

SPECIES: Scientific [common]	<i>Eriophorum gracile</i> [Slender cottongrass]
Forest:	Bridger-Teton National Forest
Forest Reviewer:	Daniel Lay/Rose Lehman, K. Clause, Trevor Bloom
Date of Review:	1/25/2020; 3/26/25
Forest concurrence (or recommendation if new) for inclusion of species on list of potential SCC: (Enter Yes or No)	No

FOREST REVIEW RESULTS:

1. The Forest concurs or recommends the species for inclusion on the list of potential SCC:
Yes ___ No X
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
8/6/1901	N/A	Mountains along Buffalo River, north of Government Bridge. Near Turpin Meadows.	Wet meadow	Collector: Elmer Merrill, Collection #1149 (Rocky Mountain Herbarium, accessed 2020). SEINet, 2020 & WYNDD, 2019.

¹The Consortium of Pacific Northwest Herbaria (Consortium of Pacific Northwest Herbaria 2019) and the Rocky Mountain Herbarium (RMH, 2020) 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___ No__

If no, provide explanation and stop assessment

No known occurrences since 1990.

- 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?

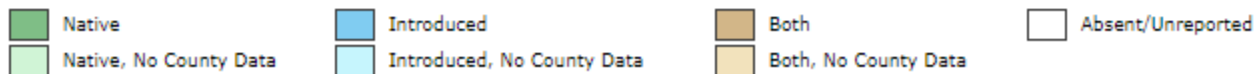
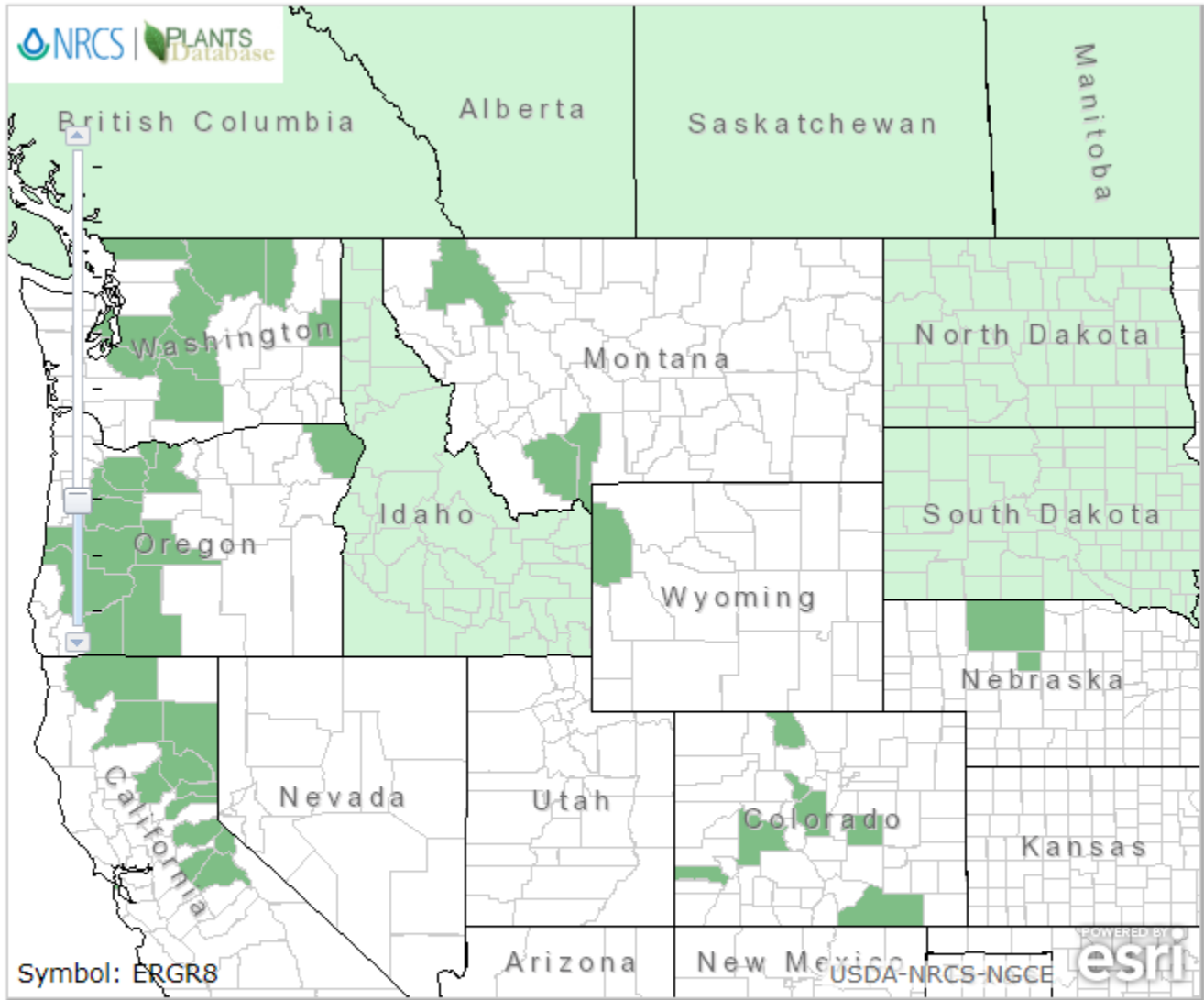
Yes X No___

