

Montana Department of Transportation Stream Mitigation Monitoring Report
NORTH FORK BEAR CREEK MITIGATION SITE

Project Overview

Watershed: Watershed #3 - Lower Clark Fork

Monitoring Year: 2020

Years Monitored: 8th year of monitoring

Corps Permit Number: NWO-1997-90821-MTH

Monitoring Conducted By: Confluence Consulting Inc.

Monitoring Dates: July 28, 2020

Purpose of the approved project:

As part of this project, the Montana Department of Transportation (MDT) requested authorization to replace bridges at North and South Fork Bear Creek, construct a new stream channel segment, and to place 0.07 acres of fill within jurisdictional wetlands. The North Fork Bear Creek work included removal and replacement of the U.S Highway 93 Bridge, placement of rock around the new bridge abutments, creation of a new stream channel alignment, filling the deactivated stream segment, and removal of gabions downstream of the bridge. Stream mitigation was required to offset placement of riprap and other fill materials within the ordinary high watermark of the stream corridor.

Site Location:

Upstream Coordinates: 46.404152, -114.145398

Downstream Coordinates: 46.404397, -114.144191

County: Ravalli **Nearest Town:** Victor, MT

Map Included: Yes

Mitigation Site Construction Started: 2011 **Construction Ended:** 2011

Dates of any recent corrective or maintenance activities (since previous report):

Activity: none **Date:** N/A

Specific recommendations for additional corrective actions: Continue weed treatment in 2021. Wattles on the downstream side of the bridge that were installed during a previous underground utility project are exposed and at risk of being captured by the creek (additional photo 6, Appendix B). The vegetation upgradient of the wattles is stable enough that the wattles could be partially or entirely removed. Wattled removal is advised.

Previous Monitoring Reports and Methods Descriptions:

<https://www.mdt.mt.gov/publications/brochures/stream-mitigation.shtml>

Requirements (from approved mitigation plan, banking instrument, or DA permit conditions)

Monitoring Period: 5 years from construction completion or until concurrence by US Army Corps of Engineers (USACE).

Performance Standards:

Results from the eighth year of monitoring indicate that the site is meeting three of the four established performance standards. Nine years post-construction, the site has greater than 50% vegetative cover from desirable, non-noxious, perennial species; greater than 25% woody vegetation cover; and more than 75% stable stream banks. Percent cover of noxious weed species failed to meet the success criteria of <10%.

Table 1. Summary of Performance Standards.

Performance Standards	Success Criteria	Criteria Achieved Y/N	Discussion
Riparian Cover	Greater than 50% aerial coverage of desirable perennial plants, including seeded species and those colonizing from adjacent undisturbed habitats.	Y	Desirable cover estimated at 53% (80% total cover - 20% weed cover - 7% annual/biennial).
	Greater than 25% aerial coverage of woody riparian shrubs and/or trees.	Y	Woody riparian species cover estimated at 35% of project area, a 3% decrease since 2019, primarily a result of herbicide application.
	Less than 10% aerial coverage of site has Montana noxious weeds.	N	Noxious weed cover is estimated at 20% of the project area.
Streambank Stability	Less than 25% of total bank length exhibiting signs of active erosion/cutting	Y	Unstable banks represent 17% of the bank length within the project area.

Summary Data

Riparian Vegetation Inventory

Results of the 2013 through 2020 visual estimates of areal vegetative cover are summarized in Table 2. In 2020, approximately 20% of the project site was bare ground, with 45% of the area vegetated with herbaceous species and 35% with woody species. The site exhibited an overall decrease in noxious weed cover, from 33% areal coverage in 2019 to 20% in 2020. While the site exhibited a substantial decrease in noxious weed cover, the herbicide application left large areas of bare ground, killed or stunted many woody plants, and promoted increased establishment by non-native annual and perennial grasses.

Table 2. Percent cover estimates of vegetative cover at the North Fork Bear Creek Stream Mitigation Site from 2013 through 2020.

