

SPECIES: Scientific [common]	<i>Triteleia grandiflora</i> [Large-flower triteleia]
Forest:	Bridger-Teton National Forest
Forest Reviewer:	Jessica Irwin; Rose Lehman; Trevor Bloom
Date of Review:	01/12/2021; 3/25/2025
Forest concurrence (or recommendation if new) for inclusion of species on list of potential SCC: (Enter Yes or No)	Yes

FOREST REVIEW RESULTS:

1. The Forest concurs or recommends the species for inclusion on the list of potential SCC:
Yes X No
2. Rationale for not concurring is based on (check all that apply):
Species is not native to the plan area
Species is not known to occur in the plan area
Species persistence in the plan area is not of substantial concern

FOREST REVIEW INFORMATION:

1. Is the Species Native to the Plan Area? Yes X No

If no, provide explanation and stop assessment.
2. Is the Species Known to Occur within the Planning Area? Yes X No

If no, stop assessment.

Table 1. All Known Occurrences, Years, and Frequency within the Planning Area

Year Observed	Number of Individuals	Location of Observations (USFS District, Town, River, Road Intersection, HUC etc.)	Habitat Description	Source of Information ¹
1927	1 collection	Teton National Forest: Jackson Hole: southwest corner of the Harrison Ranch.	On level in loam with sagebrush. Extremely rare. Elevation 6300 ft.	Collector: F. Buchenroth #FB-47 (Rocky Mountain Herbarium 2019)
1932	1 collection	Bridger-Teton National Forest	NA	Collector: Louis Williams
1999	1 collection	Teton Range: Bridger-Teton National Forest: Jackson Hole Mountain Resort at bottom of Apres-Vous Ski Run, 10 air mi NNW of Jackson Center.	Elevation 6900 ft. Steep, rocky road bank.	Collector: Charmaine Delmatier #8012 with Heider Gansen and Amy Taylor (Rocky

				Mountain Herbarium 2019, WYNDD 2019)
2011	137 plants	North side of Greys River at mouth, west of boat ramp.	River slopes. Occurs with <i>Artemisia tridentata</i> , <i>Allium acuminatum</i> , <i>Purshia tridentata</i> , <i>Symphoricarpos oreophilus</i> , <i>Hackelia uniflora</i> , <i>Chrysothamnus viscidiflorus</i> .	Collector: Orval Harrison (WYNDD 2019)
2011	11 plants	Northeast bridge and adjacent Snake River on north side.	Gravelly bench. Occurs with <i>Purshia tridentata</i> , <i>Artemisia tridentata</i> , <i>Lomatium dissectum</i> , <i>Comandra umbellata</i> , <i>Opuntia polyacantha</i> , <i>Balsamorhiza sagittata</i> , <i>Penstemon humilus</i> , <i>Symphoricarpos oreophilus</i> .	Collector: Orval Harrison (WYNDD 2019)
2011	In flower. 403 plants	Northwest bridge from Alpine Boat Ramp to bridge on north side of Snake River.	Occurs with <i>Artemisia tridentata</i> , <i>Lomatium dissectum</i> , <i>Penstemon humilis</i> , <i>Balsamorhiza sagittata</i> , <i>Phlox longifolia</i> , <i>Opuntia polyacantha</i> , <i>Hackelia patens</i> , <i>Delphinium nuttallianum</i> , <i>Purshia tridentata</i> .	Collector: Orval Harrison (WYNDD 2019)
2011	4 Plants in flower.	Southwest of bridge to north of Legion Ballfield along river.	Crest of bench; sagebrush and grasses	Collector: Orval Harrison (WYNDD 2019)
2011	2 plants in flower	East side Lincoln County Road 101, just south of Snake River	Sagebrush flat	Collector: Orval Harrison (WYNDD 2019)
2011	434 Plants in flower.	West side of Lincoln County Road 101/ Palisades Reservoir Road, north of private gravel pit	In flower. 434 plants. Occurs with <i>Artemisia tridentata</i> , <i>Phlox longifolia</i> , <i>Balsamorhiza sagittata</i> , <i>Delphinium nuttallianum</i> , <i>Purshia tridentata</i> ,	Collector: Orval Harrison (WYNDD 2019)

