

**DRAFT BIOLOGICAL
EVALUATION
for
National Old Growth
Amendment**

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For

National Old Growth Amendment

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U.S. Forest Service

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1.0 Introduction

This draft biological evaluation (BE) addresses the effects of amending 122 land management plans to provide for consistent management of old-growth forests across National Forest System lands. The purpose of this biological evaluation is to analyze and determine the likely effects of the alternative proposals for implementing the forest plan amendment on Forest Service sensitive species (FSM 2670.31-2670.32).

Forest Service policy requires that a review of programs and activities, through a biological evaluation (BE), be conducted to determine their potential effect on threatened and endangered species, species proposed for listing, and sensitive species (FSM 2670.3). Preparation of a Biological Evaluation as part of the NEPA process ensures that USFS-designated Sensitive Species receive full consideration in the decision-making process.

Species listed under the Endangered Species Act as Threatened, Endangered, Proposed or Candidate are analyzed in the Biological Analysis for the proposed action.

Forests that have completed plan revision under the 2012 Planning Rule no longer have designated Sensitive Species. Those forests instead have Species of Conservation Concern (SCC), which are analyzed in a separate document. (See the SCC discussion in the Environmental Effects section of Chapter 3 in the [Draft EIS](#) and the SCC White Paper in [Miscellaneous Supporting Documents](#).)

Refer to Chapters 1 and 2 in the Draft EIS for the *Background* on why the amendment is being proposed, the *Purpose and Need* for the amendment, and the *Proposed Action and Action Alternatives*.

Scope, Scale and Management Impact

The Secretary of Agriculture, in his capacity as responsible official, has determined that the scope of this proposed action is to add plan components to Forest Service Land Management Plans (LMP) to address old-growth conditions. While this action includes almost all LMPs, it is not intended to apply to ecosystems where trees cannot grow or are not anticipated to continue succession to the old-growth stage. Instead, this proposed action intends to provide consistency across the National Forest System (NFS) to account for situations where old growth forests may occur on the landscape, and to provide guidance if additional forested lands are acquired through land exchange for these units.

- The National Old Growth Amendment is intended to be complementary to existing LMP components. Plans that include components that are more protective of old-growth would not be replaced by NOGA.
- The duration of impacts from the amendment is variable due to the different ages of LMPs. The amendment would apply at least until the LMP is revised, which is expected to occur on a 15-year cycle. We anticipate a revised plan to include plan components for old-growth forests, but we cannot forecast potential changes that could occur during a future LMP revision. We anticipate all LMPs will be revised by 2040, so it is assumed impacts from NOGA would not occur beyond 15 years at which time a revised plan would provide for old-growth management.
- NOGA's impact on current forest management will vary widely across NFS system lands depending on current management direction and local forest conditions. Some LMPs provide for management of old-growth forests and minimal change in management is likely to occur. Other LMPs currently contain no components for old-growth and in those places NOGA is likely to result in noticeable

management changes. The nature of potential management changes will depend upon the location and condition of old-growth forests and their potential departure from desired conditions. Adaptive management strategies that are part of NOGA will provide for assessments of local old-growth conditions and identification of actions needed to achieve desired conditions.

Analysis Area

At this programmatic level of planning, the action area for the evaluation of effects is defined as all NFS lands within the exterior administrative boundary of those national forests in which the amendment would apply. Management direction an LMP only applies to NFS lands and does not apply to, or constrain, projects or activities on private lands, adjacent national forests, or other land ownerships. Based on the typical LMP revision cycle, we anticipate all LMPs to have been revised by 2040, making the lifespan of the amendment approximately 15 years.

3.0 Current Ecological Conditions

Old-Growth Forest Inventory

The National Forest System (NFS) includes about 149 million acres of woodlands and forests from Alaska to Puerto Rico (Oswalt et al. 2019). These forests vary from coast-to-coast, region by region, and locally. This variation is also seen in the range of old-growth forest types that occur on NFS lands. This reflects factors including the diversity in ecosystems and land use history of lands that are now National Forest units.

This National Old-Growth Inventory (USFS 2024) relied on the Forest Inventory and Analysis (FIA) program, which is the primary source of information about the extent, condition, status, and trends of forest resources across the United States (Oswalt et al. 2019; Bechtold and Patterson, 2005). The National Inventory estimates that there are 24.7 million acres of old-growth forest on NFS lands (about 17 percent of the total forested NFS lands). The amount of old growth varies within and among NFS Regions (Table 1).

Table 1. FIA old-growth estimates by NFS region and nationally

Region	Old Growth Estimate (1,000 acres)	95% Confidence Interval (1,000 acres)	Percent of Forested NFS Lands as Old Growth	Percent Old Growth in Passive Management*
All NFS Lands	24,738	24,253 - 25,223	17%	55%
Northern Region	2,496	2,381 - 2,611	11%	63%
Rocky Mountain Region	2,497	2,385 - 2,609	17%	58%
Southwestern Region	2,108	2,001 - 2,215	14%	25%
Intermountain Region	2,659	2,539 - 2,779	12%	69%
Pacific Southwest Region	1,701	1,607 - 1,795	11%	49%
Pacific Northwest Region	6,037	5,928 - 6,146	27%	44%
Southern Region	1,167	1,109 - 1,225	9%	24%
Eastern Region	301	275 - 327	3%	24%

Region	Old Growth Estimate (1,000 acres)	95% Confidence Interval (1,000 acres)	Percent of Forested NFS Lands as Old Growth	Percent Old Growth in Passive Management*
Alaska Region	5,769	5,673 - 5,865	76%	80%

*Passive management refers to Wilderness, Roadless, and National Monuments.

Much of the old-growth on NFS lands occurs in areas where existing LMPs limit vegetation management. The National Forest Management Act requires NFS lands be managed for multiple uses. As a result, LMPs usually include plan components for other resource needs that apply to old-growth forests. For example, areas designated as wilderness, wild and scenic rivers or national monuments are managed to protect their unique resources values and forest management projects very rarely occur. The National Old-Growth Inventory (USFS 2024) revealed that more than half of the old-growth on NFS lands occurs in these designated areas (Table 1).

Old-growth Forests as habitat

Old-growth forests contain a diverse array of plant and animal communities, including many that are rare or absent in younger forests. This diversity plays a key role in maintaining ecosystem resilience and the ability of old growth to deliver ecosystem services. Old-growth forests support high levels of biodiversity due to its complex structure—with features like large trees, diverse understory vegetation, and abundant dead wood creating a wide range of ecological niches and microhabitats (Brockhoff et al. 2017).

Old-growth forests develop along a wide variety of successional pathways, including many minor and some major disturbances. As a result, old-growth forests in NFS lands show regional differences in biodiversity related to differences in climate, fire history, site productivity, and species composition. These multiple pathways are important because they lead to unique diversity of plant and animal communities, which is essential for maintaining ecosystem functioning and resilience. In turn, this diversity contributes to maintaining processes like nutrient cycling, carbon sequestration, and water regulation. Maintaining a mosaic of old-growth forests and forests of different ages is crucial for preserving the full spectrum of plant and animal communities and ecological integrity across landscapes.

Management of old growth forests influences habitats that are adjacent to or surrounded by old growth. This can include water chemistry, temperature, and flow rate of streams and ponds in old growth forests. Small forest openings are habitat for many rare species, also potentially influenced by the management of the surrounding areas.

Species benefit from many habitat features that are present in old growth. This includes large trees, as nesting platforms as well as for cavity-nesting species; very small forest openings created by the falling of large trees; and dense canopy cover and associated moisture retention in litter and soils.

4.0 Occurrence Information for Sensitive Species

The nine regions of the NFS contain a total of 3,537 Regional Forester's Sensitive Species (RFSS) (Table 2). Some species are on the RFSS lists of multiple regions. Each region has a separate list and within each region a species that is on that list will be recognized as sensitive on any national forest or national grassland upon which it occurs. This NOGA evaluation uses the most recent list from each region. For the purposes of RFSS, the word "species" can refer to a species, a subspecies, a botanical variety, or a distinct population or population segment.

To analyze impacts, species occurrence records for the species on the combined Regional Forester's Sensitive Species List (RFSSL) were downloaded from the [Global Biodiversity Information Facility](#) (GBIF; Global Biodiversity Information Facility 2022a) on 2024-05-17 using R (ver 4.4.0, R Core Team 2024) and the *rgbif* package (ver 3.7.9, Chamberlain et al. 2024, Chamberlain and Boettiger 2017). GBIF is a repository of externally-sourced species occurrence records from museum collections, academic studies, and citizen science programs. Generally, these are presence-only records and can document the presence of species in an area of interest; probable or possible presence were not quantified. These data cannot determine the abundance or absence of a species. Of the 3,537 species on the RFSSL, 3,366 species had one or more occurrence records in GBIF. Of these, 2,913 species had occurrence records on National Forest System (NFS) lands and 371 did not. Those that did not have NFS occurrence records had occurrence records extracted from non-NFS lands. The remaining 200 species missing occurrence records in GBIF were manually assessed for habitat associations. See *Habitat Evaluation for Sensitive Species* for more information.

The scientific names on the RFSSL were then validated against the Integrated Taxonomic Information System (ITIS) using the *taxadb* package (ver. 0.2.1, Norman, Chamberlain, & Boettiger 2020). Of the 3,537 species on the RFSSL, 2,595 species had valid taxonomic classifications in ITIS using the *taxadb* package.

Table 2. Number of Regional Forester Sensitive Species by Forest Service region

Region	Number of RFSS
Northern (Region 1)	231
Rocky Mountain (Region 2)	168
Southwestern (Region 3)	343
Intermountain (Region 4)	258
Pacific Southwest (Region 5)	593
Northwest (Region 6)	782
Southern (Region 8)	524
Eastern (Region 9)	1027
Alaska (Region 10)	25
Total	3,537

5.0 Habitat Evaluation for Sensitive Species

Species were correlated with the habitats that they are known to inhabit. Some of those habitat types do not support old growth forests. They may still contain individual old growth trees, such as a lone cottonwood tree on the prairie, or an isolated bristlecone pine tree. Other habitat types may support old growth forests; communities containing many old trees and plants and animals that occur in such communities.

Geospatial Evaluation of Species' Habitat

National Land Cover Dataset (NLCD)

To prepare data, all GBIF records were converted to geospatial points data using the *sf* package in R (ver. 1.0.16, Pebesma and Bivand 2023, Pebesma 2018). These point data were then reprojected into Albers Equal Area NAD83 projections to correspond to projections of the National Land Cover Dataset (NLCD)

geospatial raster for the Continental United States (CONUS) (Dewitz 2021), Alaska (Dewitz 2019), and Puerto Rico (USGS 2003) in ESRI ArcGIS Pro v. 3.2.2. Additionally, the Alaska NLCD raster dataset (Dewitz 2019) was clipped to a 1km buffer around all GBIF points using the Extract by Mask Tool due to computational limitations using the full Alaska NLCD Dataset. After the data was prepared, the Extract Multi Values to Points tool was used for the three NLCD datasets of CONUS, Puerto Rico, and the clipped Alaska dataset. This tool will assign the NLCD cell value wherever the GBIF data points intersect with an NLCD grid cell to the GBIF data attribute table. Lastly, pivot tables summarizing the number of points per species per NLCD land cover category were calculated in R using the dplyr (ver. 1.1.4, Wickham et al. 2023) and tidyR (ver. 1.3.1, Wickham H, Vaughan, and Girlich 2024) packages.

Caves/karsts

Cave location information is protected due to confidentiality requirements of the Federal Cave Resources Protection Act. We attempted to identify cave- and karst-obligate species through geospatial analysis of species' occurrence records intersected with 500-m buffers around lands suitable for cave and karst formation on NFS lands. However, this spatial analysis did not work because non-cave dependent species are spatially correlated with caves, and it was not possible to meaningfully distinguish cave-dependent species from non-cave-dependent species. Therefore, cave/karst species were assigned solely to their intersecting NLCD cover class(s) (Dewitz et al. 2021). For example, a cave-obligate species occurrence may intersect with a forested vegetation type even when it does not use forest habitat. The analysis process errs on the side of assuming potential for impacts, rather than assuming no impacts.

Literature-Based Evaluation of Species' Habitat

Two hundred RFSS lacked occurrence records in GBIF and were manually assessed for their habitat associations using species' habitat descriptions provided in NatureServe (2024). If NatureServe (2024) had insufficient habitat information for a particular species, then other sources of BASI were used to assess species' habitat. The habitat types listed in NatureServe (2024) and/or other sources were binned into land cover classes derived from National Land Cover Dataset (Dewitz 2021), modified from the Anderson Land Cover Classification System (Anderson et al. 1976). Table 3 shows examples of how habitat descriptions from NatureServe (2024) were categorized into one or more NLCD class (Dewitz 2021). Some habitat types, such as alpine, woodland, and urban, can occur in multiple NLCD classes (Table 3). In all cases, professional biologists judged what land cover class(es) was most appropriate for a given species.

Table 3. Crosswalk showing example NatureServe habitat descriptions and how they were assigned to one or more NLCD class(es)

NatureServe Habitat Description	NLCD class
Big river, medium river, shallow water, deep water, freshwater, creek, pool, near shore, pelagic, abyssal, bay/sound, lagoon, river mouth/tidal river	Open water [†]
Alpine [†] , tundra	Perennial Ice/Snow
Urban	Developed, open space
Urban	Developed, low intensity
Urban	Developed, medium intensity
Urban	Developed, high intensity
Hay pastures	Pasture/Hay
Alpine [†] , canyons, bare rock/talus/scree, desert, playas	Barren Land

NatureServe Habitat Description	NLCD class
N/A – this cover class only occurs in Alaska and no species were associated with this cover class	Dwarf Shrub
Forest/woodland, oak woodland, hardwood forest	Deciduous Forest
Conifer, alpine [†] , forest/woodland, pinyon-juniper*	Evergreen forest
Woodland-mixed, forest/woodland, juniper-live oak woodland, alpine [†]	Mixed forest
N/A – this cover class only occurs in Alaska and no species were associated with this cover class	Sedge/ Herbaceous
Chapparal, desert, alpine [†] , pinyon-juniper*, sage scrub, shrubland, desert scrub	Shrub/Scrub
Grassland/herbaceous, alpine [†] , savanna, meadows	Herbaceous
Cropland, suburban/orchard, old field, citrus grove, agricultural fields	Cultivated crops
Creek, spring/spring brook, bog, fen, ciénagas, palustrine habitats, wet areas, shores, subaqueous, meadows, wet prairies	Emergent herbaceous wetlands [‡]
Forested wetland, cottonwood gallery, creek, spring/Spring brook, bog, fen, scrub-shrub wetland, palustrine habitats, wet areas	Woody wetlands [‡]

*Pinyon-juniper was always assigned to *both* forest and shrubland land cover classes to account for uncertainty regarding the shrub cover percentage for a given species.

†Alpine species that may use forest habitat were always assigned to the forest land cover class, potentially in addition to other land cover classes.

‡Species that use aquatic habitat for any part of their life history were always assigned to the open water land cover class and the wetland cover classes unless they occur solely within the Great Lakes or karst subterranean aquatic habitat and have no potential to be associated with old-growth forest habitat.

Identification of grassland species

Seven LMPs were exempted from the amendment because their relatively limited forest and/or woodland is currently non-commercially focused. Sensitive species are designated by the Regional Forester for the Region, not for individual national forests or grasslands; however, some RFSS only occur on a single forest or grassland within a region. Agency policy and direction for management of sensitive species and their habitat apply wherever the species occurs. Species listed as RFSS within a single region that only occur in a unit exempted from the amendment were identified by reviewing each region's sensitive species matrix. These matrices capture the region's best, but still incomplete, understanding of where these species are known or likely to occur. Species that are suspected to only occur on a unit exempted from the amendment were determined to have "No impact."

6.0 Effect Analysis – Indirect and Cumulative

The Biological Evaluation makes an effects determination for each RFSS that occurs in the project area. FFSM 2670 establishes the potential classes of determinations that can be made for each species: "No Effect" (or No Impact), "Beneficial Effect" (or Beneficial Impact) or "May Affect" (or May Impact). Application of these determinations has been adapted slightly differently by the various regions of the USFS under the guidance of each Regional Forester.

Adaptations at the regional level added specificity to the "May Affect" determination. Most USFS Regions now split that determination into two determinations. "May Impact Individuals or Habitat" (MIIH) is used in cases where there may be potential for some effect to a species or habitat but for which

that effect is not likely to cause a trend towards federal listing under ESA nor cause a loss of viability in the planning area.

The other adaptation to add specificity to the effects determinations was through the addition of “Adverse Impact” (AI) likely to cause a trend toward federal listing or loss of viability on the planning area. No “Adverse Impact” determinations nor “Beneficial Impact” determinations were identified (see Appendix A of this Biological Evaluation).

Of the 18 NLCD classes, we assumed that only shrublands, forests and woody wetlands provide for possible establishment of old-growth forest (Table 4). Shrublands were included because some habitat types with smaller stature tree species, such as pinyon-juniper woodlands or Gambel oak, can present as shrublands but can still reach old growth.

Table 4. National Land Cover Database Cover classes into which Regional Forester Sensitive Species were classified, and their potential to support old-growth forest.

NLCD Class	Potential for old-growth forest?
Barren Land	No
Cultivated Crops	No
Deciduous Forest	Yes
Developed, Open Space	No
Developed, Low Intensity	No
Developed, Medium Intensity	No
Developed, High Intensity	No
Dwarf Shrub (Alaska only)	No
Emergent Herbaceous Wetlands	No
Evergreen Forest	Yes
Hay/Pasture	No
Herbaceous	No
Mixed Forest	Yes
Open Water	No
Perennial Snow/Ice	No
Sedge/ Herbaceous (Alaska only)	No
Shrub/Scrub	Yes
Woody Wetlands	Yes

All RFSS were assigned to one of three bins based on the predicted effects of the amendment:

- No habitat association with old-growth forest – based on species’ habitat information and their assigned land cover class(es), these species were found to have no habitat association with old-growth forest for any part of their life history. For example, exclusively cave-dwelling or grassland species that are not influenced by forest habitat were placed in this category. We determined that if a species does not occur in a vegetation type that can support old-growth forests, then that species will be unaffected by NOGA and listed as “No impact”.
- May have a habitat association with old-growth forest – based on species’ habitat information and their assigned land cover class(es), these species may use or be influenced by old-growth forest at

any stage in their life history. Dependency on old-growth forest can range from incidental use to a high dependence on late successional forests. Much is still unknown about many species' relationship to old-growth forest communities, especially non-vascular plants and invertebrates (USDA 1997). Where there was uncertainty regarding whether a species uses or could be influenced by old-growth habitat, we made the conservative assumption that it may. Aquatic species were assumed to potentially be influenced by old growth due to adjacent riparian habitat. Species in this category could potentially be affected by the amendment and were carried forward in programmatic analysis of indirect and cumulative effects.

- Species listed as RFSS within a single region that only occur in a National Grassland exempted from the amendment – these species were determined to have “No impact” due to the amendment not affecting their LMP.

Based on these bins, effects determinations for all RFSS are shown in Appendix A.

Data limitations

- Species point-occurrence records were obtained from GBIF. GBIF is the world's largest species occurrence database, which draws from over 800 institutions. Data from GBIF represent the greatest body of available information on species occurrences, based on museum specimens, surveys, literature and other sources (Meyer et al. 2015). GBIF also includes citizen science data repositories, such as iNaturalist. Several studies have reviewed the gaps and limitations in GBIF data, including uncertainty associated with citizen science contributions (e.g., Meyer et al. 2015, Meyer et al. 2016, Troia and McManamay 2016, Chandler et al. 2017). This analysis assumes that species records are accurately identified in GBIF, although that is not always the case and identification accuracy varies among taxonomic groups (Meyer et al. 2016, McMullin and Allen 2022).
- Lack of species observations is not evidence of absence: a lack of observation may be because the species is rare in that area, or because no one ever looked for it there. Similarly, the number of occurrence records is not an indicator of abundance. For example, showy flowering plants or rare birds will trigger many more occurrence records relative to their abundance than “less interesting” species. Lack of observations of a particular species can lead to an incomplete picture of its habitat associations. The impact of low numbers of occurrence records for geospatial analysis of species’ habitat associations is discussed further in *Analysis Assumptions and Uncertainties*.
- Occurrence records from GBIF have location coordinates with varying levels of precision and accuracy. Some observations include an estimate of the location uncertainty, which may range from a few meters to several kilometers. For this analysis, it is important to consider the location uncertainty of occurrence records in the context of the spatial resolution of the habitat evaluation. This is discussed further in *Analysis Assumptions and Uncertainties*.

Analysis assumptions and uncertainties

The underlying assumption in this spatial evaluation is that the NLCD cover class overlapping the location of occurrences of a species represents a habitat type a species may occupy; and, a related assumption is that the select NLCD cover classes identified in Table 4 conservatively reflect that habitat's potential for supporting old-growth forest. This approach does not indicate a species is dependent on old-growth forest, nor does it indicate that a species cannot occupy old-growth forest. Furthermore, this approach is insensitive to species-habitat relationships dictated by features smaller than the spatial scale of the grid cell. Vegetation datasets used in this analysis have a resolution of a 98 x 98-ft (30 x 30 meter)

grid cell. As such, these datasets do not capture finer-scale habitat features such as caves, rock outcrops, seeps, or springs.

Additionally, some habitat that could have potential to support old-growth forests could be misidentified with the NLCD data (e.g. pinyon-juniper woodlands could be identified as ‘herbaceous’, or aquatic species could be assigned to ‘open water’ but still be influenced by adjacent old growth forest through stream shading, etc.). Species that intersected only with land cover class(es) with no potential to support old-growth forest (Table 4) also underwent a literature-based evaluation, described above. This additional evaluation was done to ensure species were not falsely determined to have “No Impact” from the amendment due to lack of spatial resolution to capture a species’ true habitat associations. Otherwise, if species conservatively assigned to a habitat type that may include old-growth forest in the geospatial analysis, they were analyzed for potential impacts of the amendment even when there may not be impacts.

The assumption that the NLCD class accurately reflects the species’ habitat may also not be met where species’ occurrence records have location uncertainty that exceeds the scale of the grid cell. For example, if an occurrence record has a location uncertainty of 100-m, this exceeds the 30-m resolution of the NLCD grid cell, and therefore the species’ habitat could potentially be misclassified. Lack of observations of a particular species can also lead to an incomplete picture of its habitat associations. Because of these potential sources of error, all species that were assigned to NLCD cover class(es) without potential for old growth (133 species) also underwent a literature-based evaluation, described above. This additional evaluation was done to ensure species were not falsely assessed as a “No Impact” simply due to false assignment to a cover class(es) or insufficient observations. The geospatial and literature-based analysis process is summarized in Table 5.

Table 5. Summary of the RFSS analysis process and determinations. Determinations: NI = No Impact; MIIH=May Impact Individuals or Habitat but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area; BI = beneficial impact.

Analysis method	Number of RFSS	NI	MIIH	AI	BI
Geospatial (NLCD)	3,284	133*	3,151	0	0
Literature review (species with no spatial data)	198	48	150	0	0
Geospatial (NLCD), followed by literature review	133*	44	89	0	0
Regional RFSS matrices for grassland species	55	55	0	0	0
Total RFSS	3,537	147	3,390	0	0

*All species that were identified as “no impact” through the geospatial analysis also underwent literature-based review by professional biologists, and 89 determinations were changed from “NI” to “MIIH” based on this review.

7.0 Summary

Ninety-two (92) sensitive species do not have potential habitat association with old growth forest. Additionally, 55 species only occur on National Grasslands that are not proposed to be amended by the National Old Growth Amendment. These 147 species would be unaffected by the implementation of the National Old Growth Amendment and are listed with an effects determination of “No Impact” (Appendix A).

The impacts to Sensitive Species analyzed here arise from the difference between management actions tiering from current LMPs and management actions that would tier off LMPs amended to include the NOGA plan components. In many cases this would be very little difference in management of forests under NOGA. However, it is anticipated that NOGA would lead to management actions on some forests that would generally maintain, preserve, and restore old growth forests.

This could include actions that reduce the probability of high intensity wildfire; actions such as thinning and prescribed fire or other forest-maintaining activities. Such actions can have a short-term detrimental impact to many species but are intended to have long-term benefit for such species. That sort of scenario is captured under the “May Impact Individuals or Habitat” (MIIH) effects determination. All such impacts would be indirect, as NOGA does not directly authorize any on-the-ground activities, only instead changing LMPs to make such activities, on some forests, more likely.

The impact to species from the difference between pre-NOGA forest plans and NOGA amended forest plans would likely be minor or negligible due to the wording of the NOGA plan components themselves. This includes Desired Conditions 3 and 4, which focus on old-growth contributions to plant and animal habitat and to the ecological integrity of that habitat. Per Standard 2, active management for old growth must be complementary to natural succession and must promote certain characteristics that can include the ability of old-growth obligate species to move through treatment areas, or to manage ecological conditions for at-risk species, or for species diversity.

Some sensitive species require early seral stages. NOGA does not prevent management to maintain early seral stages for plant or animal habitat. It does require that such management not degrade old growth and to prioritize areas that have inherent capability of sustaining old growth.

In summary, for species that occur in old-growth supportive habitat, impacts of the amendment are likely to be negligible or beneficial. For species occurring outside old-growth supportive habitat, the impacts of the amendment are likely to be negligible as the amendment does not change management of other seral stages. Early seral stages would continue to be created through natural disturbance (e.g. wildfire). Other seral stages, such as mature, may be managed for recruitment to future old-growth but this is not anticipated to lead to a noticeable reduction of habitat given the scale at which mature forest and other stages exist across the National Forest System (as described in the Mature and Old-Growth Forests: Definition, Identification, and Initial Inventory on Lands Managed by the Forest Service and Bureau of Land Management technical report).

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Amphibian Regional Forester Sensitive Species

Table 1. Determination summary for amphibian Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Jefferson salamander	<i>Ambystoma jeffersonianum</i>	R9	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Blue-spotted salamander	<i>Ambystoma laterale</i>	R9	2	3	3	0	0	8	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Maybee's salamander	<i>Ambystoma mabeei</i>	R8	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Mole salamander	<i>Ambystoma talpoideum</i>	R9	7	8	4	1	10	30	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Western (boreal) toad	<i>Anaxyrus boreas (Bufo boreas)</i>	R1, R2, R4	0	3	0	9	0	12	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Boreal toad (western toad)	<i>Anaxyrus boreas boreas (DPS)</i>	R3	5	158	6	42	1	212	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Yosemite toad	<i>Anaxyrus canorus</i>	R5	0	51	0	69	1	121	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Black toad	<i>Anaxyrus exsul</i>	R5	0	27	0	89	0	116	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Green salamander	<i>Aneides aeneus</i>	R8, R9	37	7	15	1	0	60	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Black salamander	<i>Aneides flavipunctatus</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Sacramento Mountains salamander	<i>Aneides hardii</i>	R3	2	335	0	28	0	365	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Rocky Mountain tailed frog	<i>Ascaphus montanus</i>	R6	0	129	0	59	1	189	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Fairview slender salamander	<i>Batrachoseps bramei</i>	R5	0	16	0	64	0	80	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Inyo Mountain salamander	<i>Batrachoseps campi</i>	R5	0	68	0	21	0	89	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
San Gabriel Mountains slender salamander	<i>Batrachoseps gabrieli</i>	R5	0	15	1	86	4	106	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
San Simeon slender salamander	<i>Batrachoseps incognitus</i>	R5	0	15	0	1	0	16	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Lesser slender salamander	<i>Batrachoseps minor</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Kings River slender salamander	<i>Batrachoseps regius</i>	R5	0	23	0	46	0	69	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Relictual slender salamander	<i>Batrachoseps relictus</i>	R5	0	72	0	21	2	95	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Kern Canyon slender salamander	<i>Batrachoseps simatus</i>	R5	0	1	0	54	0	55	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Western barking frog	<i>Craugastor augusti cactorum</i>	R3	X	X	X	X	NA	4	Literature	No GBIF data	Habitat may include OG	MIIH	NatureServe (2024)
Eastern hellbender	<i>Cryptobranchus alleganiensis</i>	R8, R9	26	6	13	1	0	46	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Apalachicola dusky salamander	<i>Desmognathus apalachicolae</i>	R8	1	26	0	1	10	38	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Dwarf black-bellied salamander	<i>Desmognathus folkertsi</i>	R8	52	3	8	0	0	63	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Northern pygmy salamander	<i>Desmognathus organi</i>	R8	185	22	23	2	0	232	Geospatial	FS Obs	Habitat may include OG	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Cope's giant salamander	<i>Dicamptodon copei</i>	R6	0	56	2	45	1	104	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Yellow-blotched salamander	<i>Ensatina eschscholtzii croceata</i>	R5	2	26	0	27	0	55	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Large-blotched salamander	<i>Ensatina eschscholtzii klauberi</i>	R5	0	28	5	47	0	80	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Junaluska salamander	<i>Eurycea junaluska</i>	R8	24	5	30	0	0	59	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Grotto salamander	<i>Eurycea spelaea</i>	R9	8	0	0	0	0	8	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Eastern narrow-mouth toad	<i>Gastrophryne carolinensis</i>	R9	0	2	0	0	3	5	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Four-toed salamander	<i>Hemidactylum scutatum</i>	R9	8	1	2	0	4	15	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Limestone salamander	<i>Hydromantes brunus</i>	R5	0	6	0	5	0	11	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Shasta salamander	<i>Hydromantes shastae</i>	R5	0	112	0	0	0	112	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Bird-voiced treefrog	<i>Hyla avivoca</i>	R9	11	4	5	2	14	36	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Huachuca/Canelo hills treefrog (AZ treefrog)	<i>Hyla wrightorum pop. 2</i>	R3	0	285	0	117	1	403	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Plains leopard frog	<i>Lithobates blairi</i>	R2, R9	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Gopher frog	<i>Lithobates capito</i>	R8	0	32	0	7	17	56	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Northern leopard frog	<i>Lithobates pipiens</i>	R2, R3, R6	1	1	0	0	0	2	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Wood frog	<i>Lithobates sylvatica</i>	R2	X	X	X	X	X	5	Literature	No GBIF data	Habitat may include OG	MIIH	NatureServe (2024)
Tarahumara frog	<i>Lithobates tarahumarae</i>	R3	0	2	0	53	0	55	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Lowland leopard frog	<i>Lithobates yavapaiensis</i>	R3	0	8	0	70	2	80	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Mudpuppy	<i>Necturus maculosus</i>	R9	6	0	0	0	1	7	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Striped newt	<i>Notophthalmus perstriatus</i>	R8	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Caddo Mountain salamander	<i>Plethodon caddoensis</i>	R8	175	10	128	2	0	315	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Fourche Mountain salamander	<i>Plethodon fourchensis</i>	R8	190	15	39	1	0	245	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Peaks of otter salamander	<i>Plethodon hubrichti</i>	R8	183	6	38	1	0	228	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Coeur d'alene salamander	<i>Plethodon idahoensis</i>	R1	0	57	0	6	0	63	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Kiamichi slimy salamander	<i>Plethodon kiamichi</i>	R8	221	30	2	0	0	253	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Louisiana slimy salamander	<i>Plethodon kisatchie</i>	R8	2	0	0	0	16	18	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Larch Mountain salamander	<i>Plethodon larselli</i>	R6	3	102	5	5	0	115	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Rich Mountain salamander	<i>Plethodon ouachitae</i>	R8	73	97	30	1	0	201	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
White-spotted salamander	<i>Plethodon punctatus</i>	R8	111	2	57	0	0	170	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Sequoyah slimy salamander	<i>Plethodon sequoyah</i>	R8	5	18	1	0	3	27	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Big levels salamander	<i>Plethodon sherando</i>	R8	61	35	36	0	0	132	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Siskiyou mountain salamander	<i>Plethodon stormi</i>	R5, R6	0	189	2	22	0	213	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Van dyke's salamander	<i>Plethodon vandykei</i>	R6	0	15	0	1	3	19	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Shenandoah mountain salamander	<i>Plethodon virginia</i>	R8	87	2	33	0	0	122	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Webster's salamander	<i>Plethodon websteri</i>	R8	13	8	2	0	0	23	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Weller's salamander	<i>Plethodon welleri</i>	R8	96	25	159	0	0	280	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Illinois chorus frog	<i>Pseudacris illinoensis</i>	R9	1	0	0	0	5	6	Geospatial	Non-FS	Habitat may include OG	MIIH	NA
Mud salamander	<i>Pseudotriton montanus</i>	R9	2	3	5	0	7	17	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Northern red-legged frog	<i>Rana aurora aurora</i>	R5	1	16	0	2	0	19	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Foothill yellow-legged frog	<i>Rana boylii</i>	R5, R6	0	50	3	17	0	70	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Cascade frog	<i>Rana cascadae</i>	R5	0	227	1	34	3	265	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Columbia spotted frog (bighorn mtn. pop.)	<i>Rana luteiventris</i>	R2, R4, R6	7	145	0	31	20	203	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Mountain yellow-legged frog: Southern Sierra dps	<i>Rana muscosa</i>	R5	0	66	1	90	8	165	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Northern leopard frog	<i>Rana pipiens</i>	R1	1	3	2	4	0	10	Geospatial	FS Obs	Habitat may include OG	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Sierra Nevada yellow-legged frog	<i>Rana sierrae</i>	R5	0	53	0	60	1	114	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Cascade torrent salamander	<i>Rhyacotriton cascadae</i>	R6	0	137	2	66	4	209	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Olympic torrent salamander	<i>Rhyacotriton olympicus</i>	R6	0	82	2	4	1	89	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Southern torrent salamander	<i>Rhyacotriton variegatus</i>	R5	1	67	7	6	0	81	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Eastern spadefoot	<i>Scaphiopus holbrookii</i>	R9	3	4	1	0	4	12	Geospatial	FS Obs	Habitat may include OG	MIIH	NA
Patch-nosed salamander	<i>Ursipesperes brucei</i>	R8	8	0	2	0	0	10	Geospatial	FS Obs	Habitat may include OG	MIIH	NA

Annelid Regional Forester Sensitive Species

Table 2. Determination summary for annelid Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Giant palouse earthworm	<i>Driloleirus americanus</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)