Year	Total % Riparian Cover	% Bare Ground	% Woody Cover	% Noxious Weed Cover	% Annual/Biennial Cover	% Herbaceous Non-Noxious Perennial Cover	% Desirable Cover ¹
2013	90	10	27	35	*	*	*
2014	90	10	30	35	*	*	*
2015	90	10	32	40	9	9	41
2016	92	8	34	45	7	7	40
2017	85	15	35	30	7	13	48
2018	85	15	36	30	7	13	48
2019	90	10	38	33	5	19	52
2020	80	20	35	20	7	25	53

*Data not collected in 2013 or 2014

¹ % Desirable Cover = Total % Riparian Cover - % Noxious Weed Cover - % Annual/Biennial Cover

Appendix C includes a comprehensive list of plant species observed along the new channel alignment and riparian buffer areas from 2013 through 2020. The comprehensive list includes 123 species, representing an increase of 2 species since 2019 and 78 species since monitoring efforts began in 2013. In 2020, 40% of species observed were hydrophytic based on the 2018 National Wetland Plant List (USACE 2018). Dark-throat shootingstar (*Dodecatheon pulchellum*), a native perennial hydrophytic species, and big sagebrush (*Artemisia tridentata*), a native perennial upland species, were observed for the first time in 2020.

Desirable non-noxious perennial plants including riparian trees, shrubs, and forbs were estimated at 53% cover of the project site. This estimate was calculated by subtracting the sum of the visual estimates for noxious weed cover (20%), bare ground (20%), and annual/biennial cover (7%) from 100. Percent desirable cover from 2015 to 2020 is trending upward and has now met this performance criterion for the second consecutive year.

Percent cover of woody vegetation decreased by 3% since 2019, likely a result of herbicide application on nearby noxious weed infestations. Woody cover primarily comprises shrubs and trees that existed prior to channel relocation, and volunteer species that are colonizing the site. Although techniques used to install woody cuttings have resulted in very low survival rates, the combination of volunteer shrub establishment and mature tree cover currently stands at 35%, which exceeds the established success criteria for woody cover by 10%.

Stream Bank Vegetation Composition

The relatively steep stream bank along the left (north) bank upstream of the Highway 93 Bridge may hinder the growth of riparian vegetation in this area. Downstream of the bridge, stream banks are less steep and are dominated by cottonwoods (*Populus* spp.) and grasses (*Poa* spp., *Elymus* spp., *Phleum pratense*, and *Phalaris arundinacea*).

Noxious Weed Inventory

Twelve infestations of Montana Listed Priority 2B noxious weeds were observed on both private land and within the MDT right-of-way (ROW) in the project area, all of which were classified as a low cover class (1-5%) (Table 3; Figure 2, Appendix A). Two infestations of Priority 1B noxious weeds were identified within the riparian corridor and were also considered a low cover class (Table 3; Figure 2, Appendix A). Two noxious weed species originally observed in 2014 (*Convolvulus arvensis* and *Cynoglossum officinale*) have not been observed during the past five monitoring events, and as a result, they are no longer considered present within the reach.

Table 3. Weeds observed within the North Fork Bear Creek riparian zone in 2020.

Category*	Scientific Name	Common Name
Priority 1B	<i>Polygonum cuspidatum</i>	Knotweed Complex
Priority 2B	<i>Berteroa incana</i>	Hoary False-Alyssum
	<i>Centaurea stoebe</i>	Spotted Knapweed
	<i>Cirsium arvense</i>	Canadian Thistle
	<i>Hypericum perforatum</i>	Common St. John's-Wort
	<i>Leucanthemum vulgare</i>	Ox-Eye Daisy
	<i>Potentilla recta</i>	Sulphur Cinquefoil
	<i>Tanacetum vulgare</i>	Common Tansy
Priority 3 State Regulated	<i>Bromus tectorum</i>	Cheatgrass

* Based on the MT Department of Agriculture 2019 Noxious Weed List

An estimated 20% areal coverage of noxious weeds was observed during the 2020 monitoring event. Weeds were observed on both stream banks upstream and downstream of the Highway 93 Bridge. Although each individual weed infestation is relatively small in extent, the area of all infestations combined warrants concern and must be addressed to achieve the success criterion for riparian cover. While previous weed spraying efforts by MDT may have reduced areal coverage of noxious weeds, the 20% percent cover by eight noxious weed species remains a concern at this site.

Woody Plant Survival

Attempts at establishing woody riparian vegetation within the project reach included installing cuttings along the banks upstream and downstream of the Highway 93 Bridge. Cottonwood and willow (*Salix* spp.) cuttings installed along the banks were unsuccessful. Only one of the cuttings has developed leafy stems, which have sprouted from the base of the plant. Upon inspection, all cuttings were installed to a depth of approximately one foot, with 4 to 5 feet of the stem extending above ground. The lack of specialized equipment to install willow stems in rocky/cobbly substrate was likely the limiting factor for installing the cuttings to the proper depth. High mortality of these cuttings is attributed to the shallow planting depth and inability of the cuttings to extend roots to meet the water table elevation.