Provide explanation for determination

The associated habitat has likely had little impacts since the 1901 visit, and there is no reason to believe this species has been extirpated from the forest. Further studies should be conducted to make confirmation.

If determination is no, stop assessment

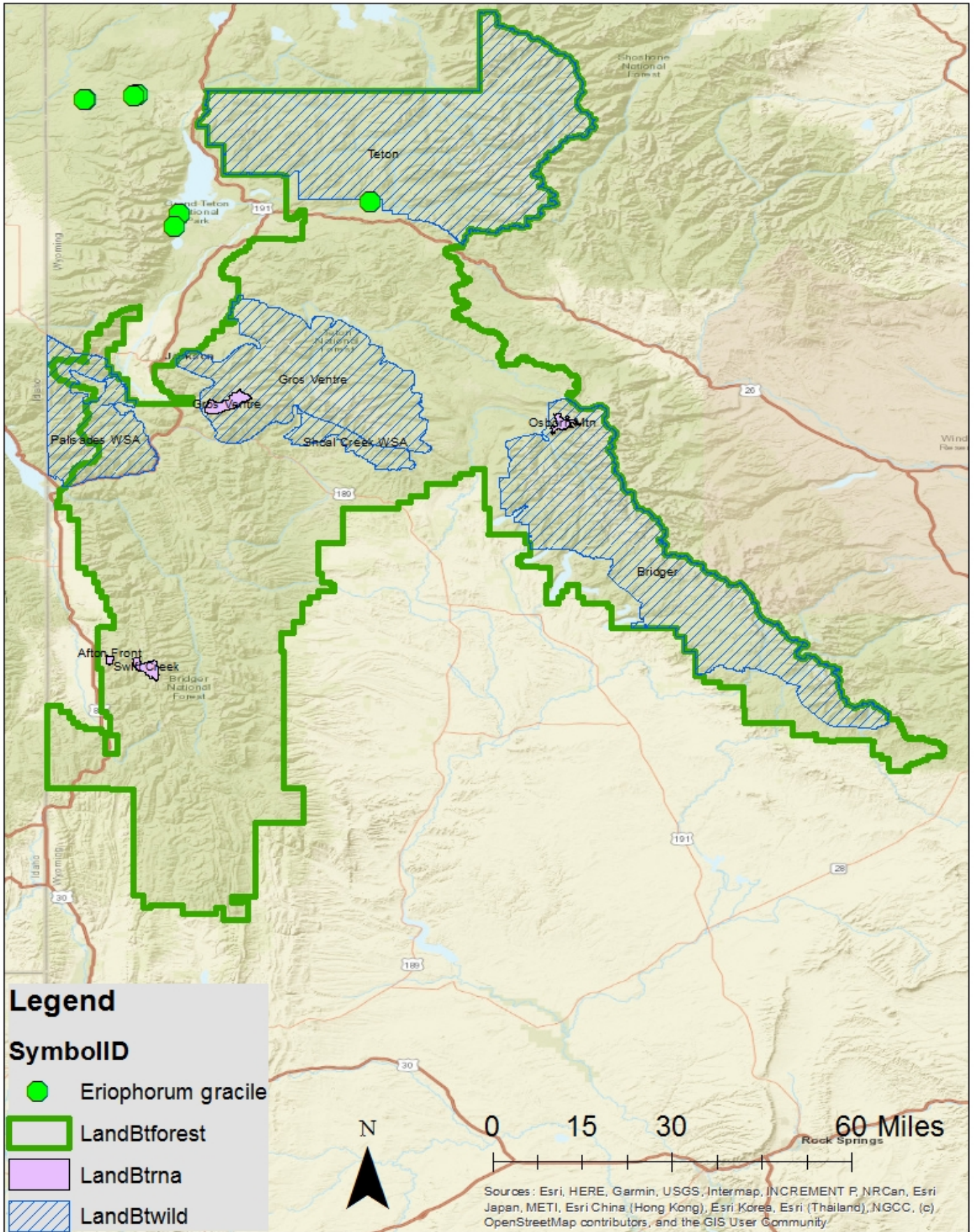
d. **Map 1, *Eriophorum gracile* range in Wyoming and surrounding states (NRCS 2020).**