			Antennaria microphylla, Crepis acuminata, Lithospermum ruderales, Eriogonum umbellatum, Lomatium dissectum, Comandra umbellata, Allium acuminatum, Chrysothamnus viscidiflorus, Penstemon cyananthus	
2016		Bridger-Teton National Forest: Jackson Hole Mountain Resort: Upper Teewinot Gully. North side of South Pass Traverse.	Dry open mountain meadow. Elevation 7162ft.	Collector: Charmaine Delmattier #10231

¹Sourced from WYNDD Data Explorer 2025. Consortium of Pacific Northwest Herbaria (Consortium of Pacific Northwest Herbaria 2019) and the SEINet data portal (SEINet 2019) were also searched, and no additional occurrences on the Bridger-Teton National Forest were found.

- a. Are all Species Occurrences Only Accidental or Transient?

Yes___ No X

If yes, document source for determination and stop assessment.

- b. For species with known occurrences on the Forest since 1990, based on the number of observations and/or year of last observation, can the species be presumed to be established or becoming established in the plan area?

Yes X No___ Unknown ___

If no, provide explanation and stop assessment

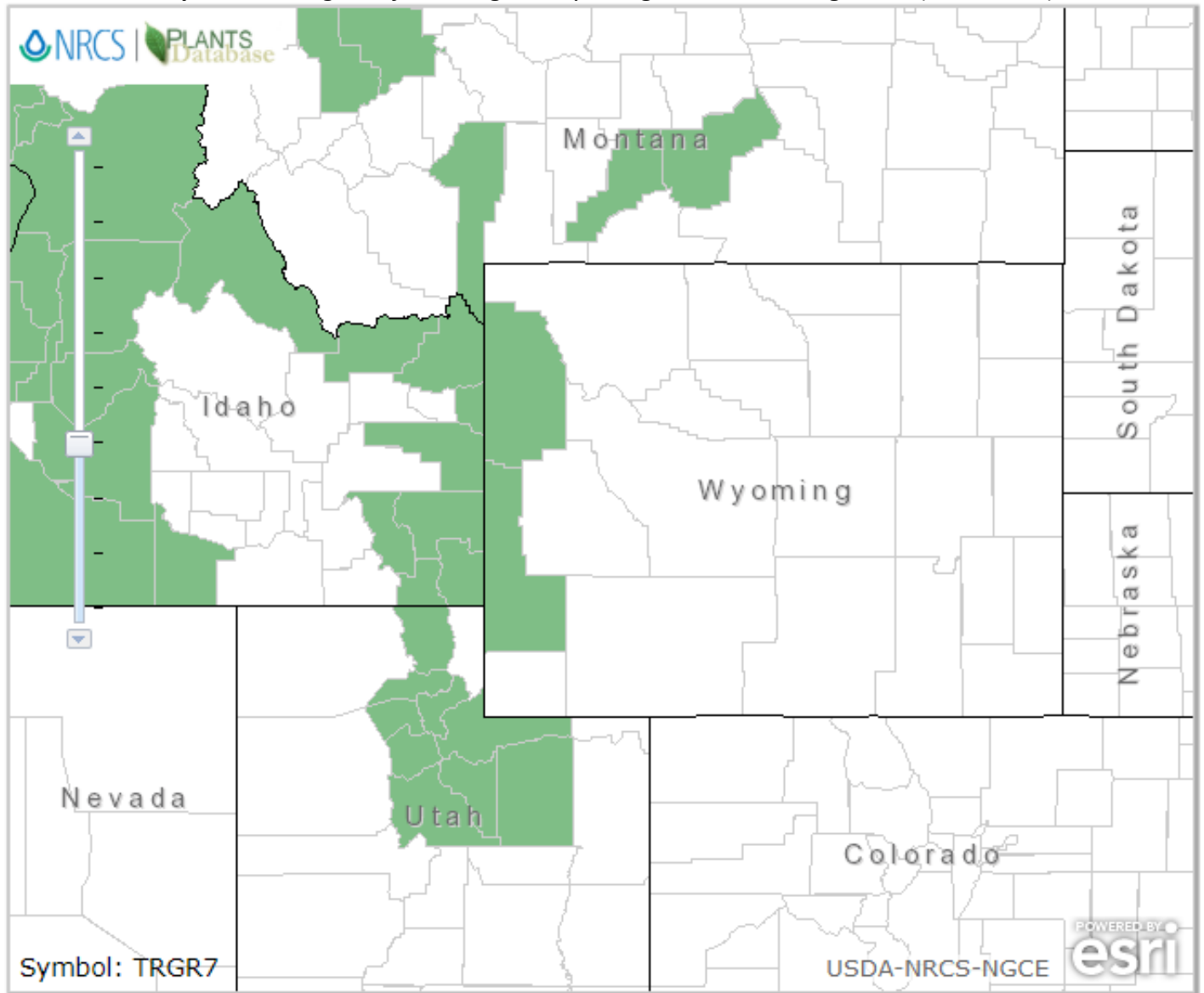
- c. For species with known occurrences on the Forest predating 1990, does the weight of evidence suggest the species still occurs in the plan area?