Bank Erosion Inventory

The length of eroding stream bank increased from 6% to 17% between the 2019 and 2020 monitoring events. Erosion was previously noted on the right bank of the reconstructed reach downstream of the Highway 93 Bridge. The eroding bank length has doubled from 25' to 50' since the 2019 monitoring event. No lateral migration was observed along this bank in 2020, but the bank has become undercut and the undercut has entrained two small cottonwood trees. On the downstream end of the project area, a 25' section of the left bank had also eroded since 2019. The root wads that were placed along this bank to provide stability are still intact and in place, but the gravel and cobble surrounding the root wads has been scoured away. Lateral retreat of this bank was approximately 3-4 feet over the past year, excluding the areas occupied by the root wads.

Channel Form

Significant changes in channel form, likely the resulting from one or more large-magnitude flow events, were observed in 2020. Evidence of overbank flooding, including drift debris and gravel deposits on the floodplain both upstream and downstream of the bridge were observed along with new mid-channel and point bar depositional features. Deposition of sand, gravel, and cobble was most notable under and downstream of the Highway 93 Bridge. Just upstream of the bridge, the channel overtopped the bank and began to form a secondary channel behind a group of small cottonwood trees that were planted during construction. This side channel quickly rejoined the main channel under the bridge. Evidence of increased scour was observed on the left bank upstream of the bridge, where cottonwood roots have become exposed, and new scour pools have formed around root wads that were keyed into the bank during construction. Scour pools were also noted around roots wads on the left bank at the downstream end of the project area (see photos, Appendix B).

