheres along Livin	ng Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B4)				Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)				FAC-Neutral Test (D5)		
Surface Soil Cracks (B6)				Stunted or Stressed Plants (D1) (I	LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Ae	rial Imagery	(B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated Con	cave Surface	e (B8)				
Field Observations:						
Surface Water Present?	Yes	No	√	Depth (inches):		
Water Table Present?	Yes	No	✓	Depth (inches):		1
Saturation Present? (includes capillary fringe)	Yes	_ No	✓	Depth (inches):	Wetland Hy	drology Present? Yes <u>V</u> No
Describe Recorded Data (stre	eam gauge,	monitori	ng v	vell, aerial photos, previous inspec	tions), if availa	ble:
Remarks:						
Wetland hydrology is present was performed late in the gro	in the form c wing season	of oxidize when w	ed rl /atei	nisospheres along living roots; how r levels are generally low. Meets th	vever, hydrolog e criteria for w	gy is also assumed given that the delineation etland hydrology.

Project/Site: Peak Ranch Resource	City	City/County: Summit County Sampling Date: 8/						
Applicant/Owner: Peak Materials			State: CO	_ Sampling Point: DP-A6b				
Investigator(s): K. Medash	Sec	tion, Township, Range: <u>S</u>	Section 20, Townsh	hip 3 South, Range 78 West				
Landform (hillslope, terrace, etc.): Hillslope	Loc	cal relief (concave, conve	<, none): <u>None</u>	Slope (%): 2-4%				
Subregion (LRR):Rock Mountain Range and Forest Region	(LRR E) Lat: 39.776	910° N Long	<u>ј:106.154945° М</u>	V Datum: NAD83				
Soil Map Unit Name: Handran gravelly loam, 0 to 3 per	rcent slopes		NWI classif	ication: PEM1C				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)								
Are Vegetation, Soil, or Hydrology	significantly dist	urbed? NO Are "Norma	al Circumstances"	present? Yes 🖌 No				
Are Vegetation, Soil, or Hydrology	naturally proble	matic? NO (If needed,	explain any answ	vers in Remarks.)				
SUMMARY OF FINDINGS – Attach site n	nap showing sa	mpling point locati	ons, transect	s, important features, etc.				
Hydrophytic Vegetation Present? Yes _	No							
Hydric Soil Present? Yes	No 🖌	Is the Sampled Area						
Wetland Hydrology Present? Yes	No	within a Wetland?	Yes	No <u>¥</u>				
Remarks:		1						

Upland data point located in horse pasture. Pair with wetand data point DP-A6a.

VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4.				()
		= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)				
1.				Prevalence Index worksheet:
2				Total % Cover of:Multiply by:
2				OBL species x 1 =
S	·			FACW species x 2 =
4	·			FAC species x 3 =
5	·			FACU species x 4 =
		= Total Co	ver	LIPI species x 5 =
Herb Stratum (Plot size:)	50	Vaa		
2. Cirsium arvense	40	Yes	FAC	Prevalence Index = B/A =
3. Alopecurus pratensis	10	No	FAC	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				\checkmark 2 - Dominance Test is >50%
6.				$3 - \text{Prevalence Index is } \le 3.0^1$
7				4 Merphological Adoptetiona ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11	·			¹ Indicators of hydric soil and wetland hydrology must
···-	100%	- Total Ca		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	10070		ver	
1				Under sche 4te
·	·			
<u> </u>				Present? Yes Ves No
% Bare Ground in Herb Stratum 0%			ver	
Remarks:				1

Even though hydrophytic vegetation is present, this area has been considered upland. The vegetation community along the wetland/upland boundary of Aquatic Resource A is very similar so the boundary was determined based on the presence of hydric soils. Hydric soils and/or wetland hydrology were not observed at this location. Meets the criteria for hydrophytic vegetation.

Profile Desc	cription: (Describe	to the dept	n needed to docu	ment the i	ndicator	or confirm	n the absen	ce of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	7.5YR 3/3	100%					Silt loam	
8-20	7.5YR 3/4	100%					Gravelly silt loa	m
·								
				_				
·								
·								
¹ Type: C=C	oncentration, D=Dep	letion, RM=I	Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	rains. ² l	Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless othe	rwise not	ed.)		Indica	ators for Problematic Hydric Soils [°] :
Histosol	(A1)	-	Sandy Redox (S5)			2	cm Muck (A10)
Histic E	pipedon (A2)	-	Stripped Matrix	(S6)			R	Red Parent Material (TF2)
Black Hi	istic (A3)	-	Loamy Mucky I	Mineral (F	1) (except	MLRA 1)	V	(ery Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)	- (444)	Loamy Gleyed	Matrix (F2)		(other (Explain in Remarks)
Depleted	u Below Dark Sunac	e (ATT) _	Depleted Matri	K (F3) Irface (E6)			³ Indic	ators of hydrophytic vegetation and
Sandy M	Aucky Mineral (S1)	-	Redux Dark St	Surface (F	7)		we	ators of hydrophytic vegetation and
Sandy G	Gleved Matrix (S4)	-	Redox Depress	sions (F8)	.,		un	less disturbed or problematic.
Restrictive	Layer (if present):							
Type:								_
Depth (in	ches).						Hydric S	oil Present? Yes No
Pomarks:							liganee	
Soils were dr	wand light colored w	ith some are	wellower in the pr	ofila Doos	not moot	the criteria	for hydric s	soil
Solis were di	y and light colored w	itil some gra		Jille. Does	notmeet		a for fryund a	5011.
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of o	ne required;	check all that app	y)			Se	condary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1. 2.
High Wa	ater Table (A2)		MLRA	1. 2. 4A. a	and 4B)			4A. and 4B)
Saturati	on (A3)		Salt Crust	(B11)	,			Drainage Patterns (B10)
Water M	larks (B1)		Aquatic In	vertebrate	s (B13)			Drv-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized I	Rhizosphe	res along	Living Roc	ots (C3)	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	d Iron (C4	+)	· /	Shallow Aguitard (D3)
Iron Dep	oosits (B5)		Recent Iro	on Reducti	on in Tille	, d Soils (C6	3)	FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundati	on Visible on Aerial I	magery (B7) Other (Ex	plain in Re	marks)		,	Frost-Heave Hummocks (D7)
Sparsel	v Vegetated Concave	Surface (B	8)		,			
Field Obser	vations:	· · · · · · · · · · · · · · · · · · ·	- /					
Surface Wat	er Present? Y	es N	o 🗸 Depth (in	ches):				
Water Table	Present? Y	es N	Depth (in	ches):		_		
Saturation P	resent? V	es N	lo ✓ Depth (in	ches):			and Hydrol	ogy Present? Yes No
(includes ca	pillary fringe)	cs N		ches)			and figuron	
Describe Re	corded Data (stream	gauge, mor	nitoring well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								
Data point lo	ocated in an upland h	orse pasture	e, no hydrology ind	icators we	re observe	ed. Does n	ot meet the	criteria for wetland hydrology.

Project/Site: Peak Ranch Resource	City/County: S	ummit County	Sampling Date: 8/29/2018
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-U1
Investigator(s): K. Medash	Section, Towns	ship, Range: Section 20, Townshi	p 3 South, Range 78 West
Landform (hillslope, terrace, etc.): <u>Hillslope</u>	Local relief (co	ncave, convex, none): <u>None</u>	Slope (%): <u>2-3%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	.776006° N	Long: <u>-106.153965° W</u>	Datum: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI classific	ation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	_ No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? NO	Are "Normal Circumstances" p	oresent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NC	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling p	ooint locations, transects	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ✓ No Yes No ✓ Yes No ✓	Is the Sampled Area within a Wetland?	Yes	No
Remarks:				

Upland data point located in an open meadow in horse pasture. This area exhibits a dominance of hydrophytic vegetation; however, underlying hydric soils were not present therefore has been considered upland.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4.				()
		= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)				
1.				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
2				OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5				FACIL species x 4 =
		= Total Co	ver	
Herb Stratum (Plot size:)				
1. Alopecurus pratensis		Yes	FAC	Column Totals: (A) (B)
2. Juncus balticus	40	Yes	FACW	Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4.				1 - Ranid Test for Hydronbytic Vegetation
5				
6				$\mathbf{\underline{v}}$ 2 - Dominance results >50%
o				3 - Prevalence Index is ≤3.0
7				4 - Morphological Adaptations ¹ (Provide supporting
8				
9				5 - Wetland Non-Vascular Plants
10				Problematic Hydrophytic Vegetation' (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
	90%	= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		-		
1				Hydrophytic
2.				Vegetation
		= Total Co		Present? Yes <u>Y</u> No
% Bare Ground in Herb Stratum ^{10%}		<u> </u>		
Remarks:				1

Vegetation community comprises a dominance of hydrophytic species; however, this is common in this area and underlying hydric soils are not present therefore this area has been considered upland. Bare ground consists of exposed surface soil. Meets the criteria for hydrophytic vegetation.