Yes___ No___

Provide explanation for determination

If determination is no, stop assessment

d. **Map 1, *Triteleia grandiflora* range in Wyoming and surrounding states (NRCS 2019).**

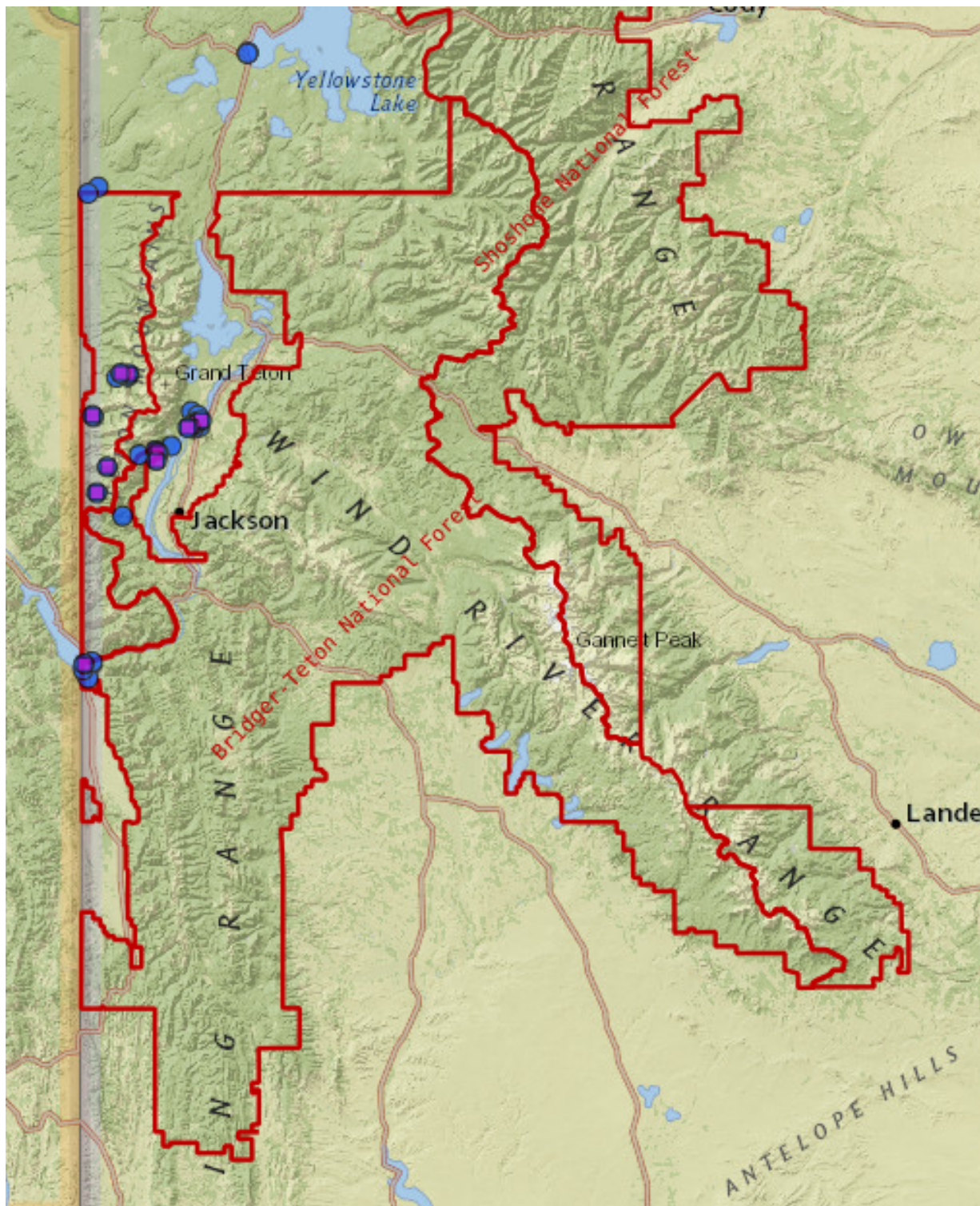


- | | | | |
|------------------------|----------------------------|----------------------|-------------------|
| Native | Introduced | Both | Absent/Unreported |
| Native, No County Data | Introduced, No County Data | Both, No County Data | |

Native Status:

- | | | | | | | | | | |
|-----|----|----|----|----|-----|-----|----|-----|----|
| L48 | AK | HI | PR | VI | NAV | CAN | GL | SPM | NA |
|-----|----|----|----|----|-----|-----|----|-----|----|

Map 2: *Triteleia grandiflora* observations on the Bridger-Teton and surrounding region. WYNDD Data Explorer 2025.



3. Is There Substantial Concern for the Species' Capability to persist Over the Long-term in the Plan Area Based on Best Available Scientific Information?

Table 2. Status summary based on existing conservation assessments

Entity	Status/Rank (include definition)
NatureServe Global Status	<p>G4—Apparently Secure</p> <p><i>Uncommon but not rare; some cause for long-term concern due to declines or other factors</i></p>
NatureServe State Status	<p>S2—Imperiled</p> <p><i>At high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.</i></p>
WYNDD	<p>Plant Species of Concern G4G5/S2</p> <p><i>Species vulnerable to extirpation at the global or state level due to:</i></p> <ul style="list-style-type: none"> <i>a. their rarity (e.g., restricted distribution, small population size, low population density)</i> <i>b. inherent vulnerability (e.g., specialized habitat requirements, restrictive life history)</i> <i>c. threats (e.g., significant loss of habitat, sensitivity to disturbances)</i>
USDA Forest Service	<p>Region 2 Sensitive</p> <p><i>Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by</i></p> <ul style="list-style-type: none"> <i>a. Significant current or predicted downward trends in population numbers or density.</i> <i>b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.</i> <p>(FSM 2670.5 – Threatened, Endangered & Sensitive Species)</p>
USDOI FWS	Not listed
USDOI BLM	Not listed
IUCN	Not listed
Sources: WYNDD 2019; Heidel 2018; USDA Forest Service Regions 2 and 4 Sensitive Species Lists; NatureServe 2019	

Table 3. Status summary based on best available scientific information.