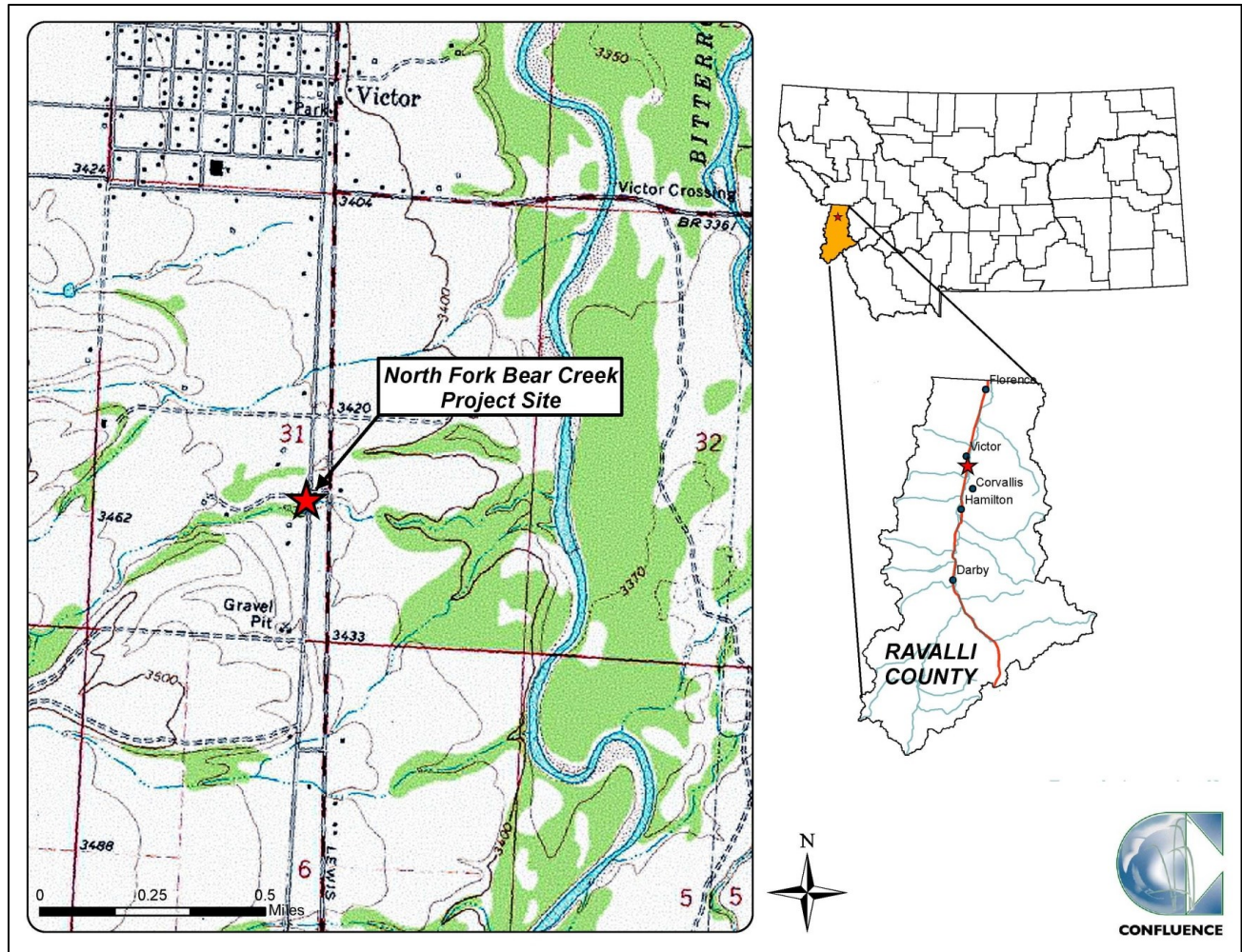
Conclusions

The site is meeting all performance standards except for the riparian cover standard that requires less than 10% noxious weed cover within the riparian corridor. The percent cover of noxious weeds has decreased and percent cover by desirable perennial species has increased since 2019, which indicates the site is moving closer to achieving this riparian cover performance standard. However, an increase in bare ground and a decline in woody riparian species was also observed in 2020. These trends are likely the result of continued herbicide application and potentially related to the application of de-icing chemicals along the bike path as well. Care should be taken not to overapply herbicide in future weed treatment efforts, causing mortality in desirable species, and reversing the positive trends.

While increased bank erosion and some amount of channel form evolution was observed within the project reach in 2020, these changes are not considered problematic at this time as no threats to infrastructure currently exist. On the contrary, some of the changes in channel form could be deemed beneficial, as they have increased the in-stream habitat complexity thus providing more suitable habitat for fish and aquatic macroinvertebrates.

Maps, Plans, Photos:

Figure 1. Site Location Map



Project Area Maps/Figures: See Appendix A

Photos: See Appendix B

Comprehensive Plant Species List: See Appendix C

Plans: See Appendix C of the North Fork Bear 2013 Monitoring Report

[https://www.mdt.mt.gov/other/webdata/external/planning/STREAM-MITIGATION/2013 REPORTS/2013 NF BEAR CREEK MONITORING REPORT.PDF](https://www.mdt.mt.gov/other/webdata/external/planning/STREAM-MITIGATION/2013%20REPORTS/2013%20NF%20BEAR%20CREEK%20MONITORING%20REPORT.PDF)

References

Montana Department of Agriculture. June 2019. *Montana Noxious Weed List..* Accessed October 2020 at:

<https://agr.mt.gov/Portals/168/Documents/Weeds/2019%20Montana%20Noxious%20Weed%20List.pdf?ver=2019-07-02-095540-487>

U.S. Department of Agriculture, Natural Resource Conservation Service (USDA, NRCS). 2020. *The PLANTS Database*. National Plant Data Team, Greensboro, NC 27401-4901 USA. Accessed October 2020 at: <http://plants.usda.gov>

U.S. Army Corps of Engineers (USACE). 2018. *National Wetland Plant List (Version 3.4)*, prepared by U.S. Army Corps of Engineers, U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH.

APPENDIX A

PROJECT AREA MAPS

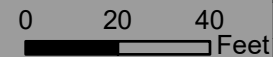
MDT Streams Mitigation Monitoring
North Fork Bear Creek
Ravalli County, Montana



Legend

- Photo Points
- Centaurea stoebe*
- Leucanthemum vulgare*
- Polygonum cuspidatum*
- Tanacetum vulgare*
- Eroding Bank

Note: *Cirsium arvense*, *Berteroa incana*, *Potentilla recta*, and *Hypericum perforatum* were observed in trace amounts and were not mapped.



