

SPECIES: Scientific [common]	<i>Lesquerella paysonii</i> [Payson's bladderpod] Other scientific names: <i>Physaria carinata</i> ssp. <i>Paysonii</i> ; <i>Physaria paysonii</i>
Forest:	Bridger-Teton National Forest
Forest Reviewer:	R.Lehman
Date of Review:	5/20/20; 10/14/20
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
8/6/1922	Unknown	U.S.A., Wyoming, Sublette County: 7 mi above Kendall. 43.2824° N, 110.0217° W; NAD 83, uncertainty 1 mi., Digital Map	Gypsaceous soil below warm springs. Elev. 7900 ft. Phenology: fruiting.	Edwin B. Payson, 2944. with Lois B. Payson. (Rocky Mountain Herbarium 2020)
8/15/1922	Unknown	U.S.A., Wyoming, Sublette County: Gros Ventre Mountains, 15 mi NE of Bondurant (10 mi N of Bondurant. NW of	Subalpine slopes. *Field book. Elev. 8200-10800 ft. Phenology: fruiting.	Edwin B. Payson, 3032. with Lois B. Payson. (Rocky Mountain Herbarium 2020)

		"Elbow", Spread Eagle Mountain). 43.3194° N, 110.234° W; NAD 83, uncertainty 2 mi., Digital Map.		
8/19/1922	Unknown	U.S.A., Wyoming, Sublette County: Hoback River Canyon. 43.2515° N, 110.4984° W; NAD 83, uncertainty 2 mi., Digital Map	Gravel roadside. *Creek" Elev. 7100 ft. Phenology: flowering & fruiting.	Edwin B. Payson, 3074 with Lois B. Payson. (Rocky Mountain Herbarium 2020)
8/5/1925	Unknown	U.S.A., Wyoming, Sublette County: In the vicinity of Green River Lakes [Limestone Mountain*]. 43.3175° N, 109.8238° W; NAD 83, uncertainty 1.5 mi., Digital Map	Red soil slopes. *Field book. Elev. 8500-10700 ft. Phenology: flowering.	Edwin B. Payson, 4551. (Rocky Mountain Herbarium 2020)
5/16/1926	Patchy abundance	U.S.A., Wyoming, Lincoln County: Squaw Flat. 43.1492° N, 110.9405° W; uncertainty 2 mi.	Level slope; clay soil; sageland with <i>Eriogonum</i> , <i>Crepis</i> , <i>Collinsia</i> , <i>Poa</i> , and <i>loco</i> ; stony open flats; patchy abundance. Elev. 5500 ft. Phenology: flowering & fruiting.	Charles H. McDonald, 541. (Rocky Mountain Herbarium 2020)
Between 1/1/1940 and 1/1/1950	Unknown	U.S.A., Wyoming: Turpin Meadows, east of Moran 277439.758, 521025.063811 Possible issue with reported location - <i>Physaria carinata</i> ssp. <i>paysonii</i> not known to occur at reported location	Unknown	H.D.D. "Dwight" Ripley and Rupert C. Barneby #8901, EO #38 (WYNDD GIS 2019)
5/24/1977	Frequent	U.S.A., Wyoming, Teton County: Gros Ventre Mountains: Lower Slide Lake. 43.6338° N, 110.5558° W; uncertainty 1 mi.	Growing with <i>Oxytropis</i> sp. and <i>Geranium</i> sp.; frequent in red soil. Elev. 7100 ft. Phenology: flowering.	Robert W. Lichvar, 61. (Rocky Mountain Herbarium 2020)
5/28/1978	Unknown	U.S.A., Wyoming, Lincoln County: Ca 22.5 air mi NNE of Afton, Greys River at Lost Creek. 43.0324° N, 110.8078° W; uncertainty 1 mi.	Growing with <i>Arabis holboellii</i> and <i>Astragalus argophyllus</i> in exposed gravel soil of sagebrush flat.	Orval C. Harrison, 243. (Rocky Mountain Herbarium 2020)

