

# Sandstone Ranch 2019 Botanical Survey Denver Botanic Gardens

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Prepared for Douglas County Open Space



Photo by Curt Frankenfeld

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## Botanical Survey Overview

Sandstone Ranch is a 2038-acre Open Space property acquired by Douglas County in 2017 (Figures 1 and 2). A vision for the Ranch's future is being developed by various stakeholders and the public, with an aim to balance historical and ecological preservation of the Ranch with public access and educational opportunities. Our goal for the 2019 botanical survey and resulting report is to inform this process with relevant data about the botanical and ecological character of the property. To this end, the report is structured to describe several aspects of plant biodiversity on the Ranch. It is not the purview of this report to make any management recommendations.

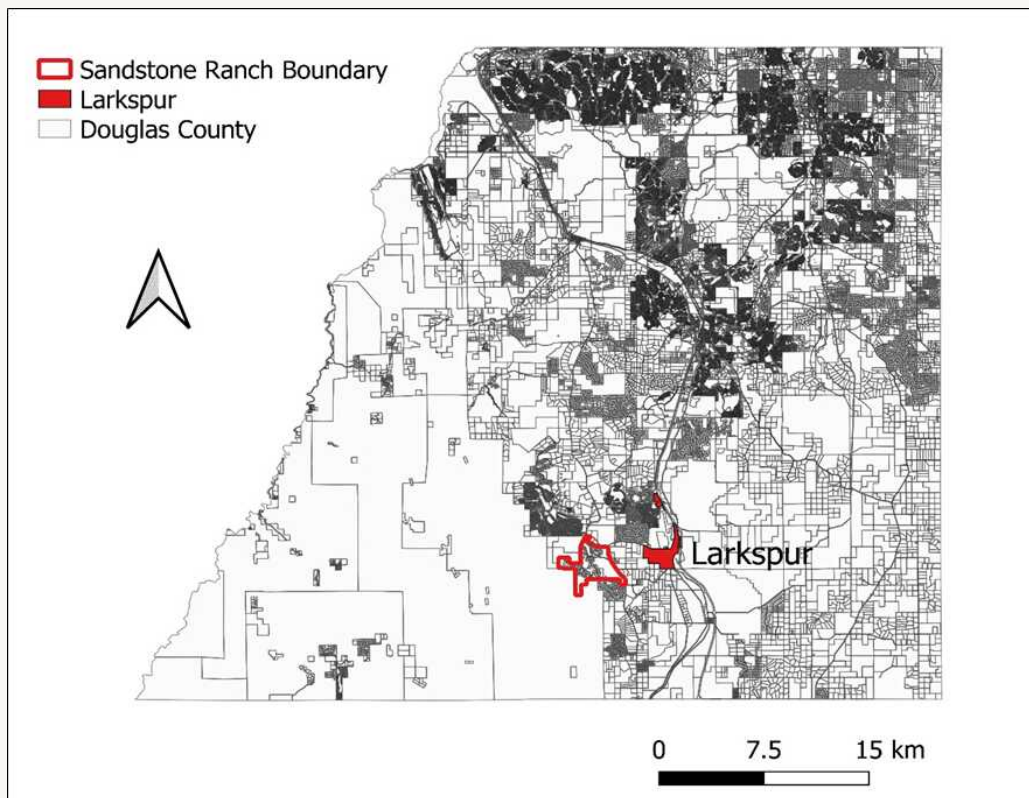


Figure 1. Location of Sandstone Ranch Open Space in Douglas County.



The backbone of this report is a species list generated through intensive sampling of Sandstone Ranch Open Space (hereafter, the Ranch) in 2019 (with additional key collections made by Loraine Yeatts and Douglas County volunteers in 2018). The species list is corroborated by physical specimens that are housed in the Kathryn Kalmbach Herbarium of Vascular Plants at Denver Botanic Gardens.



Figure 2. Vista across Sandstone Ranch, looking east toward Raspberry Butte.

Physical specimens are more valuable than observational lists because the specimen and its associated data are curated in perpetuity, to be verified by other researchers and used for future scientific and educational purposes (Figure 3). As such, the collections serve the dual purposes of describing plant communities on the Ranch, while supporting the broader effort to document plant biodiversity in Colorado.

Figure 3. Plant specimens are natural history collections, to be curated in perpetuity for future use. The approximately 450 species documented on Sandstone Ranch are vouchered and available for use by other researchers and members of the public.



Based on the species list (Table 1), we generated several metrics to help interpret plant communities on the Ranch. These metrics include: the taxonomic distribution of plant species among families; species biogeographic origins (native or introduced to Colorado); and species Coefficients of Conservatism and Wetland Indicator Status (defined below).

We also provide qualitative descriptions of plant communities using definitions by NatureServe (2009) and we highlight certain species of interest or concern (e.g., those listed as noxious weeds or tracked by the Colorado Natural Heritage Program). Throughout the report we use only scientific names. Common names can be found in the species list (Table 1).

### Field sampling

Our field crews intensively sampled each of nine property zones, as delineated by Douglas County, using a botanical “intentional meander” approach. With this approach, each uniquely encountered species is collected and linked to geographic and biological data about its location.

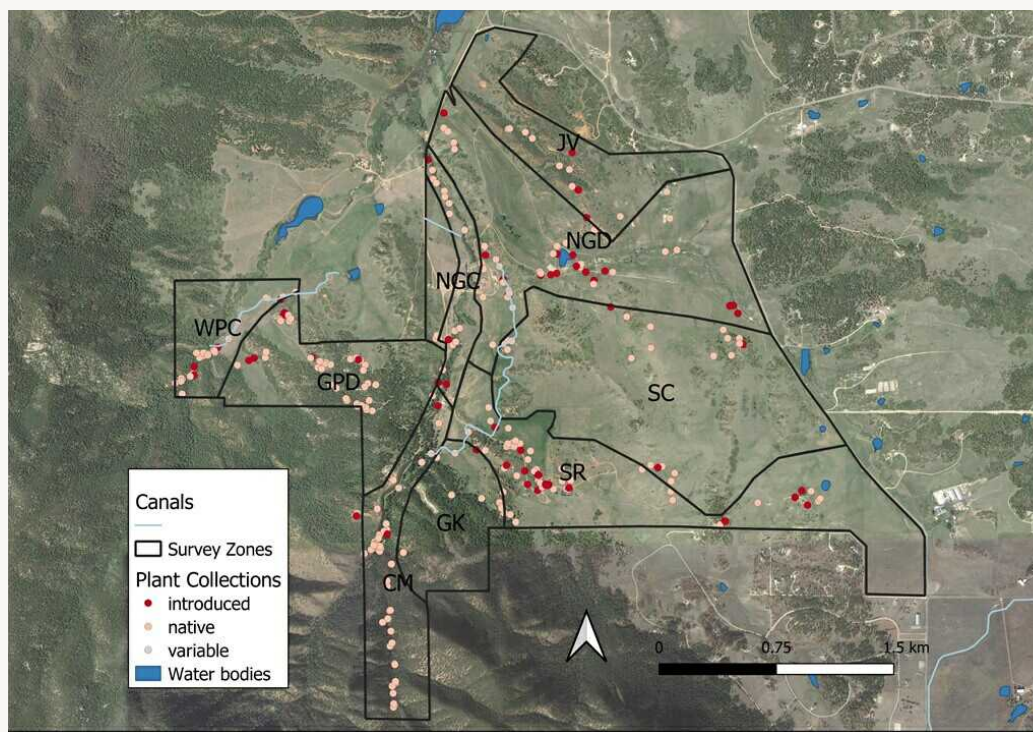
Collections were made on two dates in 2018 (6/24 and 8/24) and 18 dates in 2019 (starting on April 25th and ending on September 12th). The season-long sampling in 2019 ensured that early, middle-, and late-blooming species were collected with the reproductive structures needed for unequivocal identification.



Figure 4. Douglas County volunteers (see Acknowledgments) helped orient Denver Botanic Gardens staff (including project lead botanist Dr. Jan Wingate, and former Head Curator of Herbaria, Dr. Melissa Islam) regarding interesting locations and plant species on the property (e.g., the uncommonly encountered *Triodanis perfoliata*, pictured to the left).

A total of 783 specimens were collected by Janet L. Wingate (N = 612) and Loraine Yeatts (N = 171; Figure 5). Additional key collections were made by Douglas County volunteers Elizabeth Taylor (*Campanula aparinoides*, *Viola selkirkii*) and Barb Harbach (*Triodanis perfoliata*; Figure 4). Plants were identified using several taxonomic keys (Ackerfield 2015, FNA 1993, Weber and Whittmann 2012, Wingate 1994, 2017). All specimens have been pressed and dried for long-term curation at the Kathryn Kalmbach Herbarium at the Gardens. An interactive online species list with descriptions and pictures is available at:  
<http://swbiodiversity.org/seinet/checklists/checklist.php?clid=5685&emode=0>.

Figure 5. Specimen collection locations across nine zones on Sandstone Ranch. Most GPS points are linked with several collections (see digital Excel file for all specimens and their associated latitude/longitude). WPC = West Plum Creek; GPD = Gove Plum Divide; NGC = North Gove Creek; JV = Juniper Valley; NGD = North Grassland Drive; SC = South Central; SR = South Road; GK = Gove Knob; CM = Club Med.





## Taxonomic distribution, biogeographic origin, and listing status

Species richness, or the number of species that occurs in an area of interest, is a foundational piece of information used to describe plant biodiversity. Herein it serves as the primary data from which other descriptive metrics are derived, including assigning biogeographic origin. We use biogeographic origin as one way to understand plant communities, as introduced species can sometimes spread aggressively, which reduces biodiversity and disrupts ecological processes such as nutrient cycling or fire regimes (Alba et al. 2014).

The survey revealed 496 species (505 total taxa including subspecies), or nearly 20% of the 2690 species estimated to be present in Colorado (Ackerfield 2015). The species comprised 289 genera and 77 families, with 80% of the species native to Colorado, and 20% accidentally or intentionally introduced.

Figure 6. Two widespread members of the Poaceae family: *Bouteloua gracilis* (left), the historically dominant native shortgrass, and *Bromus inermis* (right), a now-dominant forage grass.

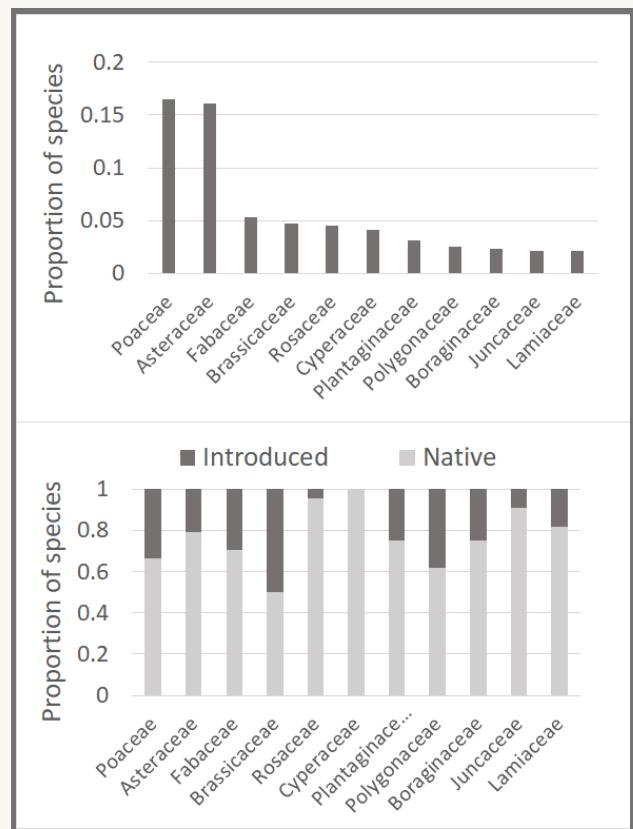
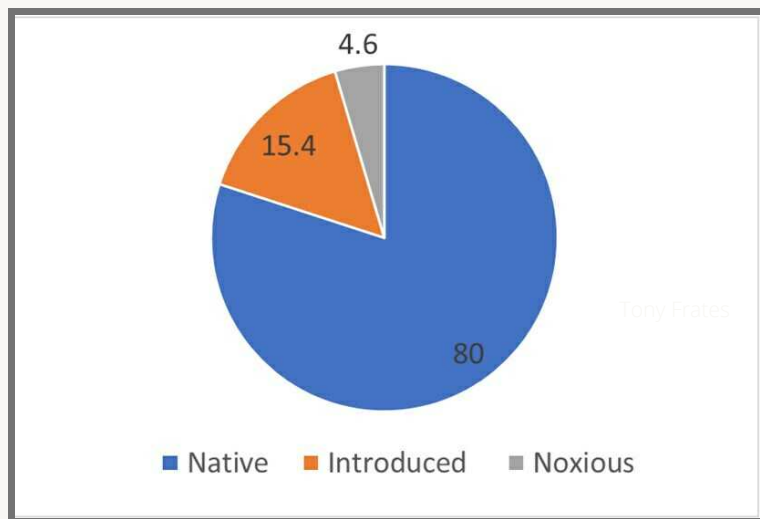


Figure 7. Panel A: The proportion of species belonging to the 11 most common plant families (defined as those families containing at least two percent of all species). Panel B: The proportions of native and introduced species (biogeographic origin) in each family.

As is typical, a few families contributed disproportionately to species richness (Figure 6A), with the grass (Poaceae) and aster (Asteraceae) families together comprising more than 30% of all documented species. There was some variation among families in terms of biogeographic origin (Figure 6B). For example, the mustard family (Brassicaceae) contained proportionally more introduced species than any other family, while the sedge family (Cyperaceae) contained only native species.

Figure 8. Percentage of plants species that are native, introduced, or introduced and noxious. (See the associated digital Excel file for the exact locations of each species.)