(inches)	Color (moist)	%	Color (moist)	<u>% realure</u>	Tvpe ¹	1 oc^2	Texture	Remarks
)-8	10YR 3/3	100%					Silt loam	Romano
3-20	10YR 4/3	95%	7.5YR 4/4	5%	С	М	Silty clay loam	Faint concentrations
ype: C=C	Concentration, D=Dep	letion, RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains. ² Loo	cation: PL=Pore Lining, M=Matrix.
Histoso			Sandy Redox (SS)	eu.)			m Muck (A10)
Histic F	ninedon (A2)		Stripped Matrix	(S6)			2 ci	Parent Material (TF2)
Black H	listic (A3)		Loamv Muckv	Mineral (F	1) (excep	t MLRA 1)	Ver	v Shallow Dark Surface (TF12)
Hydrog	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	<u>2)</u>	- ,	Oth	er (Explain in Remarks)
_ Deplete	d Below Dark Surfac	e (A11)	Depleted Matri	x (F3)	,			
Thick D	ark Surface (A12)		Redox Dark Su	urface (F6))		³ Indicato	ors of hydrophytic vegetation and
_ Sandy I	Mucky Mineral (S1)		Depleted Dark	Surface (F	-7)		wetla	nd hydrology must be present,
Sandy (Gleved Matrix (S4)		Podov Doprog	Diana (EQ)			unlos	s disturbed or problematic
_ canay			Redux Depres	SIONS (FO)			unica	
estrictive	Layer (if present):			SIONS (FO)				
estrictive	Layer (if present):							
Restrictive Type: Depth (ir	Layer (if present):						Hydric Soil	Present? Yes No
Restrictive Type: Depth (ir Remarks:	Layer (if present):	ver in the r	Redux Depres		colored w	ith faint rea	Hydric Soil	Present? Yes No
Lestrictive Type: Depth (ir Remarks: edox conce milar lands	Layer (if present): Inches): entrations present low cape position as adja DGY	ver in the p acent wet r	Redux Depres	coil is light atic Reso	colored w urce A). D	ith faint ree oes not me	dox concentrati	Present? Yes No
Arright Control of the sector	Layer (if present): aches): entrations present low cape position as adja DGY vdrology Indicators:	ver in the p acent wet r	profile, however the s	soil is light atic Reso	colored w urce A). D	ith faint rea oes not ma	dinee Hydric Soil dox concentrati	Present? Yes No
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estrictive Type: Depth (ir emarks: edox conce milar lands //DROLC //etland Hy rimary Indi Surface High W Saturati Water M Sedime Drift De	Layer (if present): Layer (if present): Inches): Inches:	ver in the p acent wet r		initis light atic Resort ly) anned Leav 1, 2, 4A, a c (B11) avertebrate Sulfide O Rhizosphe	colored w urce A). D res (B9) (e and 4B) es (B13) dor (C1) eres along	ith faint recoes not me	Hydric Soil dox concentrati eet the criteria f	Present? Yes No ions likely due to close promixity and for hydric soil. <u>Indary Indicators (2 or more required)</u> Vater-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Seomorphic Position (D2)
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	Layer (if present): Layer (if present): Inches):	ver in the p acent wet r one require	d; check all that app 	ly) anined Leav 1, 2, 4A , a (B11) vertebrate Sulfide O Rhizosphe of Reduce of Reduce plain in Re	colored w urce A). D res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C4 ion in Tille I Plants (D emarks)	ith faint recoes not me oes not me except Living Roo 4) ed Soils (Co 01) (LRR A	Hydric Soil dox concentrati dox concentrati dox concentrati Secon	Present? Yes No tions likely due to close promixity and for hydric soil. mdary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) taturation Visible on Aerial Imagery (C Seomorphic Position (D2) Shallow Aquitard (D3) AC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) frost-Heave Hummocks (D7)
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Remarks:

Data point located in an upland meadow adjacent to PEM wet meadow habitat (Aquatic Resource A). No hydrology indicators were observed. Does not meet the criteria for wetland hydrology.

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

(includes capillary fringe)

Project/Site: Peak Ranch Resource	City/C	ounty: Summit Count	ty	Sampling D	Date: 8/29/2018
Applicant/Owner: Peak Materials			State: CO	_ Sampling P	oint: DP-U2
Investigator(s): K. Medash	Sectio	n, Township, Range:	Section 20, Towns	hip 3 South, Ra	ange 78 West
Landform (hillslope, terrace, etc.): Hillslope	Local	relief (concave, conv	vex, none): <u>None</u>		_ Slope (%): <u>0-1%</u>
Subregion (LRR): Rock Mountain Range and Forest F	legion (LRR E) Lat: <u>39.778132</u>	° N Lo	ong: <u>-106.158260° V</u>	V	Datum: NAD83
Soil Map Unit Name: Handran gravelly loam, 0 to	3 percent slopes		NWI classif	fication: PEM1	IC
Are climatic / hydrologic conditions on the site ty	pical for this time of year? Ye	es 🖌 No	(If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrolog	y significantly disturb	ed? NO Are "Nor	mal Circumstances"	' present? Ye	es 🖌 No
Are Vegetation, Soil, or Hydrolog	y naturally problema	ic? NO (If neede	ed, explain any answ	ers in Remark	(S.)
SUMMARY OF FINDINGS – Attach s	ite map showing sam	pling point loca	ations, transect	s, importa	nt features, etc.
Hydrophytic Vegetation Present? Yes	No				
Hydric Soil Present? Yes	No	Is the Sampled Are	ea	Na	1
Wetland Hydrology Present? Yes	No <u>✓</u>	within a Wetland?	Yes	NO	<u>v</u>
Remarks:					

Upland data point in horse pasture within the northwest portion of the survey area.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2.				
3				Total Number of Dominant
3				Species Across All Strata (B)
4				Percent of Dominant Species
		= Total Co	ver	That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:)	10	Vee		Prevalence Index worksheet:
	10	res		Total % Cover of Multiply by
2. Ericameria nauseosa		Yes	UPL	
3.				
4				FACW species x 2 =
5				FAC species x 3 =
J	20%			FACU species x 4 =
Herb Stratum (Plot size:	2070	= 1 otal Co	ver	UPL species x 5 =
Bromus marginatus	50	Yes	UPI	Column Totals: (A) (B)
L. <u>Francisco environne en</u>		No		
				Prevalence Index = B/A =
3. Potentilla diversitolia		No		Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6.				$3 - \text{Prevalence Index is } \leq 30^1$
7				
8				 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11	·			¹ Indicators of hydric soil and wetland hydrology must
11	70%			be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	1070	= Total Cov	/er	
l	·			Hydrophytic
2				Present? Yes No
20%		= Total Cov	/er	
% Bare Ground in Herb Stratum 30%				
Remarks:				

Vegetation was mostly overgrazed, dead grass species assumed to be bromus species. Some small 1-2' high shrub species observed. bare ground was entirely exposed surface soil. Does not meet the criteria for hydrophytic vegetation.