Arthropod Regional Forester Sensitive Species

Table 3. Determination summary for arthropod Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Sedge darner	<i>Aeshna juncea</i>	R1, R2, R3, R4, R6, R9, R10	5	111	4	11	23	154	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Zigzag darner	<i>Aeshna sitchensis</i>	R2, R4, R6, R9, R10	0	37	0	4	14	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Subarctic darner	<i>Aeshna subarctica</i>	R1, R2, R6, R9, R10	7	24	1	0	38	70	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beller's ground beetle	<i>Agonum belleri</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Monongahela snowfly	<i>Allocapnia frumi</i>	R9	8	0	3	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smokies snowfly	<i>Allocapnia fumosa</i>	R8	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scott's apatanian caddisfly	<i>Allomyia scotti</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Aracoma sallfly	<i>Alloperla aracoma</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Dusky sallfly	<i>Alloperla biserrata</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bell's roadside-skipper	<i>Amblyscirtes bellii</i>	R9	9	1	2	0	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A mayfly	<i>Ameletus browni</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A mayfly	<i>Ameletus tertius</i>	R9	0	2	4	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southeastern wandering spider	<i>Anahita punctulata</i>	R9	16	0	5	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Comet darner	<i>Anax longipes</i>	R9	2	2	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A mining bee	<i>Andrena cornelli</i>	R9	13	0	1	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A pseudoscorpion	<i>Apochthonius indianensis</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Dry Fork Valley cave pseudoscorpion	<i>Apochthonius paucispinosus</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Michigan bog grasshopper	<i>Appalachia arcana</i>	R9	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Paiute dancer	<i>Argia alberta</i>	R1	0	1	0	1	6	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sabino canyon damselfly	<i>Argia sabino</i>	R3	0	2	0	48	0	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arogos skipper	<i>Atrytone arogos</i>	R2, R8	6	41	11	48	152	258	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cestus skipper	<i>Atrytonopsis cestus</i>	R3	0	2	0	26	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dusted skipper	<i>Atrytonopsis hianna</i>	R9	2	3	3	1	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Loammi skipper	<i>Atrytonopsis loammi</i>	R8	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-tail bactrid	<i>Bactrurus brachycaudus</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Krekeler's cave ant beetle	<i>Batisodes krekeleri</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Chandler and Lewis (2008)
Astarte fritillary	<i>Boloria astarte</i>	R6	0	5	0	2	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow fritillary	<i>Boloria bellona</i>	R6	6	1	2	1	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountain fritillary	<i>Boloria chariclea montinus</i>	R9	1	13	1	0	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Freija fritillary	<i>Boloria freija</i>	R6	0	4	0	17	23	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silver-bordered fritillary	<i>Boloria selene</i>	R6	2	2	3	1	14	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow bumble bee	<i>Bombus fervidus</i>	R9	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Frigid bumble bee	<i>Bombus frigidus</i>	R6	3	10	0	4	1	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Indiscriminate cuckoo bumble bee	<i>Bombus insularis</i>	R9	21	76	1	52	12	162	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
High country bumble bee	<i>Bombus kirbiellus</i>	R6	1	7	0	12	1	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Morrisoni bumble bee	<i>Bombus morrisoni</i>	R6	2	21	1	21	3	48	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western bumble bee	<i>Bombus occidentalis</i>	R1, R2, R5, R6	7	62	2	30	6	107	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American bumble bee	<i>Bombus pensylvanicus</i>	R6, R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Suckley cuckoo bumble bee	<i>Bombus suckleyi</i>	R6	17	75	1	63	0	156	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow-banded bumble bee	<i>Bombus terricola</i>	R9	6	2	3	0	3	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Half-black bumble bee	<i>Bombus vagans</i>	R6	5	9	2	1	1	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boreal fan moth	<i>Brachionycha borealis</i>	R9	7	19	39	0	1	66	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Jefferson's short-nosed scorpionfly	<i>Brachypanorpa jeffersoni</i>	R8	4	0	1	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pocked pouch fairy shrimp	<i>Branchinecta campestris</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Kaibab fairy shrimp	<i>Branchinecta kaibabensis</i>	R3	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Piglet bug	<i>Bruchomorpha dorsata</i>	R9	10	0	0	0	0	10	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A planthopper	<i>Bruchomorpha pallidipes</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	Wallner (2006)
A cave oligate isopod	<i>Caecidotea bicrenata whitei</i>	R9	22	0	2	0	0	24	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cannulate cave isopod	<i>Caecidotea cannula</i>	R9	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A cave obligate isopod	<i>Caecidotea dimorpha</i>	R9	3	1	2	0	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Incurred cave isopod	<i>Caecidotea incurva</i>	R8	1	0	1	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Salem cave isopod	<i>Caecidotea salemensis</i>	R9	14	1	0	0	0	15	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A cave obligate isopod	<i>Caecidotea simonini</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A cave isopod	<i>Caecidotea sinuncus</i>	R9	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A cave isopod	<i>Caecidotea stygia</i>	R9	9	0	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Northern metalmark	<i>Calephelis borealis</i>	R8, R9	6	3	3	0	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swamp metalmark	<i>Calephelis muticum</i>	R9	8	0	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barry's hairstreak	<i>Callophrys gryneus chalcosiva</i>	R6	0	1	0	0	13	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rosner's hairstreak	<i>Callophrys gryneus rosneri</i>	R6	0	41	0	0	0	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henry's elfin	<i>Callophrys henrici</i>	R9	3	1	2	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Frosted elfin	<i>Callophrys irus</i>	R8, R9	1	6	0	4	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Johnson's hairstreak	<i>Callophrys johnsoni</i>	R6	0	33	0	3	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Big south fork crayfish	<i>Cambarus bouchardi</i>	R8	2	0	3	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boston mountains crayfish	<i>Cambarus causeyi</i>	R8	8	2	3	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chauga crayfish	<i>Cambarus chaugaensis</i>	R8	0	5	8	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain crayfish	<i>Cambarus conasaugaensi</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Conasauga blue burrower	<i>Cambarus cymatilis</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Elk river crayfish	<i>Cambarus elkensis</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Chickamauga crayfish	<i>Cambarus extraneus</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little Tennessee crayfish	<i>Cambarus georgiae</i>	R8	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greenbrier cave crayfish	<i>Cambarus nerterius</i>	R9	7	0	0	0	0	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Hiwassee headwater crayfish	<i>Cambarus parrishi</i>	R8	2	0	4	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greenbrier River crayfish	<i>Cambarus smilax</i>	R9	3	0	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beautiful crayfish	<i>Cambarus speciosus</i>	R8	15	0	1	0	1	17	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lean crayfish	<i>Cambarus strigosus</i>	R8	4	0	1	0	3	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A stonefly	<i>Capnia caryi</i>	R3	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Herodias or pine barrens underwing	<i>Catocala herodias gerhardi</i>	R8	37	16	26	1	7	87	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Marbled underwing	<i>Catocala marmorata</i>	R8	4	1	2	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern cavefish copepod	<i>Cauloxenus stygius</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Headwaters chilstigman caddisfly	<i>Chilstigma itascae</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou short-horned grasshopper	<i>Chloealtis aspasma</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A leafhopper	<i>Chlorotettix distinctus</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	DeLong (1918)
A leafhopper	<i>Chlorotettix nudatus</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Kittelberger and Howard (2024)
Spring mountain checkerspot	<i>Chlosyne acastus robusta</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little brown cicada	<i>Cicadetta calliope</i>	R9	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Appalachian tiger beetle	<i>Cicindela ancocisconensis</i>	R9	10	2	5	0	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siuslaw sand tiger beetle	<i>Cicindela hirticollis siuslawensis</i>	R6	0	3	0	0	1	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Northern barrens tiger beetle	<i>Cicindela patruela</i>	R6, R9	7	2	5	1	2	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Subarctic bluet	<i>Coenagrion interrogatum</i>	R6	1	0	0	0	17	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Labrador sulphur	<i>Colias nastes</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Sullivan's sulphur	<i>Colias occidentalis sullivani</i>	R6	NA	NA	NA	X	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Bollman's cave millipede	<i>Conotyla bollmani</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Tiger spiketail	<i>Cordulegaster erronea</i>	R9	10	1	11	0	1	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arrowhead spiketail	<i>Cordulegaster obliqua</i>	R9	9	12	8	0	4	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pitcher plant spiketail	<i>Cordulegaster sarracenia</i>	R8	0	114	8	1	51	174	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow-headed lichen moth	<i>Crambidia cephalica</i>	R9	2	31	4	19	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Anomalous spring amphipod	<i>Crangonyx anomalus</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Barr's cave amphipod	<i>Crangonyx barri</i>	R9	34	1	5	1	0	41	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A freshwater amphipod	<i>Crangonyx castellanum</i>	R8	5	0	0	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Florida cave amphipod	<i>Crangonyx grandimanus</i>	R8	0	6	0	0	40	46	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Hobb's cave amphipod	<i>Crangonyx hobbsi</i>	R8	0	5	0	0	18	23	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Indiana cave amphipod	<i>Crangonyx indianensis</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Packard cave amphipod	<i>Crangonyx packardi</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Speckled burrowing crayfish	<i>Creaserinus danielae</i>	R8	0	3	0	0	1	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Camp shelby burrowing crayfish	<i>Creaserinus gordoni</i>	R8	NA	X	NA	NA	X	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Eastern tailed blue	<i>Cupido comyntas</i>	R6	13	3	1	0	2	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A tiger moth	<i>Cycnia collaris</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Parker's cyloepus riffle beetle	<i>Cylloepus parkeri</i>	R3	0	0	0	11	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua water scavenger beetle	<i>Cymbiodyta arizonica</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Monarch	<i>Danaus plexippus</i>	R1, R2, R5, R6, R8, R9	0	2	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A mayfly	<i>Dannella lita</i>	R9	0	0	0	0	1	1	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
A leafhopper	<i>Deltocephalus gnarum</i>	R9	NA	NA	NA	NA	X	1	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	Delong (1926)
A cave obligate copepod	<i>Diacyclops jeanneli jeanneli</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
A noctuid moth	<i>Dichagyris reliqua</i>	R9	3	13	0	0	1	17	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Three-lined angle moth	<i>Digrammia eremias</i>	R9	7	1	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kanawhole springfly	<i>Diploperla kanawholensis</i>	R9	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Piedmont prairie burrowing crayfish	<i>Distocambarus crockeri</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Newberry burrowing crayfish	<i>Distocambarus younginieri</i>	R8	0	2	0	1	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Kansas preacher leafhopper	<i>Dorydiella kansana</i>	R9	0	0	0	0	3	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Scarlet bluet	<i>Enallagma pictum</i>	R9	5	13	3	8	108	137	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Macropis cuckoo bee	<i>Epeoloides pilosulus</i>	R9	8	0	1	3	5	17	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Taiga alpine	<i>Erebia mancinus</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A cave obligate harvestman	<i>Erebomaster flavescens</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A millipede	<i>Ergodesmus remingtoni</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Velvet-striped grasshopper	<i>Eritettix simplex</i>	R9	0	11	0	11	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Early hairstreak	<i>Erora laeta</i>	R8, R9	32	2	36	1	1	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dashed ringtail	<i>Erpetogomphus heterodon</i>	R3	0	21	0	2	1	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mottled duskywing	<i>Erynnis martialis</i>	R8, R9	5	6	0	1	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Persius duskywing	<i>Erynnis persius</i>	R9	5	80	1	58	8	152	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Persius duskywing	<i>Erynnis persius persius</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Montane centipede	<i>Escaryus cryptorobius</i>	R8	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Whitetop Mountain centipede	<i>Escaryus orestes</i>	R8	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Milne's looper moth	<i>Euchlaena milnei</i>	R8	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Two-spotted eucosma	<i>Eucosma bipunctella</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A moth	<i>Eucosma rusticana</i>	R9	2	0	1	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Moth (notodontid moth)	<i>Euhyparpax rosea</i>	R3	0	6	0	0	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinaleno monkey grasshopper	<i>Eumorpha pinaleno</i>	R3	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dark blue	<i>Euphilotes ancilla purpura</i>	R4	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Vernal blue butterfly	<i>Euphilotes baueri (battoides) vernalis</i>	R5	0	1	0	17	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pratt's blue butterfly	<i>Euphilotes enoptes cryptorufes</i>	R5	NA	NA	NA	X	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Dammer's blue butterfly	<i>Euphilotes enoptes nr. Dammersi</i>	R5	0	3	4	18	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sacramento Mountains checkerspot butterfly	<i>Euphydryas anicia claudcrofti</i>	R3	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Morand's checkerspot	<i>Euphydryas anicia morandi</i>	R4	NA	NA	X	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Bing's checkerspot butterfly	<i>Euphydryas editha bingi</i>	R5	0	0	0	8	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ehrlich's checkerspot butterfly	<i>Euphydryas editha ehrlichi</i>	R5	X	X	X	X	NA	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Karin's checkerspot butterfly	<i>Euphydryas editha karinæ</i>	R5	X	X	X	X	NA	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Mono lake checkerspot butterfly	<i>Euphydryas editha monoensis</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gillette's checkerspot	<i>Euphydryas gillettii</i>	R6	2	61	0	66	23	152	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Berry's skipper	<i>Euphyes berryi</i>	R8	0	2	0	0	7	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green pitcher plant moth	<i>Exyra ridingsii</i>	R8	0	5	0	5	6	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A mayfly	<i>Fallceon eatoni</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Sabine burrowing crayfish	<i>Fallicambarus wallsi</i>	R8	0	0	1	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A caddisfly	<i>Farula constricta</i>	R6	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Coldwater crayfish	<i>Faxonius eupunctus</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Indiana crayfish	<i>Faxonius indianensis</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Kentucky crayfish	<i>Faxonius kentuckiensis</i>	R9	5	0	1	0	4	10	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Meek's crayfish	<i>Faxonius meeki</i>	R9	27	1	1	0	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mena crayfish	<i>Faxonius menae</i>	R8	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bigclaw crayfish	<i>Faxonius placidus</i>	R9	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kiamichi crayfish	<i>Faxonius saxatilis</i>	R8	0	1	12	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eleven point river crayfish	<i>Faxonius wagneri</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Williams crayfish	<i>Faxonius williamsi</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Robertson's flightless planthopper	<i>Fitchiella robertsonii</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A leafhopper	<i>Flexamia reflexus</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024), Michigan Statue University (2024)
Greenhorn fritillary	<i>Fritillaria brandegeei</i>	R5	0	7	0	10	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Butte county fritillary	<i>Fritillaria eastwoodiae</i>	R5	0	8	0	3	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Talus fritillary	<i>Fritillaria falcata</i>	R5	0	2	7	24	1	34	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Fragrant fritillary	<i>Fritillaria liliacea</i>	R5	6	50	29	46	1	132	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ojai fritillary	<i>Fritillaria ojaiensis</i>	R5	0	26	22	92	0	140	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Benito fritillary	<i>Fritillaria viridea</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
A noctuid moth	<i>Gabara subnivosa</i>	R9	0	11	0	0	2	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bousfield's amphipod	<i>Gammarus bousfieldi</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Arrowhead blue butterfly	<i>Glauopsyche piasus nr. sagittigera</i>	R5	NA	X	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
A caddisfly	<i>Goera stylata</i>	R9	3	0	0	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harpoon clubtail	<i>Gomphus descriptus</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rapids clubtail	<i>Gomphus quadricolor</i>	R9	21	2	7	0	3	33	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Green-faced clubtail	<i>Gomphus viridifrons</i>	R9	0	2	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Golden hairstreak	<i>Habrodais grunus</i>	R6	0	98	3	19	1	121	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A noctuid moth	<i>Hadena ectypa</i>	R9	9	0	4	0	0	13	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Loess sallfly	<i>Haploperla chukcho</i>	R8	0	0	1	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Uhler's sundragon	<i>Helocordulia uhleri</i>	R9	5	2	5	0	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
NA	<i>Hemipachnobia subporphyrea</i>	R8	0	0	0	0	1	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Oregon branded skipper	<i>Hesperia colorado oregonia</i>	R6	0	7	0	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cobweb skipper	<i>Hesperia metea</i>	R9	7	3	4	1	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ottoe skipper	<i>Hesperia ottoe</i>	R1, R2, R9	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southeastern cave pseudoscorpion	<i>Hesperochernes mirabilis</i>	R9	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Stephan's heterelmis riffle beetle	<i>Heterelmis stephani</i>	R3	0	11	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wakulla Springs varicolored microcaddisfly	<i>Hydroptila wakulla</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Green-faced clubtail	<i>Hylogomphus viridifrons</i>	R8	11	3	8	1	2	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink prominent	<i>Hyparpax aurora</i>	R9	4	18	0	1	10	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray-handed pseudoscorpion	<i>Kleptochthonius griseomanus</i>	R9	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A cave obligate pseudoscorpion	<i>Kleptochthonius packardi</i>	R9	6	0	0	0	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
"Gila" may fly	<i>Lachlania dencyanna</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Southern pygmy clubtail	<i>Lanthus vernalis</i>	R9	12	1	6	2	2	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A caddisfly	<i>Lepidostoma apache</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024), Houghton (2001)
A caddisfly	<i>Lepidostoma knulli</i>	R3	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hill-prairie spittlebug	<i>Lepyronia gibbosa</i>	R9	1	0	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eyed brown	<i>Lethe eurydice</i>	R9	8	3	2	0	4	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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A moth	<i>Leucania extincta</i>	R9	5	22	0	2	4	33	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Louisiana needlefly	<i>Leuctra szczytkoi</i>	R8	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple skimmer	<i>Libellula Jesseana</i>	R8	0	8	0	1	3	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A caddisfly	<i>Limnephilus granti</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
An isopod	<i>Lirceus bicuspidatus</i>	R8	2	1	0	1	1	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lustrous copper	<i>Lycaena cupreus</i>	R6	0	72	0	152	11	235	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ferris' copper	<i>Lycaena ferrisi</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	USFWS (2009)
A heptageniid mayfly	<i>Maccaffertium bednariki</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Common loosestrife oil bee	<i>Macropis nuda</i>	R9	2	1	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A leafhopper	<i>Macrosteles potorius</i>	R9	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	Orrell (2024)
Blatchley's walking stick	<i>Manomera blatchleyi</i>	R9	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A limnephilid caddisfly	<i>Manophylax butleri</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Campground cave copepod	<i>Megacyclops donnaldsoni</i>	R9	NA	NA	X	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Shenandoah needlefly	<i>Megaleuctra flinti</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Smokies needlefly	<i>Megaleuctra williamsae</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
A spur-throat grasshopper	<i>Melanoplus morsei</i>	R9	38	5	0	0	0	43	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ocala claw-cercus grasshopper	<i>Melanoplus nanciae</i>	R8	0	3	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Newman's brocade	<i>Meropleon ambifusca</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Helianthus leafhopper	<i>Mesamia straminea</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Racovitz'a's terrestrial cave isopod	<i>Miktoniscus racovitzai</i>	R8	3	0	1	0	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A mayfly	<i>Moribaetis mimbresarus</i>	R3	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Wahkeena falls flightless stonefly	<i>Nanonemoura wahkeena</i>	R6	0	13	0	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crepitating conehead	<i>Neoconocephalus robustus</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia gorge caddisfly	<i>Neothremma andersoni</i>	R6	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
A caddisfly	<i>Neothremma prolata</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A cave spider	<i>Nesticus carteri</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Yuma skipper	<i>Ochlodes yuma</i>	R6	0	3	0	6	2	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Contorted ochrotrichian micro caddisfly	<i>Ochrotrichia contorta</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Susan's purse making caddisfly	<i>Ochrotrichia susanae</i>	R2	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chryxus arctic	<i>Oeneis chryxus</i>	R9	8	93	4	63	5	173	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olympic arctic	<i>Oeneis chryxus valerata</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Melissa arctic	<i>Oeneis melissa</i>	R6	0	7	0	17	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountain butterfly	<i>Oeneis melissa semidea</i>	R9	2	4	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A springtail	<i>Onychiurus casus</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Extra-striped snaketail	<i>Ophiogomphus anomalus</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Edmund's snaketail	<i>Ophiogomphus edmundo</i>	R8	6	4	10	0	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy snaketail	<i>Ophiogomphus howei</i>	R8, R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allegheny snaketail	<i>Ophiogomphus incurvatus alleghaniensis</i>	R8	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Westfall's snaketail	<i>Ophiogomphus westfalli</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ghost crayfish	<i>Orconectes inermis inermis</i>	R9	4	0	1	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Appalachian cave crayfish	<i>Orconectes packardi</i>	R8	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Beatty's cave sheet-web spider	<i>Oreonetides beattyi</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Paquin et al. (2009)
Blue calamintha bee	<i>Osmia calaminthae</i>	R8	0	0	6	0	1	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bent forestfly	<i>Ostrocerca prolongata</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	Hogan (2021)
Neararctic paduniellan caddisfly	<i>Paduniella nearctica</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Yellow stoneroot borer	<i>Papaipema astuta</i>	R9	15	0	4	0	44	63	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Blazing star stem borer	<i>Papaipema beeriana</i>	R9	31	1	17	0	20	69	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Rattlesnake-master borer moth	<i>Papaipema eryngii</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024), Flores et al. (2024)
Culvers root borer	<i>Papaipema sciata</i>	R9	3	0	1	0	10	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Silphium borer moth	<i>Papaipema silphii</i>	R8	17	1	0	1	34	53	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A leafhopper	<i>Paraphlepsius particolor</i>	R9	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A leafhopper	<i>Paraphlepsius solidaginis</i>	R9	0	0	0	3	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A moth	<i>Parasa indetermina</i>	R9	19	2	2	0	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ocala deepdigger scarab beetle	<i>Peltotrupes youngi</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Leona's little blue butterfly	<i>Philotilla leona</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tawny crescent	<i>Phyciodes batesii</i>	R1, R9	11	24	5	12	3	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A planthopper	<i>Phylloscelis pallescens</i>	R9	8	1	0	0	0	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
West Virginia white	<i>Pieris virginiensis</i>	R9	34	6	15	0	2	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A planthopper	<i>Pissonotus brunneus</i>	R9	8	1	1	1	3	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Puget blue	<i>Plebejus icarioides blackmorei</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nabokov's blue	<i>Plebejus idas nabokovi</i>	R9	0	0	1	4	2	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lupine blue butterfly	<i>Plebejus lupini spangelatus</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024), Goodpasture (1973)
Gray-blue butterfly	<i>Plebejus podarce klamathensis</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coastal greenish blue butterfly	<i>Plebejus saepiolus littoralis</i>	R6	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Oregon Conservation Strategy (2016)
White-streaked looper moth	<i>Plusia venusta</i>	R9	9	1	9	3	5	27	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Peck's skipper	<i>Polites peckius</i>	R6	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tawny-edged skipper	<i>Polites themistocles</i>	R6	0	3	0	3	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-winged polyamia	<i>Polyamia brevipennis</i>	R9	0	0	3	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Prairie bunchgrass leafhopper	<i>Polyamia herbida</i>	R9	0	0	0	0	6	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Smyth's green comma	<i>Polygonia faunus smythi</i>	R9	1	1	2	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Appalachian cave spider	<i>Porrhomma cavernicola</i>	R9	1	1	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Leafhopper	<i>Prairiana kansana</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Silver Glen springs cave crayfish	<i>Procambarus attiguus</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Jackson prairie crayfish	<i>Procambarus barbiger</i>	R8	0	3	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bigcheek cave crayfish	<i>Procambarus delicatus</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Spinytail crayfish	<i>Procambarus fitzpatricki</i>	R8	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Big blue spring cave crayfish	<i>Procambarus horsti</i>	R8	0	3	0	2	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Woodville karst cave crayfish	<i>Procambarus orcinus</i>	R8	0	6	0	0	2	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Irons fork burrowing crayfish	<i>Procambarus reimieri</i>	R8	0	10	1	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Balmorhea saddle-case caddisfly	<i>Protoptila balmorhea</i>	R3	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Little kennedy cave beetle	<i>Pseudanophthalmus cordicollis</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
A cave beetle	<i>Pseudanophthalmus fuscus</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Timber ridge cave beetle	<i>Pseudanophthalmus hadenoecus</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Martha's cave beetle	<i>Pseudanophthalmus hypertrichosis</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Crossroads cave beetle	<i>Pseudanophthalmus intersectus</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Dry fork valley cave beetle	<i>Pseudanophthalmus montanus</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Patton cave ground beetle	<i>Pseudanophthalmus sp. 33</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NA
Marengo cave ground beetle	<i>Pseudanophthalmus stricticollis</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Young's cave ground beetle	<i>Pseudanophthalmus youngi</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Jeannel's cave ostracod	<i>Pseudocandona jeanneli</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Gandy Creek cave springtail	<i>Pseudosinella certa</i>	R9	0	0	1	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A springtail	<i>Pseudosinella espana</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
A cave springtail	<i>Pseudosinella fonsa</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
A springtail	<i>Pseudosinella gisini</i>	R9	1	0	1	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A cave obligate millipede	<i>Pseudotremia indiana</i>	R9	4	0	0	0	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Germany Valley cave millipede	<i>Pseudotremia lusciosa</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
South branch valley cave millipede	<i>Pseudotremia princeps</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Reynolds Cave millipede	<i>Pseudotremia reynoldsa</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
A cave obligate millipede	<i>Pseudotremia salisae</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
A caddisfly	<i>Psychoronia brooksi</i>	R3	0	0	0	8	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spiny salmonfly	<i>Pteronarcys comstocki</i>	R9	1	1	0	0	1	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

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A cave obligate springtail	<i>Pygmarhopalites ater</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Carolyn's cave springtail	<i>Pygmarhopalites carolyneae</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Lewis' cave springtail	<i>Pygmarhopalites lewisi</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Zeppelini et al. (2009)
A cave springtail	<i>Pygmarhopalites pavo</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
A cave springtail	<i>Pygmarhopalites sacer</i>	R8	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
A moth	<i>Pyrausta laticlavia</i>	R9	16	21	3	39	1	80	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Freija's grizzled skipper	<i>Pyrgus centaureae freija</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Appalachian grizzled skipper	<i>Pyrgus centaureae wyandot</i>	R8	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern grizzled skipper	<i>Pyrgus wyandot</i>	R9	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swimming little Florida cave isopod	<i>Remasellus parvus</i>	R8	0	1	0	0	1	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Indiana groundwater copepod	<i>Rheocyclops indiana</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
A caddisfly	<i>Rhyacophila chandleri</i>	R6	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Haddock's rhyacophilan caddisfly	<i>Rhyacophila haddocki</i>	R6	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A caddisfly	<i>Rhyacophila leechi</i>	R6	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A planthopper	<i>Rhynchosomitra recurve</i>	R9	NA	NA	X	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Kittelberger and Howard (2024)
Colorful nymph	<i>Scaphoideus productus</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jaguar flower moth	<i>Schinia jaguarina</i>	R9	1	8	0	13	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern Rocky Mountains Refugium caddisfly	<i>Sericostriata surdickae</i>	R1	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wingless winged cave springtail	<i>Sinella alata</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Cavernicolous springtail	<i>Sinella cavernarum</i>	R9	1	1	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ringed emerald	<i>Somatochlora albicincta</i>	R9	3	102	2	11	15	133	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Quebec emerald	<i>Somatochlora brevicincta</i>	R9	0	2	3	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Calvert's emerald	<i>Somatochlora calverti</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Forcipate emerald	<i>Somatochlora forcipata</i>	R9	5	2	3	0	8	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Delicate emerald	<i>Somatochlora franklini</i>	R6	0	3	3	0	5	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hudsonian emerald	<i>Somatochlora hudsonica</i>	R2	0	33	0	3	8	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Incurvate emerald	<i>Somatochlora incurvata</i>	R9	0	7	2	0	26	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas emerald	<i>Somatochlora margarita</i>	R8	0	16	3	3	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ozark emerald	<i>Somatochlora ozarkensis</i>	R9	2	3	6	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whitehouse emerald	<i>Somatochlora whitehousei</i>	R6	0	5	0	0	19	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Regal fritillary	<i>Speyeria (Argynnис) idalia</i>	R1, R2, R8	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coronis fritillary	<i>Speyeria coronis coronis</i>	R6	0	8	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Diana fritillary	<i>Speyeria diana</i>	R9	26	7	19	0	0	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Great basin fritillary	<i>Speyeria egleis</i>	R6	7	107	3	83	9	209	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tehachapi fritillary butterfly	<i>Speyeria egleis tehachapina</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Apache silverspot butterfly	<i>Speyeria nokomis apacheana</i>	R5	0	2	0	3	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nokomis fritillary	<i>Speyeria nokomis nokomis</i>	R3	0	18	0	0	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Valley silverspot	<i>Speyeria zerene bremnerii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Scott (1986)
Clemen's sphinx	<i>Sphinx luscitiosa</i>	R9	1	3	3	0	1	8	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Cherokee clubtail	<i>Stenogomphurus consanguis</i>	R8	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bonita diving beetle	<i>Stictotarusus neomexicana</i> (aka. <i>Deroneotes n.</i>)	R3	X	NA	NA	NA	X	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Dumont's fairy shrimp	<i>Streptocephalus henridumontis</i>	R3	0	0	0	2	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
James cave amphipod	<i>Stygobromus abditus</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Culver's cave amphipod	<i>Stygobromus culveri</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Greenbrier cave amphipod	<i>Stygobromus emarginatus</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Franz's cave amphipod	<i>Stygobromus franzi</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Shenandoah valley cave amphipod	<i>Stygobromus gracilipes</i>	R8	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bath county cave amphipod	<i>Stygobromus mundus</i>	R8	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Stygobromus cave amphipod	<i>Stygobromus nanus</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Minute cave amphipod	<i>Stygobromus parvus</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Least cave stygobromid	<i>Stygobromus pollostus</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Spiny cave stygobromid	<i>Stygobromus spinatus</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Subtle stygobromid	<i>Stygobromus subtilis</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Riverine clubtail	<i>Stylurus amnicola</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elusive clubtail	<i>Stylurus notatus</i>	R9	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pocahontas sallfly	<i>Sweltsa pocahontas</i>	R9	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A noctuid moth	<i>Sympistis saundersiana</i>	R9	4	0	0	0	0	4	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Cryptic willowfly	<i>Taeniopteryx nelsoni</i>	R8	0	0	3	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A gnaphosid spider	<i>Talanites echinus</i>	R9	4	1	0	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A ground spider	<i>Talanites exlineae</i>	R9	1	29	1	0	2	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A leafhopper	<i>Texananus longipennis</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lake Huron locust	<i>Trimerotropis huroniana</i>	R9	16	0	48	0	30	94	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A cave obligate pseudoscorpion	<i>Tuberochernes ubicki</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Gaspé sallfly	<i>Utaperla gaspesiana</i>	R9	0	0	0	0	4	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ebony boghaunter	<i>Williamsonia fletcheri</i>	R9	0	1	0	1	4	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ringed boghaunter	<i>Williamsonia lintneri</i>	R9	0	1	1	0	6	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A caddisfly	<i>Wormaldia planae</i>	R3	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough rattlesnake-root	<i>Zale perculta</i>	R8	0	6	0	0	3	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
West virginia blind cave millipede	<i>Zygonopus krekeleri</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)

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Grand Caverns blind cave millipede	<i>Zygonopus weyeriensis</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Luray Caverns blind cave millipede	<i>Zygonopus whitei</i>	R9	1	1	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

Bird Regional Forester Sensitive Species

Table 4. Determination summary for bird Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
American goshawk	<i>Accipiter gentilis</i>	R2, R3, R4, R5, R6, R9	1	10	0	1	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Queen charlotte goshawk	<i>Accipiter gentilis laingi</i>	R10	0	0	1	1	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clark's grebe	<i>Aechmophorus clarkii</i>	R1, R2, R3, R4, R5, R6, R8, R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boreal owl	<i>Aegolius funereus</i>	R2, R3, R4, R9	1	78	0	25	6	110	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moose	<i>Alces alces</i>	R9	8	9	6	6	6	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henslow's sparrow	<i>Ammodramus henslowii</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Le conte's sparrow	<i>Ammodramus leconteii</i>	R9	0	0	0	0	2	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nelson's sparrow	<i>Ammodramus nelsoni</i>	R9	1	0	0	0	4	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Grasshopper sparrow	<i>Ammodramus savannarum</i>	R2, R6, R9	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona grasshopper sparrow	<i>Ammodramus savannarum amolegus</i>	R3	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American pipit	<i>Anthus rubescens</i>	R9	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sprague's pipit	<i>Anthus spragueii</i>	R1	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Florida sandhill crane	<i>Antigone canadensis pratensis</i>	R8	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whip-poor-will	<i>Antrostomus vociferus</i>	R9	6	2	5	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-eared owl	<i>Asio otus</i>	R9	0	4	0	8	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Burrowing owl (western)	<i>Athene cunicularia hypugaea</i>	R3	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Upland sandpiper	<i>Bartramia longicauda</i>	R6, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Ruffed grouse	<i>Bonasa umbellus</i>	R9	7	16	6	2	5	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American bittern	<i>Botaurus lentiginosus</i>	R1, R9	6	10	6	9	95	126	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Kittlitz's murrelet	<i>Brachyramphus brevirostris</i>	R10	0	21	3	5	1	30	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Aleutian cackling goose	<i>Branta hutchinsii leucopareia</i>	R6	0	1	1	3	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bufflehead	<i>Bucephala albeola</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red-shouldered hawk	<i>Buteo lineatus</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Ferruginous hawk	<i>Buteo regalis</i>	R2, R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common black hawk	<i>Buteogallus anthracinus</i>	R3	0	1	0	15	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lark bunting	<i>Calamospiza melanocorys</i>	R2	0	2	0	174	1	177	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Chestnut-collared longspur	<i>Calcarius ornatus</i>	R2	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lucifer hummingbird	<i>Calothorax lucifer</i>	R3	0	12	0	2	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Costa's hummingbird	<i>Calypte costae</i>	R3	0	0	0	11	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern beardless-tyrannulet	<i>Camptostoma imberbe</i>	R3	0	101	0	19	0	120	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	R5	0	0	0	17	0	17	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Buff-collared nightjar	<i>Caprimulgus ridgwayi</i>	R3	0	0	0	40	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lesser goldfinch	<i>Carduelis psaltria</i>	R6	0	1	0	15	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bicknell's thrush	<i>Catharus bicknelli</i>	R9	1	75	4	0	0	80	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swainson's thrush	<i>Catharus ustulatus</i>	R9	2	1	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greater sage-grouse	<i>Centrocercus urophasianus</i>	R1, R2, R4, R5, R6	3	1	1	9	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baird's sparrow	<i>Centronyx bairdii</i>	R1	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Mountain plover	<i>Charadrius montanus</i>	R2, R3	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Black tern	<i>Chlidonias niger</i>	R2, R9	0	3	0	3	3	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Northern harrier	<i>Circus cyaneus</i>	R2, R9	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Evening grosbeak	<i>Coccothraustes vespertinus</i>	R9	1	8	0	6	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	R3, R5	0	3	0	8	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>	R9	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Northern bobwhite	<i>Colinus virginianus</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common ground dove	<i>Columbina passerina</i>	R3	0	3	0	1	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olive-sided flycatcher	<i>Contopus cooperi</i>	R2, R9	0	6	0	19	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow rail	<i>Coturnicops noveboracensis</i>	R5, R6, R9	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trumpeter swan	<i>Cygnus buccinator</i>	R1, R2, R4, R6, R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broad-billed hummingbird	<i>Cynanthus latirostris</i>	R3	0	32	0	24	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black swift	<i>Cypseloides niger</i>	R1, R2, R6	0	181	0	8	3	192	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bobolink	<i>Dolichonyx oryzivorus</i>	R6, R9	0	0	2	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray catbird	<i>Dumetella carolinensis</i>	R3	0	2	0	1	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Buff-breasted flycatcher	<i>Empidonax fulvifrons</i>	R3	0	53	11	149	0	213	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Willow flycatcher	<i>Empidonax traillii</i>	R5	1	0	0	8	1	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray flycatcher	<i>Empidonax wrightii</i>	R6	0	20	0	68	3	91	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rusty blackbird	<i>Euphagus carolinus</i>	R9	1	0	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eared quetzal	<i>Euptilotis neoxenus</i>	R3	0	379	40	5	0	424	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spruce grouse	<i>Falcipennis canadensis</i>	R9	0	32	1	10	1	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American peregrine falcon	<i>Falco peregrinus anatum</i>	R3, R4, R9	0	7	1	3	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>	R6	0	0	0	3	5	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Common gallinule	<i>Gallinula galeata</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common loon	<i>Gavia immer</i>	R1, R4, R6, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Cactus ferruginous pygmy owl	<i>Glaucidium brasilianum cactorum</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sandhill crane	<i>Grus canadensis</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greater sandhill crane	<i>Grus canadensis tabida</i>	R5	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>	R2	0	8	0	30	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black oystercatcher	<i>Haematopus bachmani</i>	R10	0	6	2	41	2	51	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bald eagle	<i>Haliaeetus leucocephalus</i>	R3, R4, R5, R6, R9	0	0	1	7	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harlequin duck	<i>Histrionicus histrionicus</i>	R1, R4, R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-eared hummingbird	<i>Hylocharis leucotis</i>	R3	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Least bittern	<i>Ixobrychus exilis</i>	R9	3	13	0	11	65	92	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Yellow-eyed junco	<i>Junco phaeonotus</i>	R3	0	354	3	13	0	370	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-tailed ptarmigan	<i>Lagopus leucura</i>	R2, R3	0	6	0	65	2	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Loggerhead shrike	<i>Lanius ludovicianus</i>	R2	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Migrant loggerhead shrike	<i>Lanius ludovicianus migrans</i>	R9	23	1	4	2	13	43	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Nashville warbler	<i>Leiothlypis ruficapilla</i>	R9	1	0	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Virginia's warbler	<i>Leiothlypis virginiae</i>	R2	0	87	4	79	0	170	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black rosy finch	<i>Leucosticte atrata</i>	R6	9	3	0	16	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wallowa rosy finch	<i>Leucosticte tephrocotis wallowa</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Swainson's warbler	<i>Limnothlypis swainsonii</i>	R9	2	1	5	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red crossbill	<i>Loxia curvirostra</i>	R9	1	32	0	5	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whiskered screech owl	<i>Megascops trichopsis</i>	R3	0	310	27	18	0	355	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	R9	5	1	6	0	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Acorn woodpecker	<i>Melanerpes formicivorus</i>	R6	0	22	0	6	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lewis's woodpecker	<i>Melanerpes lewis</i>	R2, R6	0	2	0	4	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gila woodpecker	<i>Melanerpes uropygialis</i>	R3	0	7	0	16	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gould's wild turkey	<i>Meleagris gallopavo mexicana</i>	R3	0	117	5	10	0	132	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Abert's towhee	<i>Melozone aberti</i>	R3	NA	NA	NA	X	X	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	R6	0	3	0	16	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sulphur-bellied flycatcher	<i>Myiodynastes luteiventris</i>	R3	0	115	23	112	0	250	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-billed curlew	<i>Numenius americanus</i>	R1, R2, R6	0	0	2	16	2	20	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Connecticut warbler	<i>Oporornis agilis</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain quail	<i>Oreortyx pictus</i>	R4, R6	0	13	2	48	0	63	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flammulated owl	<i>Otus flammeolus</i>	R4	1	4	1	7	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rose-throated becard	<i>Pachyramphus aglaiae</i>	R3	6	0	7	265	21	299	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Osprey	<i>Pandion haliaetus</i>	R9	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Louisiana waterthrush	<i>Parkesia motacilla</i>	R9	2	108	3	0	3	116	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern waterthrush	<i>Parkesia noveboracensis</i>	R6, R9	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Varied bunting	<i>Passerina versicolor</i>	R3	0	1	0	20	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American white pelican	<i>Pelecanus erythrorhynchos</i>	R6	2	9	3	14	19	47	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
California brown pelican	<i>Pelecanus occidentalis californicus</i>	R6	0	0	1	9	1	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Brown pelican	<i>Pelicanus occidentalis</i>	R5	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Bachman's sparrow	<i>Peucaea aestivalis</i>	R8, R9	0	20	0	0	3	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cassin's sparrow	<i>Peucaea cassini</i>	R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Wilson's phalarope	<i>Phalaropus tricolor</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-headed woodpecker	<i>Picoides albolarvatus</i>	R1, R4, R6	0	298	0	45	0	343	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black-backed woodpecker	<i>Picoides arcticus</i>	R2, R9	0	18	0	1	4	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona woodpecker	<i>Picoides arizonae</i>	R3	0	12	3	15	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American three-toed woodpecker	<i>Picoides dorsalis</i>	R9	5	56	3	12	4	80	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-toed woodpecker	<i>Picoides tridactylus</i>	R4	0	3	0	2	2	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green-tailed towhee	<i>Pipilo chlorurus</i>	R6	0	9	0	24	1	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Horned grebe	<i>Podiceps auratus</i>	R1	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Horned grebe	<i>Podiceps auritus</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Red-necked grebe	<i>Podiceps grisegena</i>	R6	22	4	3	9	7	45	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pied-billed grebe	<i>Podilymbus podiceps</i>	R9	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Vesper sparrow	<i>Pooecetes gramineus</i>	R9	0	0	1	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple martin	<i>Progne subis</i>	R2, R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Flammulated owl	<i>Psiloscops flammeolus</i>	R2	12	209	8	37	6	272	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
King rail	<i>Rallus elegans</i>	R9	1	0	0	0	0	1	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Thick-billed longspur (formerly McCown's longspur)	<i>Rhynchophanes mccownii</i>	R2	0	0	0	68	0	68	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
American woodcock	<i>Scolopax minor</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cerulean warbler	<i>Setophaga cerulea</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prairie warbler	<i>Setophaga discolor</i>	R9	1	7	2	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grace's warbler	<i>Setophaga graciae</i>	R2	0	173	57	47	0	277	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kirtland's warbler	<i>Setophaga kirtlandii</i>	R9	0	3	1	5	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clay-colored sparrow	<i>Spizella pallida</i>	R9	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Aleutian tern	<i>Sterna aleutica</i>	R10	2	0	0	0	2	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Interior least tern	<i>Sterna antillarum athalassos</i>	R1	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Great gray owl	<i>Strix nebulosa</i>	R4, R5, R6, R9	0	55	2	18	6	81	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California spotted owl	<i>Strix occidentalis occidentalis</i>	R4, R5	0	11	1	3	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern meadowlark	<i>Sturnella magna</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Elegant trogon	<i>Trogon elegans</i>	R3	0	300	93	12	0	405	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greater prairie chicken	<i>Tympanuchus cupido</i>	R1, R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Lesser prairie-chicken	<i>Tympanuchus pallidicinctus</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Columbian sharp-tailed grouse	<i>Tympanuchus phasianellus columbianus</i>	R2, R4, R6	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thick-billed kingbird	<i>Tyrannus crassirostris</i>	R3	0	6	0	14	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barn owl	<i>Tyto alba</i>	R9	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Golden-winged warbler	<i>Vermivora chrysoptera</i>	R9	1	5	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona bell's vireo	<i>Vireo bellii arizonae</i>	R3	0	7	0	48	1	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray vireo	<i>Vireo vicinior</i>	R3, R5	0	45	0	133	0	178	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada warbler	<i>Wilsonia canadensis</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Fish Regional Forester Sensitive Species

Table 5. Determination summary for fish Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Lake sturgeon	<i>Acipenser fulvescens</i>	R8, R9	7	1	0	0	7	15	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ashy darter	<i>Allohistium cinereum</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Alabama shad	<i>Alosa alabamae</i>	R8, R9	0	0	0	0	7	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hoosier cavefish	<i>Amblyopsis hoosieri</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western sand darter	<i>Ammocrypta clara</i>	R8, R9	0	0	0	0	2	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American eel	<i>Anguilla rostrata</i>	R9	0	1	0	0	2	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mexican stoneroller	<i>Campostoma ornatum</i>	R3	0	16	0	1	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Highfin carpsucker	<i>Carpoides velifer</i>	R9	12	1	6	2	57	78	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Desert sucker	<i>Catostomus clarkii</i>	R3	0	44	0	46	29	119	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Zuni bluehead sucker	<i>Catostomus discobolus jarrovii</i>	R3	NA	NA	NA	NA	X	1	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NatureServe (2024)
Sonora sucker	<i>Catostomus insignis</i>	R3	0	34	0	45	35	114	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flannelmouth sucker	<i>Catostomus latipinnis</i>	R2	0	1	0	147	54	202	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Modoc sucker	<i>Catostomus microps</i>	R6	0	4	0	13	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goose lake sucker	<i>Catostomus occidentalis lacusanserinus</i>	R5, R6	0	1	0	9	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rio Grande sucker	<i>Catostomus plebeius</i>	R3	0	77	0	27	51	155	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little Colorado sucker	<i>Catostomus sp.3</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Northern redbelly dace	<i>Chrosomus eos</i>	R2	2	1	15	0	12	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern redbelly dace	<i>Chrosomus erythrogaster</i>	R2	12	0	2	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Finescale dace	<i>Chrosomus neogaeus</i>	R2	21	8	24	3	15	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tennessee dace	<i>Chrosomus tennesseensis</i>	R8	4	1	1	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Redside dace	<i>Clinostomus elongatus</i>	R9	1	3	2	0	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nipigon cisco	<i>Coregonus nipigon</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Shortjaw cisco	<i>Coregonus zenithicus</i>	R9	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kanawha sculpin	<i>Cottus kanawhae</i>	R9	13	0	3	0	0	16	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Wood river sculpin	<i>Cottus leiopomus</i>	R4	0	13	1	6	1	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Margined sculpin	<i>Cottus marginatus</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pit sculpin	<i>Cottus pitensis</i>	R6	0	14	0	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Checkered sculpin	<i>Cottus. sp. cf. girardi</i>	R9	3	0	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lake chub	<i>Couesius plumbeus</i>	R2	0	31	6	12	2	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crystal darter	<i>Crystallaria asprella</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Ocmulgee shiner	<i>Cyprinella callitaenia</i>	R8	5	19	4	1	98	127	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Altamaha shiner	<i>Cyprinella xaenura</i>	R8	10	8	2	0	12	32	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Miller Lake lamprey	<i>Entosphenus minimus</i>	R6	0	14	0	11	10	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Klamath River lamprey	<i>Entosphenus similis</i>	R5	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pacific lamprey	<i>Entosphenus tridentatus</i>	R1, R5, R6	0	18	2	5	1	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blotched chub	<i>Erimystax insignis</i>	R8	0	0	1	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sharphead darter	<i>Etheostoma acuticeps</i>	R8	13	0	3	0	0	16	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Warrior darter	<i>Etheostoma bellator</i>	R8	27	11	5	0	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Holiday darter	<i>Etheostoma brevirostrum</i>	R8	34	3	3	0	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Golden darter	<i>Etheostoma denoncourti</i>	R8	14	1	1	0	2	18	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Coldwater darter	<i>Etheostoma ditrema</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tuskaloosa darter	<i>Etheostoma douglasi</i>	R8	39	23	19	0	0	81	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arkansas saddled darter	<i>Etheostoma euzonum euzonum</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yoknapatawpha darter	<i>Etheostoma faulkneri</i>	R8	0	0	0	0	2	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Harlequin darter	<i>Etheostoma histrio</i>	R9	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greenthroat darter	<i>Etheostoma lepidum</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted darter	<i>Etheostoma maculatum</i>	R8, R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Redlips darter	<i>Etheostoma maydeni</i>	R8	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Least darter	<i>Etheostoma micropurca</i>	R9	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Paleback darter	<i>Etheostoma pallididorsum</i>	R8	3	1	3	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama darter	<i>Etheostoma raneyi</i>	R8	17	0	0	0	2	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arrow darter	<i>Etheostoma sagitta</i>	R8	2	0	6	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wounded darter	<i>Etheostoma vulneratum</i>	R8	4	1	1	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tonguetied minnow	<i>Exoglossum laurae</i>	R9	1	2	2	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Plains topminnow	<i>Fundulus sciadicus</i>	R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Lahontan lake tui chub	<i>Gila bicolor pectinifer</i>	R5	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Headwater chub	<i>Gila nigra</i>	R3	0	26	0	24	20	70	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arroyo chub	<i>Gila orcutti</i>	R5	0	8	0	45	5	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rio Grande chub	<i>Gila pandora</i>	R2, R3	3	16	0	16	14	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roundtail chub	<i>Gila robusta</i>	R2, R3	0	97	0	94	13	204	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Plains minnow	<i>Hybognathus placitus</i>	R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Lined chub	<i>Hybopsis lineapunctata</i>	R8	3	1	1	0	7	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ohio lamprey	<i>Ichthyomyzon bdellium</i>	R9	9	0	1	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern brook lamprey	<i>Ichthyomyzon fossor</i>	R8, R9	1	0	1	0	9	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern brook lamprey	<i>Ichthyomyzon gagei</i>	R9	0	16	10	0	8	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain brook lamprey	<i>Ichthyomyzon greeleyi</i>	R8	4	1	2	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Headwater catfish	<i>Ictalurus latus</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Kern brook lamprey	<i>Lampetra hubbsi</i>	R5	0	0	0	1	1	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Western brook lamprey	<i>Lampetra richardsoni</i>	R5	0	10	1	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goose lake lamprey	<i>Lampetra tridentata</i> ssp.	R5	0	17	2	8	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clear lake hitch	<i>Lavinia exilicauda chi</i>	R5	0	0	0	3	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pit roach	<i>Lavinia symmetricus mitrulus</i>	R6	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Southern leatherside chub	<i>Lepidomeda aliciae</i>	R4	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern leatherside chub	<i>Lepidomeda copei</i>	R4	0	5	1	1	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dollar sunfish	<i>Lepomis marginatus</i>	R9	0	3	1	0	5	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Redspotted sunfish	<i>Lepomis miniatus</i>	R9	1	4	5	0	5	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bantam sunfish	<i>Lepomis symmetricus</i>	R9	0	0	0	0	6	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Burbot	<i>Lota lota</i>	R9	2	9	8	1	4	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ouachita shiner	<i>Lythrurus snelsoni</i>	R8	6	0	8	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sturgeon chub	<i>Macrhybopsis gelida</i>	R2	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Pearl dace	<i>Margariscus margarita</i>	R9	3	11	44	0	18	76	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern pearl dace	<i>Margariscus nachtriebi</i>	R2	0	0	0	1	3	4	RFSS matrices	NA	Only occurs on Nebraska NFNG that is not being amended by NOGA	NI	NA
Chatahoochee bass	<i>Micropterus chattahoochee</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Suwannee bass	<i>Micropterus notius</i>	R8	0	91	0	9	155	255	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
River redhorse	<i>Moxostoma carinatum</i>	R9	0	1	8	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robust redhorse	<i>Moxostoma robustum</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Hardhead	<i>Mylopharodon conocephalus</i>	R5	0	13	0	9	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fringed myotis	<i>Myotis thysanodes</i>	R2, R5, R6	0	28	0	6	1	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hornyhead chub	<i>Nocomis biguttatus</i>	R2	21	0	2	0	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pugnose shiner	<i>Notropis anogenus</i>	R9	2	1	1	2	6	12	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Popeye shiner	<i>Notropis ariommus</i>	R8, R9	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bridle shiner	<i>Notropis bifrenatus</i>	R8	59	24	13	2	49	147	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ironcolor shiner	<i>Notropis chalybaeus</i>	R8	0	0	0	0	27	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bigmouth shiner	<i>Notropis dorsalis</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blacknose shiner	<i>Notropis heterolepis</i>	R9	1	14	14	1	6	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kiamichi shiner	<i>Notropis orteburgi</i>	R8	11	21	15	0	0	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ozark shiner	<i>Notropis ozarkanus</i>	R8, R9	5	0	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Peppered shiner	<i>Notropis perpallidus</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sabine shiner	<i>Notropis sabinae</i>	R9	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New river shiner	<i>Notropis scabriceps</i>	R9	4	1	2	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roughhead shiner	<i>Notropis semperasper</i>	R8	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rocky shiner	<i>Notropis suttkusi</i>	R8	73	3	1	0	12	89	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Skygazer shiner	<i>Notropis uranoscopus</i>	R8	0	0	2	0	5	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orangefin madtom	<i>Noturus gilberti</i>	R8	29	0	8	2	0	39	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Piebald madtom	<i>Noturus gladiator</i>	R8	2	0	0	0	15	17	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ouachita madtom	<i>Noturus lachneri</i>	R8	10	28	6	0	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Frecklebelly madtom	<i>Noturus munitus</i>	R8	13	3	3	3	51	73	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Northern madtom	<i>Noturus stigmosus</i>	R8, R9	15	0	11	0	5	31	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Caddo madtom	<i>Noturus taylori</i>	R8	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olympic mudminnow	<i>Novumbra hubbsi</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellowstone cutthroat trout	<i>Oncorhynchus clarki bouvieri</i>	R4	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Westslope cutthroat trout	<i>Oncorhynchus clarki lewisi</i>	R4	0	32	0	4	1	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Colorado River cutthroat trout	<i>Oncorhynchus clarki pleuriticus</i>	R4	3	14	1	5	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bonneville cutthroat trout	<i>Oncorhynchus clarki utah</i>	R4	0	22	0	8	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rio Grande cutthroat trout	<i>Oncorhynchus clarki virginalis</i>	R3	3	23	1	0	1	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coastal run cutthroat trout	<i>Oncorhynchus clarkii</i>	R5	1	104	12	5	2	124	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellowstone cutthroat	<i>Oncorhynchus clarkii bouveri</i>	R2	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Coastal cutthroat trout (sw Washington/Columbia river)	<i>Oncorhynchus clarkii clarkii</i>	R6	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Westslope cutthroat trout	<i>Oncorhynchus clarkii lewisi</i>	R1, R6	0	32	0	4	1	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Colorado River cutthroat (blue and green lineage)	<i>Oncorhynchus clarkii pleuriticus</i>	R2	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Rio Grande cutthroat trout	<i>Oncorhynchus clarkii virginalis</i>	R2	3	23	1	0	1	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chum salmon	<i>Oncorhynchus keta</i>	R6	0	3	0	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon Great Basin redband trout	<i>Oncorhynchus mykiss</i>	R5, R6	5	7	5	8	5	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California golden trout	<i>Oncorhynchus mykiss aguabonita</i>	R5	0	11	0	50	0	61	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eagle Lake rainbow trout	<i>Oncorhynchus mykiss aquilarum (pop 5)</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Interior redband trout / inland Columbia basin redband trout	<i>Oncorhynchus mykiss gairdneri</i>	R1, R6	0	31	0	12	1	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kern river rainbow trout	<i>Oncorhynchus mykiss gilberti</i>	R5	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Warner Valley redband trout	<i>Oncorhynchus mykiss pop 4</i>	R5	5	7	5	8	5	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goose Lake redband trout	<i>Oncorhynchus mykiss pop 6</i>	R5	5	7	5	8	5	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mccloud river redband trout	<i>Oncorhynchus mykiss pop 7</i>	R5	5	7	5	8	5	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chinook salmon, upper Klamath-Trinity esu	<i>Oncorhynchus tshawytscha</i>	R5, R6	0	27	2	5	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Soncc chinook salmon	<i>Oncorhynchus tshawytscha</i> ssp.	R5	0	27	2	5	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon chub	<i>Oregonichthys crameri</i>	R6	0	56	1	0	0	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Umpqua chub	<i>Oregonichthys kalawatseti</i>	R6	0	6	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bluehead sucker	<i>Pantosteus discobolus</i>	R2	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain sucker	<i>Pantosteus platyrhynchos</i>	R2	1	2	0	5	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rio Grande sucker	<i>Pantosteus plebeius</i>	R2	1	72	0	29	70	172	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cheat minnow	<i>Pararhinichthys bowersi</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Froese and Pauly (2024)
Ouachita darter	<i>Percina brucethompsoni</i>	R8	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blotchside logperch	<i>Percina burtoni</i>	R8	3	1	1	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Channel darter	<i>Percina copelandi</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bluestripe darter	<i>Percina cymatotaenia</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachia darter	<i>Percina gymnocephala</i>	R9	1	2	2	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bridled darter	<i>Percina kusha</i>	R8	24	1	14	1	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Longnose darter	<i>Percina nasuta</i>	R8, R9	11	0	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bankhead darter	<i>Percina sipsi</i>	R8	59	8	7	0	0	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Olive darter	<i>Percina squamata</i>	R8	3	0	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stargazing darter	<i>Percina uranidea</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Suckermouth minnow	<i>Phenacobius mirabilis</i>	R3	0	1	0	0	0	1	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
Kanawha minnow	<i>Phenacobius teretulus</i>	R8, R9	5	0	2	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern slim minnow	<i>Pimephales tenellus parviceps</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Flathead chub	<i>Platygobio gracilis</i>	R2	0	3	0	7	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy whitefish	<i>Prosopium coulterii</i>	R6	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Big Lost River whitefish	<i>Prosopium williamsoni</i>	R4	1	36	1	19	5	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bluenose shiner	<i>Pteronotropis welaka</i>	R8	0	2	0	0	9	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Ana speckled dace	<i>Rhinichthys osculus ssp 8</i>	R5	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Umatilla dace	<i>Rhinichthys umatilla</i>	R6	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon lakes tui chub	<i>Siphateles bicolor oregonensis</i>	R6	0	0	0	5	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Arctic grayling	<i>Thymallus arcticus</i>	R1	0	46	0	30	1	77	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Salem Plateau cavefish	<i>Typhlichthys eigenmanni</i>	R9	0	0	0	0	2	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern cavefish	<i>Typhlichthys subterraneus</i>	R8	2	0	2	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Flatworm Regional Forester Sensitive Species