Of the introduced species, 23 (or 4.6%) are listed as noxious in Colorado (Figure 8 and Table 1). Listing status (A, B, C, or watchlist) reflects a prioritization of which species can be most effectively managed with available resources. We found two List A species, *Hieracium aurantiacum* and *Epilobium hirsutum* on the Ranch (see digital Excel spreadsheet for locations). List A species represent nascent (still-controllable) invasions and therefore are of the highest priority for eradication.



Figure 9. *Hieracium aurantiacum* and *Epilobium hirsutum* (right) are two list A noxious weeds that should be removed from the Ranch if possible.

There were 11 List B species (Table 1). These species are more widespread than List A species, with little potential of total eradication, but with management plans in place to contain their spread. We also found eight List C species (Table 1), which are typically so widespread that suppression decisions are left to local jurisdictions and private landowners.

Finally, *Phragmites australis*, which was found growing in the irrigation ditch near the South Barn, is on the Watch List. Watch List species are considered a potential threat to the environmental value of land in Colorado, and more information on their biology is desired by the Commissioner of Agriculture. *Phragmites australis* has both native North American and introduced European genotypes. The introduced genotypes can aggressively spread and alter ecosystem structure and function, especially in the Eastern US (Saltonstall 2002). Land managers and Douglas County volunteers might want to reference the USDA technical note by Swearingen et al. (2012) to determine whether the stand is of native or introduced origin.



Tony Frates



Paul Rothrock

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Figure 10. *Phragmites australis* is on Colorado's noxious weed Watch List, which means the Colorado Department of Agriculture is seeking additional information on its ecology.



## Floristic Quality based on Coefficients of Conservatism

The Coefficient of Conservatism (or C-value; Spyreas 2019) is an indicator that uses plant species composition to describe an area's ecological condition, which can range from highly degraded to fully intact (Figure 11). Ecological processes often break down in highly degraded systems, for example if disturbance causes a significant loss of biodiversity or a change in the historic fire or hydrologic regimes.



Figure 11. Two sites on Sandstone Ranch that provide examples of low and high floristic quality. The site on the left is highly departed from the native shortgrass steppe habitat that existed prior to land use change for agricultural purposes. In this case, *Bromus inermis* (an introduced forage grass) and introduced forbs (e.g., *Cirsium arvense* and *Verbascum thapsus*) have replaced the native grassland community and reduced biodiversity. The site on the right is still relatively intact, providing a good example of native, montane riparian and adjacent upland habitat (see detailed descriptions of these habitat types below).

Two related concepts underlie development of the conservatism indicator: 1) plant species differ in their tolerance to various types and magnitudes of human-caused disturbance and 2) the plant species present in an area inform how natural or intact the habitat is. In this context, "natural" or "intact" habitat is based on conditions prior to European settlement, which ushered in rapid changes in land use and disturbance regimes, as well as the introduction of introduced species.

Figure 12. Examples of species observed on the Ranch that fall along a continuum from low to high floristic quality based on their Coefficients of Conservatism.



*Carduus nutans*  
(C-value = 0)



*Achnatherum hymenoides*  
(C-value = 5)



*Gentiana bigelovii*  
(C-value = 8)

Species are assigned a C-value from zero to one. Those on the low end of the continuum show little fidelity to natural areas (and thus may indicate a degraded habitat), while those on the high end occur only in relatively pristine sites (Figure 12). C-values are assigned by botanical experts with extensive knowledge of plant species and community types in their region (for Colorado, we used Rocchio 2007). The indicator rankings are defined as follows:

- 0-3: Introduced species (always = 0), or native species that occur in moderately to highly degraded sites
- 4-6: Native species that show some affinity to natural areas and are often abundant or are present across a wide range of habitats and environments
- 7-8: Native species associated mostly with natural areas, but that can sometimes persist in degraded habitat
- 9-10: Native species that tolerate very little or no habitat degradation

C-values were available for 467 of the 496 species observed on the Ranch. Of these, 24% (Figure 13) had a C-value of zero, comprised mostly of introduced species plus a handful of “weedy” or highly ruderal natives such as *Ambrosia artemisiifolia* (Table 1). The remaining species exhibited a normal, or bell-shaped, distribution with relatively few extremely ruderal (C-value 1-3) or extremely conservative (C-value 8-10) species. Those species that do depend on intact habitat occurred mostly in areas that historically could not be grazed (Figure 14). The majority of species (57.5%) had a ranking between 4 and 7, suggesting that a substantial proportion of the species pool on the Ranch is dependent on at least somewhat intact, native habitat.

Figure 13. Distribution of Coefficients of Conservatism for all species found during the 2018-2019 botanical survey. Dark grey = predominantly introduced species; light grey = native species with different levels of dependence on pristine habitat.

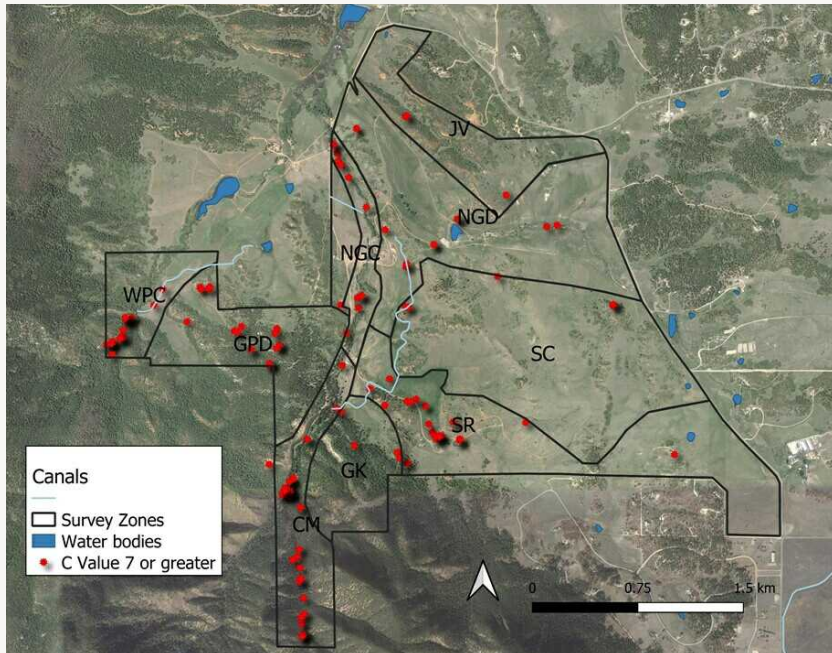
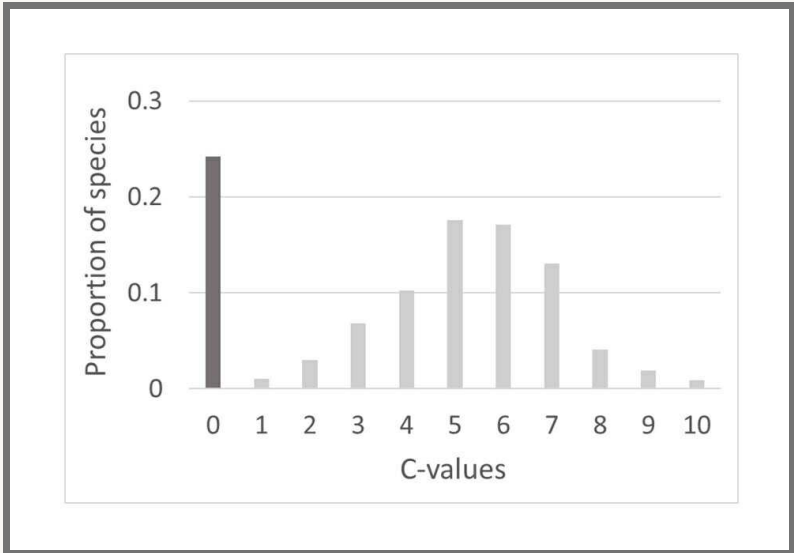


Figure 14. Many of the highly conservative species (C-value equal to or greater than 7) were restricted to the western half of the Ranch, where forest and shrubland habitats were not amenable to agricultural use.



## Species tracked by the Colorado Natural Heritage Program

Eight species found on the Ranch are tracked by CNHP (Figures 15-17). The tracking scheme includes rankings at the global (G) and state (S) levels on a scale from 1 to 5.

1 = Critically imperiled

2 = Imperiled

3 = Vulnerable to extirpation

4 = Apparently secure

5 = Demonstrably widespread, abundant, and secure.

Of the eight species, seven are globally secure (G5), with only *Mentzelia speciosa* ranked as globally vulnerable to extirpation (G3). At the state level, *Campanula aparinoides* (C-value of 10) is the most vulnerable species found on the Ranch, listed as critically imperiled (S1).

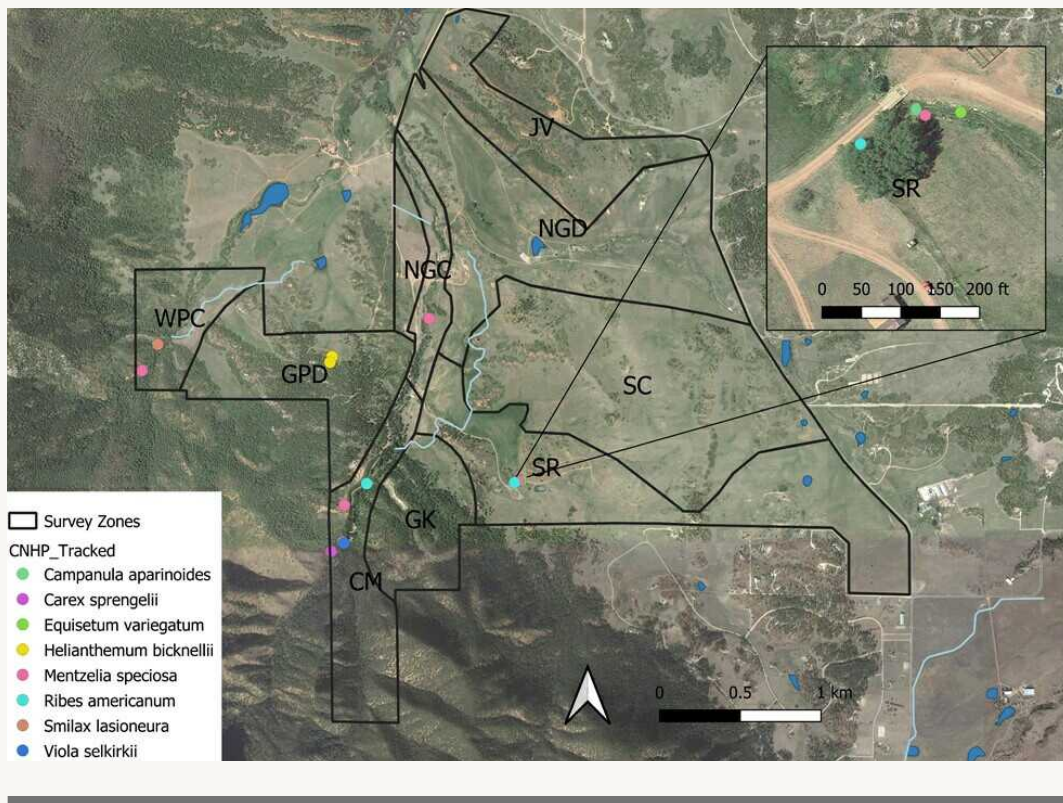


Figure 15. Locations of CNHP-tracked species found during the 2018-2019 surveys of Sandstone Ranch.

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Figure 16. *Campanula aparinoides* was thought to be extirpated in the state until it was located in an irrigation ditch on the Ranch (near the South Barn; see Figure 14) in 2018.



*Campanula aparinoides* was found by Douglas County volunteers Elizabeth Taylor, Barb Harbach, Cathy Fischer, and Curt Frankenfeld (with subsequent confirmation by Gardens adjunct researcher Loraine Yeatts) in 2018. This species was in fact thought to be extirpated in the state (Ackerfield 2015), but a small population of plants was found growing along the ditch that runs near the South Barn (Figure 15). Every effort should be made to minimize disturbance in this area, as *C. aparinoides* is an obligate wetland plant (see next section) that would be impacted by changes to its localized hydrologic regime.

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Figure 17. Four of the CNHP-tracked species are state imperiled (S2) including, from left to right, *Carex sprengelii*, *Helianthemum bicknellii*, *Ribes americanum*, and *Viola selkirkii*.



The violet was also found in 2018 by Douglas County volunteer Elizabeth Taylor, along a riparian stretch of Gove Creek in the Club Med zone of the Ranch. This species has only been vouchered in Douglas County on three other occasions, with two of those collections dating back to 1923 from Sedalia (SEINET 2020).

Another species with only a few vouchered occurrences is *Helianthemum bicknellii* (Figure 18), which had only two other specimens from Douglas County previous to the Ranch survey. A relatively robust population was observed in an open Ponderosa pine/Gambel oak woodland in the Gove Plum Divide zone of the Ranch (see Table 1 for collection location). It is important to note that vouchers of these uncommon CNHP-tracked species not only provide information about plant communities on the Ranch, but also refine our understanding of how these vulnerable species are distributed across the state.

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Figure 18. Identification features of later-season *Helianthemum bicknellii* when found after its showy, yellow chasmogamous flowers have senesced (as pictured in Figure 17).