Profile Description: (Describe to the dept	th needed to docur	nent the i	ndicator	or confirn	n the absen	ce of indicators.)
Depth Matrix	Redo	x Feature	S			
(inches) Color (moist) %	Color (moist)	%	Type'	_Loc ²	Texture	Remarks
<u>0-20</u> <u>10YR 4/3</u> <u>100%</u>					Silt loam	
		·				
					-	
	-					
		·				
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS	S=Covered	d or Coate	d Sand G	rains. ²	Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless other	wise not	ed.)		Indic	ators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)			2	cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix	(S6)			F	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Muc	/lineral (F	1) (except	MLRA 1)	\	/ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed	Matrix (F2)		(Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix	: (F3)			3	
Thick Dark Surface (A12)	Redox Dark Su	rface (F6)			°Indic	ators of hydrophytic vegetation and
Sandy Mucky Mineral (ST)	Depleted Dark :	Surface (F	7)		We	etiand hydrology must be present,
Postrictive Laver (if present):	Redux Depress				u	
Type.						
Depth (Inches):					Hydric S	oli Present? Yes No
Remarks:						
Soils were very dry, light-colored, and compa	acted throughout the	profile. D	oes not m	eet the cri	teria for hyd	ric soil.
Soils were very dry, light-colored, and compa	acted throughout the	profile. D	oes not m	eet the cri	teria for hyd	ric soil.
Soils were very dry, light-colored, and compa	acted throughout the	profile. D	oes not m	eet the cri	teria for hyd	ric soil.
Soils were very dry, light-colored, and compa	acted throughout the	profile. De	oes not m	eet the cri	teria for hyd	ric soil.
Soils were very dry, light-colored, and compa	acted throughout the	profile. Do	oes not m	eet the crit	teria for hyd	ric soil.
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators:	acted throughout the	profile. Do	bes not m	eet the crit	teria for hyd	ric soil.
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	acted throughout the	y)	oes (RQ) (o	eet the crit	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u>
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	acted throughout the <u>I; check all that appl</u> Water-Sta	y)	es (B9) (e	eet the crit	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> <u>Water-Stained Leaves (B9) (MLRA 1, 2,</u>
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A2)	acted throughout the d; check all that appl Water-Sta MLRA Solt Cruct	y) (Ref Leav (Ref Leav (Ref Leav	es (B9) (e and 4B)	eet the cri	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> <u>.</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Batterne (B10)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marke (B1)	t; check all that appl Water-Sta MLRA Salt Crust	y) (B11) (restebrate	es (B9) (e and 4B)	eet the cri	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry Socoop Water Table (C2)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sodimart Dependin (P2)	acted throughout the acted through the acted the acted through the acte	y) (B11) vertebrate	es (B9) (e and 4B) s (B13)	eet the cri	teria for hyd <u>Se</u> 	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Soturation Visible on April Imagent (C0)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B2)	I: check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Ovidiaed F	y) (Balance (B11) vertebrate Sulfide Oo	es (B9) (e Ind 4B) s (B13) dor (C1)	xcept	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Commerchic Register (D2)
Soils were very dry, light-colored, and compatible HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	t: check all that appl 	y) ined Leav (B11) vertebrate Sulfide Oo Rhizosphe	es (B9) (e ind 4B) s (B13) dor (C1) res along	eet the crit	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Againard (D2)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	t; check all that appl Water-Sta Water-Sta MLRA Salt Crust Aquatic In Oxidized F Presence	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4	eet the crit	Leria for hyd	 condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Saturation (D2)	t: check all that appl 	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tiller	Living Roc Clipic Colors	teria for hyd	 condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Acted throughout the A: check all that appl Water-Sta MLRA Salt Crust Aquatic In Aquatic In Aquatic In Presence Recent Iro Stunted or	y) ined Leave (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D	Living Roc xcept d Soils (Cf 1) (LRR A	teria for hyd	 <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7	Acted throughout the A: check all that appl Water-Sta MLRA Salt Crust Aquatic In Aquatic In Aquatic In Oxidized F Presence Recent Iro Stunted or 7) Other (Exp	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed olain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along dor in Tiller Plants (D marks)	Living Roo xcept d Soils (C6 1) (LRR A	teria for hyd	 condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Soils were very dry, light-colored, and compatible HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (E	t: check all that appl Water-Sta MLRA Salt Crust Aquatic In Aquatic In Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38)	y) ined Leav (B11) vertebrate Sulfide Oo Rhizosphe of Reduce n Reducti Stressed plain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roo Soils (Ce 1) (LRR A	eteria for hyd	<pre>condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,</pre>
Soils were very dry, light-colored, and compa HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (B Field Observations:	t: check all that appl 	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed blain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc xcept d Soils (Co 1) (LRR A	eria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Soils were very dry, light-colored, and compa	acted throughout the acted through the acte	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed plain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roc xcept d Soils (C6 1) (LRR A	teria for hyd	<pre>ric soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)</pre>
Soils were very dry, light-colored, and compa	Acted throughout the A: check all that appl Water-Sta MLRA Salt Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Stunted or 7) Other (Exp 38) No Depth (in No Depth (in	profile. Do y) ined Leave (B11) vertebrate Sulfide Oc Rhizosphe of Reducti Stressed olain in Re ches): ches):	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks)	Living Roc xcept d Soils (Cf 1) (LRR A	teria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Soils were very dry, light-colored, and compatible HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	t: check all that appl 	y) ned Leav 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed olain in Re ches): ches):	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo xcept d Soils (Ce 1) (LRR A	eria for hyd	<pre>condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) </pre>
Soils were very dry, light-colored, and compatible HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required	acted throughout the acted through the acted	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed blain in Re ches): ches): ches):	es (B9) (e es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks) evious ins	Living Roo xcept d Soils (Ce 1) (LRR A	eteria for hyd	<pre>ric soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ogy Present? Yes No</pre>
Soils were very dry, light-colored, and compa	acted throughout the a: check all that appl	y) ined Leav (B11) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Stressed olain in Re ches): ches): ches): ohotos, pr	es (B9) (e and 4B) s (B13) dor (C1) res along d Iron (C4 on in Tilled Plants (D marks) evious ins	Living Roc xcept d Soils (Cf 1) (LRR A Wetl pections),	eteria for hyd	ric soil. <u>condary Indicators (2 or more required)</u> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ogy Present? Yes No
Soils were very dry, light-colored, and compa	Acted throughout the A: check all that appl 	y) ined Leave (B11) vertebrate Sulfide Oc Rhizosphe of Reducti Stressed olain in Re ches): ches): ches):	es (B9) (e and 4B) s (B13) dor (C1) res along dor (Living Roc xcept d Soils (Cf 1) (LRR A Wetl pections),	teria for hyd	ric soil.

Project/Site: Peak Ranch Resource	City/County: Sur	mmit County		Sampling Date:	8/29/2018
Applicant/Owner: Peak Materials			State: CO	Sampling Point:	DP-U3
Investigator(s): K. Medash	Section, Townsh	nip, Range: _	Section 20, Townshi	ip 3 South, Range	78 West
Landform (hillslope, terrace, etc.): Hillslope	Local relief (con	icave, conve	ex, none): <u>Concave</u>	Slo	ope (%): <u>3-5%</u>
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	.776449° N	Lon	g: <u>-106.158127° W</u>	Date	um: NAD83
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>			NWI classific	cation: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No	_ (If no, explain in R	Remarks.)	1
Are Vegetation, Soil, or Hydrology significantly	disturbed? NO	Are "Norm	al Circumstances" p	oresent? Yes <u></u>	No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	(If needed	, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	g sampling po	oint locat	ions, transects	, important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>✓</u> No <u>✓</u> No <u>✓</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

Upland data point in a upland ditch, the ditch appears to have used in the past for agriculture but has since been unused and fragmented by a farm road with no culvert. No indicators of OHWM and/or regular flow observed.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2.				
3				I otal Number of Dominant Species Across All Strata: 4 (B)
	·			
4	·			Percent of Dominant Species
Conling/Chrub Stratum (Plat aiza:	·	= Total Co	ver	That Are OBL, FACW, or FAC: 0% (A/B)
<u>Sapling/Sillub Silatum</u> (Flot Size)	30	Vec	IIDI	Prevalence Index worksheet:
		<u> </u>		Total % Cover of: Multiply by:
2. Ericameria nauseosa	10	res		OBL species x 1 =
3				
4				
5.				FAC species x 3 =
	40%	= Total Co	vor	FACU species x 4 =
Herb Stratum (Plot size:)				UPL species x 5 =
1. Bromus marginatus	30	Yes	UPL	Column Totals: (A) (B)
2. Festuca saximontana	10	Yes	UPL	Dravalance Index - P/A -
3. Achillea millefolium	5	No	FACU	Hydrophytic Vegetation Indicators:
4. Erigeron caespitosus	5	No	UPL	1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6.				$3 - $ Prevalence Index is $< 30^{1}$
7				4. Marrielanical Adaptations ¹ (Dravide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
11:	50%	Tatal Oa		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	0070		/er	
l	·			Hydrophytic
2	·			Present? Yes No
0/ David Contraction 50%		= Total Cov	/er	
% Bare Ground in Herb Stratum				

Remarks:

Vegetation community is representative of the entire upland ditch. Bare ground comprises exposed soil/rock. Does not meet the criteria for hydrophytic vegetation.