**2020 Monitoring
NF Bear Creek**

Figure 2

Date: 10/12/2020

NFBear_features2020.mxd

APPENDIX B

PROJECT AREA PHOTOGRAPHS

MDT Streams Mitigation Monitoring
North Fork Bear Creek
Ravalli County, Montana

PHOTO INFORMATION

SITE NAME: North Fork Bear Creek

MONITORING YEARS: 2013 and 2020



2013
Photo Point 1.1: View of tributary/culvert entering from west. **Compass:** 270 (West)



2020



2013
Photo Point 1.2: View of north streambank looking downstream. **Compass:** 45 (Northeast)



2020



2013
Photo Point 1.3: View of south streambank. **Compass:** 90 (East)



2020

PHOTO INFORMATION

SITE NAME: North Fork Bear Creek

MONITORING YEARS: 2013 and 2020



2013
Photo Point 1.4: View of dry channel looking upstream. **Compass:** 230 (Southwest)



2020



2013
Photo Point 2.1: View of root wads on north bank. **Compass:** 225 (Southwest)



2020



2013
Photo Point 2.2: View across channel of south streambank. **Compass:** 180 (South)



2020

PHOTO INFORMATION

SITE NAME: North Fork Bear Creek

MONITORING YEARS: 2013 and 2020



2013



2020

Photo Point 2.3: View from north bank looking across channel. **Compass:** 135 (Southeast)



2013



2020

Photo Point 3.1: View downstream from north bridge abutment. **Compass:** 90 (East)



2013



2020

Photo Point 3.2: View of south streambank from left abutment. **Compass:** 135 (Southeast)

PHOTO INFORMATION

SITE NAME: North Fork Bear Creek

MONITORING YEARS: 2013 and 2020



2013



2020

Photo Point 3.3: View across channel of south bank from north bridge abutment. Compass: 180 (South)



2013



2020

Photo Point 4.1: View from south bank looking upstream from downstream extent. Compass: 270 (West)



2013



2020

Photo Point 4.2: View of root wads on north bank downstream of bridge. Compass: 0 (North)

PHOTO INFORMATION

SITE NAME: North Fork Bear Creek

MONITORING YEARS: 2013 and 2020



Additional Photo 1: Looking downstream at exposed root wads on the left bank at the downstream end of the project area.



Additional Photo 2: Looking upstream at exposed root wads on the left bank upstream of the bridge where increased scour was observed in 2020



Additional Photo 3: Looking upstream at a side channel that from under the bridge during recent high flow events.



Additional Photo 4: Looking downstream at gravel and cobble recently deposited under the bridge.



Additional Photo 5: Looking upstream under the bridge at recently deposited gravel and cobble and the side channel that developed during recent high flows.



Additional Photo 6: Looking at the left bank downstream of the bridge at a wattle that was installed as a part of utility installation project has become exposed.

APPENDIX C

2013 – 2020 COMPREHENSIVE PLANT SPECIES LIST

MDT Streams Mitigation Monitoring
North Fork Bear Creek
Ravalli County, Montana

Comprehensive list of plant species observed at the North Fork Bear Creek Stream Mitigation Site from 2013 through 2020.

Scientific Name	Common Name	WMVC Indicator Status*	Duration
<i>Achillea millefolium</i>	Common Yarrow	FACU	P
<i>Agropyron cristatum</i>	Crested Wheatgrass	UPL	P
<i>Agrostis gigantea</i>	Black Bent	FAC	P
<i>Agrostis scabra</i>	Rough Bent	FAC	P
<i>Alopecurus aequalis</i>	Short-Awn Meadow-Foxtail	OBL	P
<i>Alnus incana</i>	Speckled Alder	FACW	P
<i>Alyssum alyssoides</i>	Pale Alyssum	UPL	A/B
<i>Amelanchier alnifolia</i>	Saskatoon Service-Berry	FACU	P
<i>Anaphalis margaritacea</i>	Pearly-Everlasting	FACU	P
<i>Antennaria parvifolia</i>	Nuttall's Pussytoes	UPL	P
<i>Aster</i> sp.	Aster	N/A	A/P
<i>Artemisia tridentata</i>	Big Sagebrush	UPL	P
<i>Bassia scoparia</i>	Mexican-Fireweed	FAC	A
<i>Berteroa incana</i>	Hoary False-Alyssum	UPL	A/B/P
<i>Bromus diandrus</i>	Ripgut Brome	UPL	A/P
<i>Bromus inermis</i>	Smooth Brome	UPL	P
<i>Bromus tectorum</i>	Cheatgrass	UPL	A
<i>Camelina microcarpa</i>	Little-Pod False Flax	FACU	A/B
<i>Carex bebbii</i>	Bebb's Sedge	OBL	P
<i>Carex nebrascensis</i>	Nebraska Sedge	OBL	P
<i>Carex</i> sp.	Sedge	N/A	P
<i>Carex stipata</i>	Stalk-Grain Sedge	OBL	P
<i>Centaurea stoebe</i>	Spotted Knapweed	UPL	B/P
<i>Cerastium arvense</i>	Field Mouse-Ear Chickweed	FACU	P
<i>Chamaenerion angustifolium</i>	Narrow-Leaf Fireweed	FACU	P
<i>Chenopodium album</i>	Lamb's-Quarters	FACU	A
<i>Cirsium arvense</i>	Canadian Thistle	FAC	P
<i>Cirsium vulgare</i>	Bull Thistle	FACU	B
<i>Cornus alba</i>	Red Osier	FACW	P
<i>Convolvulus arvensis</i>	Field Bindweed	UPL	P
<i>Coronilla varia</i>	Common Crown-Vetch	UPL	P
<i>Crataegus douglasii</i>	Black Hawthorn	FAC	P
<i>Crepis tectorum</i>	Narrowleaf Hawksbeard	UPL	A
<i>Cynoglossum officinale</i>	Gypsy-Flower	FACU	B
<i>Dactylis glomerata</i>	Orchard Grass	FACU	P
<i>Dasiphora fruticosa</i>	Golden-Hardhack	FAC	P
<i>Deschampsia caespitosa</i>	Tufted Hairgrass	FACW	P
<i>Dodecatheon pulchellum</i>	Dark-Throat Shootingstar	FACW	P