Table 6. Determination summary for flatworm Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
A cave flatworm	<i>Geocentrophora cavernicola</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
A cave obligate planarian	<i>Phagocata angusta</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Culver's planarian	<i>Sphaloplana culveri</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Hoffmaster's cave planarian	<i>Sphaloplana hoffmasteri</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
A cave obligate planarian	<i>Sphaloplana hubrichti</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Weingartner's cave flatworm	<i>Sphaloplana weingartneri</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024), Lewis (2002)

Lichen and Fungus Regional Forester Sensitive Species

Table 7. Determination summary for lichen and fungus Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Fungus	<i>Albatrellus avellaneus</i>	R6	0	7	0	0	0	7	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Witch's-hair lichen	<i>Alectoria fallacina</i>	R8	0	2	1	0	0	3	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Ornate anzia lichen	<i>Anzia ornata</i>	R8	3	3	1	0	1	8	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Arctoparmelia incurva</i>	R6	0	3	0	1	1	5	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Subcentric ring lichen	<i>Arctoparmelia subcentrifuga</i>	R1	0	6	1	2	0	9	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Mountain red dot lichen	<i>Arthonia kermesina</i>	R8	2	11	0	0	0	13	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
A lichen	<i>Arthopyrenia degelii</i>	R8	4	0	2	0	0	6	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Red-pored bolete	<i>Boletus pulcherrimus</i>	R5	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Bryoglossum gracile</i>	R6	0	7	0	4	1	12	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Bryoria bicolor</i>	R6	0	21	4	2	4	31	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Calicium adpersum</i>	R5, R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Chamonia x caespitosa</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Choiromyces venosus</i>	R6	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Lichen	<i>Cladidium bolanderi</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Thorn cladonia	<i>Cladonia uncialis</i>	R1	22	9	18	5	1	55	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Peirson's spring beauty	<i>Claytonia lanceolata</i> var. <i>peirsonii</i>	R5	0	4	0	7	0	11	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Short-spored jelly lichen	<i>Collema curtisporum</i>	R1	0	16	0	2	0	18	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Corticarius barlowensis</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include old-growth forest	MIIH	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Fungus	<i>Cortinarius pavelekii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Mountain cudonia	<i>Cudonia monticola</i>	R5	0	7	0	0	0	7	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Dactylina arctica</i>	R6	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Branched collybia	<i>Dendrocollybia racemosa</i>	R5	0	35	4	2	2	43	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Dermatocarpon meiophyllum</i>	R6	0	8	0	1	1	10	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Entoloma occidentale</i>	R6	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Gymnomyces fragrans</i>	R6	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Gymnomyces nondistincta</i>	R6	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Helvella crassitunicata</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Appalachian fringe lichen	<i>Heterodermia appalachensis</i>	R8	15	3	6	0	0	24	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
A fringe lichen	<i>Heterodermia erecta</i>	R8	4	0	1	1	0	6	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Heterodermia japonica</i>	R6	26	31	9	8	1	75	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Seaside centipede lichen	<i>Heterodermia sitchensis</i>	R6	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Hydropus marginellus</i>	R6	0	10	0	0	0	10	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Hypogymnia pulverata</i>	R6	0	4	2	1	0	7	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
Oosting's loop lichen	<i>Hypotrichyna oostingii</i>	R8	0	9	5	0	0	14	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Hypotrichyna revoluta</i>	R6	60	32	29	13	4	138	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Hypotrichyna riparia</i>	R6	x	x	x	x	NA	4	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	NatureServe (2024), IUCN (2024), SEINet (2024)
Virginia hypotrichyna	<i>Hypotrichyna virginica</i>	R8	8	18	1	0	0	27	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
A rim lichen	<i>Lecanora masana</i>	R8	15	22	27	5	0	69	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Leioderma sorediatum</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Leptogium cyanescens</i>	R6	60	9	28	2	0	99	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
(No common name)	<i>Lobaria amplissima</i>	R10	0	8	3	2	3	16	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Lobaria linita</i>	R6	2	107	21	9	2	141	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Textured lung lichen	<i>Lobaria scrobiculata</i>	R1, R9	0	29	7	3	0	39	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Macowanites mollis</i>	R6	0	2	0	0	0	2	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
Culberson's black-parmelia	<i>Melanelia culbersonii</i>	R8	5	2	3	0	0	10	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Microcalciump arenarium</i>	R6	0	1	1	1	0	3	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Mythicomyces corneipes</i>	R6	0	13	0	0	1	14	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Niebla cephalota</i>	R6	0	28	18	83	4	133	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
Alpine foxtail lichen	<i>Nodobryoria subdivergens</i>	R1	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Smith's otidea	<i>Otidea smithii</i>	R5, R6	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Pannaria rubiginella</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Pannaria rubiginosa</i>	R6	5	14	11	5	1	36	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Western waterfan lichen	<i>Peltigera gowardii</i>	R1	0	12	0	3	0	15	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Veined water lichen	<i>Peltigera gowardii</i>	R5	0	12	0	3	0	15	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Phaeoclavulina abietina</i>	R6	1	7	3	28	2	41	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Phaeocollybia gregaria</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Olive phaeocollybia	<i>Phaeocollybia olivacea</i>	R5	0	7	2	0	0	9	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Phaeocollybia oregonensis</i>	R6	0	12	0	0	0	12	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Northern beechfern	<i>Phegopteris connectilis</i>	R1	9	37	23	4	9	82	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Devil's matchstick	<i>Pilophorus acicularis</i>	R1	2	182	9	10	1	204	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Pilophorus nigricaulis</i>	R6	2	15	2	33	0	52	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Pseudocyphellaria hawaiiensis</i>	R6	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Powdery twig lichen	<i>Ramalina labiosorediata</i>	R6	7	1	2	0	0	10	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Cartilage lichen	<i>Ramalina thrausta</i>	R5, R6	0	23	1	1	5	30	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus (forma blanda)	<i>Ramaria rubella</i> var. <i>blanda</i>	R6	0	4	0	0	0	4	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
Hayden's rimmed navel lichen	<i>Rhizoplaca haydenii</i>	R1	0	9	0	33	0	42	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Rhizopogon alexsmithii</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Rhizopogon brunneifibrillosus</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Rhizopogon chamaleontinus</i>	R6	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Rhizopogon clavitisporus</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Rhizopogon ellipsosporus</i>	R6	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Rhizopogon exiguum</i>	R6	0	0	0	2	0	2	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Rhizopogon inquinatus</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Rhizopogon masoniae</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Fungus	<i>Russula idahoensis</i>	R6	0	2	0	1	13	16	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Sarcodon fuscoindicus</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Solorina saccata</i>	R6	0	11	0	3	0	14	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Globe ball lichen	<i>Sphaerophorus globosus</i>	R1	1	80	3	5	0	89	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Fungus	<i>Stagnicola perplexa</i>	R6	0	4	1	0	2	7	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Stereocaulon spathuliferum</i>	R6	0	2	0	2	1	5	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Bony foam lichen	<i>Stereocaulon tennesseense</i>	R8	1	7	4	0	0	12	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Bay hosehair lichen	<i>Sulcaria badia</i>	R5	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Teloschistes flavicans</i>	R6	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Texosporium sancti-jacobi</i>	R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Thelomma mammosum</i>	R6	0	3	1	5	1	10	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Tholurna dissimilis</i>	R6	0	11	0	5	0	16	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Umbilicaria lambii</i>	R6	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Umbilicaria rigida</i>	R6	0	3	0	5	0	8	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
Beard lichen	<i>Usnea angulata</i>	R9	6	0	10	0	6	22	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Usnea lambii</i>	R6	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	Exeter et al. (2016)
Beard lichen	<i>Usnea longissima</i>	R9	2	65	4	0	12	83	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Lichen	<i>Usnea nidulans</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include old-growth forest	MIIH	NatureServe (2024)
Yellow ribbon lichen	<i>Usnocetraria oakesiana</i>	R9	76	12	32	2	4	126	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Idaho range lichen	<i>Xanthoparmelia idahoensis</i>	R4	0	4	0	4	0	8	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Mountain rock-shield lichen	<i>Xanthoparmelia monticola</i>	R8	4	1	1	0	1	7	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA

Mammal Regional Forester Sensitive Species

Table 8. Determination summary for mammal Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pallid bat	<i>Antrozous pallidus</i>	R5, R6	0	37	3	20	0	60	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern pygmy mouse	<i>Baiomys taylori ater</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy rabbit	<i>Brachylagus idahoensis</i>	R4, R5, R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray wolf	<i>Canis lupus</i>	R4, R6	5	15	2	5	4	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	R3	0	59	0	90	0	149	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American hognosed skunk	<i>Conepatus leuconotus</i>	R2	0	24	0	17	0	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	R8	3	1	0	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	R1, R2, R5, R6	2	49	2	69	0	122	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale Townsend's big-eared bat	<i>Corynorhinus townsendii pallescens</i>	R3	0	27	1	7	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Townsend's western big-eared bat	<i>Corynorhinus townsendii townsendii</i>	R4	0	39	0	116	0	155	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gunnison's prairie dog	<i>Cynomys gunnisoni</i>	R2, R3	1	12	1	15	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-tailed prairie dog	<i>Cynomys leucurus</i>	R2	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	R1, R2, R3	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Houserock Valley chisel toothed kangaroo rat (aka: Marble Canyon kangaroo rat)	<i>Dipodomys microps leucotis</i>	R3	0	0	0	7	0	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Big brown bat	<i>Eptesicus fuscus</i>	R9	3	32	2	4	1	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted bat	<i>Euderma maculatum</i>	R2, R3, R4, R6	0	29	0	3	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern flying squirrel	<i>Glaucomys sabrinus</i>	R9	16	61	8	16	4	105	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino flying squirrel	<i>Glaucomys sabrinus californicus; oregonensis californicus</i>	R5	0	18	0	1	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Virginia northern flying squirrel	<i>Glaucomys sabrinus fuscus</i>	R8, R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
North American wolverine	<i>Gulo gulo</i>	R1, R6	0	26	0	14	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
North American wolverine	<i>Gulo gulo luscus</i>	R5	0	7	0	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountains ground squirrel	<i>Ictidomys tridecemlineatus monticola</i>	R3	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allen's lappet-browed bat	<i>Idionycteris phyllotis</i>	R3	0	61	4	21	0	86	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silver-haired bat	<i>Lasionycteris noctivagans</i>	R9	0	21	2	6	1	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western red bat	<i>Lasiurus blossevillii</i>	R3	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern red bat	<i>Lasiurus borealis</i>	R9	3	4	1	0	2	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hoary bat	<i>Lasiurus cinereus</i>	R2, R9	0	8	1	4	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western yellow bat	<i>Lasiurus xanthinus</i>	R3	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-tailed jackrabbit	<i>Lepus townsendii</i>	R6	0	4	0	34	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
River otter	<i>Lontra canadensis</i>	R2	1	6	2	3	3	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada lynx	<i>Lynx canadensis</i>	R3	3	18	13	4	8	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olympic marmot	<i>Marmota olympus</i>	R6	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American marten	<i>Martes americana</i>	R9	3	65	6	10	5	89	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American marten	<i>Martes americana origenes</i>	R3	5	10	0	3	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pacific marten	<i>Martes caurina</i>	R2, R5, R6	9	107	4	18	6	144	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Fisher	<i>Martes pennanti</i>	R4	2	20	1	1	2	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hooded skunk	<i>Mephitis macroura milleri</i>	R3	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern rock vole	<i>Microtus chrotorrhinus carolinensis</i>	R9	1	0	4	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-bellied long-tailed vole	<i>Microtus longicaudus leucophaeus</i>	R3	X	X	X	NA	X	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Navajo Mogollon vole	<i>Microtus mogollonensis navaho</i>	R3	NA	X	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Arizona montane vole	<i>Microtus montanus arizonensis</i>	R3	0	29	2	25	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Water vole	<i>Microtus richardsoni</i>	R2	8	147	3	110	0	268	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southeastern myotis	<i>Myotis austroriparius</i>	R8, R9	2	2	0	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-eared myotis	<i>Myotis evotis</i>	R1	2	42	0	12	2	58	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Keen's myotis	<i>Myotis keenii</i>	R6	6	50	1	1	1	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern small-footed myotis	<i>Myotis leibii</i>	R8, R9	5	1	2	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little brown myotis	<i>Myotis lucifugus</i>	R1, R6, R8, R9	X	NA	X	X	X	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
White Mountains chipmunk	<i>Neotamias minimus arizonensis</i>	R3	X	X	X	X	X	5	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Peñasco least chipmunk	<i>Neotamias minimus atristriatus</i>	R3	NA	X	NA	X	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Red-tailed chipmunk	<i>Neotamias ruficaudus</i>	R6	0	37	0	71	0	108	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allegheny woodrat	<i>Neotoma magister</i>	R9	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Evening bat	<i>Nycticeius humeralis</i>	R9	2	5	1	0	3	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goat peak pika	<i>Ochotona princeps nigrescens</i>	R3	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American pika	<i>Ochotona princeps saxatilis</i>	R3	24	84	6	193	3	310	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain goat	<i>Oreamnos americanus</i>	R6	2	45	0	39	1	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bighorn sheep	<i>Ovis canadensis</i>	R1, R6	3	16	0	23	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California bighorn sheep	<i>Ovis canadensis californiana</i>	R4	0	1	0	14	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rocky Mountain bighorn sheep	<i>Ovis canadensis canadensis</i>	R2, R4	6	53	1	26	0	86	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Desert bighorn sheep	<i>Ovis canadensis nelsoni</i>	R2, R4, R5	1	4	1	19	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fisher	<i>Pekania pennanti</i>	R1, R5, R6	0	5	1	1	2	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tri-colored bat	<i>Perimyotis subflavus</i>	R9	7	6	2	0	2	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-eared pocket mouse	<i>Perognathus alticolus alticolus</i>	R5	0	28	0	60	0	88	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tehachapi pocket mouse	<i>Perognathus alticolus inexpectatus</i>	R5	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Springerville silky pocket mouse	<i>Perognathus flavus goodpasteri</i>	R3	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mesquite (Merriam's) mouse	<i>Peromyscus merriami</i>	R3	0	0	0	10	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern heather vole	<i>Phenacomys ungava</i>	R9	NA	X	NA	X	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	Braun et al. (2013)
Florida deermouse	<i>Podomys floridanus</i>	R8	0	408	0	53	15	476	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Arizona gray squirrel	<i>Sciurus arizonensis arizonensis</i>	R3	0	2	0	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western gray squirrel	<i>Sciurus griseus</i>	R6	0	14	1	14	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua squirrel	<i>Sciurus nayaritensis chiricahuae</i>	R3	0	48	37	25	0	110	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southeastern fox squirrel	<i>Sciurus niger niger</i>	R8	0	3	1	1	6	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona shrew	<i>Sorex arizonae</i>	R3	0	13	2	19	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cinereous (masked) shrew	<i>Sorex cinereus</i>	R3	81	56	18	5	24	184	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-tailed shrew	<i>Sorex dispar</i>	R9	28	8	7	0	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pygmy shrew	<i>Sorex hoyi</i>	R2, R6	54	88	59	2	3	206	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New Mexico shrew	<i>Sorex monticola neomexicanus</i>	R3	NA	X	NA	NA	X	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
American water shrew	<i>Sorex palustris</i>	R3	44	116	14	72	18	264	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern water shrew	<i>Sorex palustris punctulatus</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Preble's shrew	<i>Sorex preblei</i>	R3, R6	0	21	0	11	2	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern Idaho ground squirrel	<i>Spermophilus brunneus endemicus</i>	R4	0	0	0	8	0	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Franklin's ground squirrel	<i>Spermophilus franklinii</i>	R9	0	0	0	0	2	2	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Eastern spotted skunk	<i>Spilogale putorius</i>	R9	10	2	10	0	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Plains spotted skunk	<i>Spilogale putorius interrupta</i>	R9	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian cottontail	<i>Sylvilagus obscurus</i>	R9	19	2	7	7	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern bog lemming	<i>Synaptomys borealis</i>	R1, R9	1	5	0	5	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern bog lemming	<i>Synaptomys cooperi</i>	R9	11	2	5	0	14	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mount Pinos lodgepole chipmunk	<i>Tamias speciosus callipeplus</i>	R5	0	26	0	52	0	78	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Guadalupe pocket gopher	<i>Thomomys bottae guadalupensis</i>	R3	0	0	0	14	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cebolleta southern pocket gopher	<i>Thomomys bottae paguatae</i>	R3	0	0	0	12	0	12	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA"	NI	NA
Wyoming pocket gopher	<i>Thomomys clusius</i>	R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Louisiana black bear	<i>Ursus americanus luteolus</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Swift fox	<i>Vulpes velox</i>	R1, R2, R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cascade red fox	<i>Vulpes vulpes cascadiensis</i>	R6	1	6	0	3	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	R5, R6	0	18	0	10	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New Mexico meadow jumping mouse	<i>Zapus hudsonius luteus</i>	R3	1	60	2	5	4	72	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA

Mollusk Regional Forester Sensitive Species

Table 9. Determination summary for mollusk Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Rocky Mountain capshell	<i>Acroloxus coloradensis</i>	R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Elktoe	<i>Alasmidonta marginata</i>	R8, R9	37	0	7	0	52	96	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Triangle floater	<i>Alasmidonta undulata</i>	R8	12	9	3	0	36	60	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Brook floater	<i>Alasmidonta varicosa</i>	R8, R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slippershell mussel	<i>Alasmidonta viridis</i>	R8, R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Threeridge	<i>Amblema plicata</i>	R9	1	2	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pine Mountain tigersnail	<i>Anguispira rugoderma</i>	R8	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
California floater (freshwater mussel)	<i>Anodonta californiensis</i>	R3, R5	0	11	0	2	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flat floater	<i>Anodonta suborbiculata</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dense hydrobe snail	<i>Aphaostracon pycnus</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Silver creek woodlandsnail	<i>Ashmunella binneyi</i>	R3	0	8	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Ashmunella cockerelli argenticola</i>	R3	0	5	0	3	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black range woodlandsnail	<i>Ashmunella cockerelli cockerelli</i>	R3	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
No common name	<i>Ashmunella cockerelli perobtusa</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whitewater Creek woodlandsnail	<i>Ashmunella danielsi</i>	R3	0	25	0	9	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Iron creek woodlandsnail	<i>Ashmunella mendax</i>	R3	0	17	0	7	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Capitan woodlandsnail	<i>Ashmunella pseudodonta</i>	R3	0	3	0	15	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Ashmunella tetrodon animorum</i>	R3	0	3	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Ashmunella tetrodon inermis</i>	R3	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Ashmunella tetrodon mutator</i>	R3	0	9	0	3	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dry Creek woodlandsnail	<i>Ashmunella tetrodon tetrodon</i>	R3	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	USFS (2017)
Alabama rainbow	<i>Cambarunio nebulosus</i>	R8	6	8	7	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cascades axetail slug	<i>Carinacauda stormi</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pleistocene catinella	<i>Catinella exile</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Harney Basin dusksnail	<i>Colligyrus depressus</i>	R6	0	0	0	1	1	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Rocky Mountain dusksnail	<i>Colligyrus greggi</i>	R6	6	25	1	17	3	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Puget oregonian	<i>Cryptomastix devia</i>	R6	1	3	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia Gorge oregonian	<i>Cryptomastix hendersoni</i>	R6	0	1	0	5	3	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Poplar oregonian	<i>Cryptomastix populi</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Christy's elimia	<i>Elimia christyi</i>	R8	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama spike	<i>Elliptio arca</i>	R8	3	0	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Delicate spike	<i>Elliptio arctata</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elephant ear	<i>Elliptio crassidens</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Atlantic spike	<i>Elliptio producta</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inflated spike	<i>Elliptio purpurella</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Roanoke slabshell	<i>Elliptio roanokensis</i>	R8	4	3	3	0	27	37	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Carinate pillsnail	<i>Euchemotrema hubrichti</i>	R9	20	0	8	0	8	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shortface lanx	<i>Fisherola nuttalli</i>	R6	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Alexander siltsnail	<i>Floridobia alexander</i>	R8	0	1	0	0	2	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flatwood siltsnail	<i>Floridobia leptospira</i>	R8	0	9	0	2	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nugget pebblesnail	<i>Fluminicola seminalis</i>	R5	0	3	0	4	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia pebblesnail	<i>Fluminicola fuscus</i>	R6	1	9	0	10	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Modoc pebblesnail	<i>Fluminicola modoci</i>	R6	0	3	0	6	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Turban pebblesnail	<i>Fluminicola turbiniformis</i>	R6	0	10	0	6	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Olympia pebblesnail	<i>Fluminicola virens</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Organ cavesnail	<i>Fontigens tartarea</i>	R8, R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ocoee covert	<i>Fumonelix archeri</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clifty covert	<i>Fumonelix wetherbyi</i>	R8	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas pigtoe	<i>Fusconaia askewi</i>	R8	0	1	3	1	14	19	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ebonyshell	<i>Fusconaia ebena</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Rio Grande snaggletooth	<i>Gastrocopta riograndensis</i>	R3	0	0	0	3	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ruidoso snaggletooth	<i>Gastrocopta ruidosensis</i>	R3	0	0	0	0	1	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Appalachia bellytooth	<i>Gastrodonta fonticula</i>	R8	6	0	0	0	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Thin glyph	<i>Glyphyalinia cryptomphala</i>	R9	9	3	0	0	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue-gray glyph	<i>Glyphyalinia ocoae</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maryland glyph	<i>Glyphyalinia raderi</i>	R8	11	0	2	0	1	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Western ridged mussel	<i>Gonidea angulata</i>	R6	0	10	0	5	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shaggy coil	<i>Helicodiscus diadema</i>	R8	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Salmon coil	<i>Helicodiscus salmonaceus</i>	R6	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Talus coil	<i>Helicodiscus triodus</i>	R8	0	0	2	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Great Basin ramshorn	<i>Helisoma newberryi</i>	R6	0	6	0	4	1	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Great Basin rams-horn (snail)	<i>Helisoma newberryi newberryi</i>	R5	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Oregon shoulderband	<i>Helminthoglypta hertleini</i>	R6	0	2	0	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Keeled jumping-slug	<i>Hemphillia burringtoni</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Malone jumping-slug	<i>Hemphillia malonei</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Vagabond holospira	<i>Holospira montivaga</i>	R3	0	3	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern threeband (snail)	<i>Humboldtiana ultima</i>	R3	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Gabriel mountains elfin	<i>Incisalia mossii hidakupa</i>	R5	NA	NA	X	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Magazine Mountain shagreen	<i>Inflectarius magazinensis</i>	R8	14	0	1	0	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Velvet covert	<i>Inflectarius subpalliatus</i>	R8	8	20	1	1	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spiny riversnail	<i>Io fluvialis</i>	R8	10	0	4	0	0	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Scalloped juga (snail)	<i>Juga (Calibasis) occata</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scalloped juga	<i>Juga acutifilosa</i>	R5, R6	0	17	0	2	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chace juga (snail)	<i>Juga chacei</i>	R5	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black juga (snail)	<i>Juga nigrina</i>	R5	0	19	1	4	1	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow lampmussel	<i>Lampsilis cariosa</i>	R8	11	6	7	1	29	54	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Northern brokenray	<i>Lampsilis reeveiana brittsi</i>	R9	5	0	0	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sandbox pocketbook	<i>Lampsilis satura</i>	R8	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Highcap lanx	<i>Lanx alta</i>	R6	0	12	0	2	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kneecap lanx (limpet)	<i>Lanx patelloides</i>	R5	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama heelsplitter	<i>Lasmigona alabamensis</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
White heelsplitter	<i>Lasmigona complanata</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creek heelsplitter	<i>Lasmigona compressa</i>	R9	0	0	0	1	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flutedshell	<i>Lasmigona costata</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Etowah heelsplitter	<i>Lasmigona etowaensis</i>	R8	1	0	2	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Tennessee heelsplitter	<i>Lasmigona holstonia</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green floater	<i>Lasmigona subviridis</i>	R8, R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arkansas mudalia	<i>Leptoxis arkansensis</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Rotund rocksnail	<i>Leptoxis virgata</i>	R8	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern pondmussel	<i>Ligumia nasuta</i>	R9	12	1	6	0	22	41	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Black sandshell	<i>Ligumia recta</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Newcomb's littorine snail	<i>Littorina subrotundata</i>	R6	0	1	0	2	2	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Magnum mantleslug	<i>Magnipelta mycophaga</i>	R6	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western pearlshell	<i>Margaritifera falcata</i>	R1	0	33	2	28	9	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern pearlshell	<i>Margaritifera margaritifera</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon megomphid	<i>Megomphix hemphilli</i>	R6	0	4	0	1	1	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Umatilla megomphix	<i>Megomphix lutarius</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Wrinkled button	<i>Mesomphix rugeli</i>	R8	14	38	7	0	0	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green sideband	<i>Monadenia fidelis flava</i>	R6	0	2	0	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dalles sideband	<i>Monadenia fidelis minor</i>	R6	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shasta sideband snail	<i>Monadenia troglodytes troglodytes</i>	R5	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wintu sideband snail	<i>Monadenia troglodytes wintu</i>	R5	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern hickorynut	<i>Obovaria arkansensis</i>	R8	1	0	1	0	2	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama hickorynut	<i>Obovaria unicolor</i>	R8	5	1	7	0	31	44	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bearded mountainsnail	<i>Oreohelix barbata</i>	R3	0	35	8	42	1	86	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinaleno mountainsnail	<i>Oreohelix grahamensis</i>	R3	0	18	0	4	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grand Coulee mountainsnail	<i>Oreohelix junii</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Magdalena mountainsnail	<i>Oreohelix magdalena</i>	R3	0	2	0	0	0	2	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
No common name	<i>Oreohelix metcalfei acutidiscus</i>	R3	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name (Black Range mountainsnail)	<i>Oreohelix metcalfei concentrica</i>	R3	0	4	0	7	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Oreohelix metcalfei metcalfei</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
No common name	<i>Oreohelix metcalfei radiata</i>	R3	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Oreohelix nogalensis</i> (aka <i>O. strigosa nogalensis</i>)	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Mineral Creek mountainsnail	<i>Oreohelix pilsbryi</i>	R3	0	3	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy mountainsnail	<i>Oreohelix pygmaea</i>	R2	0	14	0	2	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cooper's Rocky Mountain snail/Black Hills mountainsnail	<i>Oreohelix strigosa cooperi</i>	R2	1	16	0	12	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue mountainsnail	<i>Oreohelix strigosa delicata</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Morgan Creek mountainsnail	<i>Oreohelix swopei</i>	R3	0	7	0	4	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dalles mountainsnail	<i>Oreohelix variabilis</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Smooth bladetooth	<i>Patera laevior</i>	R9	5	0	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Lilljeborg peaclam	<i>Pisidium lilljeborgi</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Sangre de Cristo pea-clam	<i>Pisidium sanguinichristi</i>	R3	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Montane peaclam	<i>Pisidium ultramontanum</i>	R5, R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
San Gabriel Mountains blue butterfly	<i>Plebejus saepiolus aureolus</i>	R5	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
San Emigdio blue butterfly	<i>Plebulina emigdionis</i>	R5	0	2	0	10	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mississippi pigtoe	<i>Pleurobema beadleianum</i>	R8	0	2	2	0	6	10	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ohio pigtoe	<i>Pleurobema cordatum</i>	R8, R9	28	1	3	0	10	42	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Tennessee clubshell	<i>Pleurobema oviforme</i>	R8	7	0	1	0	2	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Louisiana pigtoe	<i>Pleurobema riddellii</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pyramid pigtoe	<i>Pleurobema rubrum</i>	R8	15	2	2	0	17	36	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Tennessee pigtoe	<i>Pleuronaia barnesiana</i>	R8	1	0	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mardon skipper	<i>Polites mardon</i>	R5, R6	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Humped coin	<i>Polygyrella polygyrella</i>	R6	0	19	0	6	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robust walker	<i>Pomatiopsis binneyi</i>	R6	0	1	0	3	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pacific walker	<i>Pomatiopsis californica</i>	R6	0	0	2	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Texas heelsplitter	<i>Potamilus amphichaenus</i>	R8	1	8	1	2	9	21	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Crater lake tightcoil	<i>Pristiloma crateris</i>	R6	NA	X	NA	NA	X	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Thinlip tightcoil	<i>Pristiloma idahoense</i>	R6	0	12	0	3	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broadwhorl tightcoil	<i>Pristiloma johnsoni</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Crowned tightcoil	<i>Pristiloma pilsbryi</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shiny tightcoil	<i>Pristiloma wascoense</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pristine springsnail	<i>Pristinicola hemphilli</i>	R5, R6	0	10	0	3	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue-gray tail-dropper	<i>Prophysaon coeruleum</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama creekmussel	<i>Pseudodontoideus connasaugaensis</i>	R8	8	8	0	0	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern creekmussel	<i>Pseudodontoideus subvexus</i>	R8	7	4	3	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ouachita kidneyshell	<i>Ptychobranchus occidentalis</i>	R9	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Archimedes springsnail	<i>Pyrgulopsis archimedis</i>	R6	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gila springsnail	<i>Pyrgulopsis gilae</i>	R3	0	11	0	3	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Verde Rim springsnail	<i>Pyrgulopsis glandulosa</i>	R3	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Willow Creek pyrg (springsnail)	<i>Pyrgulopsis lassenii</i>	R5	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Page springsnail	<i>Pyrgulopsis morrisoni</i>	R3	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Owen's valley springsnail	<i>Pyrgulopsis owensensis</i>	R5	0	0	0	9	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jackson lake springsnail	<i>Pyrgulopsis robusta</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fossil springsnail	<i>Pyrgulopsis simplex</i>	R3	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brown springsnail	<i>Pyrgulopsis sola</i>	R3	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New Mexico springsnail	<i>Pyrgulopsis thermalis</i>	R3	0	8	0	8	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Huachuca springsnail	<i>Pyrgulopsis thompsoni</i>	R3	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wong's springsnail	<i>Pyrgulopsis wongi</i>	R5	0	3	0	41	2	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fir pinwheel	<i>Radiodiscus abietum</i>	R6	0	6	0	2	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Domed aenyclid	<i>Rhodacme elatior</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Warner spring shoulderband snail	<i>Rothenelix warnerfontis</i>	R5	0	0	0	11	0	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Salamander mussel	<i>Simpsonaias ambigua</i>	R8, R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clark peak talussnail	<i>Sonorella christensenii</i>	R3	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinaleno talussnail	<i>Sonorella grahamensis</i>	R3	0	3	0	7	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name given; see Metcalf and Smartt (1997)	<i>Sonorella hachitana peloncillensis</i>	R3	0	0	0	3	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Mimic talussnail	<i>Sonorella imitator</i>	R3	0	9	0	4	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wet canyon talussnail	<i>Sonorella macrophallus</i>	R3	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sonoran talussnail	<i>Sonorella magdalensis</i>	R3	0	2	0	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Highland siltmouth	<i>Stenotrema altispira</i>	R8	13	20	7	0	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rich mountain siltmouth	<i>Stenotrema pilsbryi</i>	R8	5	0	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rayed creekshell	<i>Strophitus radiatus</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
A freshwater snail	<i>Taylorconcha insperata</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Southern purple lilliput	<i>Toxolasma corvunculus</i>	R8	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple lilliput	<i>Toxolasma lividum</i>	R8, R9	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Savannah lilliput	<i>Toxolasma pullus</i>	R8	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Shasta chaparral snail	<i>Trilobopsis roperi</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tehama chaparral snail	<i>Trilobopsis tehamaana</i>	R5	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Apalachicola floater	<i>Utterbackiana heardi</i>	R8	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Multirib vallonia	<i>Vallonia gracilicosta</i>	R9	2	4	0	3	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crossed dome	<i>Ventridens decussatus</i>	R8	6	0	4	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ellipse	<i>Venustaconcha ellipsiformis</i>	R9	47	0	10	0	107	164	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Delicate vertigo	<i>Vertigo bollesiana</i>	R8, R9	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cuffed vertigo snail	<i>Vertigo clappi</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tapered vertigo	<i>Vertigo elatior</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bluff vertigo	<i>Vertigo meramecensis</i>	R9	5	0	0	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Six-whorl vertigo	<i>Vertigo morsei</i>	R9	1	0	0	0	3	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Deep-throat vertigo	<i>Vertigo nylanderii</i>	R9	0	0	1	0	8	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Mystery vertigo	<i>Vertigo paradoxa</i>	R9	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Dalles hesperian	<i>Vespericola depressus</i>	R6	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Big bar hesperian snail	<i>Vespericola pressleyi</i>	R5	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shasta hesperian snail	<i>Vespericola shasta</i>	R5	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou hesperian	<i>Vespericola sierranus</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern hickorynut	<i>Villosa arkansasensis</i>	R8	3	1	7	0	1	12	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Rainbow	<i>Villosa iris</i>	R9	37	1	7	0	4	49	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Coosa creekshell	<i>Villosa umbrans</i>	R8	8	6	2	0	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Carolina creekshell	<i>Villosa vaughaniana</i>	R8	17	0	4	1	6	28	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lined ramshorn	<i>Vorticifex effusa diagonalis</i>	R6	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Klamath ramshorn	<i>Vorticifex klamathensis</i> <i>klamathensis</i>	R6	#N/A	#N/A	#N/A	#N/A	X	1	Literature	No GBIF data	Habitat may include old-growth forest	MIIH	Oregon Conservation Strategy (2024)

Non-Vascular Plant Regional Forester Sensitive Species

Table 10. Determination summary for non-vascular plant Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
A liverwort	<i>Acrobolbus ciliatus</i>	R8	19	3	5	1	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wart lichen	<i>Bagliettoa marmorea</i>	R9	4	0	0	0	0	4	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Liverwort	<i>Barbilophozia lycopodioides</i>	R6	0	72	18	8	0	98	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Bartramia lopuraria</i>	R6	2	21	1	8	1	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Bazzania nudicaulis</i>	R8	4	22	0	0	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A lichen	<i>Biatoropsis angulatae</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Blepharostoma arachnoideum</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Brachydontium olympicum</i>	R6	1	7	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander's bruchia	<i>Bruchia bolanderi</i>	R5	0	61	0	15	4	80	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale-footed horsehair lichen	<i>Bryoria fuscescens</i>	R9	0	146	2	28	3	179	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Norway bryoxiphium moss	<i>Bryoxiphium norvegicum</i>	R9	19	20	14	1	0	54	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beautiful bryum	<i>Bryum calobryoides</i>	R4, R6	0	23	1	16	4	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bug-on-a-stick moss	<i>Buxbaumia aphylla</i>	R1	0	19	0	2	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green bug-on-a-stick	<i>Buxbaumia viridis</i>	R5	0	58	0	9	1	68	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Calliergon richardsonii</i>	R6	0	2	1	5	6	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A lichen	<i>Caloplaca parvula</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Liverwort	<i>Calypogeia sphagnicola</i>	R6	0	2	5	0	6	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Campylium stellatum</i>	R6	23	28	0	12	3	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Savanna campylopus moss	<i>Campylopus caroliniae</i>	R8	0	10	0	3	6	19	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Rock-loving swan-necked moss	<i>Campylostelium saxicola</i>	R9	9	0	9	0	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Cephaloziella spinicaulis</i>	R8	5	0	2	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Cephaloziella spinigera</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A lichen	<i>Chaenothecopsis australis</i>	R9	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	Bell-Doyon et al. (2021)
Evans' cheilolejeunea	<i>Cheilolejeunea evansii</i>	R8	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wain's cup lichen	<i>Cladonia wainioi</i>	R9	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Conostomum tetragonum</i>	R6	0	3	1	4	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Cryptomitrium tenerum</i>	R6	0	8	0	3	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tear drop moss	<i>Dacryphyllum falcifolium</i>	R5	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Shag-belly stippleback lichen	<i>Dermatocarpon moulinii</i>	R9	3	9	0	12	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink dot lichen	<i>Dibaeis absoluta</i>	R9	5	9	14	0	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dichelyma moss	<i>Dichelyma capillaceum</i>	R9	6	0	0	0	4	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Didymodon norrisii</i>	R6	0	10	1	19	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian threadwort	<i>Drepanolejeunea appalachiana</i>	R8	2	1	7	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Encalypta brevicollis</i>	R6	2	2	0	8	3	15	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Moss	<i>Encalypta brevipes</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Entosthodon fascicularis</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hall's pocket moss	<i>Fissidens amoenus</i>	R8	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brook pocket moss	<i>Fissidens aphelotaxifolius</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Minute pocket moss	<i>Fissidens pauperculus</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Frullania donnellii</i>	R8	0	2	0	0	4	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Selwyn's scalewort	<i>Frullania selwyniana</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Britton's dry rock moss	<i>Grimmia brittoniae</i>	R1	0	10	0	1	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Gymnomitrion concinnatum</i>	R6	1	12	1	7	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Haplomitrium hookeri</i>	R6	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Harpanthus flotovianus</i>	R6	0	13	0	5	1	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blandow's bog moss	<i>Helodium blandowii</i>	R5	1	45	0	4	14	64	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Herbertus aduncus</i>	R6	6	30	16	6	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orange-tinted fringe lichen	<i>Heterodermia obscurata</i>	R9	73	14	14	4	13	118	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clear moss	<i>Hookeria lucens</i>	R1	0	72	5	4	0	81	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Closter's brook moss	<i>Hygrohypnum closteri</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Iwatsukiella leucotricha</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Jungermannia polaris</i>	R6	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Kurzia makinoana</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A lichen	<i>Lecanora epanora</i>	R9	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blomquist's pouncewort	<i>Lejeunea blomquistii</i>	R8	1	0	5	0	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sharp's pouncewort	<i>Lejeunea sharpii</i>	R8	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Grandfather mountain leptodontium moss	<i>Leptodontium viticulosoides</i> var. <i>sulphureum</i>	R8	1	11	1	0	0	13	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Wedge flapwort	<i>Leptoscyphus cuneifolius</i>	R8	0	19	0	0	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Limbella fryei</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian crestwort	<i>Lophocolea appalachiana</i>	R8	2	2	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Lophozia gillmanii</i>	R6	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Lophozia laxa</i>	R6	0	2	2	2	7	13	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Marsupella condensata</i>	R6	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Marsupella emarginata</i> var. <i>aquatica</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Liverwort	<i>Marsupella sparsifolia</i>	R6	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-stalked thread moss	<i>Meesia longisetia</i>	R1	0	4	0	1	6	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meesia moss	<i>Meesia triquetra</i>	R1, R4, R9	5	109	0	17	25	156	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Swamp thread moss	<i>Meesia uliginosa</i>	R1, R5	0	20	1	8	3	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Metzgeria crassipilis</i>	R9	17	13	24	1	1	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Forked veilwort	<i>Metzgeria furcata</i>	R9	11	2	13	2	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Microlejeunea epiphylla</i>	R8	0	0	0	0	3	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Elongate copper moss	<i>Mielichhoferia elongata</i>	R5	2	54	1	36	0	93	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shevock's copper moss	<i>Mielichhoferia shevockii</i>	R5	0	4	0	8	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Nardia japonica</i>	R6	0	6	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Nardia lescurii</i>	R8	2	1	12	0	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rau's spur moss	<i>Oncophorus raei</i>	R8	NA	NA	NA	NA	x	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Moss	<i>Orthodontium gracile</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Orthodontium pellucens</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Moss	<i>Orthotrichum hallii</i>	R6	10	36	2	23	1	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kellman's bristle moss	<i>Orthotrichum kellmanii</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
No common name	<i>Orthotrichum praemorsum</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shevock rockmoss	<i>Orthotrichum shevockii</i>	R4	0	1	0	18	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spjut's brittle-moss	<i>Orthotrichum spjutii</i>	R4	0	1	0	10	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Angled paludella moss	<i>Paludella squarrosa</i>	R9	1	6	2	6	6	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brown-gray moss-shingle lichen	<i>Pannaria pezizoides</i>	R9	1	32	0	9	2	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Peltolepis quadrata</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wreath lichen	<i>Phaeophyscia leana</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Phymatoceros phymatodes</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Pale-bellied frost lichen	<i>Physconia subpallida</i>	R9	4	0	1	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Plagiochila austinii</i>	R8	28	6	49	0	0	83	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Plagiochila echinata</i>	R8	2	1	7	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Plagiochila exigua</i>	R8	0	23	1	0	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sullivan's leafy featherwort	<i>Plagiochila sullivantii</i>	R8	36	19	23	0	1	79	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Virginia featherwort	<i>Plagiochila virginica</i>	R8	9	0	18	0	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain wavy-leaf moss	<i>Plagiomnium carolinianum</i>	R8	0	0	3	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rabun bald feathermoss	<i>Pohlia rabunensis</i>	R8	0	0	6	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Polytrichastrum sexangulare</i> var. <i>vulcanicum</i>	R6	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Moss	<i>Polytrichum strictum</i>	R6	1	2	0	0	6	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Porella bolanderi</i>	R6	0	17	3	17	1	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Porella japonica</i> ssp. <i>appalachiana</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Preissia quadrata</i>	R6	3	11	1	6	2	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Delicate earth-moss	<i>Pseudodiphyscium nitidum</i>	R6	0	1	0	0	1	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Moss	<i>Pseudocalliergon trifarium</i>	R6	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pseudocyphellaria moss	<i>Pseudocyphellaria crocata</i>	R9	4	33	11	3	1	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow specklebelly lichen	<i>Pseudocyphellaria holarctica</i>	R9	5	6	9	0	1	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Ptilidium pulcherrimum</i>	R6	3	9	3	3	6	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Moss	<i>Racomitrium depressum</i>	R6	0	34	0	6	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Radula tenax</i>	R8	10	9	22	0	1	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Radula voluta</i>	R8	1	0	6	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Naked rhizomnium moss	<i>Rhizomnium nudum</i>	R1	3	67	0	8	0	78	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A liverwort	<i>Riccardia jugata</i>	R8	0	0	2	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Rivulariella gemmipara</i>	R6	0	2	0	2	6	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Witches cauldron	<i>Sarcosoma globosum</i>	R9	0	5	2	2	2	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Scapania obscura</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Schistidium cinctidodonteum</i>	R6	0	39	0	26	1	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Schistostega moss	<i>Schistostega pennata</i>	R9	2	25	9	8	4	48	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Schofieldia monticola</i>	R6	0	15	0	1	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Agoyan cataract moss	<i>Scopelophila cataractae</i>	R8	8	4	5	2	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Limprichtia moss	<i>Scorpidium revolvens</i>	R1	0	19	0	4	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scorpidium moss	<i>Scorpidium scorpioides</i>	R1	3	5	0	7	12	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Scouleria marginata</i>	R6	0	67	0	38	0	105	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Anderson's sphagnum	<i>Sphagnum andersonianum</i>	R9	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Angerman's sphagnum	<i>Sphagnum angermanicum</i>	R9	19	10	4	0	15	48	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sphagnum	<i>Sphagnum angustifolium</i>	R1, R2	0	23	0	4	6	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baltic sphagnum	<i>Sphagnum balticum</i>	R2	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fringed bogmoss	<i>Sphagnum fimbriatum</i>	R1	6	16	1	5	4	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sphagnum	<i>Sphagnum flavicomans</i>	R8, R9	19	22	14	0	67	122	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Brown hair peatmoss	<i>Sphagnum fuscum</i>	R1	1	39	3	6	16	65	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Medocino peatmoss	<i>Sphagnum mendocinum</i>	R1	0	7	0	3	1	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sphagnum	<i>Sphagnum pulchrum</i>	R9	1	2	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Horsehair threadwort	<i>Sphenolobopsis pearsonii</i>	R8	1	10	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Curled notchwort	<i>Sphenolobus saxicola</i>	R8	3	8	1	0	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brilliant red dung moss	<i>Splachnum rubrum</i>	R9	1	2	0	2	3	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Moss	<i>Splachnum sphaericum</i>	R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beauvois' spotted felt lichen	<i>Sticta beauvoisii</i>	R9	118	13	59	2	4	196	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted felt lichen	<i>Sticta fuliginosa</i>	R9	7	36	16	4	10	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mission Mountain kittentails	<i>Synthyris canbyi</i>	R1	0	8	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Charleston kittentails	<i>Synthyris ranunculina</i>	R4	0	10	1	20	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ammons' tortula moss	<i>Syntrichia ammonsiana</i>	R9	2	4	2	3	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Tetraphis geniculata</i>	R6	1	31	2	6	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brown's tetrodontium moss	<i>Tetrodontium brownianum</i>	R9	2	6	8	0	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Tortula mucronifolia</i>	R6	5	35	0	7	2	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Trematodon asanoi</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Woollywort	<i>Trichocolea tomentella</i>	R9	12	5	22	0	13	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tawny tricholomopsis	<i>Tricholomopsis fulvescens</i>	R5	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coastal triquetrella	<i>Triquetrella californica</i>	R5	0	0	8	8	0	16	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Tritomaria exsecta</i>	R6	8	31	18	0	2	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Granulating rocktripe lichen	<i>Umbilicaria hirsuta</i>	R9	0	5	0	2	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
A lichenicolous fungi	<i>Xenonectriella leptalea</i>	R9	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	LLBO and USFS (2021)