		•			
Depth (inchos)	Matrix	0/	Redox Features	Toxturo	Pomarka
		100%		Gravelly loam	Remains
0-12	1011(4/3				
	ncontration D-Don	lotion DM-I	Poducod Matrix, CS=Covered or Coated Sand G	$\frac{1}{2}$	ation: PL-Poro Lining M-Matrix
lydric Soil I	ndicators: (Applic	able to all I	RRs unless otherwise noted)		rs for Problematic Hydric Soils ³
Histocol			Sandy Podox (S5)	2 or	n Muck (A10)
Histic En	inedon (A2)	-	Stripped Matrix (S6)	2 Ci Rec	Parent Material (TE2)
Black His	stic (A3)	-	Loamy Mucky Mineral (F1) (except MLRA 1) Ver	v Shallow Dark Surface (TE12)
Hydroge	n Sulfide (A4)	-	Loamy Gleved Matrix (F2)	Oth	er (Explain in Remarks)
Depleted	Below Dark Surfac	e (A11)	Depleted Matrix (F3)		, i ,
Thick Da	rk Surface (A12)	_	Redox Dark Surface (F6)	³ Indicato	ors of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)	_	Depleted Dark Surface (F7)	wetla	nd hydrology must be present,
Sandy G	leyed Matrix (S4)	-	Redox Depressions (F8)	unles	s disturbed or problematic.
Restrictive L	ayer (if present):				
Type Coa	arse Rock Fragment	S			
.,,,,					
Depth (inc	:hes):			Hydric Soil	Present? Yes No
Depth (inc Remarks:	hes):			Hydric Soil	Present? Yes No
Depth (inc Remarks: coils were loc	thes):	d with gravel	s. Coarse rock fragments refusal at 12"+. Does i	Hydric Soil	Present? Yes No
Depth (inc Remarks: soils were loc	thes):	d with gravel	s. Coarse rock fragments refusal at 12"+. Does r	Hydric Soil	Present? Yes No
Depth (inc Remarks: coils were loc	thes):	d with gravel	s. Coarse rock fragments refusal at 12"+. Does i	Hydric Soil	Present? Yes No
Depth (inc Remarks: oils were loc	bes):	d with gravel	s. Coarse rock fragments refusal at 12"+. Does r	Hydric Soil	Present? Yes No
Depth (inc Remarks: oils were loc YDROLOO	thes): use and unstructured GY Irology Indicators:	d with gravel	s. Coarse rock fragments refusal at 12"+. Does i	Hydric Soil	Present? Yes No
Depth (inc Remarks: oils were loc YDROLO(Vetland Hyd	ches): ose and unstructured GY Irology Indicators:	d with gravel	s. Coarse rock fragments refusal at 12"+. Does i	Hydric Soil	Present? Yes No
Depth (inc Remarks: oils were loc YDROLO(Vetland Hyd Primary Indic	ches): ose and unstructured GY Irology Indicators: ators (minimum of c	d with gravel	s. Coarse rock fragments refusal at 12"+. Does n check all that apply)	Hydric Soil	Present? Yes No
Depth (inc emarks: oils were loc YDROLOO Vetland Hyd rimary Indic Surface V	Ches): Dese and unstructured GY Irology Indicators: ators (minimum of c Water (A1) tes Table (A2)	d with gravel	s. Coarse rock fragments refusal at 12"+. Does not see the second	Hydric Soil	Present? Yes No reria for hydric soil. <u>Indary Indicators (2 or more required)</u> Vater-Stained Leaves (B9) (MLRA 1, 2,
Depth (inc Remarks: oils were loc YDROLOO Vetland Hyd Primary Indic Surface V High Wat	ches): ose and unstructured GY Irology Indicators: ators (minimum of c Water (A1) ter Table (A2)	d with gravel	check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Hydric Soil	Present? Yes No teria for hydric soil. hdary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Variances Datases (P40)
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Remarks:

Data point located in an upland ditch, no hydrology indicators, OHWM, or indicators of regular flow observed. Does not meet the criteria for wetland hydrology.

Project/Site: Peak Ranch Resource	City/	_ City/County: <u>Summit County</u> Sampling Date: <u>8/</u>			2018	
Applicant/Owner: Peak Materials			State: CO	Sampling Point: DP-U	J4	
Investigator(s): <u>K. Medash</u>	Sect	Section, Township, Range: Section 20, Township 3 South, Range 78 West				
Landform (hillslope, terrace, etc.): Hillslope	Loca	al relief (concave, co	nvex, none): <u>None</u>	Slope (%	6): <u>1-2%</u>	
Subregion (LRR): Rock Mountain Range and Forest Regio	on (LRR E) Lat: <u>39.7727</u> 4	40° N	Long: -106.155378° \	N Datum: N	IAD83	
Soil Map Unit Name: Handran gravelly loam, 0 to 3 p	percent slopes		NWI classi	fication: PEM1C		
Are climatic / hydrologic conditions on the site typica Are Vegetation, Soil, or Hydrology _ Are Vegetation, Soil, or Hydrology _	al for this time of year? ` significantly distu naturally problem	Yes <u>V</u> No Irbed? NO Are "No natic? NO (If need	(If no, explain in ormal Circumstances ded, explain any ansv	Remarks.) " present? Yes <u>/</u> vers in Remarks.)	No	
SUMMARY OF FINDINGS – Attach site	map showing sar	npling point loc	ations, transec	ts, important featu	res, etc.	
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No_✓ No_✓ No_✓	Is the Sampled A within a Wetland	rea ? Yes	No 🖌		

Upland data point in horse pasture within the southwest portion of the survey area.

VEGETATION - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 0 (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>3</u> (B)	
4				Percent of Dominant Species	
		= Total Co	ver	That Are OBL, FACW, or FAC: 0% (A/B))
Sapling/Shrub Stratum (Plot size:)		.,		Prevalence Index worksheet:	
1. Artemisia tridentata		Yes		Total % Cover of: Multiply by:	
2				$\frac{1}{\text{OBL species}} = \frac{1}{\text{x 1}} = \frac{1}{\text{x 1}}$	
3					
4					
5				FAC species x 3 =	
	10%	= Total Co	ver	FACU species x 4 =	
Herb Stratum (Plot size:)				UPL species x 5 =	
1. Bromus marginatus	30	Yes	UPL	Column Totals: (A) (B)	
2. Potentilla diversifolia	15	Yes	UPL	Prevalence Index = $B/A =$	
3. Festuca saximontana	10	No	UPL	Hydrophytic Vegetation Indicators:	
4. Descurainia incana	5	No	FACU	1 - Ranid Test for Hydrophytic Vegetation	
5. Alopecurus pratensis	5	No	FAC	2 - Dominance Test is >50%	
6				$\frac{1}{2} = 2 = 500 \text{ minimum certest is } > 50\%$	
7				$ - 5 - Frevalence index is \ge 5.0 $	
8				data in Remarks or on a separate sheet)	g
9				5 - Wetland Non-Vascular Plants ¹	
10				Problematic Hydrophytic Vegetation ¹ (Explain)	
11				¹ Indicators of hydric soil and wetland hydrology must	
····	65%	= Total Cov		be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)		- 10tai C01			
1.				Hydrophytic	
2				Vegetation	
		= Total Cov		Present? Yes No V	
% Bare Ground in Herb Stratum 35%		- 10tai 001			
Remarks:				1	

Remarks:

Vegetation community is typical of pasture lands in the southwest portion of the survey area. Bare gound is comprised of exposed surface soil. Does not meet the criteria for hydrophytic vegetation.