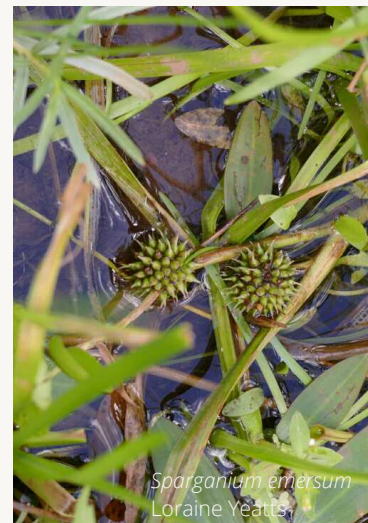
### Wetland indicator status

Plant species fall along a continuum in terms of their dependence on wetland habitat, ranging from fully dependent on wetlands to almost always occurring in uplands. Given the riparian stretches, irrigation ditches, and wet meadows that occur on the Ranch, we ranked species according to their wetland indicator status. We used the National Wetland Plant List developed for the Western Mountains Valleys and Coasts Region (National Wetland Plant List 2018) to rank plant species along a continuum as follows:



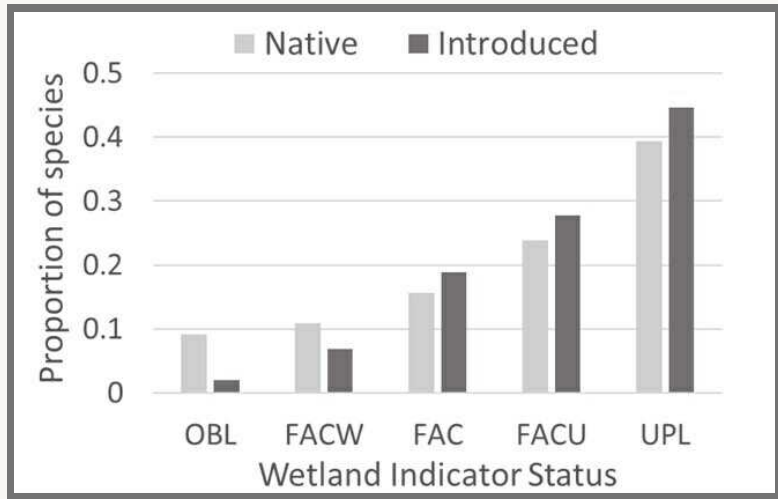
- Obligate wetland (OBL): Almost always a hydrophyte, rarely found in uplands
- Facultative Wetland (FACW): Usually a hydrophyte, occasionally found in uplands
- Facultative (FAC): Commonly occurs as either a hydrophyte or non-hydrophyte
- Facultative Upland (FACU): Occasionally a hydrophyte, but usually occurs in uplands
- Upland (UPL): Rarely a hydrophyte, almost always found in uplands

Figure 19. Examples of obligate wetland species found on the Ranch. Such species would be disproportionately affected by changes to the hydrology of their habitat.



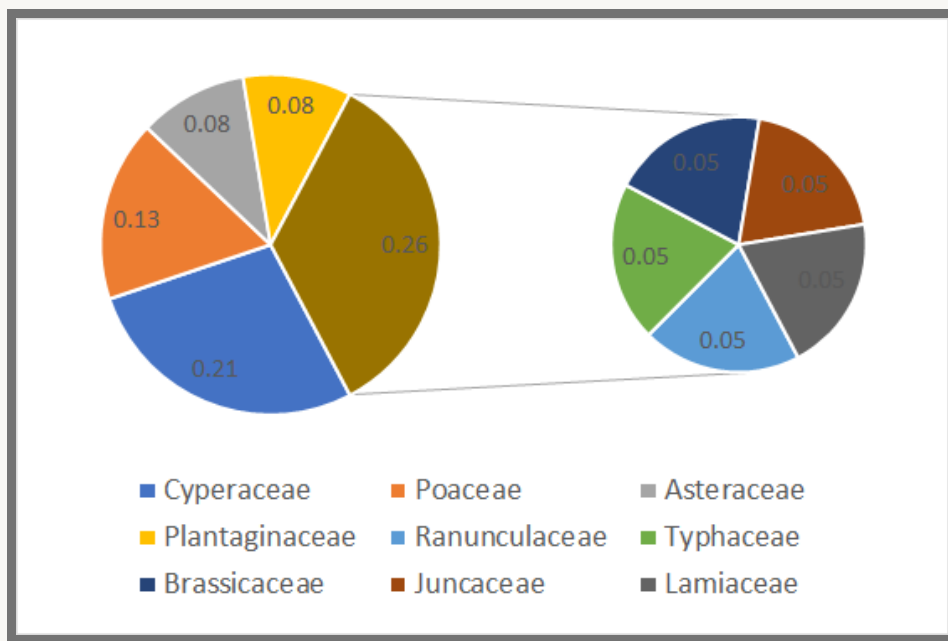
We were able to assign a wetland indicator to 492 of 496 species. The majority of both native and introduced species occur in uplands (Figure 20, assigned "FACU" and "UPL" status), while 15% (native) to 18% (introduced) of species have wider niche breadths, which include both wetland and upland conditions ("FAC" in Figure 20). Approximately 10% of native species (compared with only 2% of introduced species) are obligate to wetlands, meaning they are found in standing water or in soils that are seasonally saturated near the surface for 14 or more days in a row (Lichvar et al. 2012).

Figure 20. Distribution of species ranging from dependent on wetlands (OBL) to only occurring in uplands (UPL). Most obligate wetland species are native.



Another approximately 10% of native species are facultative to wetlands, usually occurring in hydric soils in topographic locations that facilitate saturation or flooding of soil surfaces as least seasonally. It is these native obligate- and facultative wetland species that are most vulnerable to changes in irrigation infrastructure or other aspects of hydrologic management on the Ranch.

Figure 21. Pie charts showing plant families with at least 5% of the 39 obligate wetland species found during the Ranch survey. Graminoids are an especially important group, making up nearly 40% of species (Cyperaceae, 8 species; Poaceae, 5 species; Juncaceae, 2 species; see Table 1 for species names).



## Plant community descriptions

We use NatureServe plant community descriptions (NatureServe 2009) to describe ecosystems on the Ranch. It should be appreciated that plant communities are rarely sharply delineated, but rather share species and characteristics that grade one into the other. Please also note that these plant community types represent a historical baseline, with habitats often modified from these baseline conditions in modern times.

### Western Great Plains Shortgrass Steppe

The shortgrass prairie occurs in the rain shadow of the Rocky Mountains, representing the most arid portion of the Great Plains biome. The ecosystem occurs on flat to rolling uplands with ustic soils ranging from sandy to clayey. Much of the pasture and meadow areas now present on the Ranch were historically shortgrass prairie. Plant species representative of this ecosystem type are still present, but the composition and structure of the native prairie has been degraded in these areas. This degradation is largely due to a loss of native plant biodiversity in areas dominated by the forage grass *Bromus inermis*. Examples of historically dominant, native grasses still occur, including *Bouteloua gracilis*, *Aristida purpurea*, *Bouteloua curtipendula*, *Buchloe dactyloides*, *Hesperostipa comata*, *Pascopyrum smithii*, and *Koeleria macrantha*. Sandier soils on more upland locations harbor representative subshrubs such as *Artemisia frigida*, *Gutierrezia sarothrae*, and *Yucca glauca*. The lower-lying pasture and meadow areas also contain the hydrological infrastructure of the Ranch including "Aswan Dam" and the irrigation ditches. While the areas around the shorelines of the ponds are degraded (often with an abundance of introduced forbs), the irrigation ditches harbor many native, water-loving species that would not otherwise persist. These ditches may require special attention from land managers and volunteers.





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Figure 22. Examples of areas on the Ranch that have been altered from the historic plant community composition that occurs on native shortgrass steppe. Most steppe-land has been altered to some extent in modern times via agriculture and other types of land use change. Upland areas with sandier soils (bottom right picture) appeared to harbor more native shortgrass species than lower-lying areas.



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Figure 23. Locations on the Ranch with irrigation infrastructure that provides unique habitat for water-loving species. The irrigation ditches (upper left) harbor several uncommon native species (such as *Campanula aparinoides*) as well as more common species including *Typhas* (cattails), which provide structural habitat and food resources for birds and other wildlife. The wet meadow to the north of the South Barn (upper and lower right) has several species of native *Carex* (sedges) that abundantly carpet the area.

## Rocky Mountain Gambel Oak-Mixed Montane Shrubland

These shrublands occur along dry foothills and lower mountain slopes (2000-2900 m in elevation) on the western edge of the Great Plains. They can occur on level to steep slopes, cliffs, escarpments, rimrock slopes, and rocky outcrops. Many examples of this plant community type are visible on the sandstone outcrops dotted across the Ranch or hugging the toe slopes of the foothills. Soils are often poorly developed, rocky, and well drained. These shrublands may intergrade with pinyon-juniper woodlands that lie at lower elevation (several locations on the Ranch have scattered individuals of *Juniperus scopulorum*). This ecosystem type is usually dominated by *Quercus gambelii* but may have substantial representation of other shrubs and small trees such as *Cercocarpus montanus*, *Amelanchier alnifolia*, *Prunus virginiana*, and species of *Symphoricarpos*, all of which we observed within this community type on the Ranch. The dominant Gambel's oak can form thickets, or may be open enough to allow for a rich understory of shrubs, grasses, and forbs. Perennial graminoids such as *Bouteloua gracilis*, *Carex inops*, and *Koeleria macrantha* may be abundant. This ecosystem intergrades with the Lower Montane-Foothill Shrubland ecosystem detailed below.





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Figure 24. Thickets of *Quercus gambelii* (in flower to the right) are scattered across the Ranch, often mixing with other co-dominant shrub species (see Figure 25) and grading into the lower-most extent of *Pinus ponderosa* woodlands.



## Rocky Mountain Lower Montane-Foothill Shrubland

As with the Gambel oak shrublands, this ecosystem is found in the foothills and on lower mountain slopes of the Rocky Mountains (1500-2900 m in elevation). It is usually associated with exposed, rocky, and dry sites that limit tree growth, often occurring in locations where *Quercus gambelii* is absent. *Cercocarpus montanus* can create pure stands in parts of Colorado, with inclusions of grasses and trees, although other shrubs (e.g., *Rhus trilobata*, *Ribes cereum*, and *Yucca glauca*) are often co-dominant. Representative grasses include species of the genera *Muhlenbergia*, *Bouteloua*, and *Hesperostipa*.



Figure 25. The shrubs above commonly intermix with stands of *Quercus gambelii* on the Ranch.



## Southern Rocky Mountain Ponderosa Pine Woodland

This ecosystem type occurs at the ecotone between lower-elevation grasslands and shrublands, and higher-elevation mesic coniferous forests. The woodlands usually occur on warm, dry, exposed sites that range in elevation from 1900-2800 meters. Examples are found across the western edge of the property where grass- and shrublands initially grade into the lower montane forest. Soils are typically coarse-textured with good aeration and drainage, potentially with periods of drought during the growing season. As the name implies, *Pinus ponderosa* is the dominant conifer, possibly mixed with *Pseudotsuga menziesii*, *Pinus edulis*, *Pinus contorta*, *Populus tremuloides*, and *Juniperus* species. On the Ranch we observed Douglas fir to be the most abundant co-occurring conifer. This ecosystem usually has a shrubby understory with species like *Arctostaphylos uva-ursi*, *Cercocarpus montanus*, *Quercus gambelii*, *Prunus virginiana*, and *Symphoricarpos* species. Common grasses include *Pascopyrum smithii* and species of *Achnatherum*, *Hesperostipa*, and *Festuca*.



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Figure 26. Sparse trees (left) indicating a more open example of Ponderosa pine woodlands on the Ranch. On the right, a more dense stand in the Gove Plum Divide area of the ranch had a meadow clearing that harbored many grasses of high floristic quality (e.g., *Achnatherum nelsonii*, *Muhlenbergia wrightii*, and *Pseudoroegneria spicata*).



## Southern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest and Woodland

These forests and woodlands occur throughout the Southern Rocky Mountains from 1200 to 3300 meters in elevation. Rainfall averages 40-60 cm/year with summer monsoonal rains contributing substantial moisture during the growing season. The composition and structure of overstory conifers depend on temperature and moisture relationships of the site. *Pseudotsuga menziesii* and (subdominant) *Pinus ponderosa* co-occur on drier sites, while *Abies concolor* and *Picea pungens* become more common in cooler and wetter sites. Common understory plants include *Arctostaphylos uva-ursi*, *Mahonia repens*, and *Quercus gambelii*. Much of the Club Med zone and the western edge of the West Plum Creek zone contain this ecosystem type, grading with the similar (but more mesic) ecosystem detailed below.

## Southern Rocky Mountain Mesic Montane Mixed Conifer Forest and Woodland

This system intergrades with the Dry-Mesic Mixed Conifer Forest detailed above, but occurs on cooler and more mesic sites such as the slopes of ravines, along streams, and on north- and east-facing slopes. *Pseudotsuga menziesii* and *Abies concolor* are often dominant, but may be mixed with *Picea engelmannii*, *Picea pungens*, or *Pinus ponderosa*. Cold-deciduous mid-canopy shrubs include *Acer glabrum*, *Alnus incana*, *Betula occidentalis*, *Cornus sericea*, and *Jamesia americana*, all of which were observed along riparian stretches in the Club Med and West Plum Creek zones of the Ranch. This ecosystem type is where many herbaceous species of high floristic quality were found during the survey (see photos and species names below). Some of these species (e.g., *Prunus pensylvanica* and *Aralia nudicaulis*) represent disjunct remnants of eastern deciduous flora, which rely on the cooler and wetter habitats along the riparian stretches of West Plum Creek and Gove Creek.



Figure 27. Examples of the lush riparian habitat that occurs along Gove Creek and West Plum Creek on Sandstone Ranch. In these areas, the surrounding uplands have an overstory of predominantly *Pseudotsuga menziesii* (pictured to the right), while the banks of the creeks have water-loving small trees and shrubs including *Alnus incana* (pictured on the lower right with *Viola canadensis*), *Betula occidentalis*, and *Corylus cornuta*. A thick understory of herbaceous plants contains many floristically interesting species (see Figure 28 for examples).