Reptile Regional Forester Sensitive Species

Table 11. Determination summary for reptile Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Western pond turtle	<i>Actinemys marmorata</i>	R6	0	1	0	1	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California legless lizard	<i>Anniella pulchra</i>	R5	0	1	0	8	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	R5	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant spotted whiptail	<i>Aspidoscelis stictogramma</i>	R3	0	11	1	29	0	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red-backed whiptail	<i>Aspidoscelis xanthonota</i>	R3	0	0	0	23	0	23	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Southern rubber boa	<i>Charina umbratica</i>	R5	0	5	2	11	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Painted turtle	<i>Chrysemys picta</i>	R6	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted turtle	<i>Clemmys guttata</i>	R8, R9	0	0	0	0	5	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kirtland's snake	<i>Clonophis kirtlandii</i>	R9	26	1	3	0	3	33	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Eastern diamond-back rattlesnake	<i>Crotalus adamanteus</i>	R8	0	10	0	0	8	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Timber rattlesnake	<i>Crotalus horridus</i>	R9	17	6	8	0	1	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mottled rock rattlesnake	<i>Crotalus lepidus lepidus</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twin-spotted rattlesnake	<i>Crotalus pricei</i>	R3	0	72	48	68	0	188	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red diamond rattlesnake	<i>Crotalus ruber ruber</i>	R5	0	0	0	23	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona ridgenose rattlesnake	<i>Crotalus willardi willardi</i>	R3	0	26	1	21	0	48	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino ringneck snake	<i>Diadophis punctatus modestus</i>	R5	0	4	0	34	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	R5	X	X	X	X	X	5	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Panamint alligator lizard	<i>Elgaria panamintina</i>	R5	0	14	0	29	1	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blanding's turtle	<i>Emydoidea blandingii</i>	R9	4	2	2	0	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western pond turtle	<i>Emys marmorata</i>	R5	0	9	0	15	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wood turtle	<i>Glyptemys insculpta</i>	R8, R9	5	1	2	0	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog turtle	<i>Glyptemys muhlenbergii</i>	R8	4	0	4	0	0	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sonoran Desert tortoise	<i>Gopherus morafkai</i>	R3	0	7	0	49	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gopher tortoise	<i>Gopherus polyphemus</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barbour's map turtle	<i>Graptemys barbouri</i>	R8	0	1	0	0	20	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thornscrub hook-nosed snake	<i>Gyalopion quadrangulare</i>	R3	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern hog-nosed snake	<i>Heterodon simus</i>	R8	1	28	1	6	10	46	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Apalachicola kingsnake	<i>Lampropeltis meansi</i>	R8	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
California mountain kingsnake	<i>Lampropeltis zonata</i>	R6	1	59	8	85	0	153	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino mountain kingsnake	<i>Lampropeltis zonata parvirostris</i>	R5	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
San Diego mountain kingsnake	<i>Lampropeltis zonata pulchra</i>	R5	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coastal rosy boa or 3-lined boa	<i>Lichanura orcutti</i>	R5	0	8	0	19	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alligator snapping turtle	<i>Macrochelys temminckii</i>	R9	1	4	1	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mississippi green watersnake	<i>Nerodia cyclopion</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brown vinesnake	<i>Oxybelis aeneus</i>	R3	0	1	0	7	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern, Northern and Florida pinesnakes	<i>Pituophis melanoleucus</i> [excluding <i>P. m. lodingi</i>]	R8	0	10	0	0	4	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain skink	<i>Plestiodon callicephalus</i>	R3	0	15	0	31	0	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slevin's bunchgrass lizard	<i>Sceloporus slevini</i>	R3	0	35	9	107	0	151	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida scrub lizard	<i>Sceloporus woodi</i>	R8	0	86	0	4	5	95	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green ratsnake	<i>Senticolis triaspis</i>	R3	0	23	9	30	0	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black hills redbelly snake	<i>Storeria occipitomaculata</i> <i>pahasapae</i>	R2	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flat-headed snake	<i>Tantilla gracilis</i>	R9	0	1	2	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chihuahuan black-headed snake	<i>Tantilla wilcoxi</i>	R3	0	12	0	6	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yaqui black-headed snake	<i>Tantilla yaquia</i>	R3	0	5	0	18	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern box turtle	<i>Terrapene carolina carolina</i>	R9	6	0	4	0	3	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Two-striped garter snake	<i>Thamnophis hammondii</i>	R5	0	11	6	81	0	98	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arid land ribbonsnake (aka western ribbonsnake)	<i>Thamnophis proximus diabolicus</i>	R3	0	0	1	26	0	27	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Mountain earthsnake	<i>Virginia valeriae pulchra</i>	R9	117	2	23	0	12	154	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bezy's night lizard	<i>Xantusia bezyi</i>	R3	0	0	0	34	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Vascular Plant Forester Sensitive Species

Table 12. Determination summary for vascular plant Regional Forester Sensitive Species. This table only shows National Land Cover Database Cover classes that can potentially support old growth (see Table 4). Sum OG habitat=Total number of species' occurrence records in habitat that can potentially support old growth. Occurrences for each cover class are shown numerically for species that had occurrence records in GBIF; species that lacked spatial data in GBIF were assessed categorically and are shown as "X" in the cover class(es) in which they were considered to possibly occur based on literature review. Effects determination: NI = No Impact; BI=Beneficial Impact; MIIH=May Impact Individuals of Habitat, but is not likely to cause a trend towards Federal listing or result in loss of viability in the planning area; AI= Adverse Impact, likely to cause a trend towards Federal listing or result in loss of viability in the planning area.