Depth	Matrix		Red	dox Feature	S	2				
(inches) <u>C</u>	olor (moist)		Color (moist)	%	Type'	Loc ²	Text	ure	Remarks	
0-14 <u>10Y</u>	′R 4/3					·	Silt loa	am		
					·	·		<u> </u>		
					·					
								<u> </u>		
					·					
ype: C=Concent	tration, D=Depl	etion, RM=F	Reduced Matrix, (CS=Covered	d or Coate	ed Sand Gra	ains.		ation: PL=Pore Lining, M=Matri	(. 3.
	ators: (Applica		RRS, unless our		ea.)		In		S for Problematic Hydric Solis	•
_ HISTOSOL (AT)	n (A2)	_	Sandy Redox	(55) iv (86)				_ Z Cm	Nuck (ATU) Derent Meterial (TE2)	
_ HISUC Epipedo) (AZ)	_	Surpped Muck	(SO) Minoral (E	1) (oxcon			_ Keu	Shallow Dark Surface (TE12)	
– Black Histic (A	fide (Δ4)	-	Loamy Gleve	d Matrix (E2				_ very Othe	r (Explain in Remarks)	
_ Tryatogen Sun Depleted Belo	w Dark Surface	- - (Δ11)	Depleted Mat	u Matrix (1 2 riv (E3)	.)					
Thick Dark Su	inface (A12)	·(AII) _	Depleted Mat	Surface (F6)			³ Ir	ndicator	rs of hydrophytic vegetation and	
Sandy Mucky	Mineral (S1)	_	Depleted Dar	k Surface (F	7)			wetlar	d hydrology must be present	
		_			• ,					
Sandy Gleved	Matrix (S4)		Redox Depre	ssions (F8)				unless	s disturbed or problematic.	
Sandy Gleyed	(if present):		Redox Depre	ssions (F8)				unless	s disturbed or problematic.	
_ Sandy Gleyed estrictive Layer Type: <u>Coarse</u> F	l Matrix (S4) (if present): Rock Fragments		Redox Depre	ssions (F8)				unless	s disturbed or problematic.	
Sandy Gleyed Sestrictive Layer Type: <u>Coarse F</u> Depth (inches):	Matrix (S4) (if present): Rock Fragments 10"+		Redox Depre	ssions (F8)			Hydri	unless c Soil I	s disturbed or problematic. Present? Yes No _	✓
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks:	Matrix (S4) (if present): Rock Fragments 10"+		Redox Depre	ssions (F8)			Hydri	unless c Soil I	s disturbed or problematic. Present? Yes No _	√
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, ligh	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c		Redox Depre	ssions (F8)	sal at 10"-	+. Does not	Hydri meet th	unless c Soil I	s disturbed or problematic. Present? Yes No _	√
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, light	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c	; ; compacted v	Redox Depre	ssions (F8) rament refu	sal at 10"-	+. Does not	Hydri meet th	unless c Soil I ne criter	s disturbed or problematic. Present? Yes No _	✓
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, light	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c	s compacted v	Redox Depre	ssions (F8)	sal at 10"-	+. Does not	Hydri meet th	unless c Soil I ne criter	s disturbed or problematic. Present? Yes No	✓
Sandy Gleyed estrictive Layer Type: <u>Coarse F</u> Depth (inches): temarks: bils were dry, light	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c	s compacted v	Redox Depre	ssions (F8)	sal at 10"-	+. Does not	Hydri meet th	unless c Soil I	s disturbed or problematic. Present? Yes No _	✓
Sandy Gleyed estrictive Layer Type: Coarse F Depth (inches): emarks: bils were dry, light /DROLOGY	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c	s compacted v	Redox Depre	ssions (F8)	sal at 10"-	+. Does not	Hydri meet th	unless c Soil I ne criter	s disturbed or problematic. Present? Yes No	√
Sandy Gleyed estrictive Layer Type: Coarse F Depth (inches): emarks: bils were dry, ligh YDROLOGY Vetland Hydrolog	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c	compacted v	Redox Depre	rament refu	sal at 10"-	+. Does not	Hydri meet th	c Soil I	s disturbed or problematic. Present? Yes No ria for hydric soil.	✓
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, ligh YDROLOGY Vetland Hydrolog Primary Indicators	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or	s compacted v	Redox Depre	rament refu	sal at 10"-	+. Does not	Hydri meet th	c Soil I ne criter	s disturbed or problematic. Present? Yes No _ ria for hydric soil. dary Indicators (2 or more requiners of the state of the st	✓ ed)
Sandy Gleyed testrictive Layer Type: Coarse F Depth (inches): temarks: bils were dry, ligh //DROLOGY /etland Hydrolog rimary Indicators Surface Water	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1)	s compacted v	Redox Depre	rament refu ply)	sal at 10"- es (B9) (e	+. Does not	Hydri meet th	c Soil I ne criter <u>Secon</u>	s disturbed or problematic. Present? Yes No ria for hydric soil. dary Indicators (2 or more requinater-Stained Leaves (B9) (MLR.	<u>ed)</u>
Sandy Gleyed testrictive Layer Type: Coarse F Depth (inches): temarks: bils were dry, ligh /DROLOGY /etland Hydrolog rimary Indicators Surface Water High Water Ta	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2)	compacted v	Redox Depre	rament refu ply) tained Leav A 1, 2, 4A, a	sal at 10"- es (B9) (e and 4B)	+. Does not	Hydri meet th	c Soil I le criter	s disturbed or problematic. Present? Yes No ria for hydric soil. dary Indicators (2 or more requinater-Stained Leaves (B9) (MLR. 4A, and 4B)	<u>√</u> <u>ed)</u> \ 1 , :
Sandy Gleyed lestrictive Layer Type: Coarse F Depth (inches): lemarks: bils were dry, ligh // // // // // // // // // /	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2) 3)	compacted v	Redox Depre	ssions (F8) rament refu ply) tained Leav A 1, 2, 4A, a st (B11)	sal at 10"- es (B9) (e and 4B)	+. Does not	Hydri meet th	<u>c Soil I</u> e criter <u>Secon</u> W	A gradient of the second	✓ ed) A 1, 2
Sandy Gleyed lestrictive Layer Type: Coarse F Depth (inches): lemarks: bils were dry, ligh // // // // // // // // // /	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2) B1) I I I I I I I I I I I I I I I I I I I	compacted v	Redox Depre	ssions (F8) rament refu ply) tained Leav A 1, 2, 4A, a st (B11) Invertebrate	sal at 10"- es (B9) (e and 4B) is (B13)	+. Does not	Hydri meet th	<u>c Soil I</u> e criter <u>Secon</u> W Dr Dr	s disturbed or problematic. Present? Yes No ria for hydric soil. dary Indicators (2 or more requinater-Stained Leaves (B9) (MLR. 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)	✓ ed) A 1, 3
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, ligh YDROLOGY Yetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2)	compacted v	Redox Depre	ssions (F8) rament refu ply) tained Leav A 1, 2, 4A, a st (B11) Invertebrate n Sulfide Oo	sal at 10"- es (B9) (e and 4B) s (B13) dor (C1)	+. Does not	Hydri meet th	c Soil I e criter Secon W Dr Dr Sa	s disturbed or problematic. Present? Yes No ria for hydric soil. dary Indicators (2 or more requires ater-Stained Leaves (B9) (MLR. 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Image	✓ ed) ▲ 1,
Sandy Gleyed lestrictive Layer Type: Coarse F Depth (inches): lemarks: bils were dry, ligh // // // // // // // // // /	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3)	compacted v	Redox Depre	ssions (F8) rament refu ply) tained Leav A 1, 2, 4A, a st (B11) Invertebrate n Sulfide Oo I Rhizosphe	sal at 10"- es (B9) (e and 4B) s (B13) dor (C1) res along	+. Does not	Hydri meet th	c Soil I e criter <u>Secon</u> W Dr Dr Sa Ge	s disturbed or problematic. Present? Yes No ria for hydric soil. dary Indicators (2 or more requinater-Stained Leaves (B9) (MLR. 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Image eomorphic Position (D2)	ed) A 1,
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, ligh YDROLOGY Yetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and of gy Indicators: (minimum of or r (A1) able (A2) 3) B1) posits (B2) (B3) crust (B4)		Redox Depre	rament refu rament refu tained Leav A 1, 2, 4A, a st (B11) Invertebrate n Sulfide Oo I Rhizosphe e of Reduce	sal at 10"- es (B9) (e and 4B) es (B13) dor (C1) res along ed Iron (C4	+. Does not •xcept Living Root: 4)	Hydri meet th	c Soil I e criter <u>Secon</u> W Dr Dr C Sa Ge St	s disturbed or problematic. Present? Yes No _ ria for hydric soil. dary Indicators (2 or more requinater-Stained Leaves (B9) (MLR. 4A, and 4B) rainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Image eomorphic Position (D2) nallow Aquitard (D3)	✓ ed) A 1,
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: oils were dry, ligh YDROLOGY Yetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Sediment Dep Drift Deposits Algal Mat or C Iron Deposits	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) crust (B4) (B5)	s compacted v	Redox Depre	ssions (F8) rament refu: ply) tained Leav A 1, 2, 4A, a st (B11) Invertebrate n Sulfide Oo I Rhizosphe e of Reduce ron Reducti	es (B9) (e and 4B) es (B13) dor (C1) res along ed Iron (C4 on in Tille	+. Does not •xcept Living Root: 4) d Soils (C6)	Hydri meet th	unless c Soil I ne criter Secon	AC-Neutral Test (D5)	 ed) ▲ 1,
Sandy Gleyed Restrictive Layer Type: Coarse F Depth (inches): Remarks: ioils were dry, ligh YDROLOGY YDROLOGY Vetland Hydrolog Primary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Surface Soil C	Matrix (S4) (if present): Rock Fragments 10"+ t-colored, and c gy Indicators: (minimum of or r (A1) able (A2) B1) posits (B2) (B3) crust (B4) (B5) Cracks (B6)	s compacted v	Redox Depre	ssions (F8) rament refu: ply) tained Leav A 1, 2, 4A, a st (B11) Invertebrate n Sulfide Ou I Rhizosphe e of Reduce ron Reducti or Stressed	sal at 10"- es (B9) (e and 4B) es (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D	+. Does not •xcept 4) d Soils (C6) 1) (LRR A)	Hydri meet th	c Soil I ne criter Secon Dr Dr Dr Dr Sa Ge Sr FA Ra	s disturbed or problematic. Present? Yes No ria for hydric soil. dary Indicators (2 or more requinater-Stained Leaves (B9) (MLR. 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Image eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)	✓ ed) A 1, Ty (0)