Criteria	Rationale
Distribution on the Bridger-Teton National Forest	Table 1 and Map 2 show occurrences on and near the Bridger-Teton National Forest. Two of the more recent occurrences on the Bridger-Teton National Forest are located in the Jackson Hole Mountain Resort and subject to a high level of recreation use including hiker and mountain bike trail development.
Distribution outside the Bridger-Teton National Forest	Peripheral; in Wyoming known from the Star Valley, Jackson Hole, Yellowstone Plateau, and Teton Range in Lincoln and Teton counties. <i>Triteleia</i> species are widely distributed west of the Rocky Mountains, but the geographical center of the genus' distribution and the area with the highest level of endemism is in the Klamath area of southwestern Oregon and northwestern California (Ladyman 2007). Range wide, Large-flower <i>Triteleia</i> occurs from British Columbia south to Oregon, Idaho, Utah, and northwestern Wyoming. It has its center of distribution in the Pacific Northwest.
Abundance on the Bridger-Teton National Forest	<p>Individual populations are often very small (6-50 plants). One of the largest populations in Grand Teton NP consists of several hundred plants (Jones et al. 2001).</p> <p>Although the entirety of Bridger-Teton National Forest has not been floristically inventoried, some areas within and adjacent to Bridger-Teton National Forest have been surveyed over the years. This species was not documented during these survey efforts:</p> <ul style="list-style-type: none"> • Afton Front Research Natural Area Bridger-Teton National Forest (Fertig and Jones 1994a) • Horse Creek Research Natural Area Bridger-Teton National Forest (Fertig and Jones 1994b) • Swift Creek Research Natural Area Bridger-Teton National Forest (Fertig and Jones 1994c) • Sensitive plant surveys and status of rare plant species on Bridger-Teton National Forest, 1997-1998 (Fertig 1999) • Rare Species and Riparian Vegetation of the Snake River Basin in Wyoming (Jones et al. 2001) • Survey for <i>Stephanomeria fluminea</i> on the Bridger-Teton National Forest (Markow 2004) • Wyoming Plant Species of Concern on Caribou-Targhee National Forest: 2007 Survey Results Teton and Lincoln counties, Wyoming (Mancuso and Heidel 2008) • A Floristic Inventory of Grand Teton National Park, Pinyon Peak Highlands, and Vicinity, Wyoming U.S.A (Kesonie and Hartman 2011)

Criteria	Rationale
	<ul style="list-style-type: none"> • Blackrock Creek Wild and Scenic River Botany Survey (Johnson 2011) • Sensitive and rare plant species inventory in the Salt River and Wyoming Ranges, Bridger-Teton National Forest (Heidel 2012) • Teton to Snake Fuels Management Project Botany Report and Biological Evaluation (Englebert 2013) • Botany inventories in select fens of the Caribou-Targhee and Bridger-Teton National Forests (Heidel 2019).
Population Trend on the Bridger-Teton National Forest	The data in the literature, associated with herbarium specimens, or at the state Natural Heritage Programs are insufficient to determine accurately long-term population trends for <i>Triteleia grandiflora</i> on the forest.
Habitat Trend on the Bridger-Teton National Forest	The varied range of habitats occupied by <i>Triteleia grandiflora</i> plants allows this plant to occupy many habitats and soil types on the forests. Habitat availability is stable for this species.
Threats to the Species and its Habitat on the Bridger-Teton National Forest	<p>Habitat loss where populations occur, fragmentation, and degradation caused by human recreation, livestock grazing, resource development (timber and mineral), and invasive non-native plant species are potential threats. <i>Triteleia grandiflora</i> occurrences are also vulnerable to the direct effects of herbivory, especially in areas where pressures from livestock grazing may be in addition to those from wildlife (Ladyman 2007). Invasive plants have been identified as a major threat to the biological diversity and ecological integrity within and outside the Bridger-Teton National Forest. Untreated invasive plant infestations have the potential to expand at an average rate of 1.3 to 25 percent per year (USFS 2017). Invasive plants create many adverse environmental effects, including, but not limited to: displacement of native plants; reduction in functionality of habitat and forage for wildlife and livestock; threats to populations of threatened, endangered and sensitive species; alteration of physical and biological properties of soil, including productivity; changes to the intensity and frequency of fires; facilitation of further invasive species invasions; and loss of recreational opportunities (Halofsky et al. 2018). The presence of invasive plant species may be compounded by the presence of cattle which may create an environment more conducive to the establishment of invasive plant species (Halofsky et al. 2018).</p> <p><i>Triteleia grandiflora</i> could be threatened by heavy recreational use of its habitat and over-collection for showy flowers (Jones et al. 2001). Two of the more recent observations on the Bridger-Teton National Forest are located in the Jackson Hole Mountain Resort where high levels of recreation use exist including hiking and mountain bike trail building. The other main cluster of observations occur along the Snake River in a heavily</p>