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Figure 28. A few examples of the many species that are indicative of the high-quality riparian and adjacent upland habitat along West Plum Creek and Gove Creek on Sandstone Ranch.



## Rocky Mountain Lower Montane-Foothill Riparian Woodland and Shrubland

This ecosystem occurs across a wide elevational range, from approximately 900-2800 meters. It usually contains multiple plant communities, which are dominated by trees and shrubs that grow along waterways with episodic flooding. On the Ranch, this ecosystem type occurs where Gove Creek threads across the low-lying areas of the property. Representative tree and shrubs species that were observed include *Populus angustifolia*, *Populus deltoides*, *Salix amygdaloides*, *Prunus virginiana*, and several species of *Salix* shrubs. A common exotic tree in this ecosystem type is *Elaeagnus angustifolia*, which was also observed.



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Figure 29. Overview (upper left) and close-up photos of the deciduous tree species (cottonwoods, willows, chokecherries, American plum, etc.) that thread across the ranch along the Gove Creek watercourse.

## Acknowledgements

It is heartening to work with so many people who love nature and want to grow botanical knowledge about Colorado's ecosystems. The Gardens would like to thank the many knowledgeable volunteers from Douglas County Open Space for helping our crews find plants in various stages of fruit and flower across more the 2000-plus acres of Sandstone Ranch. This includes Elizabeth Taylor, Barb Harbach, Cathy Fischer, Sharon Hines, Heather Koch, and Curt Frankenfeld (with Curt also sharing his beautiful photographs). We also thank our own Gardens volunteers for their perennial support of our fieldwork, including Sue Janssen, Chris Ruch, Frank Morrey, and Kristina Hughes. We also thank adjunct researcher Loraine Yeatts for bringing this project idea to the Gardens and contributing so many plant specimens (and photos!) to the body of work.



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Table 1. List of species plant species collected during Denver Botanic Gardens 2019 survey of Sandstone Ranch, Douglas County, Colorado. Noxious weeds are in **bold** (list A denoted with superscript A; list B with superscript B; list C with superscript C; watchlist denoted with superscript W). C-value = Coefficient of Conservatism and WIS = Wetland Indicator Status. All metrics defined in the report.

Family	Scientific Name	Common Name	Native Status	C-value	WIS
Alismataceae	<i>Alisma triviale</i> Pursh	Northern Water-Plantain	Native	3	OBL
Amaranthaceae	<i>Amaranthus powellii</i> S. Watson	Green Amaranth	Native	5	UPL
Amaranthaceae	<i>Chenopodium atrovirens</i> Rydb.	Pinyon Goosefoot	Native	5	UPL
Amaranthaceae	<i>Chenopodium berlandieri</i> <i>var. zschackei</i> (Murr) Murr	Zschack's Goosefoot	Native	2	UPL
Amaranthaceae	<i>Chenopodium fremontii</i> S. Watson	Fremont's Goosefoot	Native	6	FACU
Amaranthaceae	<i>Chenopodium hians</i> Standl.	Hians Goosefoot	Native	NA	UPL
Amaranthaceae	<i>Chenopodium pratericola</i> Rydb.	Desert Goosefoot	Native	4	UPL
Amaranthaceae	<i>Chenopodium simplex</i> (Torr.) Raf.	Giant-Seed Mock Goosefoot	Native	2	UPL
Amaranthaceae	<i>Kochia scoparia</i> (L.) Schrad.	Mexican-Fireweed	Introduced	0	FACU
Amaranthaceae	<i>Salsola tragus</i> L.	Prickly Russian-Thistle	Introduced	0	FACU
Amaryllidaceae	<i>Allium cernuum</i> Roth	Nodding Onion	Native	5	FACU
Amaryllidaceae	<i>Allium textile</i> A. Nelson & J. F. Macbr.	White Wild Onion	Native	5	UPL
Anacardiaceae	<i>Rhus glabra</i> L.	Smooth Sumac	Native	6	UPL
Anacardiaceae	<i>Rhus trilobata</i> Nutt.	Skunkbush Sumac	Native	5	UPL
Anacardiaceae	<i>Toxicodendron rydbergii</i> (Small ex Rydb.) Greene	Western Poison Ivy	Native	3	FACU
Apiaceae	<i>Cicuta maculata</i> L.	Spotted Water-Hemlock	Native	3	OBL
Apiaceae	<i>Heracleum maximum</i> W. Bartram	American Cow-Parsnip	Native	6	FAC
Apiaceae	<i>Ligusticum porteri</i> Coult. & Rose	Porter's Wild Lovage	Native	7	FACU
Apiaceae	<i>Lomatium orientale</i> Coult. & Rose	Oriental Desert-Parsley	Native	6	UPL
Apiaceae	<i>Osmorhiza berteroi</i> DC.	Mountain Sweet-Cicely	Native	5	FACU
Apiaceae	<i>Sanicula marilandica</i> L.	Maryland Black-Snakeroot	Native	8	FAC
Apocynaceae	<i>Apocynum androsaemifolium</i> L.	Spreading Dogbane	Native	1	FACU
Apocynaceae	<i>Asclepias speciosa</i> Torr.	Showy Milkweed	Native	3	FAC
Apocynaceae	<i>Asclepias tuberosa</i> L.	Butterfly Milkweed	Native	7	UPL
Araceae	<i>Lemna minor</i> L.	Common Duckweed	Native	2	OBL
Araliaceae	<i>Aralia nudicaulis</i> L.	Wild Sarsaparilla	Native	9	FACU
Asparagaceae	<i>Leucocrinum montanum</i> Nutt. ex A. Gray	Star-Lily	Native	6	UPL

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Asparagaceae	<i>Maianthemum stellatum</i> (L.) Link	Starry False Solomon's-Seal	Native	7	FAC
Asparagaceae	<i>Yucca glauca</i> Nutt.	Soapweed Yucca	Native	4	UPL
Asteraceae	<i>Achillea millefolium</i> L.	Western Yarrow	Native	4	FACU
Asteraceae	<i>Agoseris aurantiaca</i> (Hook.) Greene	Orange-Flower Goat-Chicory	Native	6	FACU
Asteraceae	<i>Ambrosia artemisiifolia</i> L.	Annual Ragweed	Native	0	FACU
Asteraceae	<i>Ambrosia psilostachya</i> DC.	Perennial Ragweed	Native	3	FACU
Asteraceae	<i>Antennaria neglecta</i> Greene	Field Pussytoes	Native	5	FACU
Asteraceae	<i>Antennaria parvifolia</i> Nutt.	Little-Leaf Pussytoes	Native	NA	UPL
<b>Asteraceae</b>	<b><i>Arctium minus</i> (Hill) Bernh.<sup>C</sup></b>	<b>Lesser Burrdock</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Asteraceae	<i>Arnica fulgens</i> Pursh	Shining Leopardbane	Native	6	UPL
<b>Asteraceae</b>	<b><i>Artemisia absinthium</i> L.<sup>B</sup></b>	<b>Oldman</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Asteraceae	<i>Artemisia biennis</i> var. <i>biennis</i> Willd. var. <i>biennis</i>	Biennial Wormwood	Introduced	0	FACW
Asteraceae	<i>Artemisia campestris</i> L.	Pacific Wormwood	Native	5	FACU
Asteraceae	<i>Artemisia dracunculus</i> L.	Dragon Wormwood	Native	3	UPL
Asteraceae	<i>Artemisia frigida</i> Willd.	Prairie Sagebrush	Native	4	UPL
Asteraceae	<i>Artemisia ludoviciana</i> Nutt.	White Sagebrush	Native	4	FACU
Asteraceae	<i>Bidens cernua</i> L.	Nodding Burr-Marigold	Introduced	0	OBL
Asteraceae	<i>Bidens frondosa</i> L.	Devil's-Pitchfork	Introduced	0	FACW
Asteraceae	<i>Bidens tripartita</i> L.	Three-Lobe Beggarticks	Native	NA	FACW
Asteraceae	<i>Brickellia grandiflora</i> (Hook.) Nutt.	Tassel-Flower Brickellbush	Native	8	UPL
<b>Asteraceae</b>	<b><i>Carduus nutans</i> L.<sup>B</sup></b>	<b>Nodding Plumeless-Thistle</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
<b>Asteraceae</b>	<b><i>Centaurea diffusa</i> Lam.<sup>B</sup></b>	<b>White Knapweed</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
<b>Asteraceae</b>	<b><i>Cirsium arvense</i> (L.) Scop.<sup>B</sup></b>	<b>Canadian Thistle</b>	<b>Introduced</b>	<b>0</b>	<b>FAC</b>
Asteraceae	<i>Cirsium canescens</i> Nutt.	Prairie Thistle	Native	6	UPL
<b>Asteraceae</b>	<b><i>Cirsium vulgare</i> (Savi) Ten.<sup>B</sup></b>	<b>Bull Thistle</b>	<b>Introduced</b>	<b>0</b>	<b>FACU</b>
Asteraceae	<i>Conyza canadensis</i> (L.) Cronquist	Canadian Horseweed	Introduced	0	UPL
Asteraceae	<i>Crepis occidentalis</i> Nutt.	Large-Flower Hawk's-Beard	Native	3	UPL
Asteraceae	<i>Cyclachaena xanthiifolia</i> (Nutt.) Fresen.	Carelessweed	Native	NA	FAC
Asteraceae	<i>Dyssodia papposa</i> (Vent.) Hitchc.	Fetid-Marigold	Native	2	UPL

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Asteraceae	<i>Ericameria nauseosa</i> (Pall. ex Pursh) G. L. Nesom & G. I. Baird	Rubber-Rabbitbrush	Native	3	UPL
Asteraceae	<i>Erigeron acris</i> L.	Bitter Fleabane	Native	NA	FACU
Asteraceae	<i>Erigeron canus</i> A. Gray	Hoary Fleabane	Native	6	UPL
Asteraceae	<i>Erigeron divergens</i> Torr. & A. Gray	Rough Fleabane	Native	4	UPL
Asteraceae	<i>Erigeron flagellaris</i> A. Gray	Trailing Fleabane	Native	3	FACU
Asteraceae	<i>Erigeron flagellaris</i> forma <i>breviligulatus</i>	Trailing Daisy	Native	NA	FACU
Asteraceae	<i>Erigeron formosissimus</i> Greene	Beautiful Fleabane	Native	6	UPL
Asteraceae	<i>Erigeron speciosus</i> (Lindl.) DC.	Aspen Fleabane	Native	5	UPL
Asteraceae	<i>Erigeron strigosus</i> var. <i>strigosus</i> Muhl. Ex Willd.	Prairie Fleabane	Native	0	FACU
Asteraceae	<i>Erigeron subtrinervis</i> Rydb. Ex Porter & Britton	Three-Nerve Fleabane	Native	NA	UPL
Asteraceae	<i>Eutrochium maculatum</i> (L.) E. E. Lamont	Spotted Trumpetweed	Native	8	OBL
Asteraceae	<i>Gnaphalium uliginosum</i> L.	Marsh Cudweed	Variable	5	FAC
Asteraceae	<i>Grindelia squarrosa</i> (Pursh) Dunal	Curly-Cup Gumweed	Native	1	FACU
Asteraceae	<i>Gutierrezia sarothrae</i> (Pursh) Britton & Rusby	Broom Snakeweed	Native	3	UPL
Asteraceae	<i>Helianthus annuus</i> L.	Common Sunflower	Native	1	FACU
Asteraceae	<i>Helianthus nuttallii</i> Torr. & A. Gray	Nuttall's Sunflower	Native	3	FACW
Asteraceae	<i>Helianthus pumilus</i> Nutt.	Little Sunflower	Native	4	UPL
Asteraceae	<i>Heliomeris multiflora</i> Nutt.	Nevada Showy False Goldeneye	Native	4	UPL
Asteraceae	<i>Heterotheca foliosa</i> (Nutt.) Shinnars	Foliose False Goldenaster	Native	NA	UPL
Asteraceae	<i>Heterotheca villosa</i> (Pursh) Shinnars	Hairy False Golden-Aster	Native	3	UPL
<b>Asteraceae</b>	<b><i>Hieracium aurantiacum</i> L.<sup>A</sup></b>	<b>Orange Hawkweed</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Asteraceae	<i>Hieracium fendleri</i> Schultz-Bip.	Yellow Hawkweed	Native	NA	UPL
Asteraceae	<i>Hymenopappus filifolius</i> Hook.	Fine-Leaf Woollywhite	Native	6	UPL
Asteraceae	<i>Lactuca biennis</i> (Moench) Fernald	Wild Blue Lettuce	Native	0	FAC
Asteraceae	<i>Lactuca canadensis</i> L.	Canadian Blue Lettuce	Native	NA	FACU