	nai inagery (Dr			
Sparsely Vegetated Con	cave Surface (E	B8)		
Field Observations:				
Surface Water Present?	Yes N	No Depth (inches):		
Water Table Present?	Yes N	No Depth (inches):		,
Saturation Present? (includes capillary fringe)	Yes N	No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No _	
Describe Recorded Data (stre	eam gauge, mo	onitoring well, aerial photos, previous inspect	ions), if available:	
Remarks:				
Data point located in an upla	nd pasture, no ł	hydrology indicators observed. Does not mee	et the criteria for wetland hydrology.	

Project/Site: Peak Ranch Resource	City/Co	City/County: Summit County Sam			8/29/2018	
Applicant/Owner: Peak Materials			State: CO	Sampling Point	DP-U5	
Investigator(s): <u>K. Medash</u>	Sectior	Section, Township, Range: Section 20, Township 3 South, Range 78 West				
Landform (hillslope, terrace, etc.): Hillslope	Local	elief (concave, con	vex, none): <u>None</u>	SI	Slope (%): <u>1-2%</u>	
Subregion (LRR):	^{E)} Lat: <u>39.772730</u>	'N Lo	ong: <u>-106.151829°</u> \	N Dat	um: NAD83	
Soil Map Unit Name: Handran gravelly loam, 0 to 3 percent	slopes		NWI classi	fication: PEM1C		
Are climatic / hydrologic conditions on the site typical for th Are Vegetation , Soil , or Hydrology	is time of year? Ye significantly disturb	s <u>/</u> No ed? NO Are "No	(If no, explain in rmal Circumstances	Remarks.) " present? Yes	✓ No	
Are Vegetation, Soil, or Hydrology	naturally problemat	c? NO (If neede	ed, explain any ansv	vers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing sam	oling point loca	ations, transec	ts, important f	eatures, etc.	
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N	lo <u>√</u> lo <u>√</u>	Is the Sampled Ar within a Wetland?	rea Yes	No	_	
Remarks:						

Upland data point located in horse pasture in the southeast portion of the survey area.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species That Are OBL EACW or EAC: 0 (A)
·				
2				Total Number of Dominant
3				Species Across All Strata: <u>5</u> (B)
4				Percent of Dominant Species
		= Total Co	ver	That Are OBL, FACW, or FAC: 0% (A/B)
Sapling/Shrub Stratum (Plot size:)	40	Vee		Prevalence Index worksheet:
1. Ericameria nauseosa	- 40	res		Total % Cover of Multiply by
2. <u>Artemisia tridentata</u>		Yes		$\frac{1}{1} \frac{1}{1} \frac{1}$
3				
4				FACVV species
5.				FAC species x 3 =
	60%	= Total Co	ver	FACU species x 4 =
Herb Stratum (Plot size:)		. 10101-00		UPL species x 5 =
1. Festuca saximontana	30	Yes	UPL	Column Totals: (A) (B)
2. Bromus marginatus	20	Yes	UPL	Drevelance Index - D/A -
3 Achillea millefolium	10	Yes	FACU	Hydrophytic Vegetation Indicators:
4				1 Denid Test for Ludrenby tic Verstation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ⁺
7				4 - Morphological Adaptations ¹ (Provide supporting
0				5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic V/cgetation ¹ (Evplain)
10				Problematic Hydrophytic Vegetation (Explain)
11				he present unless disturbed or problematic
	60%	= Total Cov	/er	
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
% Bare Ground in Herb Stratum <u>40%</u>		= Total Cov	/er	
Remarks:				

Vegetation community is representative of the southeast portion of the survey area. This area contains the most concentrated small shrub community of the entire survey area. Bare ground is comprised of exposed surface soil and rock. Does not meet the criteria for hydrophytic vegetation.