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Santa Lucia fir	<i>Abies bracteata</i>	R5	0	45	4	33	0	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fraser fir	<i>Abies fraseri</i>	R8	34	33	20	31	0	118	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine sand verbena	<i>Abronia alpina</i>	R5	0	6	0	14	1	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tufted sand verbena	<i>Abronia bigelovii</i>	R3	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coville's dwarf abronia	<i>Abronia nana</i> ssp. <i>covillei</i>	R5	0	15	1	50	0	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink sand-verbena	<i>Abronia umbellata</i> ssp. <i>Breviflora</i>	R6	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chaparral sand verbena	<i>Abronia villosa</i> var. <i>aurita</i>	R5	0	11	4	69	0	84	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pima Indian mallow	<i>Abutilon parishii</i>	R3	0	0	0	10	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Abrams' flowery puncturebract	<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	R5	0	3	0	10	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cienega seca flowery puncturebract	<i>Acanthoscyphus parishii</i> var. <i>cienegensis</i>	R5	0	22	0	48	0	70	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henderson's ricegrass	<i>Achnatherum hendersonii</i>	R6	0	4	0	7	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nevada needlegrass	<i>Achnatherum nevadense</i>	R6	5	39	0	53	0	97	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Richardson's ricegrass	<i>Achnatherum richardsonii</i>	R6	1	26	0	12	2	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wallowa ricegrass	<i>Achnatherum wallowaense</i>	R6	0	8	0	3	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
White monkshood	<i>Aconitum reclinatum</i>	R8	6	1	6	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue monkshood	<i>Aconitum uncinatum</i>	R9	17	2	15	0	4	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Hood bugbane	<i>Actaea laciniata</i>	R6	0	20	0	1	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian bugbane	<i>Actaea rubifolia</i>	R8, R9	12	1	1	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red baneberry	<i>Actaea rubra</i>	R9	9	45	5	13	2	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wright's dogweed	<i>Adenophyllum wrightii</i> var. <i>wrightii</i>	R3	NA	x	NA	NA	x	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
California maiden-hair	<i>Adiantum jordanii</i>	R6	0	3	0	6	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Climbing fumitory	<i>Adlumia fungosa</i>	R9	5	0	3	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sunrise skipper	<i>Adopaeoides prittwitzi</i>	R3	0	2	0	14	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Musk-root	<i>Adoxa moschatellina</i>	R1	10	37	7	9	5	68	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red-tailed leafhopper	<i>Aflexia rubranura</i>	R9	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Earleaf false foxglove	<i>Agalinis auriculata</i>	R8, R9	50	4	3	1	3	61	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Thread-stem false foxglove	<i>Agalinis filicaulis</i>	R8	0	6	0	0	7	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flower false foxglove	<i>Agalinis paupercula</i> var. <i>paupercula</i>	R9	3	2	3	0	3	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pale/skinner's false-foxglove	<i>Agalinis skinneriana</i>	R8, R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Artesian agapetus caddisfly	<i>Agapetus artesius</i>	R9	14	0	0	0	0	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Yellow giant-hyssop	<i>Agastache nepetoides</i>	R9	9	0	1	0	1	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Netwing midge	<i>Agathon arizonicus</i>	R3	NA	X	NA	X	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	Dugan (2017)
Huachuca giant skipper	<i>Agathymus evansi</i>	R3	0	26	0	13	0	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tonto basin agave	<i>Agave delamateri</i>	R3	0	0	0	14	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hohokam agave	<i>Agave murpheyi</i>	R3	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Cruz striped agave	<i>Agave parviflora</i> ssp. <i>parviflora</i>	R3	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Phillips' agave	<i>Agave phillipsiana</i>	R3	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trelease agave	<i>Agave schottii</i> var. <i>treleasei</i>	R3	0	0	0	9	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tricolored blackbird	<i>Agelaius tricolor</i>	R6	0	0	1	42	0	43	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lucy Braun's white snakeroot	<i>Ageratina luciae-brauniae</i>	R8	0	0	3	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western joepye-weed	<i>Ageratina occidentalis</i>	R1	2	161	0	130	1	294	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink agoseris	<i>Agoseris aurantiaca</i> var. <i>carnea</i>	R6	0	24	0	19	7	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tall agoseris	<i>Agoseris elata</i>	R6	0	7	0	9	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale false-dandelion	<i>Agoseris glauca</i>	R9	13	61	0	108	8	190	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink agoseris	<i>Agoseris lackschewitzii</i>	R1, R4	0	17	0	14	4	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Incised groovebur	<i>Agrimony incisa</i>	R8	0	9	0	0	3	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Woodland agrimony	<i>Agrimonia rostellata</i>	R9	x	x	x	NA	x	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Hoover's bentgrass	<i>Agrostis hooveri</i>	R5	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's bentgrass	<i>Agrostis howellii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Arctic/northern bentgrass	<i>Agrostis mertensii</i>	R6, R9	0	17	1	27	2	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern candlewax lichen	<i>Ahtiana aurescens</i>	R9	5	1	5	1	4	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wonderland Alice flower	<i>Aliciella (=Gilia) caespitosa</i>	R4	2	8	1	6	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Stonecrop gilia	<i>Aliciella sedifolia</i>	R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Tapertip onion	<i>Allium acuminatum</i>	R1	4	31	1	44	1	81	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allegheny onion	<i>Allium allegheniense</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander onion	<i>Allium bolanderi</i> var. <i>bolanderi</i>	R6	0	6	1	8	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra onion	<i>Allium campanulatum</i>	R6	0	166	0	141	4	311	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nodding onion	<i>Allium cernuum</i>	R9	11	61	1	19	2	94	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia onion	<i>Allium columbianum</i>	R1	0	53	0	2	0	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue mountain onion	<i>Allium dictuon</i>	R6	0	10	0	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chatterley onion	<i>Allium geyeri</i> var. <i>chatterleyi</i>	R4	1	3	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Geyer's onion	<i>Allium geyeri</i> var. <i>geyeri</i>	R6	5	45	0	21	0	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goodding's onion	<i>Allium gooddingii</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hickman's onion	<i>Allium hickmanii</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Pinos onion	<i>Allium howellii</i> var. <i>clokeyi</i>	R5	0	21	2	63	0	86	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jepson's onion	<i>Allium jepsonii</i>	R5	0	7	0	14	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swamp onion	<i>Allium madidum</i>	R4	0	76	0	17	0	93	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yucaipa onion	<i>Allium marvinii</i>	R5	0	3	2	36	1	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nevius' onion	<i>Allium nevii</i>	R6	0	23	0	8	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lillydale onion	<i>Allium oxyphilum</i>	R8, R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small onion	<i>Allium parvum</i>	R1	0	23	0	67	0	90	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Peninsular onion	<i>Allium peninsulare</i>	R6	0	0	0	12	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf onion	<i>Allium simillimum</i>	R1	0	93	0	88	0	181	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tolmie's onion	<i>Allium tolmiei</i> var. <i>persimile</i>	R4	0	58	0	38	0	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-bracted onion	<i>Allium tribracteatum</i>	R5	0	29	0	5	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yosemite onion	<i>Allium yosemitense</i>	R5	0	6	0	5	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hubricht's long-tailed amphipod	<i>Allocrangonyx hubrichti</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Candystick	<i>Allotropa virgata</i>	R4	0	221	2	9	4	236	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Violet-crowned hummingbird	<i>Amazilia violiceps</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bartram shadbush	<i>Amelanchier bartramiana</i>	R9	6	11	8	2	9	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roundleaf orchid	<i>Amerorchis rotundifolia</i>	R1, R2, R9	0	13	0	1	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baird's sparrow	<i>Ammodramus bairdii</i>	R3	0	14	0	3	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Saiya	<i>Amoreuxia gonzalezii</i>	R3	0	10	0	4	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth false indigo	<i>Amorpha nitens</i>	R9	5	1	3	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ouachita leadplant	<i>Amorpha ouachitensis</i>	R8	16	6	6	0	1	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Panicled indigobush	<i>Amorpha paniculata</i>	R8	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large-flowered blue star	<i>Amsonia grandiflora</i>	R3	0	2	0	8	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Louisiana bluestar	<i>Amsonia ludoviciana</i>	R8	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Liverwort	<i>Anastrophyllum minutum</i>	R6	0	21	2	5	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss	<i>Andreaea schofieldiana</i>	R6	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog-rosemary	<i>Andromeda polifolia</i> var. <i>polifolia</i>	R1	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sweet-flowered rock jasmine	<i>Androsace chamaejasme</i> ssp. <i>carinata</i>	R4	1	5	0	7	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog anemone	<i>Anemone oregana</i> var. <i>felix</i>	R6	0	12	0	0	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pasqueflower	<i>Anemone patens</i> var. <i>multifida</i>	R6	x	x	x	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Wood anemone	<i>Anemone quinquefolia</i>	R9	31	2	13	0	0	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Charleston angelica	<i>Angelica scabrida</i>	R4	0	46	0	11	0	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wheeler's angelica	<i>Angelica wheeleri</i>	R4	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scabrid alpine tarplant	<i>Anisocarpus scabridus</i>	R5	0	15	0	37	0	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow pussytoes	<i>Antennaria arcuata</i>	R4	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow/flat-top pussy-toes	<i>Antennaria corymbosa</i>	R1, R6	3	124	2	96	19	244	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dense-leaved pussytoes	<i>Antennaria densifolia</i>	R1	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-margined everlasting	<i>Antennaria marginata</i>	R5	1	177	4	47	1	230	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Charleston pussytoes	<i>Antennaria soliceps</i>	R4	0	4	2	10	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mogollon death camas	<i>Anticlea mogollonensis</i> (= <i>Zigadenus m.</i>)	R3	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dimorphic snapdragon	<i>Antirrhinum subcordatum</i>	R5	0	0	3	8	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eschscholtz's little nightmare	<i>Aphragmus eschscholtzianus</i>	R10	1	0	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American groundnut	<i>Apios americana</i>	R1	4	1	2	0	1	8	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Chapline's columbine	<i>Aquilegia chaplinei</i> (= <i>A. chrysanthra</i> var. <i>chaplinei</i>)	R3	0	0	0	9	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rydberg's golden columbine	<i>Aquilegia chrysanthra</i> var. <i>rydbergii</i>	R2	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Link trail columbine	<i>Aquilegia flavescens</i> var. <i>rubicunda</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Graham columbine	<i>Aquilegia grahamii</i>	R4	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Laramie columbine	<i>Aquilegia laramiensis</i>	R2	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cross-haired rockcress	<i>Arabis crucisetosa</i>	R6	0	8	0	22	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Second rockcress	<i>Arabis holboellii</i> var. <i>retrofracta</i>	R9	5	87	0	69	2	163	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth rockcress	<i>Arabis laevigata</i>	R9	2	0	2	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green rockcress	<i>Arabis missouriensis</i> v. <i>deamii</i>	R9	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Rogue canyon rockcress	<i>Arabis modesta</i>	R6	0	16	5	12	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olympic nuttall's rockcress	<i>Arabis olympica</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spreading rockcress	<i>Arabis patens</i>	R8, R9	30	1	7	0	2	40	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Carson range rock cress	<i>Arabis rigidissima</i> var. <i>demota</i>	R5	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua rock cress	<i>Arabis tricornuta</i>	R3	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Eastern dwarf-mistletoe	<i>Arceuthobium pusillum</i>	R9	5	4	3	0	32	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine manzanita	<i>Arctostaphylos alpina</i>	R9	0	1	0	3	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Arroyo de la Cruz manzanita	<i>Arctostaphylos cruzensis</i>	R5	0	3	2	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little Sur manzanita	<i>Arctostaphylos edmundsii</i>	R5	0	1	2	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Gabriel manzanita	<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	R5	0	5	0	57	0	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gasquet manzanita	<i>Arctostaphylos hispida</i>	R6	0	48	3	23	0	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hoover's manzanita	<i>Arctostaphylos hooveri</i>	R5	0	6	3	13	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Lucia manzanita	<i>Arctostaphylos luciana</i>	R5	0	16	0	10	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nissenan manzanita	<i>Arctostaphylos nissenana</i>	R5	0	18	1	11	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Bishop manzanita	<i>Arctostaphylos obispoensis</i>	R5	0	24	4	25	0	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greenleaf manzanita	<i>Arctostaphylos patula</i>	R1	0	148	0	60	0	208	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa margarita manzanita	<i>Arctostaphylos pilosula</i>	R5	0	5	0	30	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rainbow manzanita	<i>Arctostaphylos rainbowensis</i>	R5	0	1	3	25	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Refugio manzanita	<i>Arctostaphylos refugioensis</i>	R5	0	2	1	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Interior manzanita	<i>Arctostaphylos parryana</i> subsp. <i>tumescens</i>	R5	NA	NA	NA	x	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Mt. Dellenbaugh sandwort	<i>Arenaria aberrans</i>	R3	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rosy King's sandwort	<i>Arenaria kingii</i> ssp. <i>rosea</i>	R4	NA	NA	NA	X	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NPIN (2013)
Rock sandwort	<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i>	R5	11	168	2	78	4	263	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dragon's mouth	<i>Arethusa bulbosa</i>	R9	7	1	2	0	46	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern three-awn grass	<i>Aristida simpliciflora</i>	R8	0	2	0	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siberian sea thrift	<i>Armeria maritima</i> ssp. <i>sibirica</i>	R2	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lanceleaf arnica	<i>Arnica lanceolata</i>	R9	3	93	6	41	1	144	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern arnica	<i>Arnica lonchophylla</i>	R9	1	26	0	0	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shasta arnica	<i>Arnica viscosa</i>	R6	0	14	5	21	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black chokeberry	<i>Aronia melanocarpa</i>	R9	8	3	6	1	4	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Petiolate wormwood	<i>Artemisia campestris</i> ssp. <i>borealis</i> var. <i>petiolata</i>	R4	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	UDWR (2023)
Northern wormwood	<i>Artemisia campestris</i> ssp. <i>borealis</i> var. <i>wormskieldii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	WNHP (2024)
Coastal sagewort	<i>Artemisia pycnocephala</i>	R6	0	2	3	142	1	148	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Eastwood milkweed	<i>Asclepias eastwoodiana</i>	R4	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Poke milkweed	<i>Asclepias exaltata</i>	R9	35	2	9	3	0	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green milkweed	<i>Asclepias hirtella</i>	R9	0	7	0	4	2	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lemmon milkweed	<i>Asclepias lemmonii</i>	R3	0	56	25	18	0	99	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf milkweed	<i>Asclepias ovalifolia</i>	R9	0	21	2	8	1	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple milkweed	<i>Asclepias purpurascens</i>	R9	11	0	2	0	1	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Butterfly milkweed	<i>Asclepias tuberosa</i>	R9	4	11	1	1	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wheel milkweed	<i>Asclepias uncialis</i>	R2	0	5	0	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greene milkweed	<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	R3	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Southern milkweed	<i>Asclepias viridula</i>	R8	0	8	0	0	18	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bradley's spleenwort	<i>Asplenium bradleyi</i>	R9	17	1	5	0	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black-stem spleenwort	<i>Asplenium resiliens</i>	R9	18	7	10	2	2	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Walking-fern spleenwort	<i>Asplenium rhizophyllum</i>	R9	26	1	7	0	1	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grass-fern	<i>Asplenium septentrionale</i>	R6	3	68	1	28	2	102	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maidenhair spleenwort	<i>Asplenium trichomanes</i>	R1, R9	10	10	11	2	1	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Limestone maidenhair/green spleenwort	<i>Asplenium trichomanes</i> - <i>ramosum</i>	R1, R9	0	25	1	15	1	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green spleenwort	<i>Asplenium viride</i>	R6	10	79	8	54	11	162	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wagner's spleenwort	<i>Asplenium x heteroresilens</i>	R8	X	NA	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Zuni milkvetch	<i>Astragalus accumbens</i>	R3	0	2	0	0	0	2	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Clokey milkvetch	<i>Astragalus aequalis</i>	R4	0	42	0	15	0	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine milkvetch	<i>Astragalus alpinus</i>	R9	19	93	2	37	13	164	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tall milkvetch	<i>Astragalus altus</i>	R3	0	7	0	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lost river milkvetch	<i>Astragalus amnis-amissi</i>	R4	0	7	0	6	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gumbo milkvetch	<i>Astragalus ampullarius</i>	R3	0	2	0	33	0	35	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Goose creek milkvetch	<i>Astragalus anserinus</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ash valley milk-vetch	<i>Astragalus anxius</i>	R5	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lemhi milkvetch	<i>Astragalus aquilonius</i>	R4	0	3	0	6	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Palouse milk-vetch	<i>Astragalus arrectus</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arthur's milk-vetch	<i>Astragalus arthurii</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Cotton's milk-vetch	<i>Astragalus australis</i> var. <i>cottonii</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Barr's milkvetch	<i>Astragalus barrii</i>	R2	0	0	0	16	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino milk-vetch	<i>Astragalus bernardinus</i>	R5	0	1	0	13	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crested milk-vetch	<i>Astragalus bicristatus</i>	R5	0	82	1	40	0	123	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bourgeau's milkvetch	<i>Astragalus bourgovii</i>	R1	0	31	0	15	0	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California milk-vetch	<i>Astragalus californicus</i>	R6	0	7	0	9	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canadian milkvetch	<i>Astragalus canadensis</i>	R9	5	13	0	11	1	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inflated milk-vetch	<i>Astragalus cimae</i> var. <i>sufflatus</i>	R5	0	0	0	23	0	23	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Maguire's (coppermine) milkvetch	<i>Astragalus cobrensis</i> var. <i>maguirei</i>	R3	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bicknell milkvetch	<i>Astragalus consobrinus</i>	R4	0	6	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marble Canyon milkvetch	<i>Astragalus cremnophylax</i> var. <i>hevronii</i>	R3	0	0	0	2	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cliff milkvetch	<i>Astragalus cremnophylax</i> var. <i>myriorrhaphis</i>	R3	0	0	0	5	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cusick's milk-vetch	<i>Astragalus cusickii</i> var. <i>cusickii</i>	R6	0	5	0	11	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dean's milk-vetch	<i>Astragalus deanei</i>	R5	0	0	0	18	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
South Fork John Day milk-vetch	<i>Astragalus diaphanus</i> var. <i>diurnus</i>	R6	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ozark milkvetch	<i>Astragalus distortus</i> var. <i>distortus</i>	R9	1	3	1	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow milkvetch	<i>Astragalus diversifolius</i> var. <i>diversifolius</i>	R4	NA	NA	NA	x	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Jacumba milk-vetch	<i>Astragalus douglasii</i> var. <i>perstrictus</i>	R5	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Walker Pass milk-vetch	<i>Astragalus erterae</i>	R5	0	0	0	8	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dana milkvetch	<i>Astragalus henrimontanensis</i>	R4	NA	x	x	x	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Villous groundcover milkvetch	<i>Astragalus humistratus</i> var. <i>crispulus</i>	R3	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Huachuca milkvetch	<i>Astragalus hypoxylus</i>	R3	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Violet milkvetch	<i>Astragalus iodopetalus</i>	R2	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Isely's milkvetch	<i>Astragalus iselyi</i>	R4	1	6	0	2	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Starveling milkvetch	<i>Astragalus jejunus</i> var. <i>jejunus</i>	R4	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long Valley milkvetch	<i>Astragalus johannis-howellii</i>	R4, R5	0	1	0	52	0	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kerr's milkvetch	<i>Astragalus kerrii</i>	R3	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Lemmon's milk-vetch	<i>Astragalus lemmonii</i>	R5, R6	0	4	0	14	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Antonio milk-vetch	<i>Astragalus lentiginosus</i> var. <i>antonius</i>	R5	0	12	0	10	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kern plateau milk-vetch	<i>Astragalus lentiginosus</i> var. <i>kernensis</i>	R5	0	11	0	16	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broad-pod freckled milkvetch	<i>Astragalus lentiginosus</i> var. <i>latus</i>	R4	0	11	0	10	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Big Bear Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>sierrae</i>	R5	0	52	0	44	0	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Park milkvetch	<i>Astragalus leptaleus</i>	R1, R2	0	3	0	15	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Navajo Lake milkvetch	<i>Astragalus limnocharis</i> var. <i>limnocharis</i>	R4	2	2	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Table Cliff milkvetch	<i>Astragalus limnocharis</i> var. <i>tabulaeus</i>	R4	0	8	0	1	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Least bladdery milk-vetch	<i>Astragalus microcystis</i>	R6	0	16	0	10	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chaco milkvetch	<i>Astragalus micromerius</i>	R3	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Watson's dwarf milkvetch	<i>Astragalus misellus</i> var. <i>misellus</i>	R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Missouri, or Archuleta milkvetch	<i>Astragalus missouriensis</i> var. <i>humistratus</i>	R2	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mono milk-vetch	<i>Astragalus monoensis</i>	R5	0	18	0	54	0	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cooper's milkvetch	<i>Astragalus neglectus</i>	R9	1	1	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Diego milk-vetch	<i>Astragalus oocarpus</i>	R5	0	1	0	14	1	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lee Canyon milkvetch	<i>Astragalus oophorus</i> var. <i>clokeyanus</i>	R4	0	13	1	2	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lavin's egg milkvetch	<i>Astragalus oophorus</i> var. <i>lavinii</i>	R4	0	15	0	34	1	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jaeger's milk-vetch	<i>Astragalus pachypus</i> var. <i>jaegeri</i>	R5	0	2	0	12	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Payson's milkvetch	<i>Astragalus paysonii</i>	R4	0	28	0	9	0	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Peck's milk-vetch	<i>Astragalus peckii</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Aztec milkvetch	<i>Astragalus proximus</i>	R2	2	4	0	6	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Modoc milk-vetch	<i>Astragalus pulsiferae</i> var. <i>coronensis</i>	NA	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pulsifer's milk-vetch	<i>Astragalus pulsiferae</i> var. <i>pulsiferae</i>	R5	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Suksdorf's milk-vetch	<i>Astragalus pulsiferae</i> var. <i>suksdorffii</i>	R5	0	5	0	3	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Raven's milk-vetch	<i>Astragalus ravenii</i>	R5	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spring Mountain milkvetch	<i>Astragalus remotus</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ripley's milkvetch	<i>Astragalus ripleyi</i>	R2, R3	0	3	0	6	1	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robbins' milkvetch	<i>Astragalus Robbinsii</i> var. <i>minor</i>	R9	0	42	0	27	5	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lamoille canyon milkvetch	<i>Astragalus Robbinsii</i> var. <i>occidentalis</i>	R4	7	4	0	13	2	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rusby's milkvetch	<i>Astragalus rusbyi</i>	R3	0	19	0	6	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bitterroot milk-vetch	<i>Astragalus scaphoides</i>	R1	0	2	0	7	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shevock's milk-vetch	<i>Astragalus shevockii</i>	R5	0	6	0	2	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Soxman's milkvetch	<i>Astragalus soxmaniorum</i>	R8	5	21	12	5	9	52	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bastard kentrophyta	<i>Astragalus tegetarioides</i>	R6	0	5	0	4	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Railhead milkvetch	<i>Astragalus terminalis</i>	R1	0	13	0	30	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tidestrom's milk-vetch	<i>Astragalus tidestromii</i>	R5	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Toquima milkvetch	<i>Astragalus toquimanus</i>	R4	0	5	0	9	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Currant milkvetch	<i>Astragalus uncialis</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White cloud milkvetch	<i>Astragalus vexilliflexus</i> var. <i>nubilus</i>	R4	0	3	0	6	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Webber's milk-vetch	<i>Astragalus webberi</i>	R5	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
One-flowered milkvetch	<i>Astragalus wittmannii</i>	R3	0	0	0	1	0	1	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
Guard milkvetch	<i>Astragalus zionis</i> var. <i>vigulus</i>	R4	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pagosa milkvetch	<i>Astragalus missouriensis</i> var. <i>humistratus</i>	R3	NA	x	NA	x	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	Decker (2006)
Sandweed	<i>Athyrsanus pusillus</i>	R1	0	24	0	36	2	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's bristlescale	<i>Atriplex parishii</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth yellow false foxglove	<i>Aureolaria flava</i>	R9	37	2	5	0	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fernleaf yellow false foxglove	<i>Aureolaria pedicularia</i>	R9	2	0	3	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ayenia	<i>Ayenia truncata</i> (= <i>A. glabra</i>)	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Flora of North America (1993+)
San Simeon baccharis	<i>Baccharis plummerae</i> ssp. <i>glabrata</i>	R5	0	0	2	4	4	10	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bi-scale balsamroot	<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	R5	0	0	0	2	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Tall blue wild indigo	<i>Baptisia australis</i> var. <i>aberrans</i>	R8	12	9	21	2	4	48	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Blue wild indigo	<i>Baptisia australis</i> var. <i>australis</i>	R9	6	0	0	0	2	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Apalachicola wild indigo	<i>Baptisia megacarpa</i>	R8	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow wild indigo	<i>Baptisia tinctoria</i>	R9	5	2	3	1	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twining screwstem	<i>Bartonia paniculata</i>	R9	4	7	2	0	3	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas screwstem	<i>Bartonia texana</i>	R8	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American sloughgrass	<i>Beckmannia syzigachne</i>	R9	2	11	0	17	6	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bensonia	<i>Bensoniella oregana</i>	R5, R6	2	22	0	7	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American barberry	<i>Berberis canadensis</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Supplejack	<i>Berchemia scandens</i>	R9	3	0	3	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wild parsnip	<i>Berula erecta</i>	R9	0	21	0	22	8	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra Blanca kittentails	<i>Besseyea oblongifolia</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf white birch	<i>Betula minor</i>	R9	1	17	4	0	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swamp birch	<i>Betula pumila</i>	R1	0	3	3	0	30	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beck's water-marigold	<i>Bidens beckii</i>	R1	3	0	3	1	6	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Deer fern	<i>Blechnum spicant</i>	R1	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Hairy woodmint	<i>Blephilia hirsuta</i>	R9	18	0	2	0	3	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf goldenstar	<i>Bloomeria humilis</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bodie hills rockcress	<i>Boechera</i> (= <i>Arabis</i>) <i>bodiensis</i>	R4, R5	0	4	0	22	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grouse creek rockcress	<i>Boechera</i> (= <i>Arabis</i>) <i>falcatoria</i>	R4	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spring mountains rockcress	<i>Boechera</i> (= <i>Arabis</i>) <i>nevadensis</i>	R4	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ophir rockcress	<i>Boechera</i> (= <i>Arabis</i>) <i>ophira</i>	R4	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Washoe tall rockcress	<i>Boechera</i> (= <i>Arabis</i>) <i>rectissima</i> var. <i>simulans</i>	R4	2	34	2	60	3	101	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Galena creek rockcress	<i>Boechera (=Arabis) rigidissima</i> var. <i>demota</i>	R4	2	34	2	60	3	101	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tiehm rockcress	<i>Boechera (=Arabis) tiehmii</i>	R4	0	6	0	11	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sickle-pod rockcress	<i>Boechera atrorubens</i>	R6	0	17	0	4	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Constance's rockcress	<i>Boechera constancei</i>	R5	0	7	0	6	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Davidson's rockcress	<i>Boechera davidsonii</i>	R6	2	7	0	36	0	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hidden rockcress	<i>Boechera evadens</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sapphire rockcress	<i>Boechera fecunda</i>	R1	0	14	0	1	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hell's Canyon rockcress	<i>Boechera hastatula</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Crater lake rockcress	<i>Boechera horizontalis</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Johnston's rockcress	<i>Boechera johnstonii</i>	R5	0	5	0	26	1	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Koehler's rockcress	<i>Boechera koehleri</i>	R5	0	9	1	25	2	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Adams rockcress	<i>Boechera paddoensis</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's rockcress	<i>Boechera parishii</i>	R5	0	32	0	91	0	123	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino rockcress	<i>Boechera peirsonii</i>	R5	0	6	0	6	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinzl's rockcress	<i>Boechera pinzliae</i>	R5	1	0	0	6	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shevock's rockcress	<i>Boechera shevockii</i>	R5	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shockley's rockcress	<i>Boechera shockleyi</i>	R5	0	7	0	57	0	64	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Drummond's rockcress	<i>Boechera stricta</i>	R9	16	76	6	116	17	231	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tiehm's rockcress	<i>Boechera tiehmii</i>	R5	0	6	0	11	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tulare rockcress	<i>Boechera tularensis</i>	R5	0	4	0	3	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon bolandra	<i>Bolandra oregana</i>	R6	0	28	1	11	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain doll's-daisy	<i>Boltonia montana</i>	R8	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trianglelobe moonwort	<i>Botrychium ascendens</i>	R1, R2, R4, R5, R6, R9	1	17	1	12	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sparse-lobe grapefern	<i>Botrychium biternatum</i>	R9	7	5	1	1	2	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prairie dunewort	<i>Botrychium campestre</i>	R1, R2, R6, R9	8	1	0	0	3	12	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Scalloped moonwort	<i>Botrychium crenulatum</i>	R1, R3, R4, R5, R6, R9	1	37	0	31	2	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western moonwort	<i>Botrychium hesperium</i>	R1, R6	7	44	1	13	3	68	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama grapefern	<i>Botrychium jenmanii</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lanceleaf moonwort	<i>Botrychium lanceolatum</i>	R1	21	58	4	81	3	167	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lanceleaf grapefern	<i>Botrychium lanceolatum</i> var. <i>angustisegmentum</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender moonwort	<i>Botrychium lineare</i>	R1, R4, R5, R6	0	6	0	2	2	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common moonwort	<i>Botrychium lunaria</i>	R5, R6, R9	11	32	1	16	0	60	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Michigan moonwort	<i>Botrychium michiganense</i>	R1, R6, R9	3	13	1	0	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mingan moonwort	<i>Botrychium minganense</i>	R5, R9	1	63	0	36	2	102	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain moonwort	<i>Botrychium montanum</i>	R1, R5, R6	0	45	5	11	1	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little goblin moonwort	<i>Botrychium mormo</i>	R9	0	1	5	0	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Leathery grapefern	<i>Botrychium multifidum</i>	R1, R9	1	35	1	4	12	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common moonwort	<i>Botrychium neolunaria</i>	R1	3	5	0	10	1	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bluntlobe grapefern	<i>Botrychium oneidense</i>	R9	1	0	1	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale moonwort	<i>Botrychium pallidum</i>	R1, R9	1	4	0	3	2	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Peculiar moonwort	<i>Botrychium paradoxum</i>	R1, R2, R4, R5, R6	0	6	0	3	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stalked moonwort	<i>Botrychium pedunculosum</i>	R1, R5, R6	0	13	0	1	1	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern moonwort	<i>Botrychium pinnatum</i>	R1, R5	1	64	12	56	2	135	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pumice grape-fern	<i>Botrychium pumicola</i>	R5, R6	0	7	0	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ternate grapefern	<i>Botrychium rugulosum</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Least grapefern	<i>Botrychium simplex</i>	R1, R4, R9	1	20	0	23	6	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Least grapefern	<i>Botrychium simplex</i> var. <i>tenebrosum</i>	R9	8	0	1	0	2	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Spoon-leaf moonwort	<i>Botrychium spathulatum</i>	R9, R10	3	2	1	1	0	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Moosewort	<i>Botrychium tunux</i>	R4, R5, R10	0	1	0	2	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green triangle moonwort	<i>Botrychium viride</i>	R1	NA	x	NA	NA	x	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	Giblin and Legler (2003+)
Giant moonwort	<i>Botrychium yaaxudakeit</i>	R5, R10	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Farrar (2011)
Sideoats grama	<i>Bouteloua curtipendula</i>	R9	2	0	0	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Watershield	<i>Brasenia schreberi</i>	R1	4	8	4	0	7	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth northern-rockcress	<i>Braya glabella</i>	R2	0	1	0	7	2	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Low braya	<i>Braya humilis</i>	R1	0	6	0	13	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kaweah brodiaea	<i>Brodiaea insignis</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orcutt's brodiaea	<i>Brodiaea orcuttii</i>	R5	0	3	1	18	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Indian Valley brodiaea	<i>Brodiaea rosea</i>	R5	0	7	0	8	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Rosa basalt brodiaea	<i>Brodiaea santarosae</i>	R5	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf brodiaea	<i>Brodiaea terrestris</i>	R6	0	0	0	15	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nottoway brome grass	<i>Bromus nottowyanus</i>	R9	12	0	1	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bush-violet	<i>Browallia eludens</i>	R3	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bluehearts	<i>Buchnera americana</i>	R9	1	1	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Piratebush	<i>Buckleya distichophylla</i>	R8	4	2	19	0	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bupleurum	<i>Bupleurum americanum</i>	R6	0	39	0	60	0	99	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brewer's reedgrass	<i>Calamagrostis breweri</i>	R6	0	15	1	25	3	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue-joint reedgrass	<i>Calamagrostis canadensis</i> var. <i>langsdownii</i>	R9	0	5	1	1	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ofer hollow reedgrass	<i>Calamagrostis porteri</i> ssp. <i>insperata</i>	R9	7	0	0	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Porter's reedgrass	<i>Calamagrostis porteri</i> ssp. <i>porteri</i>	R9	64	0	32	0	0	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple reedgrass	<i>Calamagrostis purpurascens</i>	R9	1	53	0	92	1	147	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New England northern reed grass	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	R9	0	41	2	16	6	65	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cascade reedgrass	<i>Calamagrostis tweedyi</i>	R4	0	39	0	5	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rivergrass	<i>Calamovilfa arcuata</i>	R8	0	0	3	0	3	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bush's poppy-mallow	<i>Callirhoe bushii</i>	R8, R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Autumnal water-starwort	<i>Callitrichia hermaphroditica</i>	R9	2	19	1	8	5	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Two headed water-starwort	<i>Callitrichia heterophylla</i>	R9	6	11	1	14	5	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wheel fruited water-starwort	<i>Callitrichia trochlearis</i>	R6	0	2	3	6	2	13	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Club-haired mariposa lily	<i>Calochortus clarvatus</i> var. <i>clavatus</i>	R5	x	x	x	x	NA	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	Calflora (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pleasant valley mariposa lily	<i>Calochortus clavatus</i> var. <i>avius</i>	R5	0	15	0	5	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender mariposa lily	<i>Calochortus clavatus</i> var. <i>gracilis</i>	R5	0	4	0	21	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dunn's mariposa lily	<i>Calochortus dunnii</i>	R5	0	1	3	14	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inyo county star-tulip	<i>Calochortus excavatus</i>	R5	0	7	0	27	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Late-flowered mariposa-lily	<i>Calochortus fimbriatus</i>	R5	0	41	30	129	0	200	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Winding mariposa lily	<i>Calochortus flexuosus</i>	R2	0	10	0	72	0	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greene's mariposa-lily	<i>Calochortus greenei</i>	R5, R6	0	8	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pecos mariposa lily	<i>Calochortus gunnisonii</i> var. <i>perpulcher</i>	R3	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's mariposa-lily	<i>Calochortus howellii</i>	R6	0	23	0	35	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-haired star-tulip	<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	R5	0	10	0	6	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Peck's mariposa-lily	<i>Calochortus longebarbatus</i> var. <i>peckii</i>	R6	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green-band mariposa-lily	<i>Calochortus macrocarpus</i> var. <i>maculosus</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shasta star-tulip	<i>Calochortus nudus</i>	R6	0	193	0	44	21	258	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Luis mariposa lily	<i>Calochortus obispoensis</i>	R5	0	13	0	18	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Munz's mariposa lily	<i>Calochortus palmeri</i> var. <i>munzii</i>	R5	0	16	1	42	0	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Palmer's mariposa lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	R5	0	12	0	67	0	79	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou mariposa lily	<i>Calochortus persistens</i>	R5	0	17	0	8	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Luis obispo mariposa lily	<i>Calochortus simulans</i>	R5	0	4	8	38	0	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alkali mariposa lily	<i>Calochortus striatus</i>	R5	0	10	1	17	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Umpqua mariposa-lily	<i>Calochortus umpquaensis</i>	R6	0	6	0	2	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Intermediate mariposa lily	<i>Calochortus weedii</i> var. <i>intermedius</i>	R5	0	3	2	42	0	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shirley Meadows star-tulip	<i>Calochortus westonii</i>	R5	0	11	0	28	0	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Many-flower grass-pink	<i>Calopogon multiflorus</i>	R8	0	4	0	1	6	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oklahoma grass-pink	<i>Calopogon oklahomensis</i>	R8	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Floating marsh-marigold	<i>Caltha natans</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flowered calycadenia	<i>Calycadenia micrantha</i>	R5	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Butte County calycadenia	<i>Calycadenia oppositifolia</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf western rosinweed	<i>Calycadenia villosa</i>	R5	0	1	0	7	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fairy slipper	<i>Calypso bulbosa</i>	R9	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy pussypaws	<i>Calyptidium pygmaeum</i>	R5	0	4	0	11	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rosy pussypaws	<i>Calyptidium roseum</i>	R6	0	5	0	44	0	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cusick camas	<i>Camassia cusickii</i>	R4	0	12	0	10	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's camas	<i>Camassia howellii</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Washoe suncup	<i>Camissonia pusilla</i>	R6	0	5	0	84	0	89	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mono Hot Springs evening-primrose	<i>Camissonia sierrae</i> ssp. <i>alticola</i>	R5	0	7	0	3	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hardham's evening-primrose	<i>Camissoniopsis hardhamiae</i>	R5	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh bellflower	<i>Campanula aparinoides</i>	R1, R9	1	0	1	0	14	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alaska harebell	<i>Campanula lasiocarpa</i>	R6	4	10	0	42	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Castle crags harebell	<i>Campanula shetleri</i>	R5	0	16	0	5	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Wilkins' harebell	<i>Campanula wilkinsiana</i>	R5	0	9	0	11	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy poppy	<i>Canbya candida</i>	R5	0	8	0	24	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiltepin	<i>Capsicum annuum</i> var. <i>glabriusculum</i>	R3	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine bittercress	<i>Cardamine bellidifolia</i>	R9	0	27	0	17	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small mountain bittercress	<i>Cardamine clematitis</i>	R8	3	3	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cutleaf toothwort	<i>Cardamine concatenata</i>	R9	23	0	0	0	1	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Constance's bittercress	<i>Cardamine constancei</i>	R1	0	35	0	18	2	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large toothwort	<i>Cardamine maxima</i>	R9	3	1	1	1	4	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand bittercress	<i>Cardamine parviflora</i> var. <i>arenicola</i>	R9	5	4	2	0	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Saddle Mountain bittercress	<i>Cardamine pattersonii</i>	R6	0	20	5	4	0	29	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cuckoo-flower	<i>Cardamine pratensis</i>	R9	2	0	1	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cuckoo-flower	<i>Cardamine pratensis</i> var. <i>pratensis</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Summer sedge	<i>Carex aestivalis</i>	R9	26	0	8	0	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Winged sedge	<i>Carex alata</i>	R9	1	9	1	0	3	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Foxtail sedge	<i>Carex alopecoidea</i>	R1, R2	5	1	1	0	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Big-leaf sedge	<i>Carex amplifolia</i>	R1	0	113	0	31	0	144	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow-flowered sedge	<i>Carex anthoxanthea</i>	R6	1	16	5	11	2	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Water sedge	<i>Carex aquatilis</i> var. <i>aquatilis</i>	R9	6	122	4	49	19	200	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hay sedge	<i>Carex argyrantha</i>	R9	1	0	1	0	3	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Awned sedge	<i>Carex atherodes</i>	R9	3	25	1	7	8	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Star sedge	<i>Carex atlantica</i>	R9	12	1	2	0	1	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Atlantic sedge	<i>Carex atlantica</i> ssp. <i>atlantica</i>	R9	8	3	1	0	2	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black sedge	<i>Carex atratiformis</i>	R9	1	17	0	4	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blackened sedge	<i>Carex atrosquama</i>	R6	0	18	0	19	3	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rocky mountain sedge	<i>Carex backii</i>	R9	15	16	9	5	4	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bailey's sedge	<i>Carex baileyi</i>	R9	14	2	8	0	1	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bigelow's sedge	<i>Carex bigelowii</i>	R9	18	67	15	0	0	100	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short stemmed sedge	<i>Carex brevicaulis</i>	R6	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bromelike sedge	<i>Carex bromoides</i>	R9	12	1	3	0	6	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bryson's sedge	<i>Carex brysonii</i>	R8	3	0	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Buxbaum's sedge	<i>Carex buxbaumii</i>	R9	2	7	0	3	7	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hair-like sedge	<i>Carex capillaris</i>	R1, R6, R9	4	48	2	22	19	95	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Capitate sedge	<i>Carex capitata</i>	R6	0	17	1	2	5	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Capitate sedge	<i>Carex capitata</i> ssp. <i>arctogena</i>	R9	NA	x	NA	NA	x	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	Calflora (2024)
Chapman's sedge	<i>Carex chapmanii</i>	R8	0	0	0	0	3	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cherokee sedge	<i>Carex cherokeensis</i>	R9	3	0	0	0	3	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chihuahuan sedge	<i>Carex chihuahuensis</i>	R3	0	4	2	6	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cordroot/creeping sedge	<i>Carex chordorrhiza</i>	R1, R6	2	7	2	0	23	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coiled sedge	<i>Carex circinata</i>	R6	0	13	1	14	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fibrous-root sedge	<i>Carex communis</i> var. <i>amplisquama</i>	R8	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Bristly sedge	<i>Carex comosa</i>	R1, R6	3	0	0	0	3	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beautiful sedge	<i>Carex concinna</i>	R6, R9	1	43	0	10	4	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cordilleran sedge	<i>Carex cordillerana</i>	R1, R6	2	13	0	7	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern sedge	<i>Carex cryptolepis</i>	R9	5	7	3	2	25	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clustered sedge	<i>Carex cumulata</i>	R9	0	1	2	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dry-spike sedge	<i>Carex davyi</i>	R6	0	16	0	12	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cypress-knee sedge	<i>Carex decomposita</i>	R8, R9	9	6	0	0	4	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lesser panicle sedge	<i>Carex diandra</i>	R2, R6	6	31	4	12	21	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bristleleaf sedge	<i>Carex eburnea</i>	R1, R6	12	12	21	0	4	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hammock sedge	<i>Carex fissa</i> var. <i>fissa</i>	R9	4	0	0	1	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Dryspike sedge	<i>Carex foenea</i>	R9	5	41	23	17	10	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Handsome sedge	<i>Carex formosa</i>	R1	0	0	0	0	1	1	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Frank's sedge	<i>Carex frankii</i>	R9	7	0	2	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant sedge	<i>Carex gigantea</i>	R9	2	0	3	0	10	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Graceful sedge	<i>Carex gracillima</i>	R9	3	0	2	0	4	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow bog sedge	<i>Carex gynocrates</i>	R6	2	7	0	3	6	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hudson bay sedge	<i>Carex heleonastes</i>	R9	0	1	1	1	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Different nerve sedge	<i>Carex heteroneura</i> var. <i>epapilloosa</i>	R6	2	39	3	64	11	119	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pubescent sedge	<i>Carex hirtifolia</i>	R9	16	1	1	0	1	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho sedge	<i>Carex idahoae</i>	R1, R6	0	15	0	49	2	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Impressed-nerved sedge	<i>Carex impressinervia</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Seaside sedge	<i>Carex incurviformis</i>	R4	0	0	0	11	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greater bladder sedge	<i>Carex intumescens</i>	R9	6	3	8	1	3	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Juniper sedge	<i>Carex juniperorum</i>	R8, R9	13	0	1	1	0	15	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
A sedge	<i>Carex klamathensis</i>	R6	0	5	0	21	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender sedge	<i>Carex lasiocarpa</i> var. <i>americana</i>	R6	2	25	1	14	4	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Waterfall's sedge	<i>Carex latebracteata</i>	R8	6	8	22	1	0	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broad looseflower sedge	<i>Carex laxiflora</i> var. <i>laxiflora</i>	R9	4	0	3	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shore sedge	<i>Carex lenticularis</i>	R9	8	56	5	16	10	95	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale/livid sedge	<i>Carex livida</i>	R1, R2, R6	4	47	5	8	26	90	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Livid sedge	<i>Carex livida</i> var. <i>radicaulis</i>	R9	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Louisiana sedge	<i>Carex louisianica</i>	R9	3	3	0	0	12	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue ridge sedge	<i>Carex lucorum</i> var. <i>austrolucorum</i>	R9	3	0	2	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
False hop sedge	<i>Carex lupuliformis</i>	R9	2	0	0	0	3	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black and purple sedge	<i>Carex luzulina</i> var. <i>atropurpurea</i>	R4	0	3	0	3	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bighead sedge	<i>Carex macrocephala</i>	R6	0	11	2	1	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boreal bog sedge	<i>Carex magellanica</i> ssp. <i>irrigua</i>	R1, R9	3	58	9	4	24	98	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Intermediate sedge	<i>Carex media</i>	R6	0	21	0	7	2	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Michaux's sedge	<i>Carex michauxiana</i>	R9	2	4	0	1	15	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pyrenaean sedge	<i>Carex micropoda</i>	R6	1	15	1	76	3	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spikenard sedge	<i>Carex nardina</i>	R6	0	30	1	44	7	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Sierra nerved sedge	<i>Carex nervina</i>	R6	1	71	0	8	2	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black-edge sedge	<i>Carex nigromarginata</i>	R9	22	6	8	1	1	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New England sedge	<i>Carex novae-angliae</i>	R9	1	1	3	0	4	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Luis obispo sedge	<i>Carex obispoensis</i>	R5	0	19	1	10	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blunt sedge	<i>Carex obtusata</i>	R6	1	23	1	36	1	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western sedge	<i>Carex occidentalis</i>	R1	6	157	8	70	6	247	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fewseed sedge	<i>Carex oligosperma</i>	R9	4	7	3	0	56	70	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sharp-scale sedge	<i>Carex oxylepis</i> var. <i>pubescens</i>	R9	4	0	1	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Few-flowered sedge	<i>Carex pauciflora</i>	R6	4	22	11	9	41	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New sedge	<i>Carex pelocarpa</i>	R6	0	11	0	39	1	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Variable sedge	<i>Carex polymorpha</i>	R8	13	2	7	0	1	23	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Drooping sedge	<i>Carex prasina</i>	R9	8	3	7	0	2	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern meadow sedge	<i>Carex praticola</i>	R9	4	72	0	32	13	121	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smokey Mountain sedge	<i>Carex propinata</i>	R6	0	19	0	36	0	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Radford's sedge	<i>Carex radfordii</i>	R8	4	0	1	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Retorse sedge	<i>Carex retrorsa</i>	R6	10	22	12	2	15	61	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Richardson's sedge	<i>Carex richardsonii</i>	R9	0	15	1	1	1	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roan Mountain sedge	<i>Carex roanensis</i>	R9	4	0	2	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short sedge	<i>Carex rossii</i>	R9	5	162	9	68	3	247	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beaked sedge	<i>Carex rostrata</i>	R1, R6	5	43	3	13	24	88	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Russet sedge	<i>Carex saxatilis</i>	R6	3	48	1	21	12	85	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Schweinitz's sedge	<i>Carex schweinitzii</i>	R8, R9	0	0	2	0	2	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bulrush sedge	<i>Carex scirpoidea</i>	R9	4	22	1	72	7	106	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canadian single-spike sedge	<i>Carex scirpoidea</i> ssp. <i>scirpoidea</i>	R6	0	16	0	11	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alaskan single-spiked sedge	<i>Carex scirpoidea</i> ssp. <i>stenocholaena</i>	R6	2	23	0	18	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pointed broom sedge	<i>Carex scoparia</i>	R1	2	16	1	13	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dioecious sedge	<i>Carex sterilis</i>	R9	1	1	0	0	3	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Straw sedge	<i>Carex straminea</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-styled sedge	<i>Carex stylosa</i>	R6	1	16	8	12	4	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dark alpine sedge	<i>Carex subnigricans</i>	R6	0	34	0	78	3	115	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Weak arctic sedge	<i>Carex supina</i> var. <i>spaniocarpa</i>	R9	4	8	3	11	8	34	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Many-headed sedge	<i>Carex sychnocephala</i>	R6, R9	0	5	0	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tahoe sedge	<i>Carex tahoensis</i>	R6	3	18	0	45	3	69	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Quill sedge	<i>Carex tenera</i>	R6	4	17	4	2	3	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sparseflower sedge	<i>Carex tenuiflora</i>	R6	4	9	0	3	29	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rigid sedge	<i>Carex tetanica</i>	R9	10	0	3	1	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
<i>Carex timida</i>	<i>Carex timida</i>	R8	7	0	1	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy-fruit sedge	<i>Carex trichocarpa</i>	R9	3	0	2	0	5	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cochise sedge	<i>Carex ultra</i> (= <i>C. spissa</i> var. <i>ultra</i>)	R3	0	5	2	12	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Valley sedge	<i>Carex vallicola</i>	R6	5	70	4	80	1	160	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Native sedge	<i>Carex vernacula</i>	R6	0	39	0	58	4	101	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wiegand's sedge	<i>Carex wiegandii</i>	R9	0	1	1	0	12	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Willdenow's sedge	<i>Carex willdenowii</i>	R9	9	2	4	0	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pretty sedge	<i>Carex woodii</i>	R9	20	1	3	0	1	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Muir's tarplant	<i>Carlquista muiirii</i>	R5	NA	X	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Tree-anemone	<i>Carpenteria californica</i>	R5	0	12	0	12	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sweet pignut hickory	<i>Carya glabra</i>	R9	5	2	3	0	1	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand hickory	<i>Carya pallida</i>	R9	6	6	2	1	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clubmoss mountain-heather	<i>Cassiope lycopodioides</i>	R6	2	10	2	22	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ozark chinquapin	<i>Castanea pumila var. ozarkensis</i>	R8, R9	8	3	2	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Aquarius paintbrush	<i>Castilleja aquariensis</i>	R4	0	8	2	12	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green-tinged paintbrush	<i>Castilleja chlorotica</i>	R6	0	9	0	8	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Christ's Indian paintbrush	<i>Castilleja christii</i>	R4	0	3	0	20	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Collegial paintbrush	<i>Castilleja collegiorum</i>	R6	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coville Indian paintbrush	<i>Castilleja covilleana</i>	R1	1	73	0	80	0	154	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Obscure Indian-paintbrush	<i>Castilleja cryptantha</i>	R6	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rural paintbrush	<i>Castilleja flava var. rustica</i>	R6	0	22	0	65	1	88	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fraternal paintbrush	<i>Castilleja fraterna</i>	R6	0	10	0	2	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Gleason's paintbrush	<i>Castilleja gleasonii</i>	R5	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Kaibab paintbrush	<i>Castilleja kaibabensis</i>	R3	0	30	0	14	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino Mountains owl's-clover	<i>Castilleja lasiorhyncha</i>	R5	0	16	0	55	0	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountains paintbrush	<i>Castilleja mogollonica</i>	R3	0	20	0	4	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trans-Pecos Indian paintbrush	<i>Castilleja nervata</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tushar paintbrush	<i>Castilleja parvula var. parvula</i>	R4	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Reveal paintbrush	<i>Castilleja parvula var. revealii</i>	R4	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mojave paintbrush	<i>Castilleja plagiotaoma</i>	R5	0	5	1	37	1	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple alpine paintbrush	<i>Castilleja rubida</i>	R6	0	11	0	2	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Split-hair paintbrush	<i>Castilleja schizotricha</i>	R6	0	27	1	45	0	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Labrador Indian-paintbrush	<i>Castilleja septentrionalis</i>	R9	46	112	8	58	19	243	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thompson's paintbrush	<i>Castilleja thompsonii</i>	R6	0	19	0	15	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sticky paintbrush	<i>Castilleja viscidula</i>	R6	1	14	4	62	3	84	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Barbara jewel-flower	<i>Caulanthus amplexicaulis var. barbaraee</i>	R5	0	3	2	13	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lemmon's jewel-flower	<i>Caulanthus lemmonii</i>	R5	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Payson's jewel-flower	<i>Caulanthus simulans</i>	R5	0	7	1	23	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lakeside ceanothus	<i>Ceanothus cyaneus</i>	R5	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand butterfly-pea	<i>Centrosema arenicola</i>	R8	0	6	0	0	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prickly hornwort	<i>Ceratophyllum echinatum</i>	R9	0	0	1	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shasta pincushion	<i>Chaenactis suffrutescens</i>	R5, R6	0	43	0	7	0	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thompson's chaenactis	<i>Chaenactis thompsonii</i>	R6	0	14	0	18	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Desert chaenactis	<i>Chaenactis xantiana</i>	R6	0	9	0	79	0	88	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blazing star	<i>Chamaelirium luteum</i>	R9	28	11	36	0	2	77	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coville's lip-fern	<i>Cheilanthes covillei</i>	R6	0	27	1	93	2	123	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fee's lip-fern	<i>Cheilanthes feei</i>	R6	5	42	1	33	1	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Coastal lipfern	<i>Cheilanthes intertexta</i>	R6	0	7	0	9	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cuthbert's turtlehead	<i>Chelone cuthbertii</i>	R8	2	1	5	0	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rose turtlehead	<i>Chelone obliqua</i> var. <i>speciosa</i>	R9	1	0	1	0	4	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sandhill goosefoot	<i>Chenopodium cycloides</i>	R2	0	0	0	1	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fogg's goosefoot	<i>Chenopodium foggii</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth goosefoot	<i>Chenopodium subglabrum</i>	R1	0	0	1	2	0	3	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Spotted wintergreen	<i>Chimaphila maculata</i>	R9	11	3	7	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fringetree	<i>Chionanthus virginicus</i>	R9	8	10	3	0	3	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spearhead	<i>Chlorocrambe hastata</i>	R6	12	9	3	11	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrow-leaved amole	<i>Chlorogalum angustifolium</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf soaproot	<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Cruz star leaf	<i>Choisya mollis</i>	R3	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blakley's spineflower	<i>Chorizanthe blakleyi</i>	R5	0	3	0	4	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brewer's spineflower	<i>Chorizanthe breweri</i>	R5	0	7	0	5	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Fernando valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parry's spineflower	<i>Chorizanthe parryi</i> var. <i>parryi</i>	R5	0	0	0	8	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Straight-awned spineflower	<i>Chorizanthe rectispina</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-bracted spineflower	<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	R5	0	1	0	12	1	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Golden chinquapin	<i>Chrysolepis chrysophylla</i> var. <i>chrysophylla</i>	R6	1	64	0	10	1	76	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern golden-carpet	<i>Chrysosplenium tetrandrum</i>	R6	1	26	1	8	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tusayan rabbitbrush, disturbed rabbitbrush	<i>Chrysothamnus molestus</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Centennial rabbitbrush	<i>Chrysothamnus parryi</i> ssp. <i>montanus</i>	R4	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Timwort	<i>Cicendia quadrangularis</i>	R6	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bulb-bearing water-hemlock	<i>Cicuta bulbifera</i>	R1, R6	6	1	1	0	10	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona bugbane	<i>Cimicifuga arizonica</i>	R3	4	0	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander's woodreed	<i>Cinna bolanderi</i>	R5	0	10	0	3	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Carolina thistle	<i>Cirsium carolinianum</i>	R9	19	14	7	3	1	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Edible thistle	<i>Cirsium edule</i> var. <i>macounii</i>	R10	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gila thistle	<i>Cirsium gilense</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hill's thistle	<i>Cirsium hillii</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mogollon thistle	<i>Cirsium parryi</i> ssp. <i>mogollonicum</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Weak thistle	<i>Cirsium remotifolium</i>	R6	0	104	0	35	3	142	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wright's marsh thistle	<i>Cirsium wrightii</i>	R3	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California saw-grass	<i>Cladium californica</i>	R5	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Calflora (2024)
Yellow-wood	<i>Cladrastis kentukea</i>	R9	17	0	4	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small's southern clarkia	<i>Clarkia australis</i>	R5	0	5	0	17	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mariposa clarkia	<i>Clarkia biloba</i> ssp. <i>australis</i>	R5	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern clarkia	<i>Clarkia borealis</i> ssp. <i>borealis</i>	R5	0	6	0	4	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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White-stemmed clarkia	<i>Clarkia gracilis</i> ssp. <i>albicaulis</i>	R5	0	7	0	4	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jolon clarkia	<i>Clarkia jolonensis</i>	R5	0	2	0	0	2	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Merced clarkia	<i>Clarkia lingulata</i>	R5	0	2	0	6	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mildred's clarkia	<i>Clarkia mildrediae</i> ssp. <i>mildrediae</i>	R5	0	15	0	15	1	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mosquin's clarkia	<i>Clarkia mosquinii</i>	R5	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pacific lance-leaved springbeauty	<i>Claytonia multiscapa</i> ssp. <i>pacifica</i>	R6	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Spreading pogonia	<i>Cleistesiopsis bifaria</i>	R8	11	4	9	0	2	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Addison's leatherflower	<i>Clematis addisonii</i>	R8	9	1	2	0	0	12	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Virginia white-hair leatherflower	<i>Clematis coactilis</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona leatherflower, clustered leatherflower	<i>Clematis hirsutissima</i> var. <i>hirsutissima</i>	R3	8	16	0	16	1	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple clematis var. occidentalis	<i>Clematis occidentalis</i> var. <i>occidentalis</i>	R9	3	8	2	0	4	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Millboro leatherflower	<i>Clematis viticaulis</i>	R8	5	1	1	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Miguel savory	<i>Clinopodium chandleri</i>	R5	0	12	7	34	1	54	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Toothed savory	<i>Clinopodium dentatum</i>	R8	0	13	0	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sessileleaf scurvygrass	<i>Cochlearia sessilifolia</i>	R10	0	2	0	5	0	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Florida jointgrass	<i>Coelorachis tuberculosa</i>	R8	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flowered blue-eyed mary	<i>Collinsia parviflora</i>	R1	2	45	0	50	1	98	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Few-flowered collinsia	<i>Collinsia sparsiflora</i> var. <i>bruceae</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada horse-balm	<i>Collinsonia canadensis</i>	R9	24	0	2	0	1	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Deepwoods horsebalm	<i>Collinsonia tuberosa</i>	R8	3	3	4	0	8	18	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Whorled horsebalm	<i>Collinsonia verticillata</i>	R8	12	0	1	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flexible alpine collomia	<i>Collomia debilis</i> var. <i>camporum</i>	R1, R4	0	7	0	6	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Talus collomia	<i>Collomia larsenii</i>	R5	0	26	0	10	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Mazama collomia	<i>Collomia mazama</i>	R6	0	17	0	0	1	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flaming trumpet	<i>Collomia rawsoniana</i>	R5	0	22	0	2	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender gentian	<i>Comastoma tenellum</i>	R6	0	23	0	57	7	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mexican hemlock parsley	<i>Conioselinum mexicanum</i>	R3	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American cancer-root	<i>Conopholis americana</i>	R9	19	1	9	0	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spleenwort-leaved goldthread	<i>Coptis aspleniiifolia</i>	R6	4	117	16	15	1	153	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-leaf goldthread	<i>Coptis trifolia</i>	R6	2	4	10	1	10	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bentley's coralroot	<i>Corallorrhiza bentleyi</i>	R8, R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Autumn coralroot	<i>Corallorrhiza odontorhiza</i>	R9	36	9	9	0	0	54	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kern plateau bird's beak	<i>Cordylanthus eremicus</i> ssp. <i>kernensis</i>	R5	0	9	0	21	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pallid bird's-beak	<i>Cordylanthus tenuis</i> ssp. <i>pallescens</i>	R5	0	9	0	1	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broadleaf tickseed	<i>Coreopsis latifolia</i>	R8	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roundleaf dogwood	<i>Cornus rugosa</i>	R9	6	5	12	2	3	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cold-water corydalis	<i>Corydalis aquae-gelidae</i>	R6	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wasatch fitweed	<i>Corydalis caseana</i> spp. <i>brachycarpa</i>	R4	20	10	0	3	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pale corydalis	<i>Corydalis sempervirens</i>	R1	6	6	10	1	1	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Cruz beehive cactus	<i>Corypantha recurvata</i>	R3	X	NA	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Smooth babybonnets	<i>Coursetia glabella</i>	R3	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Solieri's pygmyweed	<i>Crassula solieri</i>	R6	0	1	0	34	2	37	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ashe hawthorn	<i>Crataegus Ashei</i>	R8	0	2	1	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Douglas' hawthorn	<i>Crataegus douglasii</i>	R9	0	13	1	22	31	67	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A hawthorn	<i>Crataegus intricata</i>	R9	9	1	3	0	5	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-flowered hawthorn	<i>Crataegus triflora</i>	R8	0	9	4	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Warner's hawthorn	<i>Crataegus warneri</i>	R8	0	0	1	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Wooton's hawthorn	<i>Crategus wootoniana</i>	R3	NA	X	X	NA	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Rosetta cushion cryptantha	<i>Cryptantha circumscissa rosulata</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creutzfeldt-flower cryptantha	<i>Cryptantha creutzfeldtii</i>	R4	0	1	0	8	0	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Silky cryptantha	<i>Cryptantha crinita</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrow-stem cryptantha	<i>Cryptantha gracilis</i>	R6	3	16	0	45	0	64	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clearwater cryptantha	<i>Cryptantha grandiflora</i>	R6	0	4	0	6	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tulare cyptantha	<i>Cryptantha incana</i>	R5	0	20	0	4	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Milo Baker's cryptantha	<i>Cryptantha milo-bakeri</i>	R6	x	x	x	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Yellow-white catseye	<i>Cryptantha ochroleuca</i>	R4	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bristlecone cryptantha	<i>Cryptantha roosiorum</i>	R5	0	1	0	6	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beaked cryptantha	<i>Cryptantha rostellata</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	CNPS (2024)
Pine woods cryptantha	<i>Cryptantha simulans</i>	R6	0	119	5	102	1	227	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Torrey's cat's eye	<i>Cryptantha torreyana</i>	R1	1	72	0	68	6	147	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Fragile/Steller's rockbrake	<i>Cryptogramma stelleri</i>	R6, R9	13	17	8	4	5	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida orange-grass	<i>Ctenium floridanum</i>	R8	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Taper-tip dodder	<i>Cuscuta attenuata</i>	R8	0	0	0	0	1	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Prairie, or Wyoming dodder	<i>Cuscuta plattnensis</i>	R2	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on Thunder Basin NG that is not being amended by NOGA	NI	natureserve
Bodie hills draba	<i>Cusickiella quadricostata</i>	R4	0	12	0	47	0	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinnate spring-parsley	<i>Cymopterus beckii</i>	R4	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Davis' wavewing	<i>Cymopterus davisii</i>	R4	0	3	0	15	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Douglas' biscuitroot	<i>Cymopterus douglassii</i>	R4	0	3	0	29	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goodrich biscuitroot	<i>Cymopterus goodrichii</i>	R4	0	7	0	3	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cedar breaks biscuitroot	<i>Cymopterus minimus</i>	R4	0	21	0	3	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snowline spring-parsley	<i>Cymopterus nivalis</i>	R6	3	13	1	71	0	88	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern wild comfrey	<i>Cynoglossum virginianum var. boreale</i>	R9	0	10	4	1	5	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Finger dog-shade	<i>Cynosciadium digitatum</i>	R9	0	0	0	0	3	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-pointed cyperus	<i>Cyperus acuminatus</i>	R6	1	4	0	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mohlenbrock's umbrella-sedge	<i>Cyperus grayoides</i>	R8	x	x	x	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Manyflower flatsedge	<i>Cyperus lancastriensis</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Ram's-head lady's-slipper	<i>Cypripedium arietinum</i>	R9	6	3	4	0	3	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small white lady's-slipper	<i>Cypripedium candidum</i>	R1, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Clustered lady's-slipper	<i>Cypripedium fasciculatum</i>	R1, R4, R5, R6	1	89	2	18	1	111	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted lady's slipper	<i>Cypripedium guttatum</i>	R10	1	0	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern lady's-slipper	<i>Cypripedium kentuckiense</i>	R8	14	5	12	0	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain lady's slipper	<i>Cypripedium montanum</i>	R2, R10	0	145	2	33	1	181	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow lady's-slipper	<i>Cypripedium parviflorum</i>	R2, R4, R6	23	6	10	0	0	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern yellow lady's-slipper	<i>Cypripedium parviflorum</i> var. <i>makasin</i>	R9	2	0	0	0	7	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greater yellow lady's-slipper	<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	R1, R3, R9, R10	16	1	5	1	3	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sparrow's-egg lady's-slipper	<i>Cypripedium passerinum</i>	R1	0	20	0	3	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Showy lady's-slipper	<i>Cypripedium reginae</i>	R1, R9	6	2	6	0	17	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
St. Lawrence bladderfern	<i>Cystopteris laurentiana</i>	R9	5	4	3	0	4	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-bract green orchis	<i>Dactylorhiza viridis</i>	R6, R9	10	50	1	13	1	75	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hall's prairie-clover	<i>Dalea hallii</i>	R8	6	0	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gentry indigo bush	<i>Dalea tentaculoides</i>	R3	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Robin runaway	<i>Dalibarda repens</i>	R9	10	5	18	0	4	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fringed waterplantain	<i>Damasonium californicum</i>	R6	0	10	0	14	5	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Poverty oatgrass	<i>Danthonia spicata</i>	R6	4	2	1	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
July gold	<i>Dedeckera eurekensis</i>	R5	0	3	0	48	0	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tecate tarplant	<i>Deinandra floribunda</i>	R5	0	0	0	11	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mojave tarplant	<i>Deinandra mohavensis</i>	R5	0	7	6	59	0	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama larkspur	<i>Delphinium alabamicum</i>	R8	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine larkspur	<i>Delphinium alpestre</i>	R3	0	3	0	11	1	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tall larkspur	<i>Delphinium exaltatum</i>	R8, R9	3	0	3	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cuyamaca larkspur	<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	R5	0	0	1	12	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hutchinson's larkspur	<i>Delphinium hutchinsoniae</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Unexpected larkspur	<i>Delphinium inopinum</i>	R5	0	7	0	17	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Newton's larkspur	<i>Delphinium newtonianum</i>	R8	5	0	2	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red larkspur	<i>Delphinium nudicaule</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nuttall's larkspur	<i>Delphinium nuttallii</i>	R6	0	16	0	5	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Willamette Valley larkspur	<i>Delphinium oregonum</i>	R6	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	OregonFlora (2019)
Mt. Pinos larkspur	<i>Delphinium parryi</i> ssp. <i>Purpureum</i>	R5	0	6	1	20	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robust larkspur	<i>Delphinium robustum</i>	R3	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trelease's larkspur	<i>Delphinium treleasei</i>	R8	2	2	3	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Umbrella larkspur	<i>Delphinium umbraculorum</i>	R5	0	6	2	12	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wenatchee larkspur	<i>Delphinium viridescens</i>	R6	0	8	0	5	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rose-flowered larkspur	<i>Delphinium purpusii</i>	R5	x	x	x	x	NA	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Eastern hay-scented fern	<i>Dennstaedtia punctilobula</i>	R9	14	2	3	0	1	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Wavy hairgrass	<i>Deschampsia flexuosa</i>	R9	8	5	3	1	1	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wyoming, or wind river tansymustard	<i>Descurainia torulosa</i>	R2, R4	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Eastern trailing ticktrefoil	<i>Desmodium humifusum</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Metcalfe's tick-trefoil	<i>Desmodium metcalfei</i>	R3	0	0	1	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cream tick-trefoil	<i>Desmodium ochroleucum</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Panicleleaf ticktrefoil	<i>Desmodium paniculatum</i>	R9	10	2	2	0	1	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Perplexed ticktrefoil	<i>Desmodium perplexum</i>	R9	14	1	4	0	2	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American beakgrain	<i>Diarrhena americana</i>	R9	19	0	2	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tulare county bleedingheart	<i>Dicentra nevadensis</i>	R5	0	3	0	9	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Few-flowered bleedingheart	<i>Dicentra pauciflora</i>	R6	0	117	0	35	4	156	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cypress panicgrass	<i>Dichanthelium dichotomum</i> var. <i>dichotomum</i>	R9	17	4	13	0	2	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A rosette grass	<i>Dichanthelium joorii</i>	R9	4	4	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ravenel's witchgrass	<i>Dichanthelium ravenelii</i>	R9	14	13	5	0	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A rosette grass	<i>Dichanthelium yadkinense</i>	R9	0	1	3	0	4	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain bush-honeysuckle	<i>Diervilla rivularis</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mount laguna aster	<i>Dieteria asteroides</i> var. <i>lagunensis</i>	R5	0	7	0	15	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ziegler's aster	<i>Dieteria canescens</i> var. <i>ziegleri</i>	R5	0	12	0	3	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Venus flytrap	<i>Dionaea muscipula</i>	R8	0	13	0	1	22	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ground cedar	<i>Diphasiastrum complanatum</i>	R6	5	78	14	6	15	118	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander's monkeyflower	<i>Diplacus bolanderi</i>	R6	0	20	2	33	0	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Congdon's monkeyflower	<i>Diplacus congdonii</i>	R6	4	10	0	5	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nesom's monkeyflower	<i>Diplacus cusickioides</i>	R6	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-colored monkeyflower	<i>Diplacus tricolor</i>	R6	0	7	0	2	3	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Glade fern	<i>Diplazium pycnocarpon</i>	R9	5	0	0	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern leatherwood	<i>Dirca palustris</i>	R9	31	0	2	0	2	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Frigid shootingstar	<i>Dodecatheon austrofrigidum</i>	R6	0	10	5	2	0	17	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
French's shootingstar	<i>Dodecatheon frenchii</i>	R8, R9	19	2	0	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wasatch shooting star	<i>Dodecatheon utahense</i>	R4	4	2	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bloom peak douglasia	<i>Douglasia conservatorum</i>	R1	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho dwarf-primrose	<i>Douglasia idahoensis</i>	R1, R4	0	7	0	8	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Abajo peak draba	<i>Draba abajoensis</i>	R4	1	4	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Open-ground whitlow-grass	<i>Draba aprica</i>	R8, R9	x	x	x	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Rock whitlow-grass	<i>Draba arabisans</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arid draba	<i>Draba arida</i>	R4	0	1	0	8	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Star draba	<i>Draba asterophora</i> var. <i>asterophora</i>	R4, R5	0	7	0	19	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cup lake draba	<i>Draba asterophora</i> var. <i>macrocarpa</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Golden draba	<i>Draba aurea</i>	R6	10	80	2	70	6	168	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wasatch draba	<i>Draba brachystylis</i>	R4	1	3	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hoary draba	<i>Draba breweri</i> var. <i>cana</i>	R9	0	6	0	14	1	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Burke's draba	<i>Draba burkei</i>	R4	0	8	2	7	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lance-leaved draba	<i>Draba cana</i>	R6	0	26	1	48	2	77	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Eddy draba	<i>Draba carnosula</i>	R5	0	7	0	4	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thick-leaf whitlow-grass	<i>Draba crassa</i>	R1	0	8	0	34	3	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mineral king draba	<i>Draba cruciata</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Bitterroot draba	<i>Draba davyesiae</i>	R1	0	11	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dense-leaf draba	<i>Draba densifolia</i>	R1	2	37	0	151	0	190	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clawless, or Garys peak draba	<i>Draba exunguiculata</i>	R2	0	0	0	11	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Round-fruited draba	<i>Draba globosa</i>	R1, R4	0	8	0	12	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray's draba	<i>Draba grayana</i>	R2	0	2	0	18	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's whitlow-grass	<i>Draba howellii</i>	R6	0	30	0	42	1	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sweetwater Mountains draba	<i>Draba incrassata</i>	R5	0	8	0	19	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jaeger draba	<i>Draba jaegeri</i>	R4	0	4	1	15	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maguire draba	<i>Draba maguirei</i>	R4	5	14	0	17	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountains draba	<i>Draba monoensis</i>	R5	0	2	0	6	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Serpentine draba	<i>Draba oreibata</i> var. <i>serpentina</i>	R4	0	2	0	4	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Charleston draba	<i>Draba paucifructa</i>	R4	0	4	0	6	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pennell draba	<i>Draba pennellii</i>	R4	2	16	0	15	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Belknap draba	<i>Draba ramulosa</i>	R4	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santaquin draba	<i>Draba santaquinensis</i>	R4	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024), Flora of North America (1993+)
Southern California rock draba	<i>Draba saxosa</i>	R5	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Whitney draba	<i>Draba sharsmithii</i>	R5	0	3	0	7	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smith's draba	<i>Draba smithii</i>	R2	0	6	1	1	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creeping draba	<i>Draba sobolifera</i>	R4	0	10	0	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Taylor's draba	<i>Draba taylorii</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Giblin and Legler (2003+)
Stanley's whitlow-grass	<i>Draba trichocarpa</i>	R4	0	2	0	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American dragonhead	<i>Dracocephalum parviflorum</i>	R6	12	83	5	31	3	134	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
English sundew	<i>Drosera anglica</i>	R1, R2, R9	1	99	13	26	73	212	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slenderleaf sundew	<i>Drosera linearis</i>	R9	0	0	0	2	3	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roundleaf sundew	<i>Drosera rotundifolia</i>	R2	11	19	1	1	14	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Drummond's mountain-avens	<i>Dryas drummondii</i> var. <i>drummondii</i>	R6	NA	x	NA	NA	x	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	WNHP (2024)
Tall cinquefoil	<i>Drymocallis arguta</i>	R9	1	6	0	5	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wedgeleaf woodbeauty	<i>Drymocallis cuneifolia</i> var. <i>cuneifolia</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ewan's cinquefoil	<i>Drymocallis cuneifolia</i> var. <i>ewanii</i>	R5	0	13	0	3	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Log fern	<i>Dryopteris celsa</i>	R9	3	7	4	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crested shieldfern	<i>Dryopteris cristata</i>	R1, R6	1	1	4	0	9	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spreading woodfern	<i>Dryopteris expansa</i>	R9	1	80	15	11	3	110	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Male fern	<i>Dryopteris filix-mas</i>	R9	14	120	3	36	1	174	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fragrant cliff woodfern	<i>Dryopteris fragrans</i>	R9	11	6	9	1	21	48	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Goldie's woodfern	<i>Dryopteris goldiana</i>	R9	19	1	2	0	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino Mountains dudleya	<i>Dudleya abramsii</i> ssp. <i>affinis</i>	R5	0	13	0	44	0	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pierpoint springs dudleya	<i>Dudleya cymosa</i> ssp. <i>Costafolia</i>	R5	NA	x	x	x	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	Calflora (2024)
San Gabriel River dudleya	<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	R5	0	0	0	9	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Gabriel Mountains dudleya	<i>Dudleya densiflora</i>	R5	0	1	1	31	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Many-stemmed dudleya	<i>Dudleya multicaulis</i>	R5	0	2	0	20	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sticky dudleya	<i>Dudleya viscida</i>	R5	0	5	0	35	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Topeka purple-coneflower	<i>Echinacea atrorubens</i>	R8	3	3	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf burhead	<i>Echinodorus tenellus</i>	R8	1	1	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short seeded waterwort	<i>Elatine brachysperma</i>	R6	2	2	1	10	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple spikerush	<i>Eleocharis atropurpurea</i>	R9	2	1	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander's spikerush	<i>Eleocharis bolanderi</i>	R6	5	15	1	18	1	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flat-stem spikerush	<i>Eleocharis compressa</i>	R9	5	2	0	0	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elliptic, or slender spikerush	<i>Eleocharis elliptica</i>	R2	3	0	4	0	17	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Engelmann's spikerush	<i>Eleocharis engelmannii</i>	R9	3	41	1	7	1	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Matted spikerush	<i>Eleocharis intermedia</i>	R9	2	2	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Daggerleaf spikerush	<i>Eleocharis lanceolata</i>	R9	4	2	1	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Soft-stemmed spikerush	<i>Eleocharis mamillata</i> ssp. <i>mamillata</i>	R6	0	0	0	0	5	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-fruited spikerush	<i>Eleocharis microcarpa</i>	R9	0	3	1	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bright green spikerush	<i>Eleocharis olivacea</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ovate pikerush	<i>Eleocharis ovata</i>	R9	21	15	3	4	9	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Few-flowered spikerush	<i>Eleocharis quinqueflora</i>	R9	3	48	1	43	18	113	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Walking spike-rush	<i>Eleocharis rostellata</i>	R6	0	8	0	10	5	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California twisted spikerush	<i>Eleocharis torticulmis</i>	R5	0	16	0	2	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-angle spikerush	<i>Eleocharis tricostata</i>	R9	8	13	6	4	14	45	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Wolf's spikerush	<i>Eleocharis wolfii</i>	R9	1	1	6	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Church's wild rye	<i>Elymus churchii</i>	R8	11	0	0	1	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth wild rye	<i>Elymus glaucus</i>	R9	0	40	2	40	5	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mackenzie's blue wild rye	<i>Elymus glaucus</i> ssp. <i>mackenziei</i>	R8	3	0	2	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Black crowberry	<i>Empetrum nigrum</i>	R9	0	18	8	9	3	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trailing arbutus	<i>Epigaea repens</i>	R9	16	2	38	0	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olympic willow-herb	<i>Epilobium mirabile</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Flora of North America (1993+)
Nevada willowherb	<i>Epilobium nevadense</i>	R4	0	5	1	4	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snow Mountain willowherb	<i>Epilobium nivium</i>	R5	0	4	0	12	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon willow-herb	<i>Epilobium oreganum</i>	R5, R6	0	25	1	23	2	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh willowherb	<i>Epilobium palustre</i>	R6, R9	2	26	2	17	19	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou willow-herb	<i>Epilobium siskiyouense</i>	R6	0	63	0	33	0	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant helleborine, or stream orchid	<i>Epipactis gigantea</i>	R1, R2	0	48	5	68	0	121	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh horsetail	<i>Equisetum palustre</i>	R1, R9	0	14	1	3	7	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow horsetail	<i>Equisetum pratense</i>	R1, R9	16	7	7	3	9	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Variegated horsetail	<i>Equisetum variegatum</i>	R1	2	17	2	13	3	37	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Clifton's eremogone	<i>Eremogone cliftonii</i>	R5	0	13	0	17	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Forest Camp sandwort	<i>Eremogone macradenia</i> var. <i>arcuifolia</i>	R5	0	8	0	22	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf evening-primrose	<i>Eremothera pygmaea</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow-flowered eriastrum	<i>Eriastrum luteum</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tracy's eriastrum	<i>Eriastrum tracyi</i>	R5	0	4	0	30	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Golden fleece	<i>Ericameria arborescens</i>	R6	0	21	2	21	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spring Mountain goldenweed	<i>Ericameria compacta</i> (= <i>Haplopappus compactus</i>)	R4	0	8	2	11	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pine Valley goldenweed	<i>Ericameria crispa</i> (= <i>Haplopappus crispus</i>)	R4	0	23	0	3	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrow-leaf goldenweed	<i>Ericameria discoidea</i> var. <i>linearis</i> (= <i>Haplopappus macronema</i> var. <i>linearis</i>)	R4	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gilman's goldenbush	<i>Ericameria gilmanii</i>	R5	0	11	0	5	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-headed goldenweed	<i>Ericameria microcephala</i> (= <i>Haplopappus m.</i>)	R3	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Guadalupe rabbitbrush	<i>Ericameria nauseosa</i> var. <i>texensis</i> (= <i>Chrysothamnus n.</i> ssp <i>t.</i>)	R3	0	2	0	11	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Low rabbitbrush	<i>Ericameria parryi</i> var. <i>imula</i>	R5	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parry's Mountain rabbitbrush	<i>Ericameria parryi</i> var. <i>montana</i>	R1	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Abajo daisy	<i>Erigeron abajoensis</i>	R4	5	6	1	4	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bitter fleabane	<i>Erigeron acris</i>	R9	1	21	3	10	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hall's daisy	<i>Erigeron aequifolius</i>	R5	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alice's fleabane	<i>Erigeron aliceae</i>	R6	0	113	2	56	9	180	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mogollon fleabane	<i>Erigeron anchana</i>	R3	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Arid throne fleabane	<i>Erigeron arisolius</i>	R3	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho fleabane	<i>Erigeron asperugineus</i>	R1	1	44	1	66	1	113	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Carrington daisy	<i>Erigeron carringtonae</i>	R4	NA	x	NA	x	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Snake mountain erigeron	<i>Erigeron cavernensis</i>	R4	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou daisy	<i>Erigeron cervinus</i>	R6	4	84	15	46	0	149	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cronquist daisy	<i>Erigeron cronquistii</i>	R4	1	3	0	11	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Engelmann's daisy	<i>Erigeron davisii</i>	R6	0	5	0	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White cushion erigeron	<i>Erigeron disparipilus</i>	R6	0	5	0	8	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Evermann fleabane	<i>Erigeron evermannii</i>	R1	0	19	0	11	2	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Garrett's fleabane	<i>Erigeron garrettii</i>	R4	2	7	0	6	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heliograph Peak fleabane	<i>Erigeron heliographis</i>	R3	NA	x	x	NA	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Hess' fleabane	<i>Erigeron hessii</i>	R3	x	x	x	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Howell's daisy	<i>Erigeron howellii</i>	R6	0	11	0	1	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Daisy fleabane	<i>Erigeron hyssopifolius</i>	R9	0	0	0	0	5	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kachina daisy	<i>Erigeron kachinensis</i>	R4	4	8	0	1	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Klamath daisy	<i>Erigeron klamathensis</i>	R6	1	18	1	24	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua fleabane	<i>Erigeron kuschei</i>	R3	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lackschewitz' fleabane	<i>Erigeron lackschewitzii</i>	R1	0	11	0	3	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Woolly daisy	<i>Erigeron lanatus</i>	R4	0	2	0	4	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maguire daisy	<i>Erigeron maguirei</i>	R4	0	1	0	2	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lasal daisy	<i>Erigeron mancus</i>	R4	3	8	0	2	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mad river fleabane daisy	<i>Erigeron maniopotamicus</i>	R5	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Starved daisy	<i>Erigeron miser</i>	R5	0	13	0	20	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kern river daisy	<i>Erigeron multiceps</i>	R5	0	0	0	8	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon daisy	<i>Erigeron oreganus</i>	R6	2	2	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parry's fleabane	<i>Erigeron parryi</i>	R1	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cliff daisy	<i>Erigeron petrophilus</i>	R6	1	88	0	58	0	147	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fish creek fleabane	<i>Erigeron piscaticus</i>	R3	x	x	x	NA	x	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Salish fleabane	<i>Erigeron salishii</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock fleabane	<i>Erigeron saxatilis</i>	R3	0	15	0	3	1	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sivinski's fleabane	<i>Erigeron sivinskii</i>	R3	0	0	0	1	0	1	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
Stansell's daisy	<i>Erigeron stanselliae</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pecos fleabane	<i>Erigeron subglaber</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Limestone daisy	<i>Erigeron uncialis</i> var. <i>uncialis</i>	R5	0	6	0	4	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Untermann daisy	<i>Erigeron untermannii</i>	R4	0	9	0	14	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-headed pipewort	<i>Eriocaulon koernickianum</i>	R8	1	3	3	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shalebarren buckwheat	<i>Eriogonum allenii</i>	R9	13	2	9	0	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trinity buckwheat	<i>Eriogonum alpinum</i>	R5	0	25	0	5	1	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Widtsoe buckwheat	<i>Eriogonum aretioides</i>	R4	0	4	0	3	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elsinore buckwheat	<i>Eriogonum batemanii</i> var. <i>ostlundii</i>	R4	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Brandegee's buckwheat	<i>Eriogonum brandegeei</i>	R2	0	11	0	26	1	38	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Breedlove's buckwheat	<i>Eriogonum breedlovei</i> var. <i>breedlovei</i>	R5	0	4	0	3	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Desert buckwheat	<i>Eriogonum brevicaule</i> var. <i>desertorum</i>	R4	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Buckworth's buckwheat	<i>Eriogonum butterworthianum</i>	R5	0	0	0	4	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Welsh buckwheat	<i>Eriogonum capistratum</i> var. <i>welshii</i>	R4	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nodding buckwheat	<i>Eriogonum cernuum</i>	R1	1	20	0	60	0	81	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Cusick's buckwheat	<i>Eriogonum cusickii</i>	R6	0	1	0	15	0	16	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sunflower flat buckwheat	<i>Eriogonum douglasii</i> var. <i>elkoense</i>	R4	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heathleaf wild buckwheat	<i>Eriogonum ericifolium</i> var. <i>ericifolium</i>	R3	0	0	0	8	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Toiyabe buckwheat	<i>Eriogonum esmeraldense</i> var. <i>toiyabense</i>	R4	1	19	0	48	0	68	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Vanishing wild buckwheat	<i>Eriogonum evanidum</i>	R5	0	3	0	23	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dropleaf buckwheat	<i>Eriogonum exilifolium</i>	R2	0	0	1	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Clokey buckwheat	<i>Eriogonum heermannii</i> var. <i>clokeyi</i>	R4	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
(Klamath Mountains buckwheat)	<i>Eriogonum hirtellum</i>	R5	0	1	0	13	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern alpine buckwheat	<i>Eriogonum kennedyi</i> var. <i>alpinum</i>	R5	0	5	0	30	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lewis's buckwheat	<i>Eriogonum lewisii</i>	R4	2	3	1	17	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lobb's buckwheat	<i>Eriogonum lobbii</i>	R6	0	47	0	243	1	291	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Logan buckwheat	<i>Eriogonum loganum</i> (= <i>E. brevicaule</i> var. <i>loganum</i>)	R4	1	6	1	12	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jack's wild buckwheat	<i>Eriogonum luteolum</i> var. <i>saltuarium</i>	R5	0	3	0	4	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Guardian buckwheat	<i>Eriogonum meledonum</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Johnson's buckwheat	<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	R5	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Bear lake buckwheat	<i>Eriogonum microthecum</i> var. <i>lacus-ursi</i>	R5	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Schoolcraft's wild buckwheat	<i>Eriogonum microthecum</i> var. <i>schoolcraftii</i>	R5	0	0	0	13	0	13	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Morton wild buckwheat	<i>Eriogonum mortonianum</i>	R3	0	0	0	22	0	22	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Snow mountain buckwheat	<i>Eriogonum nervulosum</i>	R5	0	0	0	12	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kings river buckwheat	<i>Eriogonum nudum</i> var. <i>regirivum</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Monarch buckwheat	<i>Eriogonum ovalifolium</i> ssp. <i>Monarchense</i>	R5	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prostrate buckwheat	<i>Eriogonum prociduum</i>	R5, R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NA
Ripley wild buckwheat	<i>Eriogonum ripleyi</i>	R3	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Altered andesite buckwheat	<i>Eriogonum robustum</i>	R4	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Playa buckwheat	<i>Eriogonum salicinioides</i>	R6	0	0	0	88	0	88	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Barron's buckwheat	<i>Eriogonum spectabile</i>	R5	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Atwood wild buckwheat	<i>Eriogonum thompsonae</i> var. <i>atwoodii</i>	R3	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Thyme-leaved buckwheat	<i>Eriogonum thymoides</i>	R6	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tripod buckwheat	<i>Eriogonum tripodum</i>	R5	0	0	0	12	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twisselmann's buckwheat	<i>Eriogonum twisselmannii</i>	R5	NA	x	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Ahart's buckwheat	<i>Eriogonum umbellatum</i> var. <i>ahartii</i>	R5	0	17	0	7	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green buckwheat	<i>Eriogonum umbellatum</i> var. <i>glaberrimum</i>	R5, R6	0	5	0	2	2	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Donner pass buckwheat	<i>Eriogonum umbellatum</i> var. <i>torreyanum</i>	R5	0	6	0	4	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blushing wild buckwheat	<i>Eriogonum ursinum</i> var. <i>erubescens</i>	R5	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Acker rock wild buckwheat	<i>Eriogonum villosissimum</i>	R6	0	3	0	4	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Visher's buckwheat	<i>Eriogonum visherii</i>	R1, R2	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Olancha peak buckwheat	<i>Eriogonum wrightii</i> var. <i>olanchense</i>	R5	0	1	0	12	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Russet/Chamisso's cotton-grass	<i>Eriophorum chamissonis</i>	R2, R6, R9	2	30	9	8	22	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Slender bristlegrass, or slender cottongrass	<i>Eriophorum gracile</i>	R1, R2	1	64	0	16	19	100	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough cotton-grass	<i>Eriophorum tenellum</i>	R9	2	4	6	1	24	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green keeled cotton-grass	<i>Eriophorum viridicarinatum</i>	R6	2	21	0	5	17	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Congdon's woolly sunflower	<i>Eriophyllum congdonii</i>	R5	0	4	0	12	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fort Tejon woolly sunflower	<i>Eriophyllum lanatum</i> var. <i>hallii</i>	R5	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yosemite woolly sunflower	<i>Eriophyllum nubigenum</i>	R5	0	2	0	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale alpine forget-me-not	<i>Eritrichium argenteum</i>	R6	0	18	0	121	4	143	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prostrate eryngo	<i>Eryngium prostratum</i>	R9	0	2	2	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western wallflower	<i>Erysimum capitatum</i> var. <i>capitatum</i>	R9	3	55	2	81	0	141	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Membrane-leaved monkeyflower	<i>Erythranthe hymenophylla</i>	R6	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Disappearing monkeyflower	<i>Erythranthe inflatula</i>	R6	0	2	0	4	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stalk-leaved monkeyflower	<i>Erythranthe patula</i>	R6	0	15	0	11	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pulsifer's monkey-flower	<i>Erythranthe pulsiferae</i>	R6	0	51	0	24	0	75	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Suksdorf's monkey-flower	<i>Erythranthe suksdorffii</i>	R6	1	17	0	141	3	162	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White fawnlily	<i>Erythronium albium</i>	R9	5	3	0	0	3	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coast range fawn-lily	<i>Erythronium elegans</i>	R6	0	2	5	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henderson's fawn lily	<i>Erythronium hendersonii</i>	R5	0	22	0	7	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's adder's-tongue	<i>Erythronium howellii</i>	R6	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shuteye peak fawn-lily	<i>Erythronium pluriflorum</i>	R5	0	4	0	19	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kaweah lakes fawn-lily	<i>Erythronium pusaterii</i>	R5	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Quinault fawn-lily	<i>Erythronium quinaultense</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pilot ridge fawn-lily	<i>Erythronium taylori</i>	R5	NA	NA	X	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Tuolumne fawn-lily	<i>Erythronium tuolumnense</i>	R5	0	32	2	4	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gold poppy	<i>Eschscholzia caespitosa</i>	R6	0	8	3	38	1	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Villard's pincushion cactus	<i>Escobaria villardii</i>	R3	0	1	0	21	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wayside aster	<i>Eucephalus vialis</i>	R5	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Gorman's aster	<i>Eucephalus gormanii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Wayside aster	<i>Eucephalus vialis</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
American strawberry-bush	<i>Euonymus americanus</i>	R9	9	5	9	0	2	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wahoo	<i>Euonymus atropurpureus</i>	R1	8	2	1	0	0	11	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
White thoroughwort	<i>Eupatorium album</i>	R9	8	22	4	4	3	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida thoroughwort	<i>Eupatorium anomalum</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hyssopleaf thoroughwort	<i>Eupatorium hyssopifolium</i> var. <i>hyssopifolium</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Flora of North America (1993+)
Sweet joe-pye weed	<i>Eupatorium purpureum</i>	R9	6	0	1	1	2	10	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Small-flower thoroughwort	<i>Eupatorium semiserratum</i>	R9	1	29	1	2	3	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Upland boneset	<i>Eupatorium sessilifolium</i>	R9	21	1	3	0	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Glade/Darlington's spurge	<i>Euphorbia purpurea</i>	R8, R9	3	0	3	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oakes' eyebright	<i>Euphrasia oakesii</i>	R9	2	12	0	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Coyote-thistle aster	<i>Eurybia eryngiiifolia</i>	R8	2	33	0	1	37	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arctic aster	<i>Eurybia merita</i>	R6	0	56	0	20	1	77	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough wood-aster	<i>Eurybia radula</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rockcastle wood-aster	<i>Eurybia saxicastellii</i>	R8	2	0	7	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough fescue	<i>Festuca altaica</i>	R9	1	21	0	18	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Plains rough fescue	<i>Festuca hallii</i>	R2	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cluster fescue	<i>Festuca paradoxa</i>	R9	2	5	1	0	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Proliferous fescue	<i>Festuca prolifera</i>	R9	0	1	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas fescue	<i>Festuca versuta</i>	R8	6	2	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Queen-of-the-prairie	<i>Filipendula rubra</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	Flora of North America (1993+)
Godfrey's swamp-privet	<i>Forestiera godfreyi</i>	R8	0	7	0	0	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain witch-alder	<i>Fothergilla major</i>	R8	18	1	2	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Caribou coffeeberry	<i>Frangula purshiana ultramafica</i>	R5	0	11	0	8	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Umpqua swertia	<i>Frasera umpquaensis</i>	R5, R6	0	20	0	1	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black lily	<i>Fritillaria camschatcensis</i>	R6	1	27	7	47	4	86	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Striped adobe-lily	<i>Fritillaria striata</i>	R5	1	1	0	6	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy umbrella-sedge	<i>Fuirena squarrosa</i>	R9	1	17	2	0	3	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Showy orchid	<i>Galearis spectabilis</i>	R9	38	1	19	0	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Jacinto Mountains bedstraw	<i>Galium angustifolium</i> ssp. <i>Jacinticum</i>	R5	0	23	1	14	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cone Peak bedstraw	<i>Galium californicum</i> ssp. <i>lucicense</i>	R5	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California bedstraw	<i>Galium californicum</i> ssp. <i>primum</i>	R5	0	9	0	4	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Lucia bedstraw	<i>Galium clementis</i>	R5	0	2	1	8	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Modoc bedstraw	<i>Galium glabrescens</i> ssp. <i>modocense</i>	R5	0	7	0	7	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Gabriel bedstraw	<i>Galium grande</i>	R5	0	18	0	9	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hardham's bedstraw	<i>Galium hardhamiae</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boreal bedstraw	<i>Galium kamtschaticum</i>	R9	1	19	5	1	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Warner mountain's bedstraw	<i>Galium serpenticum</i> ssp. <i>warnerense</i>	R5, R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creeping snowberry	<i>Gaultheria hispida</i>	R1, R6, R9	1	29	11	0	24	65	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Colorado butterfly plant	<i>Gaura neomexicana</i> ssp. <i>coloradensis</i>	R2	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Box huckleberry	<i>Gaylussacia brachycera</i>	R8, R9	1	0	20	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow gentian	<i>Gentiana alba</i>	R9	110	4	9	7	27	157	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Closed gentian	<i>Gentiana andrewsii</i> var. <i>andrewsii</i>	R9	2	1	0	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bottle gentian	<i>Gentiana clausa</i>	R9	14	0	8	11	3	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swamp gentian	<i>Gentiana douglasiana</i>	R6	4	64	35	43	4	150	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss gentian	<i>Gentiana fremontii</i>	R5	0	15	0	33	4	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Glaucous gentian	<i>Gentiana glauca</i>	R6	0	3	0	12	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrowleaf gentian	<i>Gentiana linearis</i>	R9	10	12	4	0	9	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Newberry's gentian	<i>Gentiana newberryi</i> var. <i>newberryi</i>	R6	0	16	0	2	3	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Wiregrass gentian	<i>Gentiana pennelliana</i>	R8	0	18	0	1	18	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elegant gentian	<i>Gentiana plurisetosa</i>	R6	0	17	0	9	1	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss gentian	<i>Gentiana prostrata</i>	R6	3	12	0	55	7	77	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Waldo gentian	<i>Gentiana setigera</i>	R5, R6	0	16	0	30	1	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Striped gentian	<i>Gentiana villosa</i>	R9	9	8	16	0	5	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wislizeni gentian	<i>Gentianella wislizeni</i>	R3	0	2	1	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern comandra	<i>Geocaulon lividum</i>	R9	2	10	3	6	8	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bent avens	<i>Geum geniculatum</i>	R8	5	1	1	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain avens	<i>Geum peckii</i>	R9	16	81	38	1	0	136	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Water avens	<i>Geum rivale</i>	R6	5	19	5	1	10	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ross' avens	<i>Geum rossii</i> var. <i>depressum</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender-stemmed avens	<i>Geum rossii</i> var. <i>turbinatum</i>	R6	2	55	0	128	4	189	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prairie-smoke	<i>Geum triflorum</i>	R9	1	20	0	23	2	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale avens	<i>Geum virginianum</i>	R9	8	0	3	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino gilia	<i>Gilia leptantha</i> ssp. <i>leptantha</i>	R5	0	72	0	67	0	139	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Seaside gilia	<i>Gilia millefoliata</i>	R6	1	18	3	23	4	49	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Monarch gilia	<i>Gilia yorkii</i>	R5	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mission canyon bluecup	<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	R5	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common bluecup	<i>Githopsis specularioides</i>	R1, R6	0	35	2	16	0	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clokey greasebush	<i>Glossopetalon clokeyi</i>	R4	0	8	0	6	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth dwarf greasebrush	<i>Glossopetalon pungens</i> var. <i>glabra</i> (= <i>G.pungens</i>)	R4	NA	X	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Spiny greasebush	<i>Glossopetalon spinescens</i>	R1	0	26	0	66	0	92	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arkansas manna-grass	<i>Glyceria arkansana</i>	R9	0	0	1	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Floating mannagrass	<i>Glyceria septentrionalis</i>	R9	2	0	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf rattlesnake-plantain	<i>Goodyera repens</i>	R9	12	82	17	9	21	141	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Checkered rattlesnake-plantain	<i>Goodyera tesselata</i>	R9	3	1	9	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bartram stonecrop	<i>Graptopetalum bartramii</i>	R3	0	3	0	9	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boggs lake hedge-hyssop	<i>Gratiola heterosepala</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Quarterman's hedge-hyssop	<i>Gratiola quartermaniae</i>	R9	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Howell's gumweed	<i>Grindelia howellii</i>	R1	0	7	0	7	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lone mesa snakeweed	<i>Gutierrezia elegans</i>	R2	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian oak fern	<i>Gymnocarpium appalachianum</i>	R8, R9	23	0	3	0	0	26	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Northern oak fern	<i>Gymnocarpium dryopteris</i>	R1	14	7	10	1	7	39	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Limestone oak fern	<i>Gymnocarpium robertianum</i>	R9	0	1	0	0	5	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beautiful stickseed	<i>Hackelia bella</i>	R6	0	27	2	9	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray stickseed	<i>Hackelia cinerea</i>	R6	0	24	0	32	1	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern stickseed	<i>Hackelia deflexa</i> var. <i>americana</i>	R9	0	5	4	1	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Diffuse stickseed	<i>Hackelia diffusa</i> var. <i>diffusa</i>	R6	0	11	0	0	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough stickseed	<i>Hackelia hispida</i> var. <i>hispida</i>	R6	0	0	0	9	0	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pink stickseed	<i>Hackelia mundula</i>	R6	0	92	0	19	1	112	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Taylor's stickseed	<i>Hackelia taylorii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Puzzling rockcress	<i>Halimolobos perplexa</i>	R1	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Puzzling halimolobos	<i>Halimolobos perplexa</i> var. <i>perplexa</i>	R4	0	8	0	4	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Leonard's witch-hazel	<i>Hamamelis ovalis</i>	R8	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nile's harmonia	<i>Harmonia doris-nilesiae</i>	R5	0	14	1	10	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stebbin's madia	<i>Harmonia stebbinsii</i>	R5	0	15	0	18	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mossplant	<i>Harrimanella hypnoides</i>	R9	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida hartwrightia	<i>Hartwrightia floridana</i>	R8	1	21	1	2	33	58	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Hammockherb	<i>Hasteola robertiorum</i>	R8	0	2	0	1	12	15	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Sweet-scented Indian plantain	<i>Hasteola suaveolens</i>	R9	7	0	1	0	3	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple-flowered rush-lily	<i>Hastingsia bracteosa</i> var. <i>atropurpurea</i>	R6	0	1	0	1	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Large-flowered rush-lily	<i>Hastingsia bracteosa</i> var. <i>bracteosa</i>	R6	0	6	0	14	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flagstaff pennyroyal	<i>Hedeoma diffusum</i>	R3	0	11	0	1	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western hedysarum	<i>Hedysarum occidentale</i>	R6	17	88	2	118	10	235	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canyon sweetvetch	<i>Hedysarum occidentale</i> var. <i>canone</i>	R4	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona sneezeweed	<i>Helenium arizonicum</i>	R3	0	46	0	8	2	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Plains frostweed	<i>Helianthemum bicknellii</i>	R1	1	6	0	0	2	9	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Swamp sunflower	<i>Helianthus angustifolius</i>	R9	1	9	5	1	3	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona sunflower	<i>Helianthus arizonicus</i>	R3	0	4	0	4	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ashy sunflower	<i>Helianthus mollis</i>	R9	6	0	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shinner's sunflower	<i>Helianthus occidentalis</i> var. <i>plantagineus</i>	R8	8	1	2	0	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smith's sunflower	<i>Helianthus smithii</i>	R8	9	2	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harsh sunflower	<i>Helianthus strumosus</i>	R9	8	5	1	0	4	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Salt heliotrope	<i>Heliotropium curassavicum</i>	R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jaeger's hesperidianthus	<i>Hesperidanthus jaegeri</i>	R5	0	2	0	7	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baker's cypress	<i>Hesperocyparis bakeri</i>	R6	0	30	0	5	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tecate cypress	<i>Hesperocyparis forbesii</i>	R5	0	2	13	11	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cuyamaca cypress	<i>Hesperocyparis stephensonii</i>	R5	0	2	0	15	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lake County western flax	<i>Hesperolinon drymarioides</i>	R5	0	0	0	12	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grassleaf mud-plantain	<i>Heteranthera dubia</i>	R1	4	0	0	1	2	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kidneyleaf mud-plantain	<i>Heteranthera reniformis</i>	R9	5	2	0	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western pearl-flower	<i>Heterocodon rariflorum</i>	R1	0	44	0	72	1	117	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jones goldenaster	<i>Heterotheca jonesii</i>	R4	1	2	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Monarch goldenaster	<i>Heterotheca monachensis</i>	R5	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon goldenaster	<i>Heterotheca oregona</i>	R6	0	17	0	3	5	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rutter's false goldenaster	<i>Heterotheca rutteri</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shevock's goldenaster	<i>Heterotheca shevockii</i>	R5	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Abrams's alumroot	<i>Heuchera abramsii</i>	R5	0	4	0	39	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White alumroot	<i>Heuchera alba</i>	R8, R9	6	0	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Urn-flowered alumroot	<i>Heuchera caespitosa</i>	R5	0	21	0	31	1	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastwood alum root	<i>Heuchera eastwoodiae</i>	R3	0	19	0	7	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona alum root	<i>Heuchera glomerulata</i>	R3	0	23	0	13	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shaggy-haired alumroot	<i>Heuchera hirsutissima</i>	R5	0	12	3	10	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's alumroot	<i>Heuchera parishii</i>	R5	0	53	0	39	0	92	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little-flowered alumroot	<i>Heuchera parviflora</i>	R9	23	13	22	9	0	67	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sandia alum root	<i>Heuchera pulchella</i>	R3	3	15	0	0	0	18	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
Ozark alumroot	<i>Heuchera villosa</i> var. <i>arkansana</i>	R8	24	2	2	0	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chisos Mt. Crested coralroot	<i>Hexalectris revoluta</i>	R3	0	1	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Crested coralroot	<i>Hexalectris spicata</i>	R9	1	1	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona coralroot	<i>Hexalectris spicata</i> var. <i>arizonica</i>	R3	X	NA	X	NA	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Texas purple-spike	<i>Hexalectris warnockii</i>	R3	2	2	0	2	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Southern heartleaf	<i>Hexastylis contracta</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harper's heartleaf	<i>Hexastylis speciosa</i>	R8	5	1	0	0	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Rusby hawkweed	<i>Hieracium abscissum</i> (= <i>H. rusbyi</i>)	R3	0	3	0	4	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mogollon hawkweed	<i>Hieracium brevipilum</i> (= <i>H. fendleri</i> var. <i>mogollense</i>)	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shaggy hawkweed	<i>Hieracium horridum</i>	R6	0	100	2	175	3	280	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Umbellate hawkweed	<i>Hieracium umbellatum</i>	R6	2	48	7	5	4	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rattlesnakeweed	<i>Hieracium venosum</i>	R9	14	5	5	0	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mesa horkelia	<i>Horkelia cuneata</i> ssp. <i>Puberula</i>	R5	0	1	1	4	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kellogg's horkelia	<i>Horkelia cuneata</i> ssp. <i>sericea</i>	R5	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henderson's horkelia	<i>Horkelia hendersonii</i>	R5, R6	0	18	0	7	1	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountains horkelia	<i>Horkelia hispidula</i>	R5	0	3	0	55	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parry's horkelia	<i>Horkelia parryi</i>	R5	NA	NA	X	X	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Three-toothed horkelia	<i>Horkelia tridentata</i> ssp. <i>tridentata</i>	R6	0	26	0	5	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ramona horkelia	<i>Horkelia truncata</i>	R5	0	0	3	19	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kern plateau horkelia	<i>Horkelia tularensis</i>	R5	0	11	0	11	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barton flats horkelia	<i>Horkelia wilderae</i>	R5	0	53	0	28	0	81	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa lucia horkelia	<i>Horkelia yadonii</i>	R5	0	1	0	6	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Featherfoil	<i>Hottonia inflata</i>	R9	5	0	1	0	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Water howellia	<i>Howellia aquatilis</i>	R1, R6	0	18	0	0	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand-heather	<i>Hudsonia tomentosa</i>	R1	0	0	0	0	0	0	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Short-leaved hulsea	<i>Hulsea brevifolia</i>	R5	0	28	0	12	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Gabriel mountains sunflower	<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	R5	0	9	0	49	1	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pygmy hulsea	<i>Hulsea vestita</i> ssp. <i>pygmaea</i>	R5	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian clubmoss	<i>Huperzia appalachiana</i>	R9	0	3	2	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock clubmoss	<i>Huperzia porophila</i>	R9	10	5	6	0	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fir clubmoss	<i>Huperzia selago</i>	R9	21	43	25	6	7	102	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goldenseal	<i>Hydrastis canadensis</i>	R9	22	0	8	0	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Whorled marsh-pennywort	<i>Hydrocotyle verticillata</i>	R6	1	2	1	1	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whorled marsh-pennywort	<i>Hydrocotyle verticillata</i> var. <i>verticillata</i>	R9	0	5	0	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oneflower false fiddleleaf	<i>Hydrolea uniflora</i>	R9	4	2	2	0	3	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arkansas waterleaf	<i>Hydrophyllum brownei</i>	R8	7	1	3	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allegheny stonecrop	<i>Hylotelephium telephoides</i>	R9	45	1	4	0	0	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shoals spider-lily	<i>Hymenocallis coronaria</i>	R8	43	10	12	1	1	67	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Henry's spider-lily	<i>Hymenocallis henryae</i>	R8	0	5	0	0	4	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Taylor's filmy fern	<i>Hymenophyllum tayloriae</i>	R8	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
New Mexico bitterweed	<i>Hymenoxyx ambigens</i> var. <i>neomexicana</i>	R3	0	0	0	2	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Tall bitterwood	<i>Hymenoxyx brachyactis</i>	R3	0	0	0	2	0	2	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
Creeping St. John's-wort	<i>Hypericum adpressum</i>	R8, R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orange-grass St. John's-wort	<i>Hypericum gentianoides</i>	R9	16	6	8	1	1	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large St. Johns'-wort	<i>Hypericum majus</i>	R6	2	13	3	1	17	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue ridge St. John's-wort	<i>Hypericum mitchellianum</i>	R9	6	4	5	2	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scalepod	<i>Idahoa scapigera</i>	R1	0	25	0	25	1	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-stalk holly	<i>Ilex collina</i>	R8, R9	5	0	3	0	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California globe-mallow	<i>Iliamna latibracteata</i>	R5, R6	0	8	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow anisetree	<i>Illicium parviflorum</i>	R8	0	14	0	3	2	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western jewel-weed	<i>Impatiens noli-tangere</i>	R6	1	15	1	0	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California satintail	<i>Imperata brevifolia</i>	R5	0	2	0	9	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra blanca cliff daisy	<i>Ionactis elegans</i> (= <i>Chaetopappa e.</i>)	R3	1	8	0	1	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrowleaf morning-glory	<i>Ipomoea shumardiana</i>	R8	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scarlet gilia	<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>	R2	3	12	0	8	3	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rydberg's gilia	<i>Ipomopsis tenuituba</i>	R6	19	65	5	173	4	266	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tuolumne iris	<i>Iris hartwegii</i> ssp. <i>Columbiana</i>	R5	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Munz's iris	<i>Iris munzii</i>	R5	1	8	0	10	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Butler's quillwort	<i>Isoetes butleri</i>	R9	2	1	1	0	0	4	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Appalachian quillwort	<i>Isoetes engelmannii</i>	R9	14	4	3	0	4	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western lake quillwort	<i>Isoetes lacustris</i>	R9	5	10	4	1	3	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thin-wall quillwort	<i>Isoetes microvela</i>	R8	0	0	0	0	2	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Midget quillwort	<i>Isoetes minima</i>	R6	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nuttall's quillwort	<i>Isoetes nuttallii</i>	R6	0	25	0	24	1	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tennessee quillwort	<i>Isoetes tennesseensis</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
A quillwort	<i>Isoetes viridimontana</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large whorled pogonia	<i>Isotria verticillata</i>	R9	26	2	26	1	0	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra Valley ivesia	<i>Ivesia aperta</i> var. <i>aperta</i>	R4, R5	0	1	0	14	1	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dog valley ivesia	<i>Ivesia aperta</i> var. <i>canina</i>	R4, R5	0	8	0	25	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silver-haired ivesia	<i>Ivesia argyrocoma</i> var. <i>argyrocoma</i>	R5	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tahquitz ivesia	<i>Ivesia callida</i>	R5	0	9	1	7	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Charleston ivesia	<i>Ivesia cryptocaulis</i>	R4	0	0	0	17	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jaeger ivesia	<i>Ivesia jaegeri</i>	R4	0	75	0	18	0	93	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Castle crags ivesia	<i>Ivesia longibracteata</i>	R5	0	2	0	8	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ash creek ivesia	<i>Ivesia paniculata</i>	R5	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pickering's ivesia	<i>Ivesia pickeringii</i>	R5	0	34	0	7	0	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Plumas ivesia	<i>Ivesia sericoleuca</i>	R4, R5	0	14	0	54	6	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shockley's ivesia	<i>Ivesia shockleyi</i>	R6	0	7	0	32	0	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Utah ivesia	<i>Ivesia utahensis</i>	R4	1	5	0	7	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Webber's ivesia	<i>Ivesia webberi</i>	R5	0	9	0	12	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wasatch jamesia	<i>Jamesia americana</i> var. <i>macrocalyx</i>	R4	1	5	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Zion jamesia	<i>Jamesia americana</i> var. <i>zionis</i>	R4	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Basin jamesia	<i>Jamesia tetrapetala</i>	R4	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Butternut	<i>Juglans cinerea</i>	R8, R9	5	0	0	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-fruit rush	<i>Juncus brachycarpus</i>	R9	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thread rush	<i>Juncus filiformis</i>	R9	6	45	2	14	13	80	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Least rush	<i>Juncus hemiendytus</i> var. <i>abjectus</i>	R6	0	11	0	10	2	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's rush	<i>Juncus howellii</i>	R6	0	80	0	29	3	112	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kellogg's rush	<i>Juncus kelloggii</i>	R6	0	6	1	5	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red bluff dwarf rush	<i>Juncus leiospermus</i> var. <i>leiospermus</i>	R5	0	2	0	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Lucia dwarf rush	<i>Juncus luciensis</i>	R5	0	3	0	9	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moor rush	<i>Juncus stygius</i>	R9	0	7	3	0	6	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creeping rush	<i>Juncus subtilis</i>	R9	0	2	1	1	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Tiehm's rush	<i>Juncus tiehmii</i>	R6	0	26	1	70	1	98	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Highland rush	<i>Juncus trifidus</i>	R9	1	16	0	0	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Three-flowered rush	<i>Juncus triglumis</i> var. <i>albescens</i>	R6	0	2	1	1	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inch-high rush	<i>Juncus uncialis</i>	R6	1	1	0	3	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Vasey's rush	<i>Juncus vaseyi</i>	R9	1	8	0	2	4	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creeping juniper	<i>Juniperus horizontalis</i>	R9	0	9	0	9	2	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thickleaf water-willow	<i>Justicia crassifolia</i>	R8	0	0	0	0	2	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine azalea	<i>Kalmia procumbens</i>	R6	11	51	10	30	3	105	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fragrant kalmiopsis	<i>Kalmiopsis fragrans</i>	R6	0	15	0	0	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bush beardtongue	<i>Keckiella lemmonii</i>	R6	0	95	2	51	2	150	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bellard's kobresia	<i>Kobresia myosuroides</i>	R6	1	17	0	69	5	92	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Simple kobresia	<i>Kobresia simpliciuscula</i>	R2, R6	3	5	2	19	4	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pineland bogbutton	<i>Lachnocaulon digynum</i>	R8	0	9	0	0	3	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Delicate gilia	<i>Lathrocasis tenerrima</i>	R6	8	38	0	50	0	96	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Two-flowered pea	<i>Lathyrus biflorus</i>	R5	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grimes lathyrus	<i>Lathyrus grimesii</i>	R4	1	0	0	18	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thin-leaved peavine	<i>Lathyrus holochlorus</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale-yellow layia	<i>Layia heterotricha</i>	R5	0	8	3	47	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jones's layia	<i>Layia jonesii</i>	R5	0	2	1	21	0	24	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

