WETLAND DELINEATION REPORT

Prepared for:

Rich Davis

Regarding the property at:

710 Whispering Pines Circle
Town of Blue River
Schedule Number 6511068

Prepared September 9, 2020 by:

Littlehorn Engineering & Surveying, LLC
970-879-5112
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Our Project No. **2020-6511068**

CONTENT SECTIONS

Enclosure:

Vicinity Map
Site Map
Data Forms A and B

List of Abbreviations and Acronyms

ACOE	U.S. Army Corps of Engineers
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
NWPL	National Wetland Plant List
OBL	Obligate
UPL	Upland
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WSS	Web Soil Survey

I. Project Information

Landowner and Client:
Rich Davis

Subject Property Address:
710 Whispering Pines Circle
Timber creek Estates
Block 3, Lot 17B
Blue River, CO 80424

Our Project Number:
2020-6511068

Field Wetland Consultant:
Joseph Littlehorn
Littlehorn Engineering & Surveying, LLC
P.O. Box 776390
Steamboat Springs, CO 80477

Engineer and Consultant:
John Littlehorn, P.E.
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P.O. Box 776390
Steamboat Springs, CO 80477
351 US Hwy 285 suite 201
Fairplay, CO 80440

II. Project Overview

Per the client's request, we visited the subject site on August 25, 2020 to perform a wetland delineation to determine the presence of wetlands and locate the wetland boundary. The purpose of the wetland delineation and this report is to document the wetland area(s) present on the site with the intention of aiding project planning to minimize disturbance of the wetland areas. Wire flags labeled "Wetland Delineation" were placed along the wetland boundary and labeled A-1 through A-16, and B-1 through B-12. These flags comprise one wetland area illustrated on the attached site map. This delineation was conducted in accordance with the U.S. Army Corps of Engineers' (ACOE) standard protocol for determining wetlands in the Western Mountains, Valleys, and Coast Region. Wetlands adjacent to the subject property were not delineated. Wetland-type areas shall not be disturbed without permission from the ACOE, Town of Blue River, and us. Prior to our site visit, multiple data sources were analyzed to obtain a better understanding of the area. Some data sources consulted included aerial imagery, topographic maps, WSS maps published by the NRCS, and USFWS NWI maps. The wetland boundary on 710 Whispering Pines Circle was located based on ACOE standard protocol, in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* published by the

Fringed Grass-of-Parnassus

ACOE in May 2010. Our delineation involved a detailed examination of vegetation, soils, and hydrology. Dominant vegetative species were documented and compared to the NWPL to determine the wetland indicator status of each species. OBL species occur almost exclusively in wetlands. FACW species usually occur in wetlands but may on occasion exist in non-wetland areas. FAC species occur equally in wetland and non-wetland environments. FACU species usually occur in non-wetland environments. UPL species very rarely grow in wetland environments. If a species is not found to be included in the NWPL, its indicator status is assumed to be UPL. Generally, if it is found that more than 50% of the vegetative species within a single plant community possess an indicator status of FAC, FACW, or OBL, this area would satisfy the ACOE criteria for wetland vegetation. Soil exploration and examination was conducted at multiple points across the site, collected in accordance with Munsell color methods. If hydric soil indicators were discovered, additional areas of exploration may have been established along the gradient to accurately identify the extent of hydric soils. Throughout our investigation on-site, hydrologic indicators were taken note of, specifically looking for such indicators as surface water, high water tables, soil saturation, water marks, sediment deposits, drainage patterns, and other indicators. Examinations for all areas investigated and deemed non-wetland areas are not necessarily included in this report. The wetland boundary is characterized in many areas by an abrupt transition from mostly hydrophytic vegetation to upland species. A site map is attached that approximately illustrates the wetland area(s) in blue, with sampling point locations shown in red. Wetlands provide many valuable functions such as flood control and wildlife habitat in addition to being areas that aid to filter out contaminants in the groundwater. Wetlands shall not be disturbed without approval from the Town of Blue


Field Horsetail

River and the ACOE. This delineation shall be considered valid for five (5) years' time.