Native Status:



Map 2: *Eriophorum gracile* occurrences on the Bridger-Teton NF and vicinity.



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>G5— Apparently Secure</p> <p><i>At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.</i></p>
NatureServe State Status	<p>S3— Vulnerable</p> <p><i>At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.</i></p>
WYNDD	<p>Plant Species of Potential Concern</p> <p>G5/S3</p> <p><i>Species that appear to be secure at present, but because they have limited distribution as regional or state endemics they could become vulnerable under large-scale changes. Species with this status warrant periodic checks.</i></p> <p>(Wyoming Natural Diversity Database - Species of Potential Concern)</p>
USDA Forest Service	R2 Sensitive
USDOI FWS	Not listed
USDOI BLM	Not listed

Sources: WYNDD 2019; Heidel 2018; USDA Forest Service Regions 2 and 4 Sensitive Species Lists; NatureServe 2020.

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

Criteria	Rationale
Distribution on the Bridger-Teton National Forest	Table 1 and Map 2 detail <i>Eriophorum gracile</i> occurrences in the Bridger-Teton National Forest. The only EO that occurs on the Bridger-Teton NF is near Turpin Meadows as was recorded in 1901.
Distribution outside the Bridger-Teton National Forest	Circumboreal; from Alaska to Labrador, and south from California to Colorado, and from Iowa to Pennsylvania (Ball and Wujek 2002, Hitchcock et al. 1969). In Wyoming, it is known from the Jackson Hole, the Beartooth, Big Horn, and Medicine Bow ranges in Albany, Johnson, Park, Sheridan, and Teton counties. (Heidel, 2019)
Abundance on the Bridger-Teton National Forest	<p>There has been only one visit (1901) at the only known occurrence on the BTNF and that visit contained no abundance data.</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"> • Sensitive plant surveys and status of rare plant species on Bridger-Teton National Forest, 1997-1998 (Fertig 1999) • A Floristic Inventory of Grand Teton National Park, Pinyon Peak Highlands, and Vicinity, Wyoming U.S.A (Kesonie and Hartman 2011) • Sensitive and rare plant species inventory in the Salt River and Wyoming Ranges, Bridger-Teton National Forest (Heidel 2012). • Rare Species and Riparian Vegetation of the Snake River Basin in Wyoming (Jones et al. 2002)
Population Trend on the Bridger-Teton National Forest	Data on population trends for this species have not been collected. However, according to (Fertig & Mills, 2000), populations may be relatively stable at present. No other sources provide additional population or multi-year trend monitoring data.
Habitat Trend on the Bridger-Teton National Forest	Habitat trend data for fens and riparian areas have been conducted for a few select locations on the BTNF, but this area was excluded from examination. No other habitat trend data was found.
Threats to the Species and its Habitat on the Bridger-Teton National Forest	Riparian and wetland habitat may be threatened by climate change effects and disturbance or loss of wetland habitat. Changes in hydrologic regimes, such as those from water diversions and dams, impact the amount, season, and timing of flows. This can substantially alter associated riparian and wetland species because of their dependence on fluvial geomorphic process, surface water, and groundwater. Floods are responsible for erosion, transport, and deposition of sediments, as well as the amounts and location of vegetation and debris. Many dominant riparian species, such as cottonwoods and willows, are pioneer species that depend on these events to provide bare, moist substrates necessary for seed germination and plant establishment (Halofsky et al. 2018). Mid-elevation