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Asteraceae	<i>Lactuca serriola</i> L.	Prickly Lettuce	Introduced	0	FACU
Asteraceae	<i>Liatris punctata</i> Hook.	Dotted Gayfeather	Native	6	UPL
Asteraceae	<i>Lygodesmia juncea</i> (Pursh) D. Don ex Hook.	Rush Skeleton-Plant	Native	4	UPL
Asteraceae	<i>Nothocalais cuspidata</i> (Pursh) Greene	Wavy-Leaf Prairie-Dandelion	Native	4	UPL
Asteraceae	<i>Packera fendleri</i> (A. Gray) W. A. Weber & Á. Löve	Fendler's Groundsel	Native	4	UPL
Asteraceae	<i>Packera tridenticulata</i> (Rydb.) W.A. Weber & Á. Löve	Threetooth Ragwort	Native	7	UPL
Asteraceae	<i>Pseudognaphalium macounii</i> (Greene) Kartesz	Macoun's Rabbit-Tobacco	Native	0	UPL
Asteraceae	<i>Pseudognaphalium stramineum</i> (Kunth) W.A. Weber	Cotton-Batting-Plant	Native	0	FAC
Asteraceae	<i>Rudbeckia laciniata</i> var. <i>ampla</i> (A. Nelson) Cronquist	Cutleaf Coneflower	Native	6	FAC
Asteraceae	<i>Scorzonera laciniata</i> L.	Cut-Leaf Viper-Grass	Introduced	5	UPL
Asteraceae	<i>Senecio eremophilus</i> var. <i>kingii</i> (Rydb.) Greenm.	King's Ragwort	Native	4	FAC
Asteraceae	<i>Senecio integerrimus</i> Nutt.	Lamb-Tongue Ragwort	Native	5	FACU
Asteraceae	<i>Senecio spartioides</i> Torr. & A. Gray	Broom-Like Ragwort	Native	5	UPL
Asteraceae	<i>Solidago canadensis</i> L.	Canadian Goldenrod	Native	5	FACU
Asteraceae	<i>Solidago missouriensis</i> Nutt.	Missouri Goldenrod	Native	5	UPL
Asteraceae	<i>Solidago rigida</i> L.	Hard-Leaf Flat-Top-Goldenrod	Native	NA	FACU
Asteraceae	<i>Solidago rigida</i> var. <i>humilis</i> Porter	Stiff Goldenrod	Native	NA	FACU
Asteraceae	<i>Solidago speciosa</i> var. <i>pallida</i> Porter	Pale Goldenrod	Native	NA	UPL
<b>Asteraceae</b>	<b><i>Sonchus asper</i> (L.) Hill<sup>C</sup></b>	<b>Spiny-Leaf Sow-Thistle</b>	<b>Introduced</b>	<b>0</b>	<b>FACU</b>
Asteraceae	<i>Symphyotrichum ericoides</i> (L.) G. L. Nesom	White Heath American-Aster	Native	4	FAC
Asteraceae	<i>Symphyotrichum falcatum</i> (Lindl.) G.L. Nesom	Rough White Prairie American-Aster	Native	4	FACU

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Asteraceae	<i>Symphotrichum foliaceum</i> var. <i>parryi</i> (D.C. Eat.) G.L. Nesom	Parry's aster	Native	NA	FACU
Asteraceae	<i>Symphotrichum laeve</i> var. <i>geyeri</i> (A. Gray) G. L. Nesom	Geyer's aster	Native	6	FACU
Asteraceae	<i>Symphotrichum lanceolatum</i> var. <i>hesperium</i> (A. Gray) G. L. Nesom	White Panicle Aster	Native	5	OBL
Asteraceae	<i>Symphotrichum porteri</i> (A. Gray) G. L. Nesom	Smooth White American-Aster	Native	6	FACU
Asteraceae	<i>Symphotrichum spathulatum</i> (Lindl.) G. L. Nesom	Mountain American-Aster	Native	6	FAC
Asteraceae	<i>Taraxacum officinale</i> F. H. Wigg.	Common Dandelion	Introduced	0	FACU
Asteraceae	<i>Tetraneuris acaulis</i> (Pursh) Greene	Stemless Four-Nerve Daisy	Native	6	UPL
Asteraceae	<i>Tragopogon dubius</i> Scop.	Meadow Goat's-Beard	Introduced	0	UPL
Asteraceae	<i>Xanthium strumarium</i> L.	Rough Cocklebur	Introduced	0	FAC
Athyriaceae	<i>Athyrium filix-femina</i> var. <i>californicum</i> (L.) Roth ex Mert Butters	Lady Fern	Native	9	FAC
Berberidaceae	<i>Berberis repens</i> Lindl.	Creeping Oregon-Grape	Native	5	UPL
Betulaceae	<i>Alnus incana</i> (L.) Moench	Speckled Alder	Native	6	FACW
Betulaceae	<i>Betula occidentalis</i> Hook.	Water Birch	Native	8	FACW
Betulaceae	<i>Corylus cornuta</i> Marshall	Beaked Hazelnut	Native	8	FACU
Boraginaceae	<i>Asperugo procumbens</i> L.	German-Madwort	Introduced	0	UPL
<b>Boraginaceae</b>	<b><i>Cynoglossum officinale</i> L.<sup>B</sup></b>	<b>Gypsy-Flower</b>	<b>Introduced</b>	<b>0</b>	<b>FACU</b>
Boraginaceae	<i>Ellisia nyctelea</i> (L.) L.	Aunt Lucy	Native	3	FACU
Boraginaceae	<i>Hackelia floribunda</i> (Lehm.) I.M. Johnston	Many-Flower Stickseed	Native	3	FACU
Boraginaceae	<i>Hydrophyllum fendleri</i> (Gray) Heller	Fendler's Waterleaf	Native	7	FAC
Boraginaceae	<i>Lappula occidentalis</i> (S. Wats.) Greene	Flat-Spine Sheepburr	Introduced	2	UPL
Boraginaceae	<i>Lithospermum incisum</i> Lehm.	Fringed Gromwell	Native	5	UPL
Boraginaceae	<i>Lithospermum multiflorum</i> Torr. ex A. Gray	Purple Gromwell	Native	5	UPL
Boraginaceae	<i>Mertensia ciliata</i> (James ex Torr.) G. Don	Tall Fringe Bluebells	Native	7	FACW

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Boraginaceae	<i>Mertensia lanceolata</i> (Pursh) DC.	Prairie Bluebells	Native	6	UPL
Boraginaceae	<i>Oreocarya virgata</i> Greene	Miner's-Candle	Native	5	UPL
Boraginaceae	<i>Phacelia heterophylla</i> Pursh	Variable-Leaf Scorpion-Weed	Native	6	FACU
Brassicaceae	<i>Alyssum desertorum</i> Stapf	Desert Madwort	Introduced	0	UPL
Brassicaceae	<i>Alyssum simplex</i> Rudolphi	European Madwort	Introduced	0	UPL
Brassicaceae	<i>Barbarea orthoceras</i> Ledeb.	American Yellow-Rocket	Introduced	5	FACW
Brassicaceae	<i>Barbarea vulgaris</i> W. T. Aiton	Garden Yellow-Rocket	Introduced	0	FAC
<b>Brassicaceae</b>	<b><i>Berteroa incana</i> (L.) DC.<sup>W</sup></b>	<b>Hoary False Madwort</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Brassicaceae	<i>Boechera fendleri</i> (S. Watson) W. A. Weber	Fendler's Rockcress	Native	6	UPL
Brassicaceae	<i>Boechera stricta</i> (Graham) Al-Shehbaz	Drummond's rockcress	Native	5	FACU
Brassicaceae	<i>Camelina microcarpa</i> Andr. ex DC.	Little-Pod False Flax	Introduced	0	FACU
Brassicaceae	<i>Capsella bursa-pastoris</i> (L.) Medik.	Shepherd's-Purse	Introduced	0	FACU
Brassicaceae	<i>Chorispora tenella</i> (Pall.) DC.	Crossflower	Introduced	0	UPL
Brassicaceae	<i>Descurainia pinnata</i> (Walter) Britton	Western Tansy-Mustard	Native	2	UPL
Brassicaceae	<i>Descurainia sophia</i> (L.) Webb ex Prantl	Herb-Sophia	Introduced	0	UPL
Brassicaceae	<i>Draba nemorosa</i> L.	Woodland Whitlow-Grass	Native	0	UPL
Brassicaceae	<i>Draba reptans</i> (Lam.) Fernald	Carolina Draba	Native	4	UPL
Brassicaceae	<i>Erysimum capitatum</i> (Douglas ex Hook.) Greene	Sand-Dune Wallflower	Native	5	UPL
Brassicaceae	<i>Lepidium densiflorum</i> Schrad.	Miner's Pepperwort	Introduced	0	FACU
Brassicaceae	<i>Nasturtium officinale</i> W. T. Aiton	Watercress	Native	0	OBL
Brassicaceae	<i>Noccaea fendleri</i> (A. Gray) Holub	Alpine Pennycress	Native	5	UPL
Brassicaceae	<i>Physaria montana</i> Greene	Mountain Bladderpod	Native	5	UPL
Brassicaceae	<i>Rorippa palustris</i> (L.) Besser	Bog Yellowcress	Native	NA	OBL
Brassicaceae	<i>Rorippa sphaerocarpa</i> (A. Gray) Britton	Round-Fruit Yellowcress	Native	4	FAC
Brassicaceae	<i>Sisymbrium altissimum</i> L.	Tall Tumblemustard	Introduced	0	FACU
Brassicaceae	<i>Thlaspi arvense</i> L.	Field Pennycress	Introduced	0	UPL
Brassicaceae	<i>Turritis glabra</i> L.	Tower-Mustard	Native	0	UPL
Cactaceae	<i>Opuntia macrorhiza</i> Engelm.	Twist-Spine Prickly-Pear	Native	3	UPL
Cactaceae	<i>Opuntia polyacantha</i> Haw.	Hair-Spine Prickly-Pear	Native	4	UPL



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Campanulaceae	<i>Campanula aparinoides</i> Pursh	Marsh Bellflower	Native	10	OBL
Campanulaceae	<i>Campanula rotundifolia</i> L.	Bluebell-of-Scotland	Native	5	FACU
Campanulaceae	<i>Triodanis perfoliata</i> (L.) Nieuwl.	Clasping-Leaf Venus' Looking-Glas	Native	NA	UPL
Cannabaceae	<i>Humulus lupulus</i> subsp. <i>Americanus</i> (Nutt.) A.Löve & D.Löve	Common Hop	Native	5	UPL
Caprifoliaceae	<i>Lonicera involucrata</i> Banks ex Spreng.	Four-Line Honeysuckle	Native	7	FAC
Caprifoliaceae	<i>Symphoricarpos albus</i> (L.) S. F. Blake	Common Snowberry	Native	5	FACU
Caprifoliaceae	<i>Symphoricarpos occidentalis</i> Hook.	Western Snowberry	Native	3	FAC
Caryophyllaceae	<i>Cerastium brachypodum</i> (Engelm. ex A. Gray) B. L. Rob.	Short-Stalk Mouse-Ear Chickweed	Native	NA	FAC
Caryophyllaceae	<i>Cerastium fontanum</i> subsp. <i>Vulgare</i> (Hartm.) Greuter & Burdet	Common Mouse-Ear Chickweed	Introduced	0	FACU
Caryophyllaceae	<i>Dianthus armeria</i> L.	Deptford Pink	Introduced	0	FACU
Caryophyllaceae	<i>Holosteum umbellatum</i> subsp. <i>umbellatum</i> L.	Jagged-Chickweed	Introduced	0	UPL
Caryophyllaceae	<i>Paronychia sessiliflora</i> Nutt.	Low Nailwort	Native	7	UPL
<b>Caryophyllaceae</b>	<b><i>Saponaria officinalis</i> L.<sup>B</sup></b>	<b>Bouncing-Bett</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Caryophyllaceae	<i>Silene antirrhina</i> L.	Sleepy Catchfly	Native	0	UPL
Caryophyllaceae	<i>Silene drummondii</i> Hook.	Drummond's Catchfly	Native	6	UPL
Caryophyllaceae	<i>Silene noctiflora</i> L.	Night-Flowering Catchfly	Introduced	0	UPL
Caryophyllaceae	<i>Stellaria longifolia</i> Muhl. ex Willd.	Long-Leaf Starwort	Native	7	FACW
Cistaceae	<i>Helianthemum bicknellii</i> Fernald	Hoary Frostweed	Native	NA	UPL
Commelinaceae	<i>Tradescantia occidentalis</i> (Britt.) Smyth	Prairie Spiderwort	Native	5	FACU
<b>Convolvulaceae</b>	<b><i>Convolvulus arvensis</i> L.<sup>C</sup></b>	<b>Field Bindweed</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Cornaceae	<i>Cornus sericea</i> L.	Redosier Dogwood	Native	7	FACW
Crassulaceae	<i>Sedum lanceolatum</i> Torr.	Lance-Leaf Stonecrop	Native	5	UPL
Cupressaceae	<i>Juniperus communis</i> L.	Common Juniper	Native	NA	UPL
Cupressaceae	<i>Juniperus scopulorum</i> Sarg.	Rocky Mountain Juniper	Native	5	UPL
Cyperaceae	<i>Carex brevior</i> (Dewey) Mack. ex Lunell	Short-Beak Sedge	Native	5	FAC
Cyperaceae	<i>Carex canescens</i> L.	Hoary Sedge	Native	8	OBL