III. Site Description

The ecosystem for these properties is in the Sub-Alpine Forest of Colorado, at an elevation of over 10,250 feet, and in the Central Colorado Rocky Mountains. The wetland delineation conducted on 710 Whispering Pines Circle in Blue River, Colorado located within Summit County, began on Whispering Pines Circle near the northwest corner of the lot and proceeded to the east.

The property slopes gently west with a canopy of Engelmann Spruce and Subalpine Fir trees. Most of the property consists of subalpine forest habitat with wildflowers, shrubs and grasses. The wetland is dominated by an herb named Field Horsetail. The wetland area has been mapped with the NWI, and is classified as R4SBC, which stand for Riverine (R), Intermittent (4), Streambed (SB), and Seasonally Flooded (C). The "Riverine" system includes all wetlands and deep-water habitats contained within a channel. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. The "Intermittent" subsystem is used to describe channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent. The "Streambed" class includes all wetlands contained within the "Intermittent" subsystem of the "Riverine" system. A "Seasonally Flooded" water regime refers to surface water that is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is

variable, extending from saturated to the surface to a water table well below the ground surface.


Red Elder

Soils within the site have not been mapped with the NRCS, as the site lies just off the edge of the map. Areas within a close proximity have been classified as Grenadier gravelly loam (6 to 15 percent slopes), generally consisting of gravelly sandy clay loam with cobble. The NRCS notes that while Grenadier and similar soils comprise approximately 80% of the area, approximately 10% of the mapped area is considered a cumulic or histic cryaquoll, both of which are considered hydric soils and are strong wetland indicators.

On the north side of the property, there is a stream that appears to flow intermittently throughout the year. At the time of the delineation, the above-ground stream averaged less than 2 feet across. The wetland was marked by the small Field Horsetail herbs and fragile Streambank Pseudosaxifrage that prefer wet soils at higher elevations in Colorado, making the wetland distinctive and irreplaceable if it is disturbed. The wetland had many grasses, sedges, mosses and flowering herbaceous plants that require saturated soils.

IV. Plants

Multiple plant species were identified across the site in both wetland and upland environments as listed below. In instances where a plant species is found to be present in both wetland and upland areas, the percent coverage in each plant community has been combined to reflect total cover across the site.

Common Name	Scientific Name	Indicator Status	Coverage
Narrow-Leaf Fireweed	Chamaenerion angustifolium	FACU	73%
Field Horsetail	Equisetum arvense	FAC	65%
Engelmann's Spruce	Picea engelmannii	FAC	62%
Smooth Brome	Bromus inermis	UPL	35%
Virginia Strawberry	Fragaria virginiana	FACU	29%
Subalpine Fir	Abies lasiocarpa	FACU	20%
Grouseberry	Vaccinium scoparium	FACU	20%
Daffodil Leopardbane	Arnica latifolia	FAC	18%
Streambank Pseudosaxifrage	Micranthes odontoloma	FACW	18%
Silvery Lupine	Lupinus argenteus	UPL	10%
Four-Line Honeysuckle	Lonicera involucrata	FAC	10%
Queen Anne's-Lace	Daucus carota	FACU	10%
Common Dandelion	Taraxacum officinale	FACU	8%
Gray Willow	Salix bebbiana	FACW	8%
Unidentified Sedge	Carex sp.	FACW*	8%
Large Mountain Fleabane	Erigeron coulteri	FACW	7%
Arrow-Leaf Ragwort	Senecio triangularis	FACW	7%
Common Yarrow	Achillea millefolium	FACU	5%
Bull Thistle	Cirsium vulgare	FACU	5%
Fringed Grass-of-Parnassus	Parnassia fimbriata	OBL	5%
Red Elder	Sambucus racemosa	FACU	4%
Bog Orchid	Platanthera aquilonis	FACW	3%
Common Red Raspberry	Rubus idaeus	FACU	3%

*Indicator status of carex sp. was assumed to be FACW. It was not able to be identified due to the fact that reproductive parts were not visible.