Scientific Name	Common Name	WMVC Indicator Status*	Duration
<i>Elymus canadensis</i>	Nodding Wild Rye	FAC	P
<i>Elymus glaucus</i>	Blue Wild Rye	FACU	P
<i>Elymus repens</i>	Creeping Wild Rye	FAC	P
<i>Elymus trachycaulus</i>	Slender Wild Rye	FAC	P
<i>Epilobium brachycarpum</i>	Panicled Willowherb	UPL	A
<i>Epilobium ciliatum</i>	Fringed Willowherb	FACW	P
<i>Erigeron compositus</i>	Cutleaf Fleabane	UPL	P
<i>Festuca idahoensis</i>	Bluebunch Fescue	FACU	P
<i>Galium aparine</i>	Sticky-Willy	FACU	A
<i>Galium boreale</i>	Northern Bedstraw	FACU	P
<i>Geranium viscosissimum</i>	Sticky Purple Crane's-Bill	FACU	P
<i>Geum macrophyllum</i>	Large-Leaf Avens	FAC	P
<i>Glyceria striata</i>	Fowl Manna Grass	OBL	P
<i>Hieracium umbellatum</i>	Narrowleaf Hawkweed	UPL	P
<i>Hordeum jubatum</i>	Fox-Tail Barley	FAC	P
<i>Hypericum perforatum</i>	Common St. John's-Wort	FACU	P
<i>Juncus balticus</i>	Baltic Rush	FACW	P
<i>Juncus effusus</i>	Lamp Rush	FACW	P
<i>Juncus sp.</i>	Rush	N/A	P
<i>Juncus tenuis</i>	Lesser Poverty Rush	FAC	P
<i>Lactuca serriola</i>	Prickly Lettuce	FACU	A/B
<i>Lepidium campestre</i>	Field Pepper-Grass	UPL	A/B
<i>Leucanthemum vulgare</i>	Ox-Eye Daisy	FACU	P
<i>Lycopus asper</i>	Rough Water-Horehound	OBL	P
<i>Medicago lupulina</i>	Black Medick	FACU	A/P
<i>Melilotus officinalis</i>	Yellow Sweet-Clover	FACU	A/B/P
<i>Mentha arvensis</i>	American Wild Mint	FACW	P
<i>Myosotis laxa</i>	Bay Forget-Me-Not	OBL	A/B/P
<i>Nasturtium officinale</i>	Watercress	OBL	P
<i>Osmorhiza occidentalis</i>	Sweet-cicely	UPL	P
<i>Pascopyrum smithii</i>	Western-Wheat Grass	FACU	P
<i>Penstemon procerus</i>	Pincushion Beardtongue	FAC	P
<i>Penstemon sp.</i>	Beardtongue	N/A	P
<i>Peritoma serrulata</i>	Rocky Mountain Beeplant	FACU	A
<i>Phalaris arundinacea</i>	Reed Canary Grass	FACW	P
<i>Phleum pratense</i>	Common Timothy	FAC	P
<i>Picea pungens</i>	Blue Spruce	FAC	P
<i>Pinus ponderosa</i>	Ponderosa Pine	FACU	P
<i>Poa compressa</i>	Flat-Stem Blue Grass	FACU	P
<i>Poa palustris</i>	Fowl Blue Grass	FAC	P