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Cyperaceae	<i>Carex deweyana</i> Schwein.	Dewey's Sedge	Native	8	FAC
Cyperaceae	<i>Carex disperma</i> Dewey	Soft-Leaf Sedge	Native	9	FACW
Cyperaceae	<i>Carex duriuscula</i> C.A. Mey.	Spike-Rush Sedge	Native	7	UPL
Cyperaceae	<i>Carex geophila</i> Mackenzie	White Mountain Sedge	Native	7	UPL
Cyperaceae	<i>Carex inops</i> L. H. Bailey	Long-Stolon Sedge	Native	7	UPL
Cyperaceae	<i>Carex microptera</i> Mack.	Small-Wing Sedge	Native	NA	FACU
Cyperaceae	<i>Carex nebrascensis</i> Dewey	Nebraska Sedge	Native	6	OBL
Cyperaceae	<i>Carex occidentalis</i> L. H. Bailey	Western Sedge	Native	7	UPL
Cyperaceae	<i>Carex pachystachya</i> Cham. ex Steud.	Thick-Head Sedge	Native	NA	FAC
Cyperaceae	<i>Carex pellita</i> Muhl. ex Willd.	Woolly Sedge	Native	6	OBL
Cyperaceae	<i>Carex praegracilis</i> W. Boott	Clustered Field Sedge	Native	5	FACW
Cyperaceae	<i>Carex scoparia</i> Schkuhr ex Willd.	Pointed Broom Sedge	Native	6	FACW
Cyperaceae	<i>Carex siccata</i> Dewey	Dry-Spike Sedge	Native	6	FACU
Cyperaceae	<i>Carex sprengei</i> Dewey ex Spreng.	Long-Beak Sedge	Native	10	FAC
Cyperaceae	<i>Carex utriculata</i> Boott	Northwest Territory Sedge	Native	5	OBL
Cyperaceae	<i>Eleocharis palustris</i> (L.) Roem. & Schult.	Soft-Stem Spike-Rush	Native	3	OBL
Cyperaceae	<i>Schoenoplectus tabernaemontani</i> (C. C. Gmel.) Palla	Soft-Stem Wood Club-Rush	Native	3	OBL
Cyperaceae	<i>Scirpus microcarpus</i> J. Presl & C. Presl	Red-Tinge Bulrush	Native	5	OBL
Cyperaceae	<i>Scirpus pallidus</i> (Britton) Fernald	Pale Bulrush	Native	5	OBL
Cystopteridaceae	<i>Cystopteris fragilis</i> (L.) Bernh.	Brittle Bladder Fern	Native	9	FACU
Dryopteridaceae	<i>Dryopteris filix-mas</i> (L.) Schott	Male Fern	Native	9	NA
<b>Elaeagnaceae</b>	<b><i>Elaeagnus angustifolia</i> L.<sup>B</sup></b>	<b>Russian-Olive</b>	<b>Introduced</b>	<b>0</b>	<b>FAC</b>
Equisetaceae	<i>Equisetum arvense</i> L.	Field Horsetail	Native	4	FACW
Equisetaceae	<i>Equisetum hyemale</i> ssp. <i>Affine</i> (Engelm.) A. A. Eaton	Scouring-rush Horsetail	Native	4	FACW
Equisetaceae	<i>Equisetum laevigatum</i> A. Braun	Smooth Scouring-Rush	Native	4	FACW
Equisetaceae	<i>Equisetum variegatum</i> Schleich. ex F. Weber & D. Mohr	Variiegated Scouring-Rush	Native	5	FACW
Ericaceae	<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	Red Bearberry	Native	6	FACU

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Ericaceae	<i>Pterospora andromedea</i> Nutt.	Woodland Pinedrops	Native	7	UPL
Ericaceae	<i>Pyrola asarifolia</i> Michx.	Pink Wintergreen	Native	8	FACU
Euphorbiaceae	<i>Chamaesyce glyptosperma</i> (Engelm.) Small	Rib-Seed Sandmat	Native	2	UPL
Euphorbiaceae	<i>Chamaesyce serpyllifolia</i> (Pers.) Small	Thyme-Leaf Sandmat	Native	0	UPL
Euphorbiaceae	<i>Euphorbia dentata</i> Michx.	Toothed Spurge	Native	1	UPL
<b>Euphorbiaceae</b>	<b><i>Euphorbia esula</i> L.<sup>B</sup></b>	<b>Leafy Spurge</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Fabaceae	<i>Astragalus agrestis</i> G. Don	Cock's-Head	Native	6	FACW
Fabaceae	<i>Astragalus canadensis</i> L.	Canadian Milk-Vetch	Native	5	FACW
Fabaceae	<i>Astragalus cicer</i> L.	Chickpea Milk-Vetch	Introduced	0	UPL
Fabaceae	<i>Astragalus drummondii</i> Douglas	Drummond's Milk-Vetch	Native	6	UPL
Fabaceae	<i>Astragalus flexuosus</i> (Hook.) Dougl. ex G. Don	Pliant Milk-Vetch	Native	6	UPL
Fabaceae	<i>Astragalus laxmannii</i> var. <i>robustior</i> Jacq. (Hook.) Barneby & S.L. Welsh	Prairie Milkvetch	Native	NA	UPL
Fabaceae	<i>Astragalus parryi</i> C. Anders.	Parry's Milk-Vetch	Native	NA	UPL
Fabaceae	<i>Astragalus shortianus</i> Nutt.	Short's Milk-Vetch	Native	7	UPL
Fabaceae	<i>Dalea candida</i> Michx. ex Willd.	White Prairie Clover	Native	7	UPL
Fabaceae	<i>Dalea candida</i> var. <i>oligophylla</i> (Torr.) Shinnery	White Prairie Clover	Native	7	UPL
Fabaceae	<i>Dalea purpurea</i> Vent.	Violet Prairie-Clover	Native	5	UPL
Fabaceae	<i>Glycyrrhiza lepidota</i> Pursh	American Licorice	Native	3	FAC
Fabaceae	<i>Lathyrus lanszwertii</i> var. <i>laetivirens</i> (Greene ex Rydb.) Welsh	Aspen Vetchling	Native	6	FACU
Fabaceae	<i>Lupinus argenteus</i> Pursh	Silver-Stem Lupine	Native	5	UPL
Fabaceae	<i>Medicago lupulina</i> L.	Black Medick	Introduced	0	FACU
Fabaceae	<i>Medicago sativa</i> L.	Alfalfa	Introduced	0	UPL
Fabaceae	<i>Melilotus albus</i> Medik.	White Sweet-Clover	Introduced	0	FACU
Fabaceae	<i>Melilotus officinalis</i> (L.) Lam.	Yellow Sweet-Clover	Introduced	0	FACU
Fabaceae	<i>Oxytropis lambertii</i> Pursh	Stemless Locoweed	Native	4	UPL



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Fabaceae	<i>Oxytropis multiceps</i> Nutt.	Southwestern Locoweed	Native	NA	UPL
Fabaceae	<i>Robinia neomexicana</i> A. Gray	New Mexico Locust	Introduced	4	UPL
Fabaceae	<i>Thermopsis rhombifolia</i> (Nutt. ex Pursh) Nutt. ex Richards.	Prairie Golden-Banner	Native	5	FACU
Fabaceae	<i>Thermopsis rhombifolia</i> var. <i>rhombifolia</i> (Nutt. ex Pursh) Nutt. ex Richards.	Goldenbanner	Native	5	FACU
Fabaceae	<i>Trifolium hybridum</i> L.	Alsike Clover	Native	0	FAC
Fabaceae	<i>Trifolium pratense</i> L.	Red Clover	Introduced	0	FACU
Fabaceae	<i>Trifolium repens</i> L.	White Clover	Introduced	0	FAC
Fabaceae	<i>Vicia americana</i> Muhl. ex Willd.	American Purple Vetch	Native	5	FAC
Fagaceae	<i>Quercus gambelii</i> Nutt.	Gambel's Oak	Native	5	UPL
Gentianaceae	<i>Frasera speciosa</i> Douglas ex Griseb.	Monument-Plant	Native	6	UPL
Gentianaceae	<i>Gentiana bigelovii</i> A. Gray	Pleated Gentian	Native	8	FACU
<b>Geraniaceae</b>	<b><i>Erodium cicutarium</i> (L.) L'Her. ex Aiton<sup>C</sup></b>	<b>Red-Stem Stork's-Bill</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Geraniaceae	<i>Geranium caespitosum</i> James	Purple Cluster Crane's-Bill	Native	6	FAC
Geraniaceae	<i>Geranium richardsonii</i> Fisch. & Trautv.	White Crane's-Bill	Native	6	FAC
Grossulariaceae	<i>Ribes americanum</i> Mill.	Wild Black Currant	Native	7	FAC
Grossulariaceae	<i>Ribes aureum</i> Pursh	Golden Currant	Native	6	FAC
Grossulariaceae	<i>Ribes cereum</i> Douglas	White Squaw Currant	Native	6	UPL
Grossulariaceae	<i>Ribes inerme</i> Rydb.	White-Stem Gooseberry	Native	5	FAC
Hydrangeaceae	<i>Jamesia americana</i> Torr. & A. Gray	Five-Petal Cliffbush	Native	7	FACU
Iridaceae	<i>Sisyrinchium montanum</i> Greene	Strict Blue-Eyed-Grass	Native	6	FAC
Juncaceae	<i>Juncus arcticus</i> var. <i>balticus</i> (Willd.) Trautv.	Arctic Rush	Native	4	FACW
Juncaceae	<i>Juncus bufonius</i> L.	Toad Rush	Native	3	FACW
Juncaceae	<i>Juncus compressus</i> Jacq.	Round-Fruit Rush	Introduced	0	OBL
Juncaceae	<i>Juncus dudleyi</i> Wiegand	Dudley's Rush	Native	5	FAC
Juncaceae	<i>Juncus ensifolius</i> var. <i>montanus</i> Wikstr.	Rocky Mountain Rush	Native	6	FACW
Juncaceae	<i>Juncus interior</i> Wiegand	Inland Rush	Native	5	FAC

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Juncaceae	<i>Juncus longistylis</i> Torr.	Long-Style Rush	Native	6	FACW
Juncaceae	<i>Juncus nodosus</i> L.	Knotted Rush	Native	6	OBL
Juncaceae	<i>Juncus torreyi</i> Coville	Torrey's Rush	Native	5	FACW
Juncaceae	<i>Luzula comosa</i> E. Mey.	Prairie Wood-Rush	Native	7	FAC
Juncaceae	<i>Luzula parviflora</i> (Ehrh.) Desv.	Small-Flower Wood-Rush	Native	7	FAC
Lamiaceae	<i>Dracocephalum parviflorum</i> Nutt.	American Dragonhead	Native	3	FACU
Lamiaceae	<i>Galeopsis bifida</i> Boenn.	Split-Lip Hemp-Nettle	Introduced	0	UPL
Lamiaceae	<i>Hedeoma hispida</i> Pursh	Rough False Pennyroyal	Native	5	UPL
Lamiaceae	<i>Lycopus americanus</i> Muhl. ex W. P. C. Barton	Cut-Leaf Water-Horehound	Native	5	OBL
Lamiaceae	<i>Mentha arvensis</i> L.	American Wild Mint	Native	4	FACW
Lamiaceae	<i>Monarda fistulosa</i> var. <i>menthifolia</i> (Graham) Fern.	Bee Balm	Native	6	UPL
Lamiaceae	<i>Nepeta cataria</i> L.	Catnip	Introduced	0	FACU
Lamiaceae	<i>Prunella vulgaris</i> L.	Common Selfheal	Native	4	FACU
Lamiaceae	<i>Scutellaria brittonii</i> Porter	Britton's Skullcap	Native	6	UPL
Lamiaceae	<i>Scutellaria galericulata</i> L.	Hooded Skullcap	Native	7	OBL
Lamiaceae	<i>Stachys palustris</i> var. <i>pilosa</i> (Nutt.) Fern.	Hairy four o'clock	Native	NA	FACW
Liliaceae	<i>Calochortus gunnisonii</i> S. Watson	Gunnison's Mariposa-Lily	Native	7	UPL
Liliaceae	<i>Prosartes trachycarpa</i> S. Watson	Rough-Fruit Fairybells	Native	8	FACU
Liliaceae	<i>Streptopus amplexifolius</i> (L.) DC.	Clasping Twistedstalk	Native	7	FAC
Linaceae	<i>Linum lewisii</i> Pursh	Prairie Flax	Native	4	UPL
Linaceae	<i>Linum perenne</i> L.	Blue Flax	Introduced	0	UPL
Loasaceae	<i>Mentzelia speciosa</i> Osterh.	Jeweled Blazingstar	Native	5	UPL
Malvaceae	<i>Malva neglecta</i> Wallr.	Dwarf Mallow	Introduced	0	UPL
Malvaceae	<i>Sphaeralcea coccinea</i> (Nutt.) Rydb.	Cowboy's Delights	Native	4	UPL
Melanthiaceae	<i>Zigadenus paniculatus</i> (Nutt.) S. Watson	Sand-Corn	Native	NA	UPL
Montiaceae	<i>Claytonia rosea</i> Rydb.	Western Springbeauty	Native	7	UPL
Montiaceae	<i>Montia chamissoi</i> (Ledeb. ex Spreng.) Greene	Chamisso's Candy-Flower	Native	8	OBL