Criteria	Rationale
	used recreation area near the confluence with Greys River. Protection from recreation impacts may be needed.
Life history and demographic characteristics of the species	<p><i>Triteleia grandiflora</i> is an herbaceous perennial plant. The stems and leaves grow from fibrous-coated bulb-like structures known as corms. Each plant has one or two basal leaves that have narrow lance-shaped blades. The flowering stem is erect, cylindrical in shape, and topped by a cluster of flowers. Each flower consists of six whitish to blue, vase-shaped to narrowly bell-shaped long tube. <i>Triteleia grandiflora</i> reproduces by producing seed, as well as vegetatively through division of the corm. The corm is an organ of dormancy and allows individuals to survive periods of environmental stress. Several years are needed for the corm to achieve a size that can send up a potentially reproductive shoot. <i>Triteleia grandiflora</i> is likely to be primarily a cross-pollinating species. If so, an abundant, healthy, and appropriate assemblage of pollinators may be particularly important to the viability of <i>Triteleia grandiflora</i> occurrences, especially where vegetative reproduction is minimal. <i>Triteleia grandiflora</i> is reported to grow in full sunlight to partial shade in meadows, grasslands, sagebrush, pinyon-juniper woodlands, aspen woodlands, pine forests, and scattered woodlands. Although the species may occur in forested areas, it is typically found in areas with low or no tree canopy (Ladyman 2007).</p>
Date: September 16, 2019 Reviewer: Julie Remp	

Summary and Recommendations

Species (Scientific and Common Name): *Triteleia grandiflora* (large-flower Triteleia)

Triteleia grandiflora is listed as S2 (imperiled) and G4 (apparently secure) globally. Its distribution extends from the Okanogan Mountains in southern British Columbia, south to the Klamath-Siskiyou Mountains and eastward to the Wasatch Front and greater Yellowstone area. Populations occur in a wide variety of habitats, including meadows, grasslands, sagebrush, pinyon-juniper woodlands, aspen woodlands, pine forests, and even vacant lots. Clonal and sexually reproducing bulb-like corms may allow individuals to survive periods of environmental stress. Across the species range, threats to habitat include recreation, livestock grazing, resource development (timber and mineral), and invasive non-native plant species (Ladyman 2007).

There are nine documented occurrences on the Bridger-Teton Forest. Two of the most recent occurrences are located on Jackson Hole Mountain Resort and several others along the Snake River near the confluence with Greys River. Most of these occurrences have not been visited since their initial herbarium specimens were collected and thus population trends cannot be determined. The occurrences from Jackson Hole Mountain Resort could be threatened invasive species, road and vegetation management, and over-collection for showy flowers (Jones et al. 2001) as well as new road and trail development. Invasive species documented nearby include *Carduus nutans*, *Artemisia absinthium*, *Verbascum thapsus*, *Cirsium vulgare*, *Cirsium arvense*, *Leucanthemum vulgare* and *Anthemis arvensis*. Known occurrences are more frequent in the nearby areas of Grand Teton National Park and the Caribou-Targhee National Forest. The area of the historic occurrence at Harrison Ranch has a similar presence of invasive species.

While discovery of populations in highly disturbed settings such as Jackson Hole Mountain Resort may suggest a resilient species, trend data and seedling survival rates would greatly inform the urgency of protective measures. Given the multiple threats and lack of trend data, it is recommended that *Triteleia grandiflora* be included as a SCC.

Evaluator: Jessica Irwin and Rose Lehman Date: 01/12/2021

Reviewed: Trevor Bloom Date: 3/25/2025

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