V. Soils

Sampling Point A was located in an area dominated by vegetation that falls under the wetland classification facultative wet. Soil samples taken in this area were dark in color, and were rich in organic matter. The texture of the soil was determined to be a silt loam by the hand-texturing method. The 0-14 inch depth exhibited a matrix that was comprised of a silt loam texture, black in color (10YR 2/1). Multiple soil samples were taken within the wetland area that yielded similar results.

VI. Hydrology

The hydrology of this wetland is supplied largely by snow melt every year. Deep snow packs accumulate in the mountains up valley (specifically Red Mountain to the east) and melt off occurs each spring, recharging the water table in the valley below. Saturated soils act as a sponge slowly releasing water that flows down valley below the surface of the soil. The property is located in the headwater region of the Blue River drainage basin. These low-lying areas likely serve important functions, such as flood control, nutrient and contaminant sequestration, as well as wildlife habitat. Seasonal fluctuations of the water table likely coincide with the runoff season with the highest water table coming in late spring. A 100-year flood evaluation or stream flow study has not been performed by our firm.

VII. Summary

Wetland delineation flags were placed on block 3, lot 17B, in the Timber Creek Estates Subdivision; a survey of the lot is currently pending and is being performed by others. The wetland is dominated by Field Horsetail across the majority of the wetland area and is part of a network of wetlands that shadow

the Blue River drainage basin as it continues down the valley. The network of wetlands is important to the wildlife habitat of the region. Wetlands shall not be disturbed without Town of Blue River and ACOE approval. Regulations include development and building setbacks to wetland boundaries, and the ACOE regulates all wetlands, therefore, all property development shall adhere to these regulations.

Thank you for the opportunity to serve your needs. If you have any questions about this report, please feel free to contact us at (970) 879-5112.