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Montiaceae	<i>Phemeranthus parviflorus</i> (Nutt.) Kiger	Prairie False Fameflower	Native	6	UPL
Nyctaginaceae	<i>Mirabilis hirsuta</i> (Pursh) MacM.	Hairy four o'clock	Native	6	UPL
Nyctaginaceae	<i>Mirabilis linearis</i> (Pursh) Heimerl	Narrow-Leaf Four-O'clock	Native	5	UPL
Nyctaginaceae	<i>Mirabilis nyctaginea</i> (Michx.) MacMill.	Heart-Leaf Four-O'clock	Native	2	FACU
Onagraceae	<i>Circaea alpina</i> L.	Small Enchanter's-Nightshade	Native	8	FAC
Onagraceae	<i>Epilobium ciliatum</i> Raf.	Fringed Willowherb	Native	4	FACW
<b>Onagraceae</b>	<b><i>Epilobium hirsutum</i> L.<sup>A</sup></b>	<b>Codlins-and-Cream</b>	<b>Introduced</b>	<b>0</b>	<b>FACW</b>
Onagraceae	<i>Gayophytum diffusum</i> subsp. <i>Parviflorum</i> Lewis & Szwedkowski	Spreading Groundsmoke	Native	4	UPL
Onagraceae	<i>Oenothera cespitosa</i> Nutt.	Tufted Evening-Primrose	Native	5	UPL
Onagraceae	<i>Oenothera coronopifolia</i> Torr. & A. Gray	Hairy-Throat Evening-Primrose	Native	4	UPL
Onagraceae	<i>Oenothera flava</i> (A. Nels.) Garrett	Long-Tube Evening-Primrose	Native	6	FAC
Onagraceae	<i>Oenothera suffrutescens</i> (Ser.) W. L. Wagner & Hoch	Scarlet Evening-Primrose	Native	5	UPL
Onagraceae	<i>Oenothera villosa</i> Thunb.	Hairy Evening-Primrose	Native	4	FAC
Orchidaceae	<i>Corallorhiza maculata</i> (Raf.) Raf.	Summer Coralroot	Native	7	UPL
Orchidaceae	<i>Corallorhiza wisteriana</i> Conrad	Spring Coralroot	Native	NA	FAC
Orchidaceae	<i>Goodyera oblongifolia</i> Raf.	Green-Leaf Rattlesnake-Plantain	Native	9	FACU
Orchidaceae	<i>Platanthera aquilonis</i> Sheviak	Bog Orchid	Native	NA	FACW
Orchidaceae	<i>Platanthera purpurascens</i> (Rydb.) Sheviak & Jennings	Purple-Petal Bog Orchid	Native	7	OBL
Orobanchaceae	<i>Castilleja integra</i> A. Gray	Squawfeather	Native	6	UPL
Orobanchaceae	<i>Castilleja miniata</i> Douglas ex Hook.	Great Red Indian-Paintbrush	Native	7	FACW
Orobanchaceae	<i>Orthocarpus luteus</i> Nutt.	Golden-Tongue Owl-Clover	Native	6	FACU
Orobanchaceae	<i>Pedicularis canadensis</i> L.	Canadian Lousewort	Native	NA	UPL
Oxalidaceae	<i>Oxalis dillenii</i> Jacq.	Slender Yellow Wood-Sorrel	Native	NA	FACU
Papaveraceae	<i>Argemone polyanthemom</i> (Fedde) G. B. Ownbey	White Prickly-Poppy	Native	3	UPL
Pinaceae	<i>Pinus edulis</i> Engelm.	Two-Needle Pinyon	Native	6	FACU
Pinaceae	<i>Pinus ponderosa</i> P. Lawson & C. Lawson	Ponderosa Pine	Native	5	FACU



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Pinaceae	<i>Pseudotsuga menziesii</i> (Mirbel) Franco	Douglas-Fir	Native	5	FACU
Plantaginaceae	<i>Collinsia parviflora</i> Lindl.	Small-Flower Blue-Eyed Mary	Native	4	UPL
Plantaginaceae	<i>Gratiola neglecta</i> Torr.	Clammy Hedge-Hyssop	Native	NA	OBL
<b>Plantaginaceae</b>	<b><i>Linaria vulgaris</i> Mill.<sup>B</sup></b>	<b>Greater Butter-and-Eggs</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Plantaginaceae	<i>Penstemon gracilis</i> Nutt.	Lilac Beardtongue	Native	5	UPL
Plantaginaceae	<i>Penstemon secundiflorus</i> Benth.	Sidebells Beardtongue	Native	6	UPL
Plantaginaceae	<i>Penstemon virens</i> Pennell ex Rydb.	Front Range Beardtongue	Native	7	UPL
Plantaginaceae	<i>Penstemon virgatus</i> var. <i>asa-grayi</i> (Crosswh.) R.D.Dorn	Tall One-Sided Beardtongue	Native	NA	FACU
Plantaginaceae	<i>Plantago lanceolata</i> L.	English Plantain	Introduced	0	FACU
Plantaginaceae	<i>Plantago major</i> L.	Great Plantain	Introduced	0	FAC
Plantaginaceae	<i>Plantago patagonica</i> Jacq.	Woolly Plantain	Native	2	UPL
Plantaginaceae	<i>Veronica americana</i> Schwein. ex Benth.	American-Brooklime	Native	6	OBL
Plantaginaceae	<i>Veronica anagallis-aquatica</i> L.	Blue Water Speedwell	Native	0	OBL
Plantaginaceae	<i>Veronica biloba</i> L.	Two-Lobe Speedwell	Introduced	0	UPL
Plantaginaceae	<i>Veronica peregrina</i> subsp. <i>xalapensis</i> (Kunth) Pennell	Hairy purslane speedwell	Native	0	FACW
Plantaginaceae	<i>Veronica serpyllifolia</i> L.	Thyme-Leaf Speedwell	Native	6	FAC
Plantaginaceae	<i>Veronica serpyllifolia</i> var. <i>humifusa</i> (Dickson) Vahl	Brightblue Speedwell	Native	6	FAC
Poaceae	<i>Achnatherum hymenoides</i> (Roem. & Schult.) Barkworth	Indian Rice Grass	Native	5	UPL
Poaceae	<i>Achnatherum nelsonii</i> (Scribn.) Barkworth	Nelson's Rice Grass	Native	6	UPL
Poaceae	<i>Achnatherum robustum</i> (Vasey) Barkworth	Sleepy Rice Grass	Native	3	UPL
Poaceae	<i>Achnatherum scribneri</i> (Vasey) Barkworth	Scribner's Rice Grass	Native	7	UPL
Poaceae	<i>Agropyron cristatum</i> (L.) Gaertn.	Crested Wheat Grass	Introduced	0	UPL
Poaceae	<i>Agrostis gigantea</i> Roth	Black Bent	Introduced	0	FAC
Poaceae	<i>Agrostis scabra</i> Willd.	Thermal Bent	Native	4	FAC
Poaceae	<i>Alopecurus aequalis</i> Sobol.	Short-Awn Meadow-Foxtail	Native	4	OBL

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Poaceae	<i>Alopecurus pratensis</i> L.	Field Meadow-Foxtail	Introduced	0	FAC
Poaceae	<i>Andropogon gerardii</i> Vitman	Big Bluestem	Native	9	FACU
Poaceae	<i>Aristida purpurea</i> var. <i>longiseta</i> (Steud.) Vasey	Fendler threeawn	Native	3	UPL
Poaceae	<i>Beckmannia syzigachne</i> (Steud.) Fernald	American Slough Grass	Native	4	OBL
Poaceae	<i>Bouteloua curtipendula</i> (Michx.) Torr.	Side-Oats Grama	Native	6	UPL
Poaceae	<i>Bouteloua gracilis</i> (Kunth) Lag. ex Griffiths	Blue Grama	Native	4	UPL
Poaceae	<i>Bouteloua simplex</i> Lag.	Matted Grama	Introduced	0	UPL
Poaceae	<i>Bromopsis inermis</i> (Leyss.) Holub	Smooth Brome	Introduced	0	UPL
Poaceae	<i>Bromus carinatus</i> var. <i>marginatus</i> (Nees ex Steud.) Barkworth & Anderton	Mountain Brome	Introduced	0	UPL
Poaceae	<i>Bromus inermis</i> Leyss.	Smooth Brome	Introduced	0	UPL
Poaceae	<i>Bromus japonicus</i> Thunb.	Japanese Brome	Introduced	0	UPL
Poaceae	<i>Bromus lanatipes</i> (Shear) Rydb.	Woolly Brome	Native	6	UPL
Poaceae	<i>Bromus richardsonii</i> Link	Richardson's Brome	Native	5	FACU
<b>Poaceae</b>	<b><i>Bromus tectorum</i> L.<sup>C</sup></b>	<b>Cheat Grass</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Poaceae	<i>Calamagrostis canadensis</i> (Michx.) P. Beauv.	Bluejoint	Native	6	FACW
Poaceae	<i>Calamagrostis stricta</i> (Timm) Koel.	Slim-Stem Reed Grass	Native	7	FACW
Poaceae	<i>Calamovilfa longifolia</i> (Hook.) Scribn.	Prairie Sandreed	Native	7	UPL
Poaceae	<i>Cinna latifolia</i> (Trevir. ex Goepp.) Griseb.	Slender Wood-Reed	Native	6	FACW
Poaceae	<i>Dactylis glomerata</i> L.	Orchard Grass	Introduced	0	FACU
Poaceae	<i>Danthonia spicata</i> (L.) P. Beauv. ex Roem. & Schult.	Poverty Wild Oat Grass	Native	7	UPL
Poaceae	<i>Dichanthelium linearifolium</i> (Scribn. ex Nash) Gould	Slim-Leaf Witch Grass	Native	7	UPL
Poaceae	<i>Echinochloa muricata</i> (P. Beauv.) Fernald	Rough Barnyard Grass	Introduced	0	FACW
Poaceae	<i>Elymus albicans</i> (Scribn. & J.G. Sm.) Á. Löve	Montana Wild Rye	Native	NA	NA
Poaceae	<i>Elymus canadensis</i> L.	Nodding Wild Rye	Native	4	FAC

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Poaceae	<i>Elymus elymoides</i> (Raf.) Swezey	Western Bottle-Brush Grass	Native	4	FACU
Poaceae	<i>Elymus glaucus</i> Buckley	Blue Wild Rye	Native	7	FACU
Poaceae	<i>Elymus lanceolatus</i> (Scribn. & J.G. Sm.) Gould	Streamside Wild Rye	Native	4	FACU
Poaceae	<i>Elymus lanceolatus</i> subsp. <i>Lanceolatus</i> (Scribn. & J.G. Sm.) Gould	Streambank Wheatgrass	Native	4	FACU
<b>Poaceae</b>	<b><i>Elymus repens</i> (L.) Gould<sup>C</sup></b>	<b>Creeping Wild Rye</b>	<b>Introduced</b>	<b>0</b>	<b>FAC</b>
Poaceae	<i>Elymus trachycaulus</i> (Link) Gould ex Shinners	Slender Wild Rye	Native	7	FAC
Poaceae	<i>Eragrostis cilianensis</i> (All.) Vignolo ex Janch.	Stink Grass	Introduced	0	FACU
Poaceae	<i>Eragrostis minor</i> Host	Little Love Grass	Introduced	0	UPL
Poaceae	<i>Eragrostis pectinacea</i> (Michx.) Nees ex Steud.	Purple Love Grass	Native	1	FAC
Poaceae	<i>Festuca trachyphylla</i> (Hack.) R.P.Murray	Hard Fescue	Introduced	0	FACU
Poaceae	<i>Glyceria elata</i> (Nash ex Rydb.) M.E. Jones	Tall Manna Grass	Native	6	FACW
Poaceae	<i>Glyceria grandis</i> S. Watson	American Manna Grass	Native	6	OBL
Poaceae	<i>Glyceria striata</i> (Lam.) Hitchc.	Fowl Manna Grass	Native	6	OBL
Poaceae	<i>Hesperostipa comata</i> (Trin. & Rupr.) Barkworth	Needle-and-Thread	Native	6	UPL
Poaceae	<i>Hesperostipa spartea</i> (Trin.) Barkworth	Porcupine Grass	Native	10	UPL
Poaceae	<i>Hordeum jubatum</i> L.	Fox-Tail Barley	Native	2	FAC
Poaceae	<i>Koeleria macrantha</i> (Ledeb.) Schult.	Prairie Koeler's Grass	Native	6	UPL
Poaceae	<i>Lolium perenne</i> L.	Perennial Rye Grass	Introduced	0	FAC
Poaceae	<i>Muhlenbergia minutissima</i> (Steud.) Swallen	Least Muhly	Native	8	FAC
Poaceae	<i>Muhlenbergia montana</i> (Nutt.) A.S. Hitchc.	Mountain Muhly	Native	7	UPL
Poaceae	<i>Muhlenbergia racemosa</i> (Michx.) Britton, Sterns & Poggenb.	Green Muhly	Native	5	FACW



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Poaceae	<i>Muhlenbergia wrightii</i> Vasey ex Coult.	Wright's Muhly	Native	7	FACU
Poaceae	<i>Nassella viridula</i> (Trin.) Barkworth	Green Tussock Grass	Native	4	UPL
Poaceae	<i>Oryzopsis asperifolia</i> Michx.	White-Grain Mountain-Rice Grass	Native	7	UPL
Poaceae	<i>Panicum capillare</i> L.	Common Panic Grass	Native	0	FAC
Poaceae	<i>Pascopyrum smithii</i> (Rydb.) Barkworth & D. R. Dewey	Western-Wheat Grass	Native	5	FACU
Poaceae	<i>Phalaris arundinacea</i> L.	Reed Canary Grass	Native	0	FACW
Poaceae	<i>Phleum pratense</i> L.	Common Timothy	Introduced	0	FAC
<b>Poaceae</b>	<b><i>Phragmites australis</i> (Cav.) Trin. ex Steud.<sup>W</sup></b>	<b>Common Reed</b>	<b>Variable</b>	<b>3</b>	<b>FACW</b>
Poaceae	<i>Piptatherum micranthum</i> (Trin. & Rupr.) Barkworth	Little-Seed Mountain-Rice Grass	Native	7	UPL
Poaceae	<i>Poa annua</i> L.	Annual Blue Grass	Introduced	0	FAC
<b>Poaceae</b>	<b><i>Poa bulbosa</i> L.<sup>C</sup></b>	<b>Bulbous Blue Grass</b>	<b>Introduced</b>	<b>0</b>	<b>FACU</b>
Poaceae	<i>Poa compressa</i> L.	Flat-Stem Blue Grass	Introduced	0	FACU
Poaceae	<i>Poa fendleriana</i> (Steud.) Vasey	Mutton Grass	Native	7	UPL
Poaceae	<i>Poa palustris</i> L.	Fowl Blue Grass	Native	6	FAC
Poaceae	<i>Poa pratensis</i> L.	Kentucky Blue Grass	Introduced	0	FAC
Poaceae	<i>Poa secunda</i> J.Presl	Curly Blue Grass	Native	6	FACU
Poaceae	<i>Poa secunda</i> subsp. <i>juncifolia</i> (Scribn.) Soreng	Curly Blue Grass	Native	6	FACU
Poaceae	<i>Psathyrostachys juncea</i> (Fisch.) Nevski	Russian-Wild Rye	Introduced	0	FAC
Poaceae	<i>Pseudoroegneria spicata</i> (Pursh) Á. Löve	Bluebunch-Wheat Grass	Native	7	UPL
Poaceae	<i>Schedonnardus paniculatus</i> (Nutt.) Trel.	Tumble Grass	Native	0	UPL
Poaceae	<i>Schedonorus arundinaceus</i> (Schreb.) Dumort.	Tall Fescue	Introduced	0	FAC
Poaceae	<i>Schedonorus pratensis</i> (Huds.) P. Beauv.	Meadow Fescue	Introduced	0	FACU
Poaceae	<i>Schizachyrium scoparium</i> (Michx.) Nash	Little False Bluestem	Native	5	FACU
Poaceae	<i>Setaria viridis</i> (L.) P. Beauv.	Green Bristle Grass	Introduced	0	UPL
Poaceae	<i>Sporobolus cryptandrus</i> (Torr.) A. Gray	Sand Dropseed	Native	2	FACU