			Elev. 6280 ft. Phenology: flowering.	
6/26/1978	Common	U.S.A., Wyoming, Sublette County: Wyoming Range: 0.1 mi E of McDougal Gap; 38 air mi W of Daniel. 42.8451° N, 110.5573° W; uncertainty 1 mi.	Opening in lodgepole, common. *specimens. Elev. 9300 ft. Phenology: flowering.	Leila M. Shultz, 2654. with John S. Shultz. (Rocky Mountain Herbarium 2020)
7/20/1978	Unknown	U.S.A., Wyoming, Sublette County: Wyoming Range: directly S of Mt. McDougal, 30 air mi W of Old Fort Bonneville. 42.8451° N, 110.577° W; uncertainty 0.5 mi.	Fine soils from red sandstone, opening in lodgepole-subalpine fir stand bordered by aspen. Elev. 8400 ft. Phenology: fruiting.	Leila M. Shultz, 2811. with John S. Shultz. Element Occurrence Number: 4 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/5/1979	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: east facing limestone outcrops above Crow Creek Lakes, 9 air mi E of Afton. 42.7268° N, 110.7578° W; uncertainty 1 mi.	Associated with Douglas fir and whitebark pine Elev. 8900 ft. Phenology: flowering & fruiting.	John S. Shultz, 597. (Rocky Mountain Herbarium 2020)
8/6/1979	Unknown	U.S.A., Wyoming, Lincoln County: Grayback Ridge, 2.5 air mi SE of McCain Guard Station. 43.1065° N, 110.5573° W; uncertainty 0.5 mi.	East facing slope, rocky soil, limestone. Elev. 9300 ft. Phenology: fruiting.	Leila M. Shultz, 3727. with John S. Shultz. Element Occurrence Number: 11 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/16/1980	Unknown	U.S.A., Wyoming: Greys River, in area of Forest Park. 239184.862066, 408043.380072	Gravelly sagebrush flat, and in disturbed soil adjacent to road. Occurs with <i>Allium brandegei</i> . Phenology: in flower and fruit.	Orval C. Harrison Element Occurrence Number: 15 (WYNDD GIS 2019)
8/11/1980	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: Corral Creek, ca 5 mi W of Corral Creek Guard Station. 42.6869° N, 110.7308° W; uncertainty 1 mi.	Rocky open slope. Phenology: fruiting.	Ronald L. Hartman, 11871. with Leila and John Shultz. (Rocky Mountain Herbarium 2020)

5/18/1985	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: Strawberry Creek: 3/8 mi below dam; ca 13 air mi NNE of Afton; ca 1.5 air mi E of Bedford. 42.90167° N, 110.86333° W; uncertainty 1 mi.	Growing in rocky-gravelly soil on southerly slope with <i>Anemone multifida</i> . Elev. 6880 ft. Phenology: flowering.	Orval C. Harrison, 401. EO #14 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/21/1986	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: Murphy Creek; ca 20 air mi N of Afton. 43.00361° N, 110.88167° W; uncertainty 1 mi.	Growing in exposed gravel near creek. Elev. 7800 ft. Phenology: flowering & fruiting.	Orval C. Harrison, 436. EO #8 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/2/1986	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: Murphy Creek; ca 0.3 mi W of oil well site; ca 20 air mi N of Afton. 43.0032° N, 110.9049° W; uncertainty 1 mi.	Growing in open, rocky basin at base of ledges with <i>Lomatium nuttallii</i> , <i>Erigeron eatonii</i> , and <i>Synthyris pinnatifida</i> . Elev. 8840 ft. Phenology: flowering & fruiting.	Orval C. Harrison, 435. EO #8 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
5/27/1990	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: Greys River Drainage: along Greys River at Mink Creek, ca 16 air mi SE of Afton; ca 12 air mi E of Smoot. 42.5967° N, 110.6812° W	Gravelly-rocky soil on open southerly facing slope with <i>Allium brandegei</i> and <i>Androsace septentrionalis</i> . Elev. 8000 ft. Phenology: flowering & fruiting.	Orval C. Harrison, 578. EO #47 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
6/8/1990	Unknown	U.S.A., Wyoming, Sublette County: West Slope Wind River Range: Gypsum Creek Road, ca 1-1.5 air mi SE of Red Hill, ca 7 air mi SW of Green River Lakes campground. 43.2439° N, 109.9742° W; uncertainty 1 mi.	Sagebrush slopes with scattered lodgepole pine and adjacent stream margins; shales and limestone parent material and outcrops. Elev. 8100-8200 ft.	Ronald L. Hartman, 25173. EO #18 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
6/8/1990	Unknown	.S.A., Wyoming, Sublette County: West Slope Wind River Range: ca 8.5 air mi WSW of Green River Lakes campground. 43.26861° N, 110.01306° W; uncertainty 1 mi.	Shale and limestone parent material; sagebrush and open slope. Elev. 7800-7900 ft. Phenology: flowering & fruiting.	Ronald L. Hartman, 25160. Element Occurrence Number: 2 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)