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Golden gladecrest	<i>Leavenworthia aurea</i>	R8	7	4	6	3	1	21	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Fleshy-fruit gladecrest	<i>Leavenworthia crassa</i>	R8	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Leggett's pinweed	<i>Lechea pulchella</i>	R9	1	3	0	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Upright pinweed	<i>Lechea stricta</i>	R1	1	0	1	0	1	3	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Heart-leaved pitcher sage	<i>Lepechinia cardiophylla</i>	R5	0	1	0	18	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fragrant pitcher sage	<i>Lepechinia fragrans</i>	R5	0	9	0	57	0	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ross' pitcher sage	<i>Lepechinia rossii</i>	R5	0	0	0	43	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Neeses' peppergrass	<i>Lepidium montanum</i> var. <i>neeseae</i>	R4	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Wasatch pepperwort	<i>Lepidium montanum</i> var. <i>alpinum</i>	R4	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hazel's prickly phlox	<i>Leptodactylon pungens</i> ssp. <i>hazeliae</i>	R4	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baker's linanthus	<i>Leptosiphon bolanderi</i>	R6	1	16	0	32	1	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Rosa mountains leptosiphon	<i>Leptosiphon floribundus</i> ssp. <i>Hallii</i>	R5	0	1	0	7	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Tedoc leptosiphon	<i>Leptosiphon nuttallii</i> ssp. <i>howellii</i>	R5	0	8	0	4	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Madera leptosiphon	<i>Leptosiphon serrulatus</i>	R5	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy lespedeza	<i>Lespedeza hirta</i>	R9	12	6	5	4	1	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Violet lespedeza	<i>Lespedeza violacea</i>	R9	14	3	8	2	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Threadleaf bladderpod	<i>Lesquerella angustifolia</i>	R8	3	1	3	0	0	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Fremont's bladderpod	<i>Lesquerella fremontii</i>	R2	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Garrett bladderpod	<i>Lesquerella garrettii</i>	R4	1	2	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hitchcock bladderpod	<i>Lesquerella hitchcockii</i> var. <i>hitchcockii</i>	R4	NA	X	NA	X	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Kaibab bladderpod	<i>Lesquerella kaibabensis</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Payson bladderpod	<i>Lesquerella paysonii</i>	R4	0	1	0	4	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pagosa Springs bladderpod	<i>Lesquerella pruinosa</i>	R2	0	0	0	2	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Warner Springs lessingia	<i>Lessingia glandulifera</i> var. <i>tomentosa</i>	R5	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand lily	<i>Leucocrinum montanum</i>	R1	0	5	0	6	0	11	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Large-flowered ground-cherry	<i>Leucophysalis grandiflora</i>	R9	0	4	0	2	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-sepaled lewisia	<i>Lewisia brachycalyx</i>	R5	0	74	0	37	0	111	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cantelow's lewisia	<i>Lewisia cantelovii</i>	R5	0	22	0	13	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia lewisia	<i>Lewisia columbiana</i>	R1	1	165	0	109	0	275	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia lewisia	<i>Lewisia columbiana</i> var. <i>columbiana</i>	R6	0	5	0	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Congdon's lewisia	<i>Lewisia congdonii</i>	R5	0	9	0	9	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yosemite lewisia	<i>Lewisia disepala</i>	R5	0	1	0	9	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hutchinson's lewisia	<i>Lewisia kelloggii</i> ssp. <i>hutchinsonii</i>	R5	NA	X	X	NA	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	Calflora (2024)
Kellogg's lewisia	<i>Lewisia kelloggii</i> ssp. <i>kelloggii</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lee's lewisia	<i>Lewisia leeana</i>	R6	0	119	2	116	0	237	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-petaled lewisia	<i>Lewisia longipetala</i>	R5	0	4	0	4	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maguire lewisia	<i>Lewisia maguirei</i>	R4	0	8	0	14	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Opposite-leaved lewisia	<i>Lewisia oppositifolia</i>	R5	1	14	2	39	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sacajawea's bitterroot	<i>Lewisia sacajaweaiana</i>	R4	0	12	0	20	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Saw-toothed lewisia	<i>Lewisia serrata</i>	R5	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stebbins's lewisia	<i>Lewisia stebbinsii</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow wildrye	<i>Leymus flavescens</i>	R6	0	6	0	2	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American dunegrass	<i>Leymus mollis</i>	R9	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nieuwland's blazing star	<i>Liatris scariosa var. nieuwlandii</i>	R9	6	3	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender gayfeather	<i>Liatris tenuis</i>	R8	0	22	0	1	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Turgid blazing star	<i>Liatris turgida</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	No habitat association with OG forest	NI	NatureServe (2024)
Calder's loveage	<i>Ligusticum calderi</i>	R10	0	3	1	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada lily	<i>Lilium canadense</i>	R9	12	3	6	0	2	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gray's lily	<i>Lilium grayi</i>	R8	52	4	15	2	0	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Panhandle lily	<i>Lilium iridollae</i>	R8	0	21	0	6	6	33	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lemon lily	<i>Lilium parryi</i>	R3	0	81	17	190	1	289	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lemon lily	<i>Lilium parryi</i>	R5	0	81	17	190	1	289	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wood lily	<i>Lilium philadelphicum</i>	R3	19	26	0	3	1	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Turk's-cap lily	<i>Lilium superbum</i>	R9	51	1	21	5	2	80	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender meadow-foam	<i>Limnanthes alba ssp. gracilis</i>	R6	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's meadowfoam	<i>Limnanthes alba var. parishii</i>	R5	0	10	3	22	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bellinger's meadow-foam	<i>Limnanthes floccosa ssp. bellingeriana</i>	R5, R6	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western marsh-rosemary	<i>Limonium californicum</i>	R6	0	1	1	20	3	25	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Chiricahua mudwort	<i>Limosella pubiflora</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
San Gabriel linanthus	<i>Linanthus concinnus</i>	R5	0	16	1	47	2	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Jacinto prickly phlox	<i>Linanthus jaegeri</i>	R5	0	5	0	10	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baldwin lake linanthus	<i>Linanthus killipii</i>	R5	0	10	0	55	0	65	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orcutt's linanthus	<i>Linanthus orcuttii</i>	R5	0	4	1	16	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog spicebush	<i>Lindera subcoriacea</i>	R8	0	10	4	12	8	34	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Twinflower	<i>Linnaea borealis ssp. americana</i>	R9	6	146	3	25	5	185	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spring hill flax	<i>Linum macrocarpum</i>	R8	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Grooved yellow flax	<i>Linum sulcatum</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
West's flax	<i>Linum westii</i>	R8	0	0	0	0	2	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large twayblade	<i>Liparis liliifolia</i>	R9	21	2	14	0	1	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow widelip orchid	<i>Liparis loeselii</i>	R1, R2, R9	NA	NA	NA	NA	x	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Aristulate lipocarpha	<i>Lipocarpha aristulata</i>	R6	2	3	0	7	7	19	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Dwarf bulrush	<i>Lipocarpha micrantha</i>	R9	3	2	0	6	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western halfchaff sedge	<i>Lipocarpha occidentalis</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Auricled twayblade	<i>Listera auriculata</i>	R9	1	0	0	0	1	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Northern twayblade	<i>Listera borealis</i>	R6	3	15	2	6	4	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twayblade	<i>Listera convallarioides</i>	R9	0	53	1	22	3	79	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heartleaf twayblade	<i>Listera cordata</i>	R9	2	88	1	15	4	110	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Pondspice	<i>Litsea aestivalis</i>	R8	0	0	0	0	6	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American shoregrass	<i>Littorella uniflora</i> (syn = <i>L. americana</i>)	R9	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Water lobelia	<i>Lobelia dortmanna</i>	R6	4	6	6	4	5	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Great blue lobelia	<i>Lobelia siphilitica</i>	R9	3	0	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Taper-tip desert-parsley	<i>Lomatium attenuatum</i>	R1	0	3	0	9	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Englemann's desert-parsley	<i>Lomatium engelmannii</i>	R6	0	29	0	2	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red-fruited lomatium	<i>Lomatium erythrocarpum</i>	R6	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Basalt desert parsley	<i>Lomatium filicinum</i>	R6	0	12	0	21	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greenman's desert-parsley	<i>Lomatium greenmanii</i>	R6	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Klickitat biscuitroot	<i>Lomatium klickitatense</i>	R6	0	3	0	58	0	61	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Desert-parsley	<i>Lomatium knoepfii</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth desert-parsley	<i>Lomatium laevigatum</i>	R6	0	2	0	12	0	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Canyonlands lomatium	<i>Lomatium latilobum</i>	R4	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ochoco lomatium	<i>Lomatium ochocense</i>	R6	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow lomatium	<i>Lomatium pastoreale</i>	R6	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rollins' lomatium	<i>Lomatium rollinsii</i>	R6	0	2	0	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Leavenworth desert parsley	<i>Lomatium roneorum</i>	R6	0	8	0	2	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snake canyon desert parsley	<i>Lomatium serpentinum</i>	R6	0	18	0	45	0	63	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stebbins' lomatium	<i>Lomatium stebbinsii</i>	R5	0	19	0	6	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Suksdorf's desert parsley	<i>Lomatium suksdorffii</i>	R6	0	8	0	2	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spider biscuitroot	<i>Lomatium tarantuloides</i>	R6	0	3	0	2	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Watson's desert parsley	<i>Lomatium watsonii</i>	R6	0	4	0	5	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh felwort	<i>Lomatogonium rotatum</i>	R1	0	14	0	3	8	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain honeysuckle var. glaucescens	<i>Lonicera dioica</i> var. <i>glaucescens</i>	R9	2	4	1	1	1	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow honeysuckle	<i>Lonicera flava</i>	R9	36	2	18	1	0	57	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy honeysuckle	<i>Lonicera hirsuta</i>	R9	6	8	13	0	10	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Barbara honeysuckle	<i>Lonicera subspicata</i> var. <i>subspicata</i>	R5	0	7	3	24	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alamos deer vetch	<i>Lotus alamosanus</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Horseshoe deer vetch	<i>Lotus mearnsii</i> var. <i>equisolensis</i>	R3	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stipuled trefoil	<i>Lotus stipularis</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Carolina birdfoot-trefoil	<i>Lotus unifoliolatus</i> var. <i>helleri</i>	R8	X	NA	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	Masson and Stucky (2008)
Small-fruit seedbox	<i>Ludwigia microcarpa</i>	R9	1	2	0	1	4	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Colonial luina	<i>Luina serpentina</i>	R6	0	8	0	1	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Anthony peak lupine	<i>Lupinus antonius</i>	R5	0	2	0	12	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Ashland lupine	<i>Lupinus aridus</i> ssp. <i>ashlandensis</i>	R6	0	12	0	7	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orange lupine	<i>Lupinus citrinus</i> var. <i>citrinus</i>	R5	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
The Lassics lupine	<i>Lupinus constancei</i>	R5	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mono lake lupine	<i>Lupinus duranii</i>	R5	0	15	0	76	0	91	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Huachuca mountains lupine	<i>Lupinus huachucanus</i>	R3	0	18	3	24	0	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broadleaf lupine	<i>Lupinus latifolius</i> ssp. <i>leucanthus</i>	R3	0	20	0	4	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bearded lupine	<i>Lupinus latifolius</i> var. <i>barbatus</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Lemmon's lupine	<i>Lupinus lemmontii</i>	R3	0	7	0	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Ashland lupine	<i>Lupinus lepidus</i> var. <i>ashlandensis</i>	R5	0	5	0	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hockett meadows lupine	<i>Lupinus lepidus</i> var. <i>culbertsonii</i>	R5	0	0	1	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cusick's lupine	<i>Lupinus lepidus</i> var. <i>cusickii</i>	R6	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Luis obispo lupine	<i>Lupinus ludovicianus</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Father Crowley's lupine	<i>Lupinus padre-crowleyi</i>	R5	15	15	0	35	0	65	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Peirson's lupine	<i>Lupinus peirsonii</i>	R5	0	26	1	44	1	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tracy's lupine	<i>Lupinus tracyi</i>	R6	0	47	1	21	3	72	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alaska curved woodrush	<i>Luzula arcuata</i> ssp. <i>unalaschcensis</i>	R6	0	3	0	5	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra woodrush	<i>Luzula oreastera</i>	R6	0	21	0	37	3	61	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flower woodrush	<i>Luzula parviflora</i>	R9	9	143	9	41	14	216	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog club-moss	<i>Lycopodiella inundata</i>	R1, R6	5	17	13	14	42	91	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern prostrate clubmoss	<i>Lycopodiella marginariae</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Northern bog clubmoss	<i>Lycopodiella subappressa</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Groundcedar	<i>Lycopodium complanatum</i>	R2	NA	X	X	NA	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Treelike clubmoss	<i>Lycopodium dendroideum</i>	R1, R6	6	18	9	3	8	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
One-cone clubmoss	<i>Lycopodium lagopus</i>	R6	4	25	10	16	16	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alaskan clubmoss	<i>Lycopodium sitchense</i>	R9	0	41	0	10	0	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fraser's loosestrife	<i>Lysimachia fraseri</i>	R8	2	0	3	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Curtiss' loosestrife	<i>Lythrum curtissii</i>	R8	0	12	0	0	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mapleleaf false snapdragon	<i>Mabrya acerifolia</i> (= <i>Maurandya a.</i>)	R3	0	0	0	48	0	48	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flameflower	<i>Macranthera flammea</i>	R8	0	12	0	6	3	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Supine bean	<i>Macroptilium supinum</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ashe's magnolia	<i>Magnolia ashei</i>	R8	0	18	0	0	2	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Umbrella magnolia	<i>Magnolia tripetala</i>	R9	20	2	9	1	2	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Carmel valley bush mallow	<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	R5	0	0	0	4	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Arroyo seco bush mallow	<i>Malacothamnus palmeri</i> var. <i>lucianus</i>	R5	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Lucia bush mallow	<i>Malacothamnus palmeri</i> var. <i>palmeri</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Carmel valley malothrix	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	R5	0	1	1	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White adder's-mouth orchid	<i>Malaxis brachypoda</i>	R9	1	4	0	9	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White adder's-mouth orchid	<i>Malaxis monophyllos</i> var. <i>brachypoda</i>	R2, R5, R6	1	9	1	9	2	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog adder's-mouth orchid	<i>Malaxis paludosa</i>	R9	0	3	1	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern crab apple	<i>Malus angustifolia</i>	R9	2	7	2	1	2	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hispid false mallow	<i>Malvastrum hispidum</i>	R9	1	0	0	0	0	1	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Counter-clockwise fishhook cactus	<i>Mammillaria mainiae</i>	R3	X	NA	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Arizona manihot	<i>Manihot davisiae</i>	R3	0	1	0	7	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California marina	<i>Marina orcuttii</i> var. <i>orcuttii</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large-flowered Barbara's-buttons	<i>Marshallia grandiflora</i>	R9	5	1	1	0	1	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Broadleaf Barbara's-buttons	<i>Marshallia trinervia</i>	R8	3	1	2	0	2	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baldwin's milkvine	<i>Matelea baldwyniana</i>	R9	9	0	10	2	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spearleaf	<i>Matelea parviflora</i>	R5	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White fairypoppy	<i>Meconella oregana</i>	R6	0	6	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smith's melicgrass	<i>Melica smithii</i>	R6, R9	1	24	3	0	4	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creeping cucumber	<i>Melothria pendula</i>	R9	1	1	0	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chama blazing star	<i>Mentzelia conspicua</i>	R3	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Goodrich stickleaf	<i>Mentzelia goodrichii</i>	R4	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inyo blazing star	<i>Mentzelia inyoensis</i>	R5	0	1	0	12	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf mentzelia	<i>Mentzelia pumila</i>	R1	2	12	0	19	0	33	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Springer's blazing star	<i>Mentzelia springeri</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog buckbean	<i>Menyanthes trifoliata</i>	R1, R9	1	40	3	3	29	76	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Virginia bluebells	<i>Mertensia virginica</i>	R9	8	0	2	0	2	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wiggins milkweed vine	<i>Metastelma mexicanum</i> (= <i>Cynanchum wigginsii</i>)	R3	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tiny swamp saxifrage	<i>Micranthes apetala</i>	R1	0	8	0	5	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Carolina saxifrage	<i>Micranthes caroliniana</i>	R8	8	1	0	0	0	9	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Storm saxifrage	<i>Micranthes tempestiva</i>	R1	0	6	0	6	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tisch's saxifrage	<i>Micranthes tischii</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Red poverty weed	<i>Micromonolepis pusilla</i>	R6	0	3	0	15	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern microseris	<i>Microseris borealis</i>	R6	0	38	10	6	12	66	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's microseris	<i>Microseris howellii</i>	R6	0	5	0	6	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ladies'-tresses	<i>Microthelys rubrococcalosa</i> (= <i>Schiedeella r.</i> , <i>Spiranthes r.</i>) (= <i>Malaxis abieticola</i>)	R3	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Chickweed monkeyflower	<i>Mimulus alsinoides</i>	R1	0	23	1	3	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spacious monkeyflower	<i>Mimulus ampliatus</i>	R1	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-flower monkeyflower	<i>Mimulus breviflorus</i>	R1	0	9	0	6	2	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bank monkeyflower	<i>Mimulus clivicola</i>	R1, R4	0	32	0	10	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Two-colored monkeyflower	<i>Mimulus discolor</i>	R5	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ephemeral monkeyflower	<i>Mimulus evanescens</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
San Bernardino mountains monkeyflower	<i>Mimulus exiguus</i>	R5	0	2	0	14	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender-stemmed monkeyflower	<i>Mimulus filicaulis</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rocky Mountain, budding, or weber monkeyflower	<i>Mimulus gemmiparus</i>	R2	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender stalked monkeyflower	<i>Mimulus gracilipes</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Common large monkeyflower	<i>Mimulus guttatus</i>	R9	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Dwarf purple monkeyflower	<i>Mimulus nanus</i>	R1	NA	X	NA	X	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	Calflora (2024)
Kaweah monkeyflower	<i>Mimulus norrisii</i>	R5	0	0	0	11	0	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Primrose monkeyflower	<i>Mimulus primuloides</i>	R1	1	82	1	54	12	150	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pansy monkeyflower	<i>Mimulus pulchellus</i>	R5	0	3	0	4	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple monkeyflower	<i>Mimulus purpureus</i>	R5	0	3	0	12	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kelso creek monkeyflower	<i>Mimulus shevockii</i>	R5	0	0	0	20	0	20	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cumberland sandwort	<i>Minuartia cumberlandensis</i>	R8	1	0	0	0	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
The Lassics sandwort	<i>Minuartia decumbens</i>	R5	0	2	0	8	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Godfrey's stitchwort	<i>Minuartia godfreyi</i>	R8	0	1	0	0	1	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pitcher's stitchwort	<i>Minuartia patula</i>	R9	5	2	2	0	0	9	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Peanut sandwort	<i>Minuartia rosei</i>	R5	0	22	1	19	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scott Mountain sandwort	<i>Minuartia stolonifera</i>	R5	0	6	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Largeleaf sandwort	<i>Moehringia macrophylla</i>	R9	3	126	0	22	2	153	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smoke hole bergamot	<i>Monarda fistulosa</i> ssp. <i>brevis</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Jokerst's monardella	<i>Monardella australis</i> <i>jokerstii</i>	R5	0	6	0	1	2	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sweet-smelling monardella	<i>Monardella beneolens</i>	R5	0	0	0	16	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Follett's monardella	<i>Monardella follettii</i>	R5	0	17	0	20	0	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flat-leaved monardella	<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	R5	0	0	0	25	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flax-like monardella	<i>Monardella linoides</i> ssp. <i>Oblonga</i>	R5	0	24	0	35	0	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hall's monardella	<i>Monardella macrantha</i> ssp. <i>hallii</i>	R5	0	7	8	27	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Felipe monardella	<i>Monardella nana</i> ssp. <i>leptosiphon</i>	R5	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Palmer's monardella	<i>Monardella palmeri</i>	R5	0	10	0	5	1	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou monardella	<i>Monardella purpurea</i>	R6	0	60	5	24	0	89	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock monardella	<i>Monardella saxicola</i>	R5	0	6	1	30	2	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stebbins's monardella	<i>Monardella stebbinsii</i>	R5	0	7	0	5	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sweet pinesap	<i>Monotropsis odorata</i>	R8	6	10	25	0	1	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Branching montia	<i>Montia diffusa</i>	R6	0	23	0	7	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Red mulberry	<i>Morus rubra</i>	R9	7	1	3	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sycamore Canyon muhly	<i>Muhlenbergia elongata</i> (= <i>M. xerophila</i>)	R3	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh muhly	<i>Muhlenbergia glomerata</i>	R1, R6	6	16	3	3	8	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Annual dropseed	<i>Muhlenbergia minutissima</i>	R6	4	111	3	37	0	155	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southwestern muhly	<i>Muhlenbergia palmeri</i> (= <i>M. dubioloides</i>)	R3	0	1	0	14	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Soft-leaf muhly	<i>Muhlenbergia richardsonis</i>	R9	1	62	2	81	1	147	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog muhly	<i>Muhlenbergia uniflora</i>	R9	1	1	3	0	7	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Farwell's water-milfoil	<i>Myriophyllum farwellii</i>	R9	3	7	7	2	6	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Low water-milfoil	<i>Myriophyllum humile</i>	R9	24	12	17	3	25	81	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Loose water-milfoil	<i>Myriophyllum laxum</i>	R8	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Fish lake naiad	<i>Najas caespitosa</i>	R4	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Narrowleaf naiad	<i>Najas filifolia</i>	R8	0	3	2	0	2	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Slender waternymph	<i>Najas gracillima</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern waternymph	<i>Najas guadalupensis</i> ssp. <i>olivacea</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Ojai navarretia	<i>Navarretia ojaiensis</i>	R5	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Baja navarretia	<i>Navarretia peninsularis</i>	R5	0	11	0	31	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow bur navarretia	<i>Navarretia prolifera</i> ssp. <i>lutea</i>	R5	0	20	0	6	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Piute Mountains navarretia	<i>Navarretia setiloba</i>	R5	0	3	2	21	0	26	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Marigold navarretia	<i>Navarretia tagetina</i>	R6	1	1	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chimney Creek nemacladus	<i>Nemacladus calcaratus</i>	R5	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender nemacladus	<i>Nemacladus capillaris</i>	R6	0	16	2	24	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robbins' nemacladus	<i>Nemacladus secundiflorus robbinsi</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twisselman's nemacladus	<i>Nemacladus twisselmannii</i>	R5	0	4	0	3	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fall-flowering ixia	<i>Nemastylis floridana</i>	R8	0	14	0	5	60	79	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lakecress	<i>Neobreckia aquatica</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bill's neoparrya	<i>Neoparrya lithophila</i>	R2	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alabama snow-wreath	<i>Neviusia alabamensis</i>	R8	97	0	0	0	0	97	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shasta snow-wreath	<i>Neviusia cliftonii</i>	R5	0	43	1	6	0	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coyote tobacco	<i>Nicotiana attenuata</i>	R6	1	21	1	70	1	94	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho pennycress	<i>Noccaea idahoensis</i> var. <i>aileeniae</i> (= <i>Thlaspi aileeniae</i>)	R4	NA	X	NA	X	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)
Small-flowered pennycress	<i>Noccaea parviflora</i>	R1	0	10	0	9	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida bear-grass	<i>Nolina atopocarpa</i>	R8	0	23	0	0	10	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chaparral nolina	<i>Nolina cismontana</i>	R5	0	0	1	26	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow pond-lily	<i>Nuphar lutea</i> ssp. <i>pumila</i>	R9	3	0	2	0	3	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Dwarf water-lily	<i>Nymphaea leibergii</i>	R9	1	2	1	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blackgum	<i>Nyssa sylvatica</i>	R9	2	1	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tufted evening primrose	<i>Oenothera caespitosa</i> ssp. <i>marginata</i>	R6	3	30	0	49	5	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrowleaf evening primrose	<i>Oenothera fruticosa</i>	R9	12	4	2	0	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stemless evening primrose	<i>Oenothera triloba</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	SEINet (2024)
Prairie goldenrod	<i>Oligoneuron album</i>	R9	18	0	6	1	0	25	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Alpine arctic cudweed	<i>Omalotheca supina</i>	R9	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sensitive fern	<i>Onoclea sensibilis</i>	R1	7	1	2	0	1	11	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Northern adder's tongue	<i>Ophioglossum pusillum</i>	R5	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Limestone adder's-tongue	<i>Ophioglossum engelmannii</i>	R9	5	3	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern adder's-tongue	<i>Ophioglossum pusillum</i>	R1, R6, R9	4	10	2	3	12	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-joint beavertail	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	R5	0	26	6	103	1	136	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple mountain-parsley	<i>Oreonana purpurascens</i>	R5	0	12	0	5	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Woolly mountain-parsley	<i>Oreonana vestita</i>	R5	0	29	2	96	1	128	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tall alpine aster	<i>Oreostemma elatum</i>	R5	0	12	0	1	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pikes peak alpineparsley	<i>Oreoxis humilis</i>	R2	0	7	0	2	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clustered broomrape	<i>Orobanche fasciculata</i>	R9	1	39	3	90	0	133	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pine broomrape	<i>Orobanche pinorum</i>	R1	0	10	0	4	1	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
One-flowered broomrape	<i>Orobanche uniflora</i>	R9	4	22	1	15	1	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock creek broomrape	<i>Orobanche valida</i> ssp. <i>valida</i>	R5	0	4	0	6	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rosy owl-clover	<i>Orthocarpus bracteosus</i>	R6	0	16	0	11	2	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chilean sweet-cicely	<i>Osmorrhiza berteroii</i>	R9	3	35	2	2	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Illinois wood sorrel	<i>Oxalis illinoensis</i>	R9	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain-sorrel	<i>Oxyria digyna</i>	R9	4	41	0	95	2	142	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chickweed oxytheca	<i>Oxytheca caryophylloides</i>	R5	0	19	0	15	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-margined oxytheca	<i>Oxytheca emarginata</i>	R5	0	7	0	15	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Challis crazyweed	<i>Oxytropis besseyi</i> var. <i>salmonensis</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Viscid locoweed	<i>Oxytropis borealis</i> var. <i>viscida</i>	R9	3	36	0	93	2	134	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellowflower locoweed	<i>Oxytropis campestris</i> var. <i>gracilis</i>	R6	0	16	1	7	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock-loving oxytropes	<i>Oxytropis oreophila</i> <i>oreophila</i>	R5	0	28	3	40	0	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allegheny-spurge	<i>Pachysandra procumbens</i>	R9	18	0	7	0	4	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beaver Mountain groundsel	<i>Packera (=Senecio) castoreus</i>	R4	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Podunk groundsel	<i>Packera (=Senecio) malmstenii</i>	R4	0	8	0	1	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino ragwort	<i>Packera bernardina</i>	R5	0	6	0	8	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harford's ragwort	<i>Packera bolanderi</i> var. <i>harfordii</i>	R6	0	60	0	4	0	64	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heartleaf groundsel	<i>Packera cardamine</i> (= <i>Senecio cardamine</i>)	R3	0	3	0	5	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cut-leaved ragweed	<i>Packera eurycephala</i>	R5	0	28	1	56	0	85	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gander's ragwort	<i>Packera ganderi</i>	R5	0	0	0	11	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western senecio	<i>Packera hesperia</i>	R5	0	2	0	6	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elegant groundsel	<i>Packera indecora</i>	R9	3	43	0	8	5	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mancos shale packera	<i>Packera mancosana</i>	R2	1	1	0	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue ridge ragwort	<i>Packera millefolium</i>	R8	X	X	X	NA	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Toumey groundsel	<i>Packera neomexicana</i> var. <i>toumeyi</i> (= <i>Senecio n. var. t.</i>)	R3	0	13	0	10	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Balsam groundsel	<i>Packera paupercula</i>	R9	3	18	4	3	7	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Porter's butterweed	<i>Packera porteri</i>	R6	1	2	0	30	1	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spellenberg's groundsel	<i>Packera spellenbergii</i> (= <i>Senecio s.</i>)	R3	0	1	0	0	0	1	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
American ginseng	<i>Panax quinquefolius</i>	R8, R9	25	2	8	0	0	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Philadelphia panicgrass	<i>Panicum philadelphicum</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale poppy	<i>Papaver alboroseum</i>	R10	0	10	0	4	1	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arctic poppy	<i>Papaver radicatum</i> var. <i>pygmaeum</i>	R4	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NA
Bog fern	<i>Parathelypteris simulata</i>	R9	22	7	14	0	9	52	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Carolina grass-of-Parnassus	<i>Parnassia caroliniana</i>	R8	0	4	0	0	9	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
San Bernardino grass-of-Parnassus	<i>Parnassia cirrata</i> var. <i>cirrata</i>	R5	0	2	0	3	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cascade grass-of-Parnassus	<i>Parnassia cirrata</i> var. <i>intermedia</i>	R5	3	63	7	25	15	113	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Largeleaf grass-of-Parnassus	<i>Parnassia grandifolia</i>	R8	47	16	10	2	28	103	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kotzebue's grass-of-Parnassus	<i>Parnassia kotzebuei</i>	R2, R6	0	9	1	19	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh grass-of-Parnassus	<i>Parnassia palustris</i>	R9	1	54	1	52	12	120	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern grass-of-Parnassus	<i>Parnassia palustris</i>	R6	1	54	1	52	12	120	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silvery nailwort	<i>Paronychia argyrocoma</i>	R9	32	4	19	5	0	60	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow nailwort	<i>Paronychia virginica</i>	R9	21	0	11	0	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Naked-stemmed parrya	<i>Parrya nudicaulis</i>	R4	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	NatureServe (2024)
Wild quinine	<i>Parthenium integrifolium</i>	R9	15	0	5	1	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Virlet paspalum	<i>Paspalum virletii</i>	R3	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona passionflower	<i>Passiflora arizonica</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NA
Canby's mountain-lover	<i>Paxistima canbyi</i>	R8, R9	3	1	1	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beardless chinchweed	<i>Pectis imberbis</i>	R3	0	2	0	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink coil-beaked lousewort	<i>Pedicularis contorta</i> var. <i>ctenophora</i>	R1	0	16	0	13	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Selway coil-beaked lousewort	<i>Pedicularis contorta</i> var. <i>rubicunda</i>	R1	0	19	0	13	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dudley's lousewort	<i>Pedicularis dudleyi</i>	R5	0	5	0	3	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's lousewort	<i>Pedicularis howellii</i>	R5	0	13	0	6	11	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swamp lousewort	<i>Pedicularis lanceolata</i>	R9	4	0	0	0	5	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain lousewort	<i>Pedicularis pulchella</i>	R6	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Rainier lousewort	<i>Pedicularis rainierensis</i>	R6	0	2	0	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kaibab pincushion cactus	<i>Pediocactus paradinei</i>	R3	0	3	0	6	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fickeisen pincushion cactus	<i>Pediocactus peeblesianus</i> var. <i>fickeisniae</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Paria breadroot	<i>Pediomelum pariense</i>	R4	0	18	0	18	0	36	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Three-nerved surf-pea	<i>Pediomelum pentaphyllum</i>	R3	0	0	0	6	0	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Coffee fern	<i>Pellaea andromedifolia</i>	R6	0	7	1	24	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra cliffbrake	<i>Pellaea brachyptera</i>	R6	0	109	0	67	0	176	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brewer's cliff-brake	<i>Pellaea breweri</i>	R6	12	109	8	216	0	345	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bridges' cliff-brake	<i>Pellaea bridgesii</i>	R6	1	75	0	266	1	343	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lyngholm's brakefern	<i>Pellaea lyngholmii</i>	R3	0	2	0	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California birds-foot cliff-brake	<i>Pellaea mucronata</i> ssp. <i>californica</i>	R6	0	43	0	66	2	111	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Green arrow-arum	<i>Peltandra virginica</i>	R9	0	1	1	0	6	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Absaroka, or Absaroka Range beardtongue	<i>Penstemon absarokensis</i>	R2	0	5	0	4	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stemless beardtongue	<i>Penstemon acaulis</i> var. <i>acaulis</i>	R4	NA	X	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Alamo penstemon	<i>Penstemon alamosensis</i>	R3	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dune penstemon	<i>Penstemon arenarius</i>	R4	0	0	0	47	0	47	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Barrett's penstemon	<i>Penstemon barrettiae</i>	R6	0	12	0	19	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Red Canyon beardtongue	<i>Penstemon bracteatus</i>	R4	0	8	0	10	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California beardtongue	<i>Penstemon californicus</i>	R5	0	10	0	32	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Guadalupe penstemon	<i>Penstemon cardinalis</i> ssp. <i>regalis</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cary's beardtongue	<i>Penstemon caryi</i>	R2	0	3	0	9	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sunset Crater beardtongue	<i>Penstemon clutei</i>	R3	0	23	0	5	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cache beardtongue	<i>Penstemon compactus</i>	R4	3	11	0	45	0	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elegant penstemon	<i>Penstemon concinnus</i>	R4	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Degener's beardtongue	<i>Penstemon degeneri</i>	R2	3	5	0	5	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Variable hot-rock penstemon	<i>Penstemon deustus</i> var. <i>variabilis</i>	R6	0	5	0	3	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Catalina beardtongue	<i>Penstemon discolor</i>	R3	0	5	0	3	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whited's penstemon	<i>Penstemon eriantherus</i> var. <i>whitedii</i>	R6	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow beardtongue	<i>Penstemon flavescens</i>	R1	0	43	0	39	0	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue-leaved penstemon	<i>Penstemon glaucinus</i>	R6	0	3	0	9	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harrington's beardtongue	<i>Penstemon harringtonii</i>	R2	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho penstemon	<i>Penstemon idahoensis</i>	R4	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Charleston beardtongue	<i>Penstemon leiophyllum</i> var. <i>keckii</i>	R4	2	29	3	15	0	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lemhi penstemon	<i>Penstemon lemhiensis</i>	R1, R4	0	28	0	13	0	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maguire's beardtongue	<i>Penstemon linarioides</i> ssp. <i>maguirei</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Metcalfe's penstemon	<i>Penstemon metcalfei</i>	R3	0	11	0	8	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mt. Moriah penstemon	<i>Penstemon moriahensis</i>	R4	0	22	0	21	0	43	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flagstaff beardtongue	<i>Penstemon nudiflorus</i>	R3	2	41	0	8	0	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale beardtongue	<i>Penstemon pallidus</i>	R9	17	2	4	0	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little penstemon	<i>Penstemon parvus</i>	R4	3	5	1	8	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Payette beardtongue	<i>Penstemon payettensis</i>	R1	0	92	0	60	2	154	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Peck's penstemon	<i>Penstemon peckii</i>	R6	0	12	0	3	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue mountain penstemon	<i>Penstemon pennellianus</i>	R6	0	27	0	11	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Closed-throated beardtongue	<i>Penstemon personatus</i>	R5	0	24	0	3	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinyon penstemon	<i>Penstemon pinorum</i>	R4	0	14	0	5	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Mateo penstemon	<i>Penstemon pseudoparvus</i>	R3	0	5	0	4	0	9	RFSS matrices	NA	Only occurs on the Cibola NFNG that is not being amended by NOGA	NI	NA
Bashful penstemon	<i>Penstemon pudicus</i>	R4	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rhizome beardtongue	<i>Penstemon rhizomatous</i>	R4	1	17	0	8	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wassuk beardtongue	<i>Penstemon rubicundus</i>	R4	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Susanville beardtongue	<i>Penstemon sudans</i>	R5	0	10	0	1	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jaeger beardtongue	<i>Penstemon thompsoniae</i> ssp. <i>jaegeri</i>	R4	0	21	0	2	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tracy's beardtongue	<i>Penstemon tracyi</i>	R5	0	13	0	8	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ward beardtongue	<i>Penstemon wardii</i>	R4	0	5	0	11	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wilcox's penstemon	<i>Penstemon wilcoxii</i>	R6	0	171	0	50	1	222	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender pentachaeta	<i>Pentachaeta exilis</i> ssp. <i>aeolica</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Calflora (2024)
Red-rooted yampah	<i>Perideridia erythrorhiza</i>	R6	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Chiricahua rockdaisy	<i>Perityle cochisensis</i>	R3	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Salt River rockdaisy	<i>Perityle gilensis</i> var. <i>salensis</i>	R3	0	0	0	4	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Fish Creek rockdaisy	<i>Perityle saxicola</i>	R3	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Dotted smartweed	<i>Persicaria punctata</i>	R6	1	1	0	1	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sweet colt's-foot	<i>Petasites frigidus</i> var. <i>palmatus</i>	R9	1	52	3	1	1	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arrowleaf sweet coltsfoot	<i>Petasites frigidus</i> var. <i>sagittatus</i>	R9	2	40	3	8	10	63	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marble rockmat	<i>Petrophyton caespitosum</i> ssp. <i>Acuminatum</i>	R5	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chelan rockmat	<i>Petrophytum cinerascens</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silvery phacelia	<i>Phacelia argentea</i>	R6	0	13	10	4	3	30	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cooke's phacelia	<i>Phacelia cookei</i>	R5	0	18	0	2	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Buttercup scorpionweed	<i>Phacelia covillei</i>	R9	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Franklin's phacelia	<i>Phacelia franklinii</i>	R9	1	32	2	33	3	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scott Valley phacelia	<i>Phacelia greenei</i>	R5	0	20	0	17	0	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inconspicuous phacelia	<i>Phacelia inconspicua</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Playa phacelia	<i>Phacelia inundata</i>	R5	0	0	0	6	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Inyo phacelia	<i>Phacelia inyoensis</i>	R5	0	5	0	7	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santiago Peak phacelia	<i>Phacelia keckii</i>	R5	0	3	2	15	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou phacelia	<i>Phacelia leonis</i>	R6	0	20	2	7	2	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flower phacelia	<i>Phacelia minutissima</i>	R4, R6	0	3	0	11	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mono County phacelia	<i>Phacelia monoensis</i>	R4, R5	0	22	0	33	0	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nine-mile Canyon phacelia	<i>Phacelia novemmillensis</i>	R5	0	2	0	8	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blue-scorpionweed	<i>Phacelia ranunculacea</i>	R8	26	0	4	0	1	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stebbins's phacelia	<i>Phacelia stebbinsii</i>	R5	0	8	0	25	0	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf phacelia	<i>Phacelia tetramera</i>	R6	0	5	0	16	0	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broad beechfern	<i>Phegopteris hexagonoptera</i>	R9	48	1	3	0	6	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinus altos flame flower	<i>Phemeranthus humilis</i>	R3	0	3	1	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sunbright	<i>Phemeranthus parviflorus</i>	R9	4	19	3	18	1	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spinescent fameflower	<i>Phemeranthus spinescens</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alyssum-leaf phlox	<i>Phlox alyssifolia</i>	R1	1	39	0	17	0	57	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Arizona phlox	<i>Phlox amabilis</i>	R3	0	34	0	22	0	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Largeleaf phlox	<i>Phlox amplifolia</i>	R9	2	0	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swordleaf phlox	<i>Phlox buckleyi</i>	R8, R9	3	0	2	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Big Bear Valley phlox	<i>Phlox dolichantha</i>	R5	0	53	2	37	0	92	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henderson's phlox	<i>Phlox hendersonii</i>	R6	0	6	0	1	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Missoula phlox	<i>Phlox kelseyi</i> var. <i>missoulensis</i>	R1	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted phlox	<i>Phlox maculata</i> ssp. <i>pyramidalis</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Soft phlox	<i>Phlox mollis</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Many-flowered phlox	<i>Phlox multiflora</i>	R6	6	67	0	74	7	154	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lonely phlox	<i>Phlox solivagus</i>	R6	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	NatureServe (2024)
Pineland false sunflower	<i>Phoebanthus tenuifolius</i>	R8	NA	X	X	X	NA	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	SEINet (2024)