Sincerely,

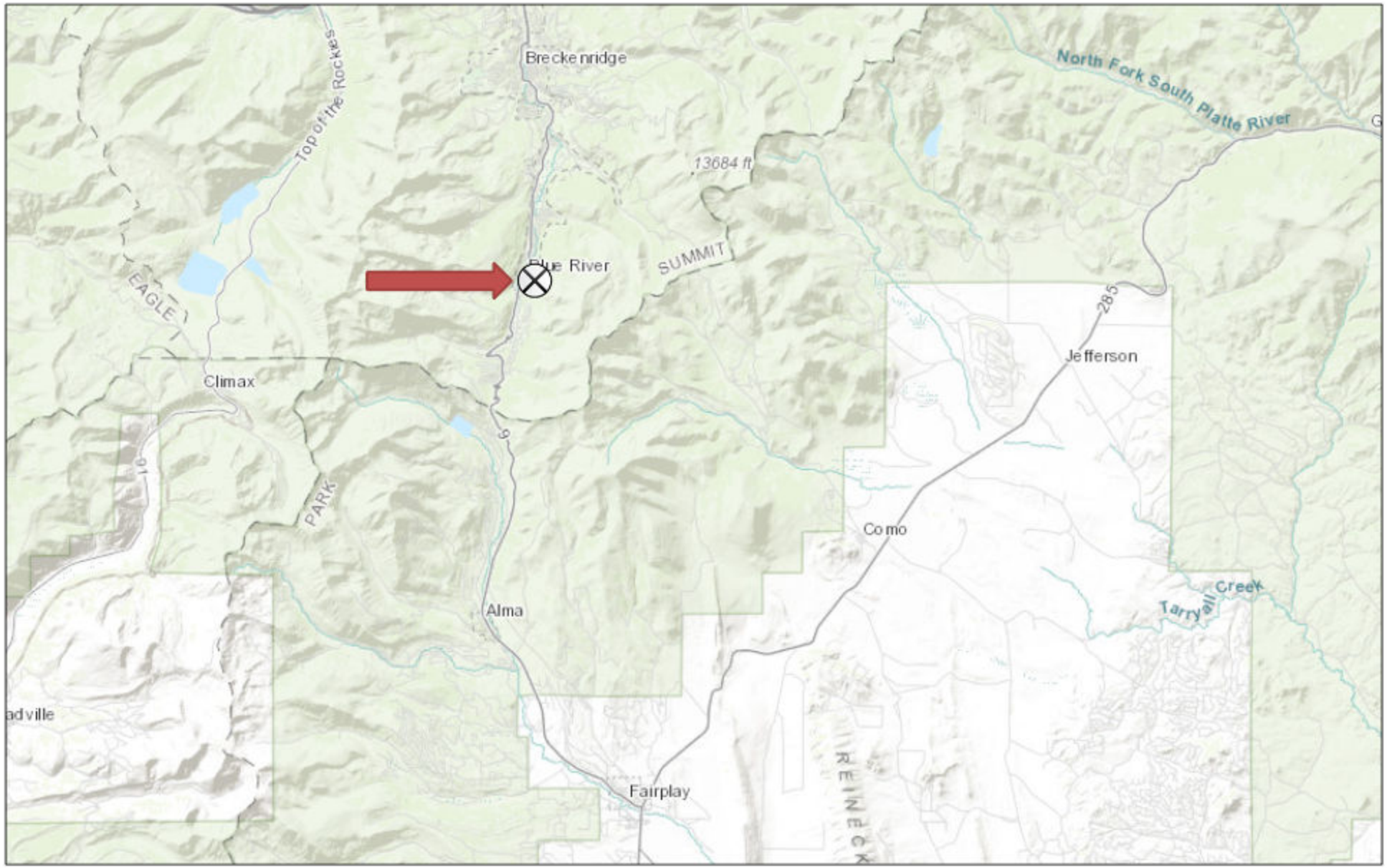
Joseph Littlehorn, Wetland Consultant

Littlehorn Engineering & Surveying, LLC

Enclosure:

Vicinity Map
Site Map
Data Forms A and B

710 Whispering Pines Circle, Blue River



8/20/2020, 5:04:06 PM

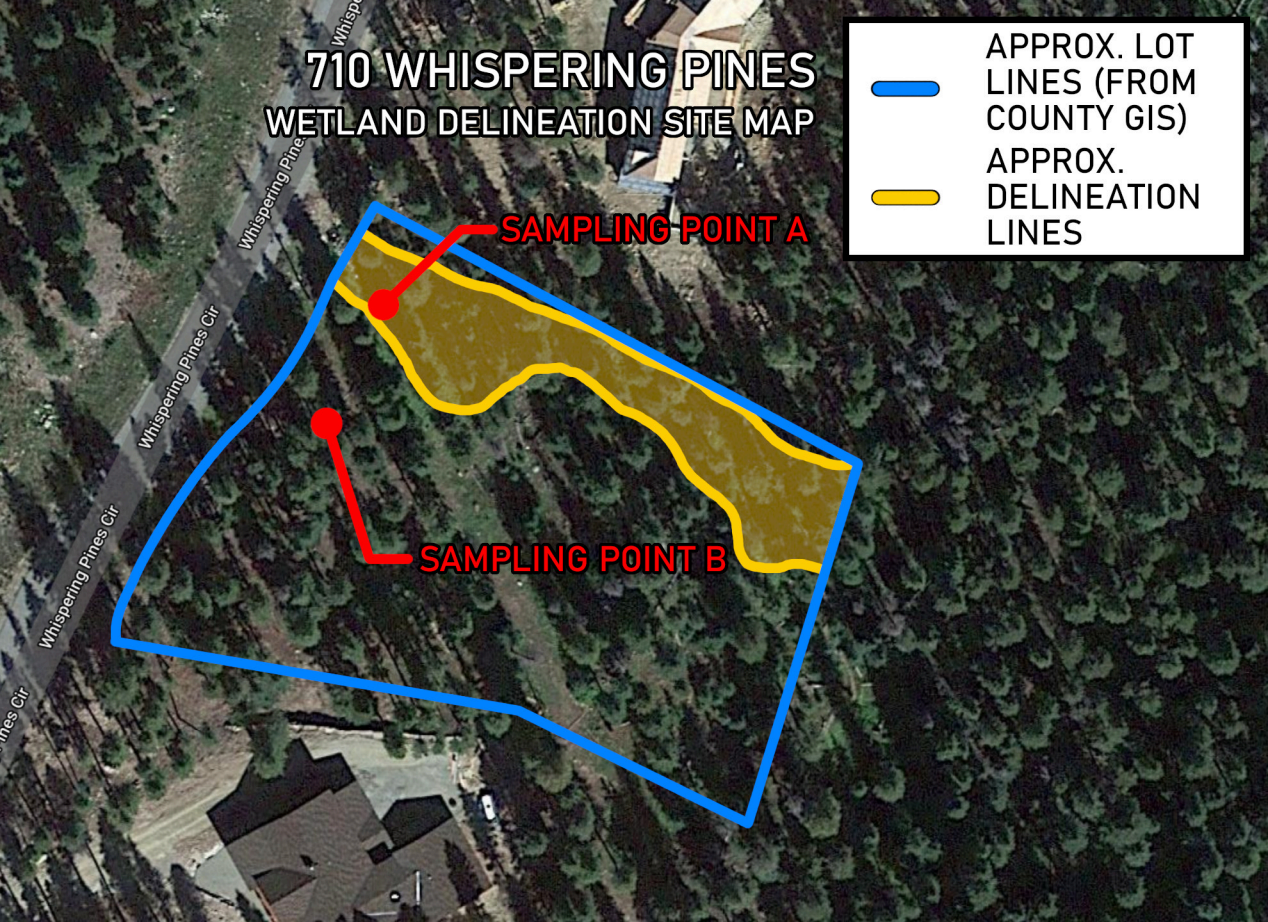
1:275,000

0 1.75 3.5 7 mi

0 2.75 5.5 11 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS |


710 WHISPERING PINES
WETLAND DELINEATION SITE MAP
APPROX. LOT LINES (FROM COUNTY GIS)
APPROX. DELINEATION LINES
SAMPLING POINT A
SAMPLING POINT B
Whispering Pines Cir
Whispering Pines Cir
Whispering Pines Cir

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 710 Whispering Pines Circle City/County: Town of Blue River Sampling Date: 8/25/2020

Applicant/Owner: Rich Davis State: CO Sampling Point: A

Investigator(s): Joseph Littlehorn Section, Township, Range: S30 T7S R77W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 15

Subregion (LRR): E Lat: 39°24'25.91"N Long: 106°02'33.96"W Datum: WGS84

Soil Map Unit Name: Not mapped NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Hydrology is problematic because we are outside of the peak wet season, which was ~June 7 this year.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: *)	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea engelmannii	25	X	FAC
2.			
3.			
4.			
	25 = Total Cover		
Sapling/Shrub Stratum (Plot size: *)			
1. Lonicera involucrata	8	X	FAC
2. Salix bebbiana	8	X	FACW
3. Picea engelmannii	7	X	FAC
4.			
5.			
	23 = Total Cover		
Herb Stratum (Plot size: *)			
1. Equisetum arvense	65	X	FAC
2. Micranthes odontoloma	18	X	FACW
3. Poa leptocoma	15		FACW
4. Chamaenerion angustifolium	8		FACU
5. Carex sp.	8		FACW
6. Senecio triangularis	7		FACW
7. Parnassia fimbriata	5		OBL
8. Fragaria virginiana	4		FACU
9. Daucus carota	4		FACU
10. Patanthera aquilonis	3		FACW
11.			
	137 = Total Cover		
Woody Vine Stratum (Plot size: *)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	59	x 2 =	118
FAC species	105	x 3 =	315
FACU species	16	x 4 =	64
UPL species	0	x 5 =	0
Column Totals:	185 (A)		502 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ✓ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ✓ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

*Sampled entire plant community. Unidentified moss present, approximately 60 percent of the canopy cover.