Scientific Name	Common Name	WMVC Indicator Status*	Duration
<i>Poa pratensis</i>	Kentucky Blue Grass	FAC	P
<i>Polygonum cuspidatum</i>	Japanese Knotweed	UPL	P
<i>Populus angustifolia</i>	Narrow-Leaf Cottonwood	FACW	P
<i>Populus balsamifera</i>	Balsam Poplar	FAC	P
<i>Potentilla anserina</i>	Silverweed	OBL	P
<i>Potentilla recta</i>	Sulphur Cinquefoil	UPL	P
<i>Prunella vulgaris</i>	Common Selfheal	FACU	P
<i>Prunus virginiana</i>	Choke Cherry	FACU	P
<i>Pseudoroegneria spicata</i>	Bluebunch Wheatgrass	UPL	P
<i>Pseudotsuga menziesii</i>	Douglas-Fir	FACU	P
<i>Ranunculus repens</i>	Creeping Buttercup	FAC	P
<i>Ranunculus sp.</i>	Buttercup	N/A	P
<i>Ribes lacustre</i>	Bristly Black Gooseberry	FAC	P
<i>Rosa woodsii</i>	Woods' Rose	FACU	P
<i>Rubus idaeus</i>	Common Red Raspberry	FACU	P
<i>Rubus sp.</i>	Raspberry sp.	N/A	P
<i>Rumex acetosa</i>	Garden Sorrel	FAC	P
<i>Rumex acetosella</i>	Common Sheep Sorrel	FACU	P
<i>Salix amygdaloides</i>	Peach-Leaf Willow	FACW	P
<i>Salix bebbiana</i>	Gray Willow	FACW	P
<i>Salix drummondiana</i>	Drummond's Willow	FACW	P
<i>Salix lasiandra</i>	Pacific Willow	FACW	P
<i>Salix sp.</i>	Willow	N/A	P
<i>Salsola tragus</i>	Prickly Russian-Thistle	FACU	A
<i>Scutellaria galericulata</i>	Hooded Skullcap	OBL	P
<i>Silene latifolia</i>	Bladder Champion	UPL	B/P
<i>Silene noctiflora</i>	Night-flowering Catchfly	UPL	A
<i>Sinapis arvensis</i>	Corn Mustard	UPL	A
<i>Sisymbrium altissimum</i>	Tall Hedge-Mustard	FACU	A/B
<i>Solanum dulcamara</i>	Climbing Nightshade	FAC	P
<i>Solidago canadensis</i>	Canadian Goldenrod	FACU	P
<i>Sonchus arvensis</i>	Field Sow-Thistle	FACU	P
<i>Symphoricarpos albus</i>	Common Snowberry	FACU	P
<i>Symphoricarpos occidentalis</i>	Western Snowberry	FAC	P
<i>Symphyotrichum ascendens</i>	Western American-Aster	FACU	P
<i>Symphyotrichum laeve</i>	Smooth Blue American-Aster	FACU	P
<i>Tanacetum vulgare</i>	Common Tansy	FACU	P
<i>Taraxacum officinale</i>	Common Dandelion	FACU	P
<i>Thalictrum dasycarpum</i>	Purple Meadow-Rue	FACW	P
<i>Thlaspi arvense</i>	Field Pennycress	UPL	A

Scientific Name	Common Name	WMVC Indicator Status*	Duration
<i>Tragopogon dubius</i>	Meadow Goat's-beard	UPL	A/B
<i>Trifolium pratense</i>	Red Clover	FACU	B/P
<i>Trifolium repens</i>	White Clover	FAC	P
<i>Verbascum thapsus</i>	Great Mullein	FACU	B
<i>Veronica americana</i>	American-Brooklime	OBL	P

* 2018 National Wetland Plant List; Western Mountains, Valleys, and Coast Region (WMVC) (USACE 2018)

Duration: A=Annual; B=Biennial; P=Perennial; USDA PLANTS Database (2020)

New species identified in 2020 are **bolded**

Species identified to genus level have been assigned an indicator status of N/A