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Knotweed leaf-flower	<i>Phyllanthus polygonoides</i>	R9	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broadleaf ground cherry	<i>Physalis latiflora</i>	R3	NA	NA	X	X	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	SEINet (2024)
Keeled bladderpod	<i>Physaria carinata</i>	R1	0	30	0	42	1	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common twinpod	<i>Physaria didymocarpa</i> ssp. <i>lanata</i>	R2	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Salmon twin bladderpod	<i>Physaria didymocarpa</i> var. <i>lyrata</i>	R4	0	2	0	6	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Douglas bladderpod	<i>Physaria douglasii</i>	R1	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bitterroot bladderpod	<i>Physaria humilis</i>	R1	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Creeping twinpod	<i>Physaria integrifolia</i> v. <i>monticola</i>	R4	0	3	0	5	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beautiful bladderpod	<i>Physaria pulchella</i>	R1	0	9	0	4	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cushion bladderpod	<i>Physaria pulvinata</i>	R2	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silver, or west silver bladderpod	<i>Physaria scotiformis</i>	R2	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Godfrey's false dragonhead	<i>Physostegia godfreyi</i>	R8	0	15	0	0	13	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
American pillwort	<i>Pilularia americana</i>	R6	6	4	0	8	1	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fever-tree	<i>Pinckneya bracteata</i>	R8	0	7	0	0	11	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chapman's butterwort	<i>Pinguicula planifolia</i>	R8	0	64	0	0	107	171	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern butterwort	<i>Pinguicula primuliflora</i>	R8	0	13	0	0	2	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common butterwort	<i>Pinguicula vulgaris</i>	R9	5	37	28	33	6	109	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whitebark pine	<i>Pinus albicaulis</i>	R4, R5	1	124	1	134	3	263	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Limber pine	<i>Pinus flexilis</i>	R1, R6	7	89	1	86	1	184	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pitch pine	<i>Pinus rigida</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alaska rein orchid	<i>Piperia unalascensis</i>	R10	7	125	1	44	2	179	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little ricegrass	<i>Piptatheropsis exigua</i>	R6	3	94	0	90	2	189	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada mountain ricegrass	<i>Piptatherum canadense</i>	R9	0	0	0	0	2	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black-fruit mountain-ricegrass	<i>Piptatherum racemosum</i>	R9	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blackseed speargrass	<i>Piptochaetium avenaceum</i>	R9	8	10	4	0	3	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Zigzag silk-grass	<i>Pityopsis flexuosa</i>	R8	1	17	0	3	1	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cooper's popcornflower	<i>Plagiobothrys collinus ursinus</i>	R5	0	2	0	8	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coral seeded allocarya	<i>Plagiobothrys figuratus</i> ssp. <i>corallicarpus</i>	R6	0	1	0	2	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Altered andesite popcorn flower	<i>Plagiobothrys glomeratus</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greene's popcorn flower	<i>Plagiobothrys greenei</i>	R6	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's popcornflower	<i>Plagiobothrys parishii</i>	R5	0	2	0	2	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Desert allocarya	<i>Plagiobothrys salsus</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hooked popcornflower	<i>Plagiobothrys uncinatus</i>	R5	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heartleaf plantain	<i>Plantago cordata</i>	R9	9	0	3	0	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Choris' bog-orchid	<i>Platanthera chorisia</i>	R6	1	21	3	15	2	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow-fringe orchid	<i>Platanthera ciliaris</i>	R9	21	7	20	0	7	55	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small green woodland orchid	<i>Platanthera clavellata</i>	R9	37	3	22	3	12	77	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern rein orchid	<i>Platanthera flava</i> var. <i>flava</i>	R9	4	2	4	0	1	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale-green orchid	<i>Platanthera flava</i> var. <i>herbiola</i>	R9	2	2	2	0	2	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hooker's orchid	<i>Platanthera hookeri</i>	R9	2	8	4	0	3	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fragrant green orchid	<i>Platanthera hyperborea</i> var. <i>huronensis</i>	R9	2	0	9	0	0	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA

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Yellow fringeless orchid	<i>Platanthera integra</i>	R8	0	22	1	0	19	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small northern bog-orchid	<i>Platanthera obtusata</i>	R6	3	37	0	4	16	60	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lesser roundleafed orchid	<i>Platanthera orbiculata</i>	R2, R9, R10	36	40	12	1	3	92	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large roundleaf orchid	<i>Platanthera orbiculata</i> var. <i>macrophylla</i>	R9	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shriver's frilly orchid	<i>Platanthera shriveri</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alaska rein orchid	<i>Platanthera unalascensis</i>	R9	11	147	4	36	5	203	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yosemite bog orchid	<i>Platanthera yosemitensis</i>	R5	0	5	0	2	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alcove bog orchid	<i>Platanthera zothecina</i>	R3	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-spurred plectritis	<i>Plectritis brachystemon</i>	R6	0	12	0	17	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon semaphoregrass	<i>Pleuropogon oregonus</i>	R6	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Marsh's bluegrass	<i>Poa abbreviata</i> ssp. <i>marshii</i>	R4	0	1	0	7	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long tongue muttongrass	<i>Poa fendleriana</i> ssp. <i>longiligula</i>	R6	7	58	0	73	3	141	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White bluegrass	<i>Poa glauca</i>	R9	2	31	2	58	4	97	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wavy bluegrass	<i>Poa laxa</i> ssp. <i>fernaldiana</i>	R9	0	10	0	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lax-flower bluegrass	<i>Poa laxiflora</i>	R6	2	9	6	1	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Letterman's bluegrass	<i>Poa lettermanii</i>	R6	0	7	0	22	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog bluegrass	<i>Poa paludigena</i>	R8, R9	4	0	0	0	4	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine meadow grass	<i>Poa pratensis</i> ssp. <i>alpigena</i>	R9	5	4	3	10	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nodding bluegrass	<i>Poa reflexa</i>	R6	19	124	2	87	5	237	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Timber bluegrass	<i>Poa rhizomata</i>	R6	0	50	4	32	1	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra blue grass	<i>Poa sierrae</i>	R5	0	9	1	9	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Profuse-flowereed mesa mint	<i>Pogogyne floribunda</i>	R6	0	0	0	31	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Great polemonium	<i>Polemonium carneum</i>	R6	1	137	2	22	1	163	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White Mountain skypilot	<i>Polemonium chartaceum</i>	R4, R5	0	12	0	20	0	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western Jacob's-ladder	<i>Polemonium occidentale</i> ssp. <i>lacustre</i>	R9	0	0	0	0	3	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Hinckley's polemonium	<i>Polemonium pauciflorum</i> ssp. <i>hinckleyi</i>	R3	3	2	2	0	0	7	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bog Jacob's-ladder	<i>Polemonium vanbruntiae</i>	R9	4	3	3	1	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Skunk polemonium	<i>Polemonium viscosum</i>	R6	4	18	1	152	3	178	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Williams's combleaf	<i>Polyctenium williamsiae</i>	R5	0	5	0	18	1	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Williams combleaf	<i>Polyctenium williamsii</i>	R4	NA	NA	NA	NA	NA	0	Literature	No GBIF data	No habitat association with OG forest	NI	Holland and Morefield (2003)
Crossleaf milkwort	<i>Polygala cruciata</i>	R9	0	18	0	3	20	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hooker's milkwort	<i>Polygala hookeri</i>	R8	0	12	0	0	12	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink milkwort	<i>Polygala incarnata</i>	R9	2	16	2	1	3	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Georgia milkwort	<i>Polygala leptostachys</i>	R8	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hualapai milkwort	<i>Polygala rusbyi</i>	R3	0	0	0	29	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whorled milkwort	<i>Polygala verticillata</i>	R9	4	2	3	0	2	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whorled milkwort	<i>Polygala verticillata</i> var. <i>ambigua</i>	R9	44	4	12	2	4	66	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Halberd-leaf tearthumb	<i>Polygonum arifolium</i>	R9	130	13	43	1	210	397	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Austin's knotweed	<i>Polygonum austiniæ</i>	R6	4	21	0	33	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Douglas' knotweed	<i>Polygonum douglasii</i>	R9	11	105	4	121	7	248	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gabriela's knotweed	<i>Polygonum gabrielae</i>	R6	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Viviparous knotweed	<i>Polygonum viviparum</i>	R9	3	49	9	77	18	156	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heartleaf leafcup	<i>Polymnia cossatotensis</i>	R8	8	2	1	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Braun's holly fern	<i>Polystichum braunii</i>	R1, R9	43	34	33	1	14	125	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California sword-fern	<i>Polystichum californicum</i>	R6	0	13	0	2	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kruckeberg's swordfern	<i>Polystichum kruckebergii</i>	R10	1	31	0	42	0	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain swordfern	<i>Polystichum scopulinum</i>	R1	5	97	1	85	0	188	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prairie parsley	<i>Polytaenia nuttallii</i>	R9	6	3	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lanceleaf cottonwood	<i>Populus acuminata</i>	R1	2	18	0	13	2	35	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Snail-seed pondweed	<i>Potamogeton bicupulatus</i>	R9	0	0	0	0	4	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Algae-like pondweed	<i>Potamogeton confervoides</i>	R9	11	2	1	0	2	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rafinesque's pondweed	<i>Potamogeton diversifolius</i>	R6	5	7	0	5	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hill's pondweed	<i>Potamogeton hillii</i>	R8, R9	1	1	2	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oakes' pondweed	<i>Potamogeton oakesianus</i>	R9	3	0	3	0	3	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blunt-leaved pondweed	<i>Potamogeton obtusifolius</i>	R6	0	4	2	8	7	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-stem pondweed	<i>Potamogeton praelongus</i>	R6	2	15	3	5	6	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Spotted pondweed	<i>Potamogeton pulcher</i>	R9	11	1	1	0	2	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flatleaf pondweed	<i>Potamogeton robbinsii</i>	R6	1	9	2	1	2	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tennessee pondweed	<i>Potamogeton tennesseensis</i>	R8, R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Vasey's pondweed	<i>Potamogeton vaseyi</i>	R9	2	0	4	0	2	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-flowered cinquefoil	<i>Potentilla albiflora</i>	R3	0	9	0	4	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Angell cinquefoil	<i>Potentilla angelliae</i>	R4	0	6	0	3	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brewer's cinquefoil	<i>Potentilla breweri</i>	R6	3	74	0	118	11	206	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cottam cinquefoil	<i>Potentilla cottamii</i>	R4	0	4	0	4	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sagebrush cinquefoil	<i>Potentilla johnstonii</i>	R4	0	9	0	1	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Morefield's cinquefoil	<i>Potentilla morefieldii</i>	R5	0	8	0	45	0	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snow cinquefoil	<i>Potentilla nivea</i>	R6	1	25	0	45	2	73	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua cinquefoil	<i>Potentilla rhyolitica</i> var. <i>chiricahuensis</i>	R3	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Huachuca cinquefoil	<i>Potentilla rhyolitica</i> var. <i>rhyolitica</i>	R3	0	1	0	4	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cliff cinquefoil	<i>Potentilla rimicola</i>	R5	0	12	0	1	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robbins' cinquefoil	<i>Potentilla Robbinsiana</i>	R9	1	1	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock, or rocky mountain cinquefoil	<i>Potentilla rupincola</i>	R2	0	10	0	2	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra Blanca cinquefoil	<i>Potentilla sierrae-blancae</i>	R3	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Darrach's cinquefoil	<i>Potentilla versicolor</i> var. <i>darrachii</i>	R6	0	5	0	5	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Villous cinquefoil	<i>Potentilla villosa</i>	R6	0	12	3	9	2	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough rattlesnake-root	<i>Prenanthes (Nabalus) aspera</i>	R8	X	NA	X	NA	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Barber rattlesnake-root	<i>Prenanthes barbata</i>	R8	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	NatureServe (2024)
Boott's rattlesnake-root	<i>Prenanthes boottii</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	SEINet (2024)
Nodding rattlesnake-root	<i>Prenanthes crepidinea</i>	R8	X	NA	X	NA	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Alkali primrose	<i>Primula alcalina</i>	R1, R4	0	2	0	3	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Ruby mountain primrose	<i>Primula capillaris</i>	R4	0	2	1	11	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nevada primrose	<i>Primula cusickiana</i> var. <i>nevadensis</i> (= <i>P. nevadensis</i>)	R4	0	6	0	2	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Greenland primrose	<i>Primula egaliksensis</i>	R2, R4	0	2	1	3	3	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bird's-eye primrose	<i>Primula mistassinica</i>	R9	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon drops of gold	<i>Prosartes hookeri</i> var. <i>oregana</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou fairy bells	<i>Prosartes parvifolia</i>	R5, R6	0	10	0	3	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roughfruit fairybells	<i>Prosartes trachycarpa</i>	R9	22	181	7	21	0	231	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California cudweed	<i>Pseudognaphalium californicum</i>	R6	0	0	1	11	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mexican tansy aster	<i>Psilactis gentryi</i> (= <i>machaeranthera mexicana</i>)	R3	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whisk fern	<i>Psilotum nudum</i>	R3	0	4	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant orchid	<i>Pteroglossaspis ecristata</i>	R8	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant pinedrops	<i>Pterospora andromedea</i>	R9	2	210	1	10	4	227	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Davidson's cliff carrot	<i>Pteryxia davidsonii</i>	R3	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Porter's false needlegrass	<i>Ptilagrostis porteri</i>	R2	3	6	0	2	7	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's alkali grass	<i>Puccinellia parishii</i>	R3	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Beadle's mountainmint	<i>Pycnanthemum beadlei</i>	R9	1	0	8	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stone mountainmint	<i>Pycnanthemum curvipes</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida mountainmint	<i>Pycnanthemum floridanum</i>	R8	0	19	4	4	8	35	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Torrey's mountainmint	<i>Pycnanthemum torrei</i>	R8	NA	x	NA	x	x	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Whorled mountainmint	<i>Pycnanthemum verticillatum</i>	R9	15	1	0	1	2	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pink wintergreen	<i>Pyrola asarifolia</i>	R9	8	128	11	22	14	183	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snowline wintergreen	<i>Pyrola minor</i>	R9	3	78	2	23	14	120	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bugleg goldenweed	<i>Pyrrocoma</i> (= <i>Haplopappus</i>) <i>insecticurris</i>	R4	0	1	0	5	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Largeflower goldenweed	<i>Pyrrocoma carthamoides</i> var. <i>subsquarrosa</i>	R2	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tranquil goldenweed	<i>Pyrrocoma clementis</i> var. <i>villosa</i>	R2	NA	x	NA	X	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	SEINet (2024, Ladyman (2006))
Sticky goldenweed	<i>Pyrrocoma hirta</i> var. <i>sonchifolia</i>	R6	0	12	0	3	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Many-stemmed goldenweed	<i>Pyrrocoma integrifolia</i>	R2	0	5	0	6	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sticky pyrrocoma	<i>Pyrrocoma lucida</i>	R5	0	7	0	7	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Panicled goldenweed	<i>Pyrrocoma racemosa</i> var. <i>paniculata</i>	R6	0	5	0	10	3	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Radiate goldenweed	<i>Pyrrocoma radiata</i> (= <i>Haplopappus radiatus</i>)	R4	0	0	0	7	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rough pyrrocoma	<i>Pyrrocoma scaberula</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bear valley pyrrocoma	<i>Pyrrocoma uniflora</i> var. <i>gossypina</i>	R5	0	1	0	7	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mapleleaf oak	<i>Quercus acerifolia</i>	R8	23	1	6	0	0	30	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arkansas oak	<i>Quercus arkansana</i>	R8	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nuttall's scrub oak	<i>Quercus dumosa</i>	R5	0	2	1	5	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chinquapin oak	<i>Quercus muehlenbergii</i>	R9	2	4	0	0	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oglethorpe's oak	<i>Quercus oglethorpensis</i>	R8	4	18	3	0	2	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Chestnut oak	<i>Quercus prinus</i>	R9	12	0	5	0	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nuttall's oak	<i>Quercus texana</i>	R9	1	0	0	0	7	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California chicory	<i>Rafinesquia californica</i>	R6	0	2	1	25	1	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Showy raillardella	<i>Raillardella pringlei</i>	R5	0	61	1	5	4	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cooley's buttercup	<i>Ranunculus cooleyae</i>	R6	2	6	0	5	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gmelin's buttercup	<i>Ranunculus gmelini</i>	R9	3	31	4	9	14	61	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ice cold buttercup	<i>Ranunculus grayi</i>	R2	1	1	0	5	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lapland buttercup	<i>Ranunculus lapponicus</i>	R9	X	X	X	NA	X	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Pennsylvania buttercup	<i>Ranunculus pensylvanicus</i>	R9	7	11	4	3	2	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain buttercup	<i>Ranunculus populago</i>	R6	0	93	0	29	5	127	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prairie buttercup	<i>Ranunculus rhomboideus</i>	R9	3	2	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dalles Mt. buttercup	<i>Ranunculus triternatus</i>	R6	0	2	2	8	0	12	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Redberry	<i>Rhamnus ilicifolia</i>	R6	0	13	2	54	2	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lanceleaf buckthorn	<i>Rhamnus lanceolata</i> ssp. <i>lanceolata</i>	R9	0	0	0	0	0	0	Geospatial and Literature	Non-FS	Habitat may include OG forest	MIIH	SEINet (2024)
Maryland meadowbeauty	<i>Rhexia mariana</i>	R9	0	7	0	1	5	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flower meadowbeauty	<i>Rhexia parviflora</i>	R8	0	5	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Panhandle meadowbeauty	<i>Rhexia salicifolia</i>	R8	0	3	0	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Handsome Harry	<i>Rhexia virginica</i>	R9	5	0	2	0	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Little yellow-rattle	<i>Rhinanthus minor</i> ssp. <i>groenlandicus</i>	R9	0	5	0	0	1	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ledge stonecrop	<i>Rhodiola integrifolia</i> ssp. <i>integrifolia</i>	R6	4	46	1	96	14	161	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New Mexican stonecrop	<i>Rhodiola integrifolia</i> ssp. <i>neomexicana</i>	R3	0	9	0	1	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roseroot stonecrop	<i>Rhodiola rosea</i>	R9	1	26	0	26	0	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Orange azalea	<i>Rhododendron austrinum</i>	R8	1	5	0	0	3	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastman's rhododendron	<i>Rhododendron eastmanii</i>	R8	0	2	2	0	4	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pink azalea	<i>Rhododendron periclymenoides</i>	R9	9	0	1	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White beaksedge	<i>Rhynchospora alba</i>	R6	2	15	6	3	36	62	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mosquito beaksedge	<i>Rhynchospora crinipes</i>	R8	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Brown beaksedge	<i>Rhynchospora fusca</i>	R9	3	11	16	0	68	98	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shortbristle beaksedge	<i>Rhynchospora galeana</i>	R8	0	2	0	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clustered beaksedge	<i>Rhynchospora glomerata</i>	R9	2	17	3	2	1	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Harvey's beaksedge	<i>Rhynchospora harveyi</i>	R9	3	7	0	1	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Large beaksedge	<i>Rhynchospora macra</i>	R8	0	18	0	0	10	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Coastal beaksedge	<i>Rhynchospora pleiantha</i>	R8	0	4	0	0	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Longbeak beaksedge	<i>Rhynchospora scirpoidea</i>	R9	7	3	0	0	2	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moreno currant	<i>Ribes canthariforme</i>	R5	0	0	0	39	0	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wax currant	<i>Ribes cereum</i> var. <i>colubrinum</i>	R6	0	35	0	16	0	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bristly black currant	<i>Ribes lacustre</i>	R9	4	133	3	11	8	159	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trailing black currant	<i>Ribes laxiflorum</i>	R6	4	84	8	20	3	119	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho gooseberry	<i>Ribes oxyacanthoides</i> ssp. <i>irriguum</i>	R6	0	62	0	16	1	79	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Swamp red currant	<i>Ribes triste</i>	R9	5	12	8	8	8	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wolf's currant	<i>Ribes wolfii</i>	R6	45	172	26	30	10	283	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thompson's mistmaiden	<i>Romanzoffia thompsonii</i>	R6	0	29	0	5	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Unalaska mist-maid	<i>Romanzoffia unalaschensis</i>	R10	0	3	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia cress	<i>Rorippa columbaiae</i>	R5, R6	0	10	0	10	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tahoe yellow cress	<i>Rorippa subumbellata</i>	R5	0	14	0	13	2	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smooth rose	<i>Rosa blanda</i> var. <i>blanda</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Grand Canyon rose	<i>Rosa stellata</i> ssp. <i>abyssa</i>	R3	0	2	0	2	0	4	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Lowland toothcup	<i>Rotala ramosior</i>	R6	3	2	1	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nagoonberry	<i>Rubus arcticus</i>	R6	6	17	8	20	16	67	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf raspberry	<i>Rubus arcticus</i> ssp. <i>acaulis</i>	R2, R9	1	8	4	4	15	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bartons' blackberry	<i>Rubus bartonianus</i>	R4, R6	0	23	0	48	0	71	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cloudberry	<i>Rubus chamaemorus</i>	R9	1	32	11	6	2	52	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf red raspberry	<i>Rubus pubescens</i>	R9	4	8	5	0	10	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swamp blackberry	<i>Rubus semisetosus</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	Minnesota DNR (2022)
Big horseshoe lake dewberry	<i>Rubus stipulatus</i>	R9	21	5	9	2	3	40	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Eared coneflower	<i>Rudbeckia auriculata</i>	R8	1	1	6	1	5	14	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Orange coneflower	<i>Rudbeckia fulgida</i> var. <i>speciosa</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Sun-facing coneflower	<i>Rudbeckia heliopsis</i>	R8	3	1	3	0	1	8	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bog coneflower	<i>Rudbeckia scabriifolia</i>	R8	0	47	0	0	0	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pinnate-lobe black-eyed-susan	<i>Rudbeckia triloba</i> var. <i>pinnatiflora</i>	R8	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Night-flowering wild petunia	<i>Ruellia noctiflora</i>	R8	0	1	0	0	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua Mountain dock	<i>Rumex orthoneurus</i>	R3	0	25	12	8	0	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hall's California tea	<i>Rupertia hallii</i>	R5	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrowleaf pink	<i>Sabatia brachiata</i>	R9	2	14	1	2	6	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Olympic mountain sandwort	<i>Sabulina basaltica</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twin sisters sandwort	<i>Sabulina sororia</i>	R6	0	2	0	4	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Longbeak arrowhead	<i>Sagittaria australis</i>	R9	NA	NA	NA	NA	X	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA
Brewer's snapdragon	<i>Sairocarpus breweri</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern willow	<i>Salix argyrocarpa</i>	R9	0	23	0	0	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona willow	<i>Salix arizonica</i>	R2, R3, R4	1	36	7	14	1	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barratt's willow	<i>Salix barrattiana</i>	R2	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bebb's willow	<i>Salix bebbiana</i>	R3	7	29	6	7	4	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hoary willow	<i>Salix candida</i>	R1, R2, R6, R9	1	7	1	14	22	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand dune willow	<i>Salix cordata</i>	R9	0	0	0	1	1	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Farr's willow	<i>Salix farriae</i>	R6	0	29	1	18	2	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida willow	<i>Salix floridana</i>	R8	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Glaucus willow	<i>Salix glauca</i> ssp. <i>glauca</i> var. <i>villosa</i>	R6	2	50	1	46	5	104	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New England dwarf willow	<i>Salix herbacea</i>	R9	1	7	4	1	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maccall's willow	<i>Salix maccalliana</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Blueberry willow	<i>Salix myrtillifolia</i>	R2	2	13	0	10	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Snow willow	<i>Salix nivalis</i>	R6	0	50	0	114	7	171	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog willow	<i>Salix pedicellaris</i>	R9	3	21	4	0	40	68	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Satin willow	<i>Salix pellita</i>	R9	0	1	2	1	2	6	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
False mountain willow	<i>Salix pseudomonticola</i>	R6	0	23	0	8	2	33	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Autumn willow	<i>Salix serissima</i>	R2	0	10	0	6	10	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wolf's willow	<i>Salix wolfii</i>	R6	8	118	4	85	19	234	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Latimer's woodland-gilia	<i>Saltugilia latimeri</i>	R5	0	1	0	28	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Galiuro sage	<i>Salvia amissa</i>	R3	0	3	0	11	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mearns sage	<i>Salvia dorrii</i> ssp. <i>mearnsii</i>	R3	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Chiricahua Mountain brookweed	<i>Samolus vagans</i>	R3	0	28	1	5	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bloodroot	<i>Sanguinaria canadensis</i>	R2	19	1	4	0	1	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada burnet	<i>Sanguisorba canadensis</i>	R9	24	1	14	1	0	40	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Canadian black-snakeroot var. <i>canadensis</i>	<i>Sanicula canadensis</i> var. <i>canadensis</i>	R9	5	0	6	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Adobe sanicle	<i>Sanicula maritima</i>	R5	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small's sanicle	<i>Sanicula smallii</i>	R9	13	6	5	0	1	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tracy's sanicle	<i>Sanicula tracyi</i>	R5	1	130	7	32	0	170	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Largefruit blacksnakeroot	<i>Sanicula trifoliata</i>	R9	3	0	8	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Weber's saw-wort	<i>Saussurea weberi</i>	R1, R4	0	8	0	11	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wedge-leaf saxifrage	<i>Saxifraga adscendens</i> ssp. <i>oregonensis</i>	R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tobias' saxifrage	<i>Saxifraga bryophora</i> var. <i>tobiasiae</i>	R4	0	3	0	10	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nodding saxifrage	<i>Saxifraga cernua</i>	R6, R9	1	10	0	33	0	44	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Michaux's saxifrage	<i>Saxifraga michauxii</i>	R9	7	1	1	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White mountain saxifrage	<i>Saxifraga paniculata</i>	R9	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine brook saxifrage	<i>Saxifraga rivularis</i>	R9	4	66	2	44	3	119	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tolmie's saxifrage	<i>Saxifraga tolmiei</i> var. <i>ledifolia</i>	R4	0	10	0	9	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Early saxifrage	<i>Saxifraga virginiensis</i>	R9	3	1	2	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Joint-leaved saxifrage	<i>Saxifragopsis fragarioides</i>	R6	1	37	3	40	2	83	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rannoch-rush	<i>Scheuchzeria palustris</i>	R5	1	13	5	3	68	90	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rannoch-rush	<i>Scheuchzeria palustris</i> ssp. <i>americana</i>	R6, R9	0	3	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bay starvine	<i>Schisandra glabra</i>	R8	2	2	7	0	1	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas sunnybell	<i>Schoenolirion wrightii</i>	R8	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canby's bulrush	<i>Schoenoplectus etuberculatus</i>	R9	5	1	0	0	3	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hall's bulrush	<i>Schoenoplectus hallii</i>	R2, R8, R9	1	1	1	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Water clubrush	<i>Schoenoplectus subterminalis</i>	R1, R6	0	24	3	4	19	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Torrey's bulrush	<i>Schoenoplectus torreyi</i>	R9	1	2	2	0	6	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Black bogrush	<i>Schoenus nigricans</i>	R5	0	1	0	5	2	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Stalked bulrush	<i>Scirpus pedicellatus</i>	R9	2	1	0	2	9	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Drooping bulrush	<i>Scirpus pendulus</i>	R6	3	3	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Leafy bulrush	<i>Scirpus polyphyllus</i>	R9	24	3	8	2	0	37	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Little-head nutrush	<i>Scleria oligantha</i>	R9	9	14	6	1	8	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Few-flower nutrush	<i>Scleria pauciflora</i>	R9	8	14	1	0	3	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whip nutrush	<i>Scleria triglomerata</i>	R9	2	6	2	1	4	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northwestern yellow flax	<i>Sclerolinon digynum</i>	R6	0	2	0	2	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California fetid adderstongue	<i>Scoliopus bigelovii</i>	R6	13	326	62	9	4	414	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Scribner's grass	<i>Scribneria bolanderi</i>	R6	0	7	0	17	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New Mexico figwort	<i>Scrophularia macrantha</i>	R3	0	5	0	1	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy skullcap	<i>Scutellaria arguta</i>	R8	X	X	X	NA	X	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	SEINet (2024)
Sierra skullcap	<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	R5	0	5	1	34	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bush's skullcap	<i>Scutellaria bushii</i>	R9	7	0	0	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock skullcap	<i>Scutellaria saxatilis</i>	R8, R9	5	0	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Feather river stonecrop	<i>Sedum albomarginatum</i>	R5	0	8	0	10	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rogue River stonecrop	<i>Sedum moranii</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nevius' stonecrop	<i>Sedum nevii</i>	R8	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Davidson's stonecrop	<i>Sedum niveum</i>	R5	0	45	1	36	0	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canyon Creek stonecrop	<i>Sedum obtusatum</i> ssp. <i>paradisum</i>	R5	0	4	0	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Meadow spike-moss	<i>Selaginella apoda</i>	R9	12	8	4	1	7	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ledge spike-moss	<i>Selaginella rupestris</i>	R9	12	4	9	2	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Club spikemoss	<i>Selaginella selaginoides</i>	R2	7	32	12	27	9	87	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elmer's ragwort	<i>Senecio elmeri</i>	R1	0	12	0	15	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Huachuca groundsel	<i>Senecio multidentatus</i> var. <i>huachucanus</i> (=s. <i>huachucanus</i>)	R3	0	2	1	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Musinea groundsel	<i>Senecio musiniensis</i>	R4	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mono ragwort	<i>Senecio pattersonensis</i>	R4, R5	0	2	0	11	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon white-top aster	<i>Sericocarpus oregonensis</i> var. <i>oregonensis</i>	R6	X	X	X	X	NA	4	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)
White-topped aster	<i>Sericocarpus rigidus</i>	R6	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Verrucose sea-purslane	<i>Sesuvium verrucosum</i>	R6	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Russet buffaloberry	<i>Shepherdia canadensis</i>	R9	3	91	2	23	1	120	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oconee bells	<i>Shortia galacifolia</i>	R8	22	5	31	0	0	58	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Shoshone carrot	<i>Shoshonea pulvinata</i>	R2	0	4	0	5	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hammitt's claycress	<i>Sibaropsis hammittii</i>	R5	0	0	0	36	0	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arizona cinquefoil	<i>Sibbaldia procumbens</i>	R9	0	90	2	138	9	239	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Henderson's sidalcea	<i>Sidalcea hendersonii</i>	R6, R10	0	3	0	1	1	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cuesta Pass checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>anomala</i>	R5	0	2	0	7	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hickman's checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>hickmanii</i>	R5	0	0	1	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>parishi</i>	R5	0	23	0	23	0	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lake Pillsbury checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>pillsburyensis</i>	R5	0	0	0	1	0	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bristly-stemmed sidalcea	<i>Sidalcea hirtipes</i>	R6	0	0	1	6	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf checkerbloom	<i>Sidalcea malviflora</i> ssp. <i>Dolosa</i>	R5	NA	X	NA	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	Flora of North America (1993+)

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Coast checker bloom	<i>Sidalcea malviflora</i> ssp. <i>patula</i>	R6	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Salt spring checkerbloom	<i>Sidalcea neomexicana</i>	R5	4	95	1	48	2	150	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Moss campion	<i>Silene acaulis</i> var. <i>exscapa</i>	R9	0	11	0	7	0	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clokey silene	<i>Silene clokeyi</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander's catchfly	<i>Silene hookeri</i> ssp. <i>bolanderi</i>	R6	0	6	0	2	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nachlinger silene	<i>Silene nachlingerae</i>	R4	0	5	1	10	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snowy campion	<i>Silene nivea</i>	R9	2	0	1	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-stiped campion	<i>Silene occidentalis</i> ssp. <i>longistipitata</i>	R5	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ovate catchfly	<i>Silene ovata</i>	R8, R9	10	3	0	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Maguire campion	<i>Silene petersonii</i>	R4	5	23	3	20	0	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Royal catchfly	<i>Silene regia</i>	R8, R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
Klamath Mountain catchfly	<i>Silene salmonacea</i>	R5	0	10	0	10	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scouler's catchfly	<i>Silene scouleri</i> ssp. <i>scouleri</i>	R6	0	8	0	2	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Seely's silene	<i>Silene seelyi</i>	R6	0	8	0	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Serpentine catchfly	<i>Silene serpentinicola</i>	R5	0	25	2	23	0	50	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Louisiana catchfly	<i>Silene subciliata</i>	R8	0	0	0	2	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fire pink	<i>Silene virginica</i> var. <i>robusta</i>	R9	3	0	0	0	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Tansy rosinweed	<i>Silphium pinnatifidum</i>	R8	4	0	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whorled rosinweed	<i>Silphium trifoliatum</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	SEINet (2024)
Appalachian rosinweed	<i>Silphium wasiotense</i>	R8	10	0	1	0	0	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Pointed blue-eyed-grass	<i>Sisyrinchium angustifolium</i>	R9	7	3	0	1	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern blue-eyed-grass	<i>Sisyrinchium atlanticum</i>	R9	2	3	2	1	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nodding blue-eyed grass	<i>Sisyrinchium cernuum</i>	R3	0	3	0	5	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Timberland blue-eyed grass	<i>Sisyrinchium logipes</i>	R5	NA	X	X	NA	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Strict blue-eyed-grass	<i>Sisyrinchium montanum</i> var. <i>crebrum</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Strict blue-eyed grass	<i>Sisyrinchium montanum</i> var. <i>montanum</i>	R6, R9	4	12	4	6	3	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Michaux's blue-eyed-grass	<i>Sisyrinchium mucronatum</i>	R9	0	1	3	0	3	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale blue-eyed grass	<i>Sisyrinchium sarmentosum</i>	R6	0	11	0	3	2	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Strict blue-eyed-grass	<i>Sisyrinchium strictum</i>	R9	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parish's horse-nettle	<i>Solanum parishii</i>	R6	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
White-haired goldenrod	<i>Solidago albopilosaa</i>	R8	16	0	25	0	0	41	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Broadleaf goldenrod	<i>Solidago flexicaulis</i>	R1	6	2	2	0	0	10	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Ouachita Mountain goldenrod	<i>Solidago ouachitensis</i>	R8	31	4	11	0	0	46	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roundleaf goldenrod	<i>Solidago patula</i>	R9	5	1	6	2	3	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yadkin river goldenrod	<i>Solidago plumosa</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rand's goldenrod	<i>Solidago simplex</i> ssp. <i>randii</i>	R9	1	3	1	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Granite dome goldenrod	<i>Solidago simulans</i>	R8	9	0	3	0	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Squarrose goldenrod	<i>Solidago squarrosa</i>	R9	5	0	2	0	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Elmleaf goldenrod	<i>Solidago ulmifolia</i>	R9	6	0	1	0	2	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Spring-flowering goldenrod	<i>Solidago verna</i>	R8	4	1	0	0	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Guadalupe Mountain necklacepod	<i>Sophora gypsophila</i> var. <i>guadalupensis</i>	R3	NA	x	NA	x	NA	2	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Western sophra	<i>Sophora leachiana</i>	R6	0	0	0	10	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern bur-reed	<i>Sparganium glomeratum</i>	R9	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small bur-reed	<i>Sparganium natans</i>	R9	2	68	4	13	13	100	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Prairie cordgrass	<i>Spartina pectinata</i>	R6	3	3	1	3	1	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Railroad valley globemallow	<i>Sphaeralcea caespitosa</i> var. <i>williamsiae</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rock-tansy	<i>Sphaeromeria capitata</i>	R4	0	8	0	3	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Low sphaeromeria	<i>Sphaeromeria compacta</i>	R4	0	2	0	4	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas ladies'-tresses	<i>Spiranthes brevilabris</i>	R8	0	2	0	0	8	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant-spiral ladies'-tresses	<i>Spiranthes longilabris</i>	R8	0	4	0	0	2	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Yellow nodding ladies'-tresses	<i>Spiranthes ochroleuca</i>	R9	30	1	9	0	0	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western ladies'-tresses	<i>Spiranthes porrifolia</i>	R6	0	48	0	18	8	74	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Twisted ladies'-tresses	<i>Spiranthes vernalis</i>	R9	0	6	0	0	2	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pineland dropseed	<i>Sporobolus curtissii</i>	R8	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern dropseed	<i>Sporobolus heterolepis</i>	R9	6	0	2	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mock pennyroyal	<i>Stachydeoma graveolens</i>	R8	0	14	0	0	4	18	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Gritty hedge-nettle	<i>Stachys aspera</i>	R9	0	1	0	0	2	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clingman's hedge-nettle	<i>Stachys clingmanii</i>	R8	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Epling's hedge-nettle	<i>Stachys eplingii</i>	R9	5	0	0	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Biennial stanleya	<i>Stanleya confertiflora</i>	R6	0	0	0	22	0	22	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Bog chickweed	<i>Stellaria alsine</i>	R9	5	2	3	0	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Boreal starwort	<i>Stellaria borealis</i> ssp. <i>borealis</i>	R9	1	19	5	6	7	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Long-stalked stitchwort	<i>Stellaria longipes</i>	R9	5	95	1	82	28	211	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Porsild's starwort	<i>Stellaria porsildii</i>	R3	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Star chickweed	<i>Stellaria pubera</i>	R9	23	3	5	0	1	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Eastern featherbells	<i>Stenanthium gramineum</i>	R9	54	10	16	1	0	81	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lemmon's stevia	<i>Stevia lemmonii</i>	R3	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Most beautiful jewelflower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	R5	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern jewelflower	<i>Streptanthus campestris</i>	R5	0	9	1	24	2	36	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Piute mountains jewelflower	<i>Streptanthus cordatus</i> var. <i>piutensis</i>	R5	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tehipite Valley jewelflower	<i>Streptanthus fenestratus</i>	R5	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Common jewel flower	<i>Streptanthus glandulosus</i> ssp. <i>josephinensis</i>	R6	0	0	0	0	0	0	Geospatial and Literature	FS Obs	No habitat association with OG forest	NI	Flora of North America (1993+)
Alpine jewel-flower	<i>Streptanthus gracilis</i>	R5	0	3	0	3	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's jewelflower	<i>Streptanthus howellii</i>	R5, R6	0	10	0	18	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trinity river jewel-flower	<i>Streptanthus oblanceolatus</i>	R5	NA	NA	X	NA	NA	1	Literature	No GBIF data	Habitat may include OG forest	MIIH	NatureServe (2024)
Masonic mountain jewelflower	<i>Streptanthus oliganthus</i>	R4, R5	1	21	0	12	0	34	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Guadalupe jewelflower	<i>Streptanthus sparsiflorus</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pine-oak jewelflower	<i>Streptanthus squamiformis</i>	R8	1	3	3	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Clasping twisted-stalk	<i>Streptopus amplexifolius</i>	R9	11	138	20	7	4	180	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kruhsea	<i>Streptopus streptopoides</i>	R1, R6	0	49	4	6	0	59	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern slender-leaved pondweed	<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	R6	6	5	5	6	1	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sheathed pondweed	<i>Stuckenia vaginata</i>	R9	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flowering southern morning-glory	<i>Stylisma abdita</i>	R8	2	9	0	3	14	28	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Mason's neststraw	<i>Stylocline masonii</i>	R5	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
American snowbell	<i>Styrax americanus</i>	R9	5	4	0	0	13	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bigleaf snowbell	<i>Styrax grandifolius</i>	R9	24	14	16	1	5	60	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Awlwort	<i>Subularia aquatica</i>	R9	0	17	3	7	2	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Violet suksdorffia	<i>Suksdorffia violacea</i>	R6	0	32	0	13	0	45	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Oregon sullivantia	<i>Sullivantia oregana</i>	R6	0	9	0	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Swertia	<i>Swertia perennis</i>	R6	8	88	10	73	48	227	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Snowberry	<i>Symphoricarpos albus</i>	R9	1	2	2	1	1	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rush aster	<i>Symphyotrichum boreale</i>	R1, R6	0	11	4	4	10	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
San Bernardino aster	<i>Symphyotrichum defoliatum</i>	R5	0	4	1	27	6	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tradescant aster	<i>Symphyotrichum dumosum</i> var. <i>strictior</i>	R9	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Georgia aster	<i>Symphyotrichum georgianum</i>	R8	1	2	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Soft aster	<i>Symphyotrichum molle</i> (= <i>Aster mollis</i>)	R4	0	2	0	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crooked-stem aster	<i>Symphyotrichum prenanthoides</i>	R9	10	1	8	0	1	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Western silvery aster	<i>Symphyotrichum sericeum</i>	R9	1	1	2	1	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Guyandotte beauty	<i>Synandra hispidula</i>	R9	26	0	3	0	0	29	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain pimpernel	<i>Taenidia montana</i>	R9	4	0	1	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tepic flame flower	<i>Talinum marginatum</i>	R3	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Small-flower flameflower	<i>Talinum parviflorum</i>	R1	0	6	0	7	0	13	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Roundleaf frameflower	<i>Talinum teretifolium</i>	R8	1	0	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dune tansy	<i>Tanacetum bipinnatum</i> ssp. <i>huronense</i>	R10	1	1	0	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's tauschia	<i>Tauschia howellii</i>	R5, R6	0	9	0	6	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Strickland's tauschia	<i>Tauschia stricklandii</i>	R6	0	11	0	0	0	11	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Canada yew	<i>Taxus canadensis</i>	R9	21	10	17	0	8	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parry's tetracoccus	<i>Tetracoccus dioicus</i>	R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender-flowered evening-primrose	<i>Tetrapteron graciliflorum</i>	R6	0	5	0	23	0	28	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine meadowrue	<i>Thalictrum alpinum</i>	R1, R6	1	37	1	87	7	133	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Arkansas meadowrue	<i>Thalictrum arkansanum</i>	R8	9	6	4	1	21	41	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Cathedral bluff meadow-rue	<i>Thalictrum heliophilum</i>	R2	5	12	0	10	1	28	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Veined meadowrue	<i>Thalictrum venulosum</i>	R9	2	81	1	16	9	109	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cutleaf meadow-parsnip	<i>Thaspium pinnatifidum</i>	R8	6	0	1	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Caespitose greenthread	<i>Thelesperma caespitosum</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Uinta greenthread	<i>Thelesperma pubescens</i>	R4	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Arrow-leaf thelypody	<i>Thelypodium eucosmum</i>	R6	0	3	0	5	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Howell's thelypody	<i>Thelypodium howellii</i> ssp. <i>howellii</i>	R5	0	5	0	1	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Paniculate thelypody	<i>Thelypodium paniculatum</i>	R1	0	1	0	3	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wavy-leaf thelypody	<i>Thelypodium repandum</i>	R4	0	1	0	2	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sierra wood-fern	<i>Thelypteris nevadensis</i>	R1	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
New York fern	<i>Thelypteris noveboracensis</i>	R9	16	2	9	1	3	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	R3, R5	0	0	0	5	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Velvety false lupine	<i>Thermopsis californica</i> var. <i>semota</i>	R5	0	10	5	38	0	53	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ashleaf bush-pea	<i>Thermopsis fraxinifolia</i>	R8	0	1	1	1	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Santa Ynez false lupine	<i>Thermopsis macrophylla</i>	R5	0	18	2	11	1	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Allegheny mountain golden-banner	<i>Thermopsis mollis</i>	R8	0	1	1	2	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Robust false lupine	<i>Thermopsis robusta</i>	R5	0	13	0	7	0	20	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy false lupine	<i>Thermopsis villosa</i>	R8	7	1	4	4	0	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rigid fringed-pod	<i>Thysanocarpus rigidus</i>	R5	0	1	0	6	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heartleaf foamflower	<i>Tiarella cordifolia</i>	R9	24	6	8	0	0	38	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Crippled cranefly	<i>Tipularia discolor</i>	R9	10	1	8	0	2	21	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sticky bog-asphodel	<i>Tofieldia glutinosa</i>	R9	0	46	0	28	4	78	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Scotch false asphodel	<i>Tofieldia pusilla</i>	R9	0	0	0	1	2	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barneby woody aster	<i>Tonestus (=Aster) kingii</i> var. <i>barnebyana</i>	R4	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine goldenweed	<i>Tonestus (=Haplopappus) alpinus</i>	R4	0	0	1	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Idaho goldenweed	<i>Tonestus aberrans</i>	R1	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Pale false managrass	<i>Torreyochloa pallida</i>	R9	4	73	1	34	50	162	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cushion townsend daisy	<i>Townsendia condensata</i>	R1, R2	0	12	0	49	0	61	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Silky townsend daisy	<i>Townsendia exscapa</i>	R1	0	97	0	36	0	133	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Hooker's townsend daisy	<i>Townsendia hookeri</i>	R1	1	12	0	32	0	45	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Sevier townsendia	<i>Townsendia jonesii</i> var. <i>lutea</i>	R4	0	1	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Charleston ground daisy	<i>Townsendia jonesii</i> var. <i>tumulosa</i>	R4	0	20	1	5	0	26	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain townsendia	<i>Townsendia montana</i>	R6	8	30	0	69	0	107	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Parry's townsendia	<i>Townsendia parryi</i>	R6	3	64	0	96	2	165	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Giant death camas	<i>Toxicoscordion exaltatum</i>	R6	0	7	0	2	1	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Beaked tracyina	<i>Tracyina rostrata</i>	R5	0	2	3	10	0	15	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Ozark spiderwort	<i>Tradescantia ozarkana</i>	R8, R9	21	1	1	1	0	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Heartleaf noseburn	<i>Tragia cordata</i>	R9	12	7	4	0	1	24	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sonoran noseburn	<i>Tragia laciniata</i>	R3	0	18	1	23	0	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lesser marsh st. John's-wort	<i>Triadenium tubulosum</i>	R9	6	7	0	0	3	16	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Short-style tofieldia	<i>Triantha occidentalis</i> ssp. <i>brevistyla</i>	R4	4	93	0	28	17	142	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bristle fern	<i>Trichomanes boschianum</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Weft fern	<i>Trichomanes intricatum</i>	R9	1	0	4	0	0	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hudson's bay bulrush	<i>Trichophorum alpinum</i>	R1	3	13	2	4	29	51	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Clinton's bulrush	<i>Trichophorum clintonii</i>	R9	0	0	0	0	0	0	Geospatial and Literature	FS Obs	Habitat may include OG forest	MIIH	NatureServe (2024)
False pennyroyal	<i>Trichostema brachiatum</i>	R9	3	2	3	2	0	10	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Forked bluecurls	<i>Trichostema dichotomum</i>	R9	4	6	2	0	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Narrowleaf bluecurls	<i>Trichostema setaceum</i>	R9	0	11	4	1	6	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Currant summit clover	<i>Trifolium andinum</i> var. <i>podocephalum</i>	R4	0	12	0	1	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bolander's clover	<i>Trifolium bolanderi</i>	R5	0	22	0	3	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dedecker's clover	<i>Trifolium dedeckerae</i>	R5	0	11	0	34	2	47	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Douglas' clover	<i>Trifolium douglasii</i>	R1, R6	0	13	0	4	0	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Woolly-head clover	<i>Trifolium eriocephalum</i>	R1	0	128	0	41	3	172	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hollyleaf clover	<i>Trifolium gymnocarpon</i>	R1	1	51	0	30	0	82	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mogollon clover	<i>Trifolium longipes</i> var. <i>neurophyllum</i> (= <i>T. neurophyllum</i>)	R3	1	2	0	0	1	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rollins clover	<i>Trifolium macilentum</i> var. <i>rollinsii</i>	R4	0	0	0	3	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Buffalo clover	<i>Trifolium reflexum</i>	R9	13	9	5	0	0	27	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Running buffalo clover	<i>Trifolium stoloniferum</i>	R8, R9	6	1	1	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Thompson's clover	<i>Trifolium thompsonii</i>	R6	0	0	0	1	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kate's mountain clover	<i>Trifolium virginicum</i>	R8, R9	9	1	3	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Slender bog arrowgrass	<i>Triglochin palustris</i>	R6	1	11	4	10	9	35	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Whip-poor-will flower	<i>Trillium cernuum</i>	R9	24	1	6	0	9	40	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Trailing trillium	<i>Trillium decumbens</i>	R8	3	0	3	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ocmulgee trillium	<i>Trillium delicatum</i>	R8	0	0	0	0	11	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Faded trillium	<i>Trillium discolor</i>	R8	11	4	10	0	0	25	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Siskiyou trillium	<i>Trillium kurabayashii</i>	R6	0	10	2	2	1	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lanceleaf wakerobin	<i>Trillium lancifolium</i>	R8	2	5	0	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ozark trillium	<i>Trillium pusillum</i> var. <i>ozarkanum</i>	R8, R9	12	5	6	0	0	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Jeweled wakerobin	<i>Trillium simile</i>	R8	12	0	1	0	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas trillium	<i>Trillium texanum</i>	R8	3	0	1	2	5	11	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Green trillium	<i>Trillium viride</i>	R9	3	1	3	0	1	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nodding pogonia	<i>Triphora trianthophora</i>	R9	3	1	0	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Texas three-birds orchid	<i>Triphora trianthophora</i> var. <i>texensis</i>	R8	0	1	0	0	0	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Purple sandgrass	<i>Triplasis purpurea</i>	R1, R9	0	0	0	4	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand puffs	<i>Tripterocalyx micranthus</i>	R1	0	1	0	2	0	3	RFSS matrices	NA	Only occurs on Dakota Prairie NG that is not being amended by NOGA	NI	NA
Largeflower triteleia	<i>Triteleia grandiflora</i>	R2	4	22	0	29	1	56	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Cook's triteleia	<i>Triteleia ixoides</i> ssp. <i>cookii</i>	R5	0	0	4	13	0	17	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
American globeflower	<i>Trollius albiflorus</i>	R6	9	144	0	53	10	216	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Caper-fruited tropidocarpum	<i>Tropidocarpum capparideum</i>	R5	0	0	0	5	0	5	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Carolina hemlock	<i>Tsuga caroliniana</i>	R8	60	21	80	2	0	163	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Tumamoc globeberry	<i>Tumamoca macdougalii</i>	R3	0	0	0	3	0	3	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Hidden-fruit bladderwort	<i>Utricularia geminiscapa</i>	R9	1	2	1	0	5	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA

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Humped bladderwort	<i>Utricularia gibba</i>	R6	6	5	1	0	5	17	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Flatleaf bladderwort	<i>Utricularia intermedia</i>	R1, R6	2	5	5	5	50	67	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lesser bladderwort	<i>Utricularia minor</i>	R1, R2	3	41	2	8	36	90	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern bladderwort	<i>Utricularia ochroleuca</i>	R6	0	2	1	0	5	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northeastern bladderwort	<i>Utricularia resupinata</i>	R9	2	8	2	0	2	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Florida bellwort	<i>Uvularia floridana</i>	R8	14	8	3	0	37	62	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Perfoliate bellwort	<i>Uvularia perfoliata</i>	R9	14	4	13	0	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern blueberry	<i>Vaccinium boreale</i>	R9	0	6	0	0	0	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dwarf huckleberry	<i>Vaccinium cespitosum</i>	R9	6	108	20	122	15	271	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Velvet-leaf blueberry	<i>Vaccinium myrtilloides</i>	R6	7	11	4	1	19	42	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Deerberry	<i>Vaccinium stamineum</i>	R9	6	16	7	1	2	32	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine blueberry	<i>Vaccinium uliginosum</i>	R9	4	89	22	16	13	144	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain cranberry	<i>Vaccinium vitis-idaea</i>	R9	4	60	26	0	1	91	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Mountain hairgrass	<i>Vahlodea atropurpurea</i>	R9	1	116	2	43	5	167	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Hairy valerian	<i>Valeriana edulis</i> var. <i>ciliata</i>	R9	7	1	0	2	25	35	RFSS matrices	NA	Only occurs on the Midewin National Tallgrass Prairie that is not being amended by NOGA	NI	NA
Marsh valerian	<i>Valeriana uliginosa</i>	R9	1	0	0	0	11	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Nuttall's cornsalad	<i>Valerianella nuttallii</i>	R8	4	5	6	0	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ozark cornsalad	<i>Valerianella ozarkana</i>	R8, R9	2	1	1	0	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Palmer's cornsalad	<i>Valerianella palmeri</i>	R8	0	3	6	0	0	9	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
California false hellebore	<i>Veratrum californicum</i>	R1	29	125	8	40	25	227	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Diverseleaf crownbeard	<i>Verbesina heterophylla</i>	R8	1	24	0	4	6	35	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Narrowleaf ironleaf	<i>Vernonia lettermannii</i>	R8	3	0	4	0	0	7	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Wooly kettentails	<i>Veronica dissecta</i> var. <i>lanuginosa</i>	R6	0	3	0	1	0	4	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Fringed kettentails	<i>Veronica schizantha</i>	R6	0	11	0	1	0	12	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Alpine speedwell	<i>Veronica wormskjoldii</i>	R9	3	91	1	126	15	236	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Culver's-root	<i>Veronicastrum virginicum</i>	R9	3	0	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Softleaf arrowwood	<i>Viburnum molle</i>	R9	1	0	1	0	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Highbush cranberry	<i>Viburnum opulus</i> var. <i>americanum</i>	R2, R9	0	0	0	0	1	1	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Downy arrow-wood	<i>Viburnum rafinesqueanum</i>	R9	1	5	5	1	1	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern arrow-wood	<i>Viburnum recognitum</i>	R9	2	0	0	0	1	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ocala vetch	<i>Vicia ocalensis</i>	R8	0	2	0	0	0	2	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Appalachian blue violet	<i>Viola appalachiensis</i>	R9	7	0	1	0	0	8	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Charleston violet	<i>Viola charlestonensis</i>	R4	0	42	0	7	0	49	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Smith violet	<i>Viola franksmithii</i>	R4	6	8	0	8	0	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Southern woodland violet	<i>Viola hirsutula</i>	R9	19	1	11	0	0	31	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Bog white violet	<i>Viola lanceolata</i>	R9	3	0	1	0	2	6	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lithion violet	<i>Viola lithion</i>	R4	0	5	1	7	0	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New England violet	<i>Viola novae-angliae</i>	R9	0	4	4	0	5	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
New England violet subspecies	<i>Viola novae-angliae</i> ssp. <i>novae-angliae</i>	R9	NA	X	X	NA	X	3	Literature	No GBIF data	Habitat may include OG forest	MIIH	NA

Species common name	Species scientific name	Region	Deciduous Forest	Evergreen Forest	Mixed Forest	Shrub/Scrub	Woody Wetlands	Sum OG habitat	Analysis method	Species spatial occurrence point location	Could species be associated with OG?	Effects determination	Reference
Western bog violet	<i>Viola primulifolia</i> ssp. <i>occidentalis</i>	R5, R6	0	7	0	8	0	15	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Roundleaf violet	<i>Viola rotundifolia</i>	R9	25	4	30	0	1	60	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Great-spurred violet	<i>Viola selkirkii</i>	R1, R2, R9	7	17	5	3	7	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Ponderosa violet	<i>Viola umbraticola</i>	R3	0	13	3	3	0	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Sand grape	<i>Vitis rupestris</i>	R8, R9	13	0	1	0	0	14	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Appalachian vittaria	<i>Vittaria appalachiana</i>	R9	14	3	22	0	0	39	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Barren strawberry	<i>Waldsteinia fragarioides</i>	R9	6	1	8	0	4	19	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Lobed barren-strawberry	<i>Waldsteinia lobata</i>	R8	1	0	2	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Dotted water-meal	<i>Wolffia borealis</i>	R6	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Columbia water-meal	<i>Wolffia columbiana</i>	R6	1	2	0	0	2	5	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Northern woodsia	<i>Woodsia alpina</i>	R9	12	7	4	11	1	35	Geospatial	Non-FS	Habitat may include OG forest	MIIH	NA
Smooth woodsia	<i>Woodsia glabella</i>	R9	1	0	0	1	0	2	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Rocky mountain woodsia	<i>Woodsia scopulina</i>	R9	0	106	0	90	0	196	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Netted chainfern	<i>Woodwardia areolata</i>	R9	1	6	0	0	6	13	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Colorado tansyaster	<i>Xanthisma coloradoense</i>	R2	1	6	0	13	2	22	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Drummond's yellow-eyed-grass	<i>Xyris drummondii</i>	R8	0	20	0	0	3	23	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Quillwort yellow-eyed-grass	<i>Xyris isoetifolia</i>	R8	0	0	0	0	1	1	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Kral's yellow-eyed grass	<i>Xyris longisepala</i>	R8	0	3	0	0	0	3	Geospatial	FS Obs	Habitat may include OG forest	MIIH	NA
Louisiana yellow-eyed grass	<i>Xyris louisianica</i>	R8	0	6	1	1	1	9	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Roughleaf yellow-eyed grass	<i>Xyris scabrifolia</i>	R8	0	51	0	1	2	54	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Slender yelloweyed grass	<i>Xyris torta</i>	R9	5	9	2	2	2	20	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
Arkansas yucca	<i>Yucca arkansana</i>	R9	10	6	0	0	0	16	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA
White camas	<i>Zigadenus elegans</i> ssp. <i>glaucus</i>	R9	2	0	0	0	0	2	Geospatial	Non-FS	Habitat may include old-growth forest	MIIH	NA
A wild rice	<i>Zizania aquatica</i> var. <i>aquatica</i>	R9	0	0	0	0	0	0	Geospatial and literature-based	FS Obs	Habitat may include old-growth forest	MIIH	SEINet (2024)
Meadow zizia	<i>Zizia aptera</i>	R9	12	5	4	1	3	25	Geospatial	FS Obs	Habitat may include old-growth forest	MIIH	NA