SOIL

Sampling Point: A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10YR 2/1	100	-	-	-	-	SiL	~25% organic matter

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- [X] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [ ] Hydrogen Sulfide (A4)
- [ ] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Sandy Mucky Mineral (S1)
- [ ] Sandy Gleyed Matrix (S4)
- [ ] Sandy Redox (S5)
- [ ] Stripped Matrix (S6)
- [ ] Loamy Mucky Mineral (F1) (**except MLRA 1**)
- [ ] Loamy Gleyed Matrix (F2)
- [ ] Depleted Matrix (F3)
- [ ] Redox Dark Surface (F6)
- [ ] Depleted Dark Surface (F7)
- [ ] Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- [ ] 2 cm Muck (A10)
- [ ] Red Parent Material (TF2)
- [ ] Very Shallow Dark Surface (TF12)
- [ ] Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes [X] No [ ]

Remarks:

HCl test did not yield noticeable Hydrogen Sulfide odor.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- [ ] Surface Water (A1)
- [X] High Water Table (A2)
- [X] 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 (B8)
- [ ] Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- [ ] Salt Crust (B11)
- [ ] Aquatic Invertebrates (B13)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Stunted or Stressed Plants (D1) (**LRR A**)
- [ ] Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- [ ] Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- [ ] Drainage Patterns (B10)
- [X] Dry-Season Water Table (C2)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [X] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [X] FAC-Neutral Test (D5)
- [ ] Raised Ant Mounds (D6) (**LRR A**)
- [ ] Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes [ ] No [X] Depth (inches): _____

Water Table Present? Yes [X] No [ ] Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes [X] No [ ] Depth (inches): 0

Wetland Hydrology Present? Yes [X] No [ ]

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

USGS 09046490 Stream Gauge at Blue River recorded peak flows around June 7, 2020, and July 20, 2020.

Remarks:

Problematic hydrology because the delineation was performed during the dry season.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 710 Whispering Pines Circle City/County: Town of Blue River Sampling Date: 8/25/2020

Applicant/Owner: Rich Davis State: CO Sampling Point: B

Investigator(s): Joseph Littlehorn Section, Township, Range: S30 T7S R77W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 15

Subregion (LRR): E Lat: 39°24'25.09"N Long: 106°02'34.23"W Datum: WGS84

Soil Map Unit Name: Not mapped NWI classification: Not mapped

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Hydrology is problematic because we are outside of the peak wet season, which was ~June 7 this year.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: *)	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea engelmannii	30	X	FAC
2. Abies lasiocarpa	20	X	FACU
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: *)			
1. Vaccinium scoparium	20	X	FACU
2. Sambucus racemosa	4		FACU
3. Rubus idaeus	3		FACU
4. Lonicera involucrata	2		FAC
5.			
	29	= Total Cover	
Herb Stratum (Plot size: *)			
1. Chamaenerion agustifolium	65	X	FACU
2. Bromus inermis	35	X	UPL
3. Fragaria virginiana	25		FACU
4. Arnica latifolia	18		FAC
5. Lupinus argenteus	10		UPL
6. Taraxacum officinale	8		FACU
7. Erigeron coulteri	7		FACW
8. Daucus carota	6		FACU
9. Achillea millefolium	5		FACU
10. Cirsium vulgare	5		FACU
11.			
	184	= Total Cover	
Woody Vine Stratum (Plot size: *)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	7	x 2 =	14
FAC species	50	x 3 =	150
FACU species	161	x 4 =	644
UPL species	45	x 5 =	225
Column Totals:	263 (A)		1033 (B)

Prevalence Index = B/A = 3.92

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

*Sampled entire plant community.

SOIL

Sampling Point: B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100	-	-	-	-	SiL	Spruce needles/O.M.
1-14	7.5YR 5/3	100	-	-	-	-	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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 (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary 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)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** X

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

USGS 09046490 Stream Gauge at Blue River recorded peak flows around June 7, 2020, and July 20, 2020.

Remarks:

Problematic hydrology because the delineation was performed during the dry season.