Depth	Matrix	0/	Redox	<u>Features</u>	T	1.0.02	Tautura	Demerke
(incnes)		<u>%</u>	Color (moist)	<u>%</u>	Туре	LOC		Remarks
0-12	10YR 4/3	100%					Gravelly silt loam	
		<u> </u>						
		- <u> </u>						
		· ·				<u> </u>		
				·		<u> </u>		
Type: C=C	oncentration D=Den	letion RM=	Reduced Matrix CS	=Covered	or Coate	d Sand Gra	ins ² l (
vdric Soil	Indicators: (Applic	able to all I	_RRs. unless other	wise noted	d.)		Indicat	tors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S	(5)	,		20	em Muck (A10)
Histic E	pipedon (A2)	•	Stripped Matrix	(S6)			Re	ed Parent Material (TF2)
Black H	istic (A3)		Loamy Mucky M	lineral (F1)) (except	MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed N	Aatrix (F2)		,	Ot	her (Explain in Remarks)
Deplete	d Below Dark Surfac	e (A11)	Depleted Matrix	(F3)				
Thick Da	ark Surface (A12)		Redox Dark Sur	face (F6)			³ Indicat	tors of hydrophytic vegetation and
Sandy N	Aucky Mineral (S1)		Depleted Dark S	Surface (F7	7)		wetl	and hydrology must be present,
Sandy C	Gleyed Matrix (S4)	-	Redox Depressi	ons (F8)			unle	ess disturbed or problematic.
Sandy G	Bleyed Matrix (S4) Layer (if present):		Redox Depressi	ons (F8)			unle	ess disturbed or problematic.
Sandy C Restrictive Type: <u>Co</u>	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment	s	Redox Depressi	ons (F8)			unle	ess disturbed or problematic.
Sandy C Restrictive Type: <u>Co</u> Depth (in	Gleyed Matrix (S4) Layer (if present): barse Rock Fragment: ches): <u>12"+</u>	S	Redox Depressi	ons (F8)			unle Hydric So	il Present? Yes No
Sandy C Restrictive Type: <u>Cc</u> Depth (in Remarks:	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u>	s	Redox Depressi	ons (F8)			unle Hydric So	il Present? Yes No
Sandy C Restrictive Type: <u>Cc</u> Depth (in Remarks: coils were dr	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> ry and unstructured w	s vith Coarse	Redox Depressi	ons (F8)	Does not	meet the cr	unle Hydric So iteria for hyd	ess disturbed or problematic. Il Present? Yes No
Sandy C Restrictive Type: <u>Cc</u> Depth (in Remarks: oils were dr	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> ry and unstructured w	s vith Coarse	Redox Depressi	ons (F8) Il at 12"+. [Does not	meet the cr	unle Hydric So iteria for hyd	il Present? Yes <u>No</u>
Sandy C Restrictive Type: <u>Cc</u> Depth (in Remarks: bils were dr	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> ry and unstructured w	s vith Coarse	Redox Depressi	ons (F8) I at 12"+. [Does not	meet the cr	unle Hydric So iteria for hyd	il Present? Yes No
Sandy C Restrictive Type: Cc Depth (in Remarks: bils were dr YDROLO	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+ ry and unstructured w GY</u>	s vith Coarse	Redox Depressi	ons (F8) I at 12"+. [Does not	meet the cr	unle Hydric So iteria for hyd	il Present? Yes <u>No</u>
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr /DROLO /etland Hy	Gleyed Matrix (S4) Layer (if present): Darse Rock Fragment: ches): <u>12"+ </u> ry and unstructured w GGY drology Indicators:	s vith Coarse	Redox Depressi	ons (F8) Il at 12"+. [Does not	meet the cr	unle Hydric So iteria for hyd	ass disturbed or problematic. il Present? Yes No dric soil.
Sandy C testrictive Type: <u>Cc</u> Depth (in temarks: bils were dr /DROLO /etland Hy rimary India	Gleyed Matrix (S4) Layer (if present): Darse Rock Fragment: ches): <u>12"+ </u> ry and unstructured w OGY drology Indicators: cators (minimum of c	s vith Coarse	Redox Depressi	ons (F8) Il at 12"+. [Does not	meet the cr	Unle	Il Present? Yes No dric soil.
Sandy C testrictive Type: <u>Cc</u> Depth (in temarks: bils were dr /DROLO /etland Hy rimary India Surface	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+ ry and unstructured w GGY drology Indicators: cators (minimum of c Water (A1)</u>	s vith Coarse	Redox Depressi	ons (F8) Il at 12"+. [/) ned Leaves	Does not	meet the cr	Unle	il Present? Yes No Versent? No No Versent? No Versent? (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr DROLO /etland Hy rimary India Surface High Wa	Gleyed Matrix (S4) Layer (if present): Darse Rock Fragment: ches): <u>12"+</u> Ty and unstructured w OGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2)	s vith Coarse	Redox Depressi	ons (F8) Il at 12"+. [/) ned Leaves	Does not	meet the cr	Unle	ass disturbed or problematic. il Present? Yes No dric soil. ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr bils were dr CDROLO Vetland Hy rimary India Surface High Wa Saturatio	Gleyed Matrix (S4) Layer (if present): barse Rock Fragment: ches): <u>12"+</u> Ty and unstructured w OGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3)	s with Coarse	Redox Depressi	ons (F8) Il at 12"+. [/) ned Leaves I, 2, 4A, ar (B11)	Does not s (B9) (e nd 4B)	meet the cr	Unle	il Present? Yes No dric soil. Dondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Sandy C testrictive Type: <u>Cc</u> Depth (in temarks: bils were dr /DROLO /etland Hy rimary India Surface High Wa Saturatia Water M	Gleyed Matrix (S4) Layer (if present): Layer (if present): Darse Rock Fragment: ches): 12"+ Ty and unstructured w OGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1)	s vith Coarse	Redox Depressi	ons (F8)	Does not s (B9) (e nd 4B)	meet the cr	Unle	il Present? Yes No dric soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Sandy C estrictive Type: Cc Depth (in emarks: bils were dr /DROLO /etland Hy rimary India Surface High Wa Saturatia Water M Sediment	Gleyed Matrix (S4) Layer (if present): barse Rock Fragment: ches): <u>12"+</u> ry and unstructured w DGY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	s vith Coarse	Redox Depressi	ons (F8) I at 12"+. [) ned Leaves (B11) ertebrates Sulfide Odd	Does not s (B9) (e nd 4B) • (B13) or (C1)	meet the cr	Unle	il Present? Yes No dric soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS
Sandy C estrictive Type:Cc Depth (in emarks: bils were dr // // // // // // // // // // // // //	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> ry and unstructured w GGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	s vith Coarse	Redox Depressi rock fragment refusa check all that apply Water-Stain MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R	ons (F8) Il at 12"+. [hed Leaves I, 2, 4A, ar (B11) ertebrates Sulfide Odd hizosphere	Does not s (B9) (e nd 4B) · (B13) or (C1) es along	meet the cr	Hydric So iteria for hyd <u>Secc</u> 	il Present? Yes No il Present? Yes No idric soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: oils were dr vils were dr /DROLO /etland Hy rimary India Surface Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia Saturatia	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> ry and unstructured w GGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	s vith Coarse	Redox Depressi rock fragment refusa ; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence co	ons (F8) Il at 12"+. [ned Leaves I, 2, 4A, ar (B11) rertebrates Sulfide Odd hizosphere of Reduced	Does not s (B9) (e n d 4B) (B13) or (C1) es along i Iron (C4	meet the cr xcept	Hydric So iteria for hyd <u>Seco</u> <u>Seco</u> <u>Seco</u>	il Present? Yes No il Present? Yes No chic soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr DROLO (etland Hy rimary India Saturatio Unifa De Saturatio Saturatio Unift De Algal Ma Iron Dep	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> Ty and unstructured w OGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	s with Coarse	Redox Depressi rock fragment refusa ; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror	ons (F8) al at 12"+. [al at 12"+. [bl 2, 4A, ar (B11) ertebrates Sulfide Odd hizosphere of Reduced n Reduction	Does not 5 (B9) (e 10 4B) (B13) or (C1) es along 1 Iron (C4 n in Tillec	meet the cr xcept Living Roots	Hydric So iteria for hyd <u>Secc</u>	il Present? Yes No dric soil. Dondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr bils were dr /DROLO /etland Hy rimary India Surface High Wa Saturatio Saturatio Sedimen Sedimen Sedimen Sedimen Surface Surface	Gleyed Matrix (S4) Layer (if present): barse Rock Fragment: ches): <u>12"+</u> Ty and unstructured w DGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) bosits (B5) Soil Cracks (B6)	s vith Coarse	Redox Depressi rock fragment refusa <u>; check all that apply</u> Water-Stain <u>MLRA 1</u> Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or	ons (F8) al at 12"+. [al at 12"+. [bl constant	Does not s (B9) (e nd 4B) c (B13) or (C1) es along d Iron (C4 n in Tilleo Plants (D	meet the cr xcept Living Roots	Unle	il Present? Yes No dric soil. condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr Drift Dep Cetland Hy rimary India Saturatia Saturatia Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> Ty and unstructured w GGY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial I	s vith Coarse	Redox Depressi rock fragment refusa <u>: check all that apply</u> Water-Stain Salt Crust (Aquatic Inv Aquatic Inv Oxidized R Presence c Recent Iror Stunted or) Other (Exp	ons (F8) I at 12"+. [) ned Leaves (B11) ertebrates Sulfide Odd hizosphered f Reduced n Reduction Stressed F lain in Ren	Does not S (B9) (e nd 4B) (B13) or (C1) es along d Iron (C4 n in Tillec Plants (D narks)	meet the cr xcept Living Roots) d Soils (C6) 1) (LRR A)	Hydric So iteria for hyd Seco s (C3)	il Present? Yes No dric soil. Dradary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sandy C estrictive Type: <u>Cc</u> Depth (in emarks: bils were dr /DROLO /etland Hy rimary India Surface High Wa Saturation Surface High Wa Saturation Surface High Ma Saturation Surface Inon Dep Surface Surface Surface	Gleyed Matrix (S4) Layer (if present): parse Rock Fragment: ches): <u>12"+</u> ry and unstructured w GGY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial I y Vegetated Concave	s vith Coarse one required	Redox Depressi rock fragment refusa rock fragment refusa Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or) Other (Exp 18)	ons (F8) al at 12"+. [al at 12"+. [bl at 12"+. [al at 12"+. [al at 12"+. [al at 12"+. [al at 12"+. [bl at 12"+. [al at 12"+. [bl at 12"+. [al at 12"+. [bl at 12"+.	Does not s (B9) (e nd 4B) or (C1) es along d Iron (C4 n in Tillea Plants (D narks)	xcept Living Roots) d Soils (C6) 1) (LRR A)	Unle	il Present? Yes No dric soil. bridary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sandy C estrictive Type: Cc Depth (in emarks: bils were dr // // // // // // // // // // // // //	Gleyed Matrix (S4) Layer (if present): barse Rock Fragment: ches): <u>12"+</u> ry and unstructured w GGY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) bosits (B5) Soil Cracks (B6) ion Visible on Aerial I y Vegetated Concave vations:	s vith Coarse one required magery (B7 e Surface (E	Redox Depressi rock fragment refusa ; check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Stunted or) Other (Exp 88)	ons (F8) I at 12"+. [) ned Leaves I, 2, 4A, ar (B11) rertebrates Sulfide Odd hizosphere of Reduced n Reduction Stressed F lain in Rem	Does not s (B9) (e nd 4B) (B13) or (C1) es along t Iron (C4 n in Tillec Plants (D narks)	meet the cr xcept Living Roots () d Soils (C6) 1) (LRR A)	Hydric So iteria for hyd Seco s (C3)	il Present? Yes No dric soil. ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Remarks:

Saturation Present? (includes capillary fringe)

Data point located in an upland horse pasture, no hydrology indicators were observed. Does not meet the criteria for wetland hydrology.

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Project/Site: Peak Ranch Resource	City/County: Summit County		_ Sampling Date: 8/29/2018	
Applicant/Owner: Peak Materials		State: CO	Sampling Point: DP-U6	
Investigator(s): K. Medash	Section, Townsh	ip, Range: <u>Section 20, Townshi</u>	o 3 South, Range 78 West	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (con	cave, convex, none): <u>Concave</u>	Slope (%): <u>1-2%</u>	
Subregion (LRR): Rock Mountain Range and Forest Region (LRR E) Lat: 39.	.775366° N	Long: <u>-106.153252° W</u>	Datum: NAD83	
Soil Map Unit Name: <u>Handran gravelly loam, 0 to 3 percent slopes</u>		NWI classific	ation: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌	No (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? NO	Are "Normal Circumstances" p	resent? Yes 🖌 No	
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO	(If needed, explain any answer	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	y sampling po	oint locations, transects	, important features, etc.	

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland?	Yes	No 🖌
Remarks:				

Upland data point located in horse pasture. Data point exhibits hydrophytic vegetation; however, has been considered upland due to lack of hydric soils and wetland hydrology.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 2	(A)
2				Tatal Number of Demission	
3				I otal Number of Dominant Species Across All Strate: 2	(B)
					(B)
4				Percent of Dominant Species	
		= Total Co	over	That Are OBL, FACW, or FAC: 100%	(A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:	
1				Total % Cover of: Multiply by:	
2					-
3.				OBL species x 1 =	-
4				FACW species x 2 =	_
				FAC species x 3 =	_
o				FACU species x 4 =	
Hart Obstature (District)		= Total Co	over	LIPL species x 5 =	-
Herb Stratum (Plot size:)	70	Vee			- (D)
1. Juncus ballicus		res	FACW		_ (D)
2. Alopecurus pratensis		Yes	FAC	Prevalence Index = B/A =	_
3				Hydrophytic Vegetation Indicators:	
4				1 - Rapid Test for Hydrophytic Vegetation	
5.				$\sqrt{2}$ - Dominance Test is >50%	
6				2 Dominance rest is $50%$	
7					
<i>1</i>				4 - Morphological Adaptations' (Provide supplications)	orting
8				E Wetland Nan Vascular Dianta ¹	
9					
10				Problematic Hydrophytic Vegetation (Explain	1)
11				¹ Indicators of hydric soil and wetland hydrology m	iust
	100%	= Total Co	ver	be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)					
1.				Hydrophytic	
2				Vegetation	
<u> </u>		Tatal C		Present? Yes Ves No	
% Bare Ground in Herb Stratum 0%		= I otal Co	ver		
Remarks:				1	
rtomano.					

Hydrophytic vegetation is present; however, the dominant species do not appear to be good indicator species in this area as they are commonly growing in both wetlands and uplands throughout the northeast portion of the survey area. Further, hydric soils and wetland hydrology are not present. Therefore has been considered upland. Meets the criteria for hydrophytic vegetation.

Profile Descriptio	n: (Describe	to the dept	th needed to docun	nent the i	ndicator o	or confirm	n the absence of ind	icators.)	
Depth	Matrix		Redo	x Features	s				
(inches) C	olor (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12 10Y	′R 4/3	100%					Gravelly loam		
·		· ·					·		
		· ·							
		· ·					·		
		· ·					·		
¹ Type: C=Concent	tration D=Dep	letion RM=	Reduced Matrix CS	=Covered	or Coate	d Sand G	rains ² Location	PI =Pore Lining M=	Matrix
Hydric Soil Indica	itors: (Applic	able to all I	LRRs, unless other	wise note	ed.)		Indicators for	Problematic Hydric	Soils ³ :
Histosol (A1)	· · ·		Sandy Redox (S	35)	,		2 cm Muc	(A10)	
Histic Epipedo	n (A2)	-	Stripped Matrix	(S6)			Red Parer	nt Material (TF2)	
Black Histic (A	(3)		Loamv Muckv M	(ineral (F1) (except	MLRA 1)	Verv Shall	ow Dark Surface (TF	12)
Hydrogen Sulf	ide (A4)		Loamy Gleyed I	Matrix (F2)	,	Other (Exp	plain in Remarks)	,
Depleted Belo	w Dark Surface	e (A11)	Depleted Matrix	(F3)	,		、	,	
Thick Dark Su	rface (A12)	. ,	Redox Dark Sur	face (F6)			³ Indicators of h	ydrophytic vegetation	n and
Sandy Mucky	Mineral (S1)		Depleted Dark S	Surface (F	7)		wetland hyd	lrology must be prese	ent,
Sandy Gleyed	Matrix (S4)		Redox Depress	ions (F8)			unless distu	rbed or problematic.	
Restrictive Layer	(if present):								
Туре:									1
Depth (inches):							Hydric Soil Prese	ent? Yes	No 🗸
Remarks:							1		
Soils were dry and	light colored w	ith a fair an	nount of gravel, likely	due to lo	cation adj	acent to th	ne gravel driveway tha	at accesses the surve	ey area. Does
not meet the criteria	a for hydric soi	Ι.							

HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)
Surface Water (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)		_ Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)		_ Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (B2)		_ Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Oxidized Rhizospheres along Living Roots (C3)		Geomorphic Position (D2)
Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Deposits (B5)		_ Recent Iron Reduction in Tilled Soils (C6)		FAC-Neutral Test (D5)
Surface Soil Cracks (B6)		Stunted or Stressed Plants (D1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)				
Field Observations:	,			
Surface Water Present?	Yes No 🗸	Depth (inches):		
Water Table Present?	Yes No 🗸	Depth (inches):		1
Saturation Present? (includes capillary fringe)	Yes No 🖌	_ Depth (inches):	Wetland Hydrology Present? Yes No	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				
Data point located in an upland horse pasture, no hydrology indicators observed. Does not meet the criteria for wetland hydrology.				

EXHIBIT M – OTHER PERMITS AND LICENSES

In addition to obtaining a 112 Reclamation Permit from the DRMS, before the Peak Ranch Resource site can be mined, the following permits will also need to be obtained:

- 1. Summit County Conditional Use Permit(s)
 - a. Peak Ranch Conditional Use Permit
 - b. Maryland Creek Ranch Conditional Use Permit
- 2. Colorado Air Pollution Control Division Fugitive Dust Permit and Air Pollution Emission Notice (APEN)
- 3. Water Quality Control Commission Stormwater Discharge Permit
- 4. Colorado Department of Transportation Access Permit
- 5. Colorado Department of Transportation Work in the ROW Permit
- 6. Colorado State Engineer's Office approved substitute water supply plan, and water augmentation plan (prior to Phase 2)
- 7. Colorado State Engineer's Office Gravel Well Permit
- 8. US Army Corps of Engineers nationwide permit (crossing of the wetlands with the access road)

Note: A Summit County Floodplain Permit will not be required because the operations will not take place in or impact the floodplain.