6/13/1990	Unknown	U.S.A., Wyoming, Sublette County: West Slope Wind River Range: mineral spring 1/8 mi N of Stinky Spring, ca 23 air mi N of Cora adjacent to Green River Lakes Road. 43.2686° N, 110.0131° W	Sagebrush clearing. Elev. 7800-8000 ft.	Walter Fertig, 1572. (Rocky Mountain Herbarium 2020)
6/25/1990	Unknown	U.S.A., Wyoming, Sublette County: West Slope Wind River Range: Kendall Warm Springs Falls and Green River, adjacent to Green River Road; ca 29 air mi NNW of Pinedale. 43.28278° N, 110.01306° W; uncertainty 1 mi.	Grassy meadow adjacent to springs and river. Elev. 7800-7880 ft. Phenology: flowering & fruiting.	Walter Fertig, 2447. (Rocky Mountain Herbarium 2020)
7/7/1990	Unknown	U.S.A., Wyoming, Lincoln County: Salt River Range: Salt River Drainage: pass between two forks of Dry Creek 1 mi NNE of Dry Creek Lake, ca 6.5 air mi E of Afton; ca 8.5 air mi NE of Smoot. 42.7156° N, 110.8108° W	Rocky-gravelly soil on open southeasterly exposure with <i>Androsace septentrionalis</i> and <i>Viola praemorsa</i> . Elev. 9550 ft. Phenology: flowering & fruiting.	Orval C. Harrison, 598. Element Occurrence Number: 24 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/16/1990	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Wyoming Range: Willow Creek Drainage: Grayback Ridge above Little Greys River, ca 1-1.5 air mi W to NW of Pickle Pass, ca 19 air mi ESE of Alpine, ca 29 air mi NE of Afton. 43.0908° N, 110.6542° W; uncertainty 1 mi.	Rocky point on limestone ridge. Elev. 9400 ft.	B. E. Nelson, 19724. Element Occurrence Number: 11 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/21/1990	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Wyoming Range: south end of ridge between Hunter and Wilson creeks and ridge down into Wilson Creek; ca 6 air mi NW of Hoback Peak. 43.1194° N, 110.6172° W	Shaley and sandy slopes with Douglas fir and whitebark pine switching to limber pine on ridge. Elev. 8200-9200 ft.	Ronald L. Hartman, 27934. (Rocky Mountain Herbarium 2020)

8/22/1991	Unknown	U.S.A., Wyoming, Sublette County: West Slope Wind River Range: Lime Creek, across Green River from Kendall Warm Springs; ca 11 air mi W of Green River Lakes. 43.28306° N, 110.0525° W; uncertainty 3 mi.	Limestone outcrops with stream on rolling sagebrush slopes. Elev. 7800-8800 ft. Phenology: fruiting.	Ronald L. Hartman, 31522 with Jonathan Hughes. (Rocky Mountain Herbarium 2020)
8/14/1991	Unknown	U.S.A., Wyoming, Sublette County: Between springs and Green River. Kendall Warm Springs, west slope of Wind River Range. T38N R110W S2	Open banks of spring. Phenology: Flowers.	Duane Atwood, 16417. ID #1 (Consortium of Pacific Northwest Herbaria 2020)
5/9/1992	Unknown	U.S.A., Wyoming, Sublette County: Wyoming/Salt River Ranges: Wyoming Range: ca 14.5 air mi SE of Hoback Junction; at juncture of the Kerr, the Little Cliff and Cliff creeks. 43.2269° N, 110.4861° W	Mixed forb community with stands of lodgepole pine and subalpine fir on margin. Elev. 6720-6750 ft. Phenology: flowering & fruiting.	Ronald L. Hartman, 32113 with Bruce Embury. EO #22 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
6/4/1992	Unknown	U.S.A., Wyoming, Sublette County: Wyoming/Salt River Ranges: Wyoming Range: McDougal Gap, 20.5 air mi NE of Afton. 42.865° N, 110.5753° W	South facing slopes, spruce-fir-aspen, wind swept ridge. Phenology: flowering & fruiting. Elev. 8440-9300 ft.	Bruce Embury, 637. (Rocky Mountain Herbarium 2020)
6/6/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Wyoming Range: Deadman Mine (Vail Mine, at head of Deadman Creek), ca 22.5 air mi NE of Afton. 42.9833° N, 110.6311° W	Spruce, fir, aspen slopes, windswept ridges. Elev. 7880-9202 ft. Phenology: flowering & fruiting.	Bruce Embury, 722. EO #21 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
6/19/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Salt River Range: Prater Canyon, ca 19 air mi N of Afton. 43.0036° N, 110.9406° W	Canyon bottom and lower slopes with narrowleaf cottonwood, Douglas fir, willow below, and Douglas fir, subalpine fir, and <i>Salix scouleriana</i> on higher slopes; substrate of limestone. Elev. 6560-	Ronald L. Hartman, 32642 (Rocky Mountain Herbarium 2020)