Criteria	Rationale
	<p>riparian and wetland communities are rated as having a moderate to high sensitivity to climate change, moderate adaptive capacity, and moderate to high vulnerability (Halofsky et al. 2018). Mid-elevation riparian plant species may have the ability to move upward in elevation, but where resilience has been compromised by human uses, these systems may not be able to easily adjust to changes in their environment. Invasive species at mid-elevation sites are likely to expand in the future, especially following disturbances such as fire, drought, and trampling associated with human and animal use. As riparian areas become drier, upland species will continue to expand into these sites (Halofsky et al. 2018). Grazing can impact wetlands by altering water quality, trampling herbaceous vegetation, increasing bare ground, and facilitating noxious weed expansion in riparian areas. Rangelands form a major component of ecosystems in the Bridger-Teton National Forest, and there are open rangelands throughout the Forest (USFS 2017). Although no active grazing allotments overlap the two occurrences, it is likely that they overlap potential habitat and could limit future recruitment. Adherence to rangeland management plans will limit the chance of overgrazing.</p> <p>The area in which <i>E. gracile</i> occurs is just outside of the Teton Wilderness and does not have any active grazing allotments that overlap.</p> <p>Threats to potential habitat described in (Fertig & Mills, 2000) include grazing, trampling, and recreational use.</p>
<p>Life history and demographic characteristics of the species</p>	<p><i>Eriophorum gracile</i> is a perennial with slender rhizomes that flowers mid-June through August. It is also consider a wetland obligate plant (NRCS, 2020) that occurs in fens and meadows in saturated soil to shallow standing water at 6,900-8,000 feet Fertig & Mills, 2000).</p>
<p>Date: January 25, 2020 Reviewer: D. Lay</p>	

Summary and Recommendations
<p>Species (Scientific and Common Name): <i>Eriophorum gracile</i> (Slender cottongrass)</p>

Eriophorum gracile is listed as S3 (vulnerable) and G5 (secure) globally. General habitat has been described as fens and meadows with saturated soils to shallow standing water. Although it is rare in the BTNF, it is distributed quite abundantly throughout its circumboreal range.

Only one occurrence has been documented on the BTNF. This occurrence has had no baseline abundance or population trend assessments conducted. Additional surveys and long-term trend monitoring need to be conducted on this occurrence to assess the trend of the populations on the BTNF.

Threats to current habitat include recreation, trampling, and climate change, while threats to potential habitat include grazing, trampling, recreation and climate change. Climate change is projected to be a long-term threat to both populations and habitat for this species. Invasive plant species do not pose much of a threat to the known *E. gracile* occurrence as there are no known invasive populations within the immediate area that are able to persist as obligate wetland plants. WYNDD has identified it as a Species of Potential Concern but has not elevated it to a Species of Concern. Due to insufficient population and trend data and low potential for impacts from identified threats, *E. gracile* is not recommended to be a Species of Conservation Concern at this time.

Evaluator: Daniel Lay Date: 1/25/2020 Updated: K. Clause, Trevor Bloom 3/26/25

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