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Poaceae	<i>Sporobolus heterolepis</i> (A. Gray) A. Gray	Prairie Dropseed	Native	9	FACU
Poaceae	<i>Thinopyrum intermedium</i> (Host) Barkworth & D.R. Dewey	Intermediate Quack Grass	Introduced	0	UPL
Poaceae	<i>Thinopyrum intermedium</i> subsp. barbulatum (Schur) Barkworth & D.R. Dewey	Pubescent Wheatgrass	Introduced	0	UPL
Poaceae	<i>Thinopyrum intermedium</i> subsp. <i>intermedium</i> (Host) Barkworth & D.R. Dewey	Intermediate Wheatgrass	Introduced	0	UPL
Poaceae	<i>Torreyochloa pauciflora</i> (J. Presl) G. L. Church	Pale False Mannagrass	Native	5	OBL
Poaceae	<i>Vulpia octoflora</i> (Walter) Rydb.	Eight-Flower Six-Weeks Grass	Native	3	UPL
Polemoniaceae	<i>Collomia linearis</i> Nutt.	Narrow-Leaf Mountain-Trumpet	Native	4	FACU
Polemoniaceae	<i>Gilia ophthalmoides</i> Brand	Eyed Gily-Flower	Native	6	UPL
Polemoniaceae	<i>Ipomopsis aggregata</i> (Pursh) V. Grant	Scarlet Skyrocket	Native	5	UPL
Polemoniaceae	<i>Microsteris gracilis</i> (Hook.) Greene	Annual-Phlox	Native	NA	FACU
Polygonaceae	<i>Eriogonum alatum</i> Torr.	Winged Wild Buckwheat	Native	5	UPL
Polygonaceae	<i>Eriogonum effusum</i> Nutt.	Spreading Wild Buckwheat	Native	4	UPL
Polygonaceae	<i>Eriogonum umbellatum</i> Torr.	Sulphur-Flower Wild Buckwheat	Native	6	UPL
Polygonaceae	<i>Fallopia convolvulus</i> (L.) Á. Löve	Black-Bindweed	Native	3	FACU
Polygonaceae	<i>Persicaria lapathifolia</i> (L.) Delarbre	Dock-Leaf Smartweed	Introduced	0	FACW
Polygonaceae	<i>Persicaria maculosa</i> S. F. Gray	Spotted Lady's-Thumb	Introduced	0	FACW
Polygonaceae	<i>Polygonum aviculare</i> L.	Yard Knotweed	Introduced	0	FAC
Polygonaceae	<i>Polygonum douglasii</i> Greene	Douglas' Knotweed	Native	3	FACU
Polygonaceae	<i>Polygonum ramosissimum</i> Michx.	Yellow-Flower Knotweed	Native	2	FAC
Polygonaceae	<i>Polygonum sawatchense</i> subsp. <i>sawatchense</i> Small	Sawatch Knotweed	Native	3	FACU
Polygonaceae	<i>Rumex acetosella</i> L.	Common Sheep Sorrel	Introduced	0	FACU
Polygonaceae	<i>Rumex crispus</i> L.	Curly Dock	Introduced	0	FAC

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Polygonaceae	<i>Rumex triangulivalvis</i> (Danser) Rech. f.	Triangular-Valved Dock	Native	4	FAC
Portulacaceae	<i>Portulaca oleracea</i> L.	Little-Hogweed	Introduced	0	FAC
Potamogetonaceae	<i>Potamogeton nodosus</i> Poir.	Long-Leaf Pondweed	Native	5	OBL
Primulaceae	<i>Androsace occidentalis</i> Pursh	Western Rock-Jasmine	Native	9	FACU
Primulaceae	<i>Androsace septentrionalis</i> L.	Pygmy-Flower Rock-Jasmine	Native	6	FACU
Primulaceae	<i>Dodecatheon pulchellum</i> (Raf.) Merr.	Darkthroat Shootingstar	Native	8	FACW
Primulaceae	<i>Lysimachia ciliata</i> L.	Fringed Yellow-Loosestrife	Native	6	FACW
Ranunculaceae	<i>Aconitum columbianum</i> Nutt.	Columbian Monkshood	Native	8	FACW
Ranunculaceae	<i>Anemone cylindrica</i> A. Gray	Long-Head Thimbleweed	Native	5	FACU
Ranunculaceae	<i>Clematis ligusticifolia</i> Nutt.	Deciduous Traveler's-Joy	Native	4	FAC
Ranunculaceae	<i>Delphinium nuttallianum</i> Pritz. ex Walp.	Two-Lobe Larkspur	Native	6	FAC
Ranunculaceae	<i>Ranunculus abortivus</i> subsp. <i>Acrolasius</i> (Fern.) Kapoor & Á. Löve	Kidney-Leaf Buttercup	Native	NA	FACW
Ranunculaceae	<i>Ranunculus aquatilis</i> L.	White Water-Crowfoot	Native	10	OBL
Ranunculaceae	<i>Ranunculus macounii</i> Britton	Macoun's Buttercup	Native	7	OBL
Ranunculaceae	<i>Thalictrum dasycarpum</i> Fisch. & Avé-Lall.	Purple Meadow-Rue	Native	7	FACW
Ranunculaceae	<i>Thalictrum fendleri</i> Engelm. ex A. Gray	Fendler's Meadow-Rue	Native	6	FAC
Rhamnaceae	<i>Ceanothus fendleri</i> A. Gray	Fendler's Buckbrush	Native	7	UPL
Rhamnaceae	<i>Ceanothus herbaceus</i> Raf.	Prairie Redroot	Native	7	UPL
Rosaceae	<i>Agrimonia striata</i> Michx.	Woodland Grooveburr	Native	7	FACU
Rosaceae	<i>Amelanchier alnifolia</i> (Nutt.) Nutt. ex M. Roem.	Saskatoon Service-Berry	Native	6	FACU
Rosaceae	<i>Cercocarpus montanus</i> Raf.	Alder-Leaf Mountain-Mahogany	Native	6	UPL
Rosaceae	<i>Crataegus succulenta</i> Schrad. ex Link	Fleshy Hawthorn	Native	5	UPL
Rosaceae	<i>Fragaria vesca</i> L.	Woodland Strawberry	Native	5	FACU
Rosaceae	<i>Fragaria virginiana</i> Mill.	Virginia Strawberry	Native	5	FACU
Rosaceae	<i>Geum aleppicum</i> Jacq.	Yellow Avens	Native	6	FACW
Rosaceae	<i>Geum macrophyllum</i> Willd.	Large-Leaf Avens	Native	6	FAC

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Rosaceae	<i>Holodiscus dumosus</i> (Nutt. ex Hook.) Heller	Glandular Oceanspray	Native	8	UPL
Rosaceae	<i>Physocarpus monogynus</i> (Torr.) Coult.	Mountain Ninebark	Native	7	UPL
Rosaceae	<i>Potentilla arguta</i> Pursh	Tall Woodbeauty	Native	7	FACU
Rosaceae	<i>Potentilla fissa</i> Nutt.	Big-Flower Woodbeauty	Native	5	UPL
Rosaceae	<i>Potentilla norvegica</i> L.	Norwegian Cinquefoil	Native	5	FAC
<b>Rosaceae</b>	<b><i>Potentilla recta</i> L.<sup>B</sup></b>	<b>Sulphur Cinquefoil</b>	<b>Introduced</b>	<b>0</b>	<b>UPL</b>
Rosaceae	<i>Prunus americana</i> Marshall	American Plum	Native	6	FACU
Rosaceae	<i>Prunus pensylvanica</i> L. f.	Fire Cherry	Native	6	UPL
Rosaceae	<i>Prunus virginiana</i> L.	Choke Cherry	Native	4	FACU
Rosaceae	<i>Rosa arkansana</i> Porter	Prairie Rose	Native	5	FACU
Rosaceae	<i>Rosa blanda</i> Aiton	Smooth Rose	Native	NA	FACU
Rosaceae	<i>Rubus deliciosus</i> Torr.	Delicious Raspberry	Native	7	UPL
Rosaceae	<i>Rubus idaeus</i> L.	Common Red Raspberry	Native	5	FACU
Rosaceae	<i>Rubus parviflorus</i> Nutt.	Western Thimble-Berry	Native	7	FACU
Rosaceae	<i>Sorbus scopulina</i> var. <i>scopulina</i> Greene	Mountain Ash	Native	7	FACU
Rubiaceae	<i>Galium aparine</i> L.	Sticky-Willy	Introduced	0	FACU
Rubiaceae	<i>Galium bifolium</i> S. Watson	Twin-Leaf Bedstraw	Native	7	UPL
Rubiaceae	<i>Galium triflorum</i> Michx.	Fragrant Bedstraw	Native	7	FACU
Salicaceae	<i>Populus angustifolia</i> James	Narrow-Leaf Cottonwood	Native	8	FACW
Salicaceae	<i>Populus deltoides</i> ssp. <i>monilifera</i> W. Bartram ex Marshall (Ait.) Eckenw	Plains Cottonwood	Native	3	FAC
Salicaceae	<i>Populus x acuminata</i> Rydb.	Lanceleaf Cottonwood	Native	5	FAC
Salicaceae	<i>Salix amygdaloides</i> Andersson	Peach-Leaf Willow	Native	5	FACW
Salicaceae	<i>Salix bebbiana</i> Sarg.	Gray Willow	Native	6	FACW
Salicaceae	<i>Salix eriocephala</i> var. <i>ligulifolia</i> (Ball) Dorn	Strap-Leaf Willow	Native	6	FAC
Salicaceae	<i>Salix exigua</i> var. <i>exigua</i> Nutt.	Coyote Willow	Native	3	FACW
Salicaceae	<i>Salix fragilis</i> L.	Crack Willow	Introduced	0	UPL
Salicaceae	<i>Salix irrorata</i> Andersson	Dewy-Stem Willow	Native	7	FACW
Salicaceae	<i>Salix monticola</i> Bebb	Park Willow	Native	6	OBL



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Santalaceae	<i>Comandra umbellata</i> (L.) Nutt.	Bastard-Toadflax	Native	5	FACU
Sapindaceae	<i>Acer glabrum</i> Torr.	Rocky Mountain Maple	Native	7	FACU
Saxifragaceae	<i>Heuchera parvifolia</i> Nutt. ex Torr. & A. Gray	Little-Leaf Alumroot	Native	7	UPL
Scrophulariaceae	<i>Limosella aquatica</i> L.	Awl-Leaf Mudwort	Native	7	OBL
Scrophulariaceae	<i>Scrophularia lanceolata</i> Pursh	Lance-Leaf Figwort	Native	5	FAC
<b>Scrophulariaceae</b>	<b><i>Verbascum thapsus</i> L.<sup>C</sup></b>	<b>Great Mullein</b>	<b>Introduced</b>	<b>0</b>	<b>FACU</b>
Smilacaceae	<i>Smilax lasioneura</i> Hook.	Blue Ridge Carrion-Flower	Native	7	NA
Solanaceae	<i>Physalis fendleri</i> Gray	Fendler's groundcherry	Native	5	UPL
Solanaceae	<i>Physalis hederifolia</i> var. <i>comata</i> A. Gray (Rydb.) Waterf.	Ivy-leaf Ground Cherry	Native	5	UPL
Solanaceae	<i>Physalis heterophylla</i> Nees	Clammy Ground-Cherry	Native	5	FACU
Solanaceae	<i>Physalis virginiana</i> Mill.	Virginia Ground-Cherry	Native	4	UPL
Solanaceae	<i>Solanum physalifolium</i> Rusby	Hairy nightshade	Introduced	0	UPL
Solanaceae	<i>Solanum triflorum</i> Nutt.	Cut-Leaf Nightshade	Native	2	UPL
Typhaceae	<i>Sparganium emersum</i> Rehmman	European Burr-Reed	Native	7	OBL
Typhaceae	<i>Typha latifolia</i> L.	Broad-Leaf Cat-Tail	Native	2	OBL
Urticaceae	<i>Urtica dioica</i> subsp. <i>gracilis</i> (Aiton) Seland.	California Nettle	Native	3	FAC
Verbenaceae	<i>Verbena bracteata</i> Cav. ex Lag. & Rodr.	Carpet Vervain	Introduced	0	FAC
Verbenaceae	<i>Verbena hastata</i> L.	Blue Vervain	Native	4	FAC
Violaceae	<i>Viola canadensis</i> L.	Canadian White Violet	Native	NA	FACU
Violaceae	<i>Viola nuttallii</i> Pursh	Yellow Prairie Violet	Native	5	UPL
Violaceae	<i>Viola palustris</i> L.	Alpine-Marsh Violet	Native	NA	OBL
Violaceae	<i>Viola selkirkii</i> Pursh ex Goldie	Great-Spur Violet	Native	8	NA
Violaceae	<i>Viola sororia</i> Willd.	Hooded Blue Violet	Native	8	FAC