			8200 ft. Phenology: flowering & fruiting	
7/8/1992	Unknown	U.S.A., Wyoming, Teton County: Teton Mountains: Targhee and Teton National Forests: ca 1/8-1/2 mi S of Teton Pass, near microwave station ca 10 mi W of Jackson. 43.5042° N, 110.9542° W	Rocky meadow openings in spurce-fir forest with <i>Linanthus nuttallii</i> , <i>Senecio streptanthifolius</i> , and <i>Pedicularis contorta</i> . Elev. 8500-8700 ft. Phenology: fruiting.	Erwin F. Evert, 23613. (Rocky Mountain Herbarium 2020)
7/19/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Salt River Range: ridge N and W of Corral Creek Lake; ca 7.5 air mi ESE of Afton. 42.6858° N, 110.7881° W	Limestone ridge. Elev. 10200-10400 ft. Phenology: flowering & fruiting.	Ronald L. Hartman, 33957, EO #24 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/24/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Salt River Range: ridge from McDougal Pass 42.8572° N, 110.8061° W	Calcareous talus slopes up to ridge. Elev. 9600-9800 ft. Phenology: fruiting.	Ronald L. Hartman, 34754. EO #26 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/16/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Salt River Range: ridge 1-2 air mi SW of summit of Man Peak; ca 9 air mi E of Thayne. 42.9597° N, 110.8247° W	Limestone ridge with patches of limber pine and subalpine fir. Elev. 9200-10139 ft. Phenology: fruiting.	Ronald L. Hartman, 35894. EO #25 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/16/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Salt River Range: Man Peak, S of summit to 0.5 mi; ca 9 air mi E of Thayne. 42.9597° N, 110.8247° W	Limestone ridge and outcrops. Elev. 9400-9900 ft. Phenology: fruiting.	Ronald L. Hartman, 35953. EO #25 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/22/1992	Unknown	U.S.A., Wyoming, Lincoln County: Wyoming/Salt River Ranges: Salt River Range: Star Peaks: peak 9988 (feet) and slope immediately to W. 43.0036° N, 110.8817° W	Rocky slopes and summit with islands of conifers. Elev. 9000-9988 ft. Phenology: fruiting.	Ronald L. Hartman, 36758. EO #8 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/16/1993	Unknown	U.S.A., Wyoming, Lincoln County: West Slope Salt River Range: north-south trending ridge along east	Sandy north facing slope with limestone gravel and rocks in small clearing	Walter Fertig, 14132. EO #27 (Rocky Mountain

		edge of Afton Front Research Natural Area; ca 2 air mi NE of Afton. 42.7598° N, 110.8858° W; uncertainty 0.5 mi.	surrounded by semi-open Douglas fir grove. Elev. 8600 ft. Phenology: flowering & fruiting.	Herbarium 2020; WYNDD GIS 2019)
7/24/1993	Unknown	U.S.A., Wyoming, Sublette County: Wyoming/Salt River Ranges: Salt River Range: Deadline Ridge, ca 21 air mi SW of Big Piney. 42.4166° N, 110.4939° W	Limestone outcrop and rocky slope. Elev. 10100-10200 ft. Phenology: flowering & fruiting.	Ronald L. Hartman, 41932. (Rocky Mountain Herbarium 2020)
6/28/1994	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Area: Swift Creek trail from Wilderness boundary NNE ca 1.5 air mi, at break of trail with basin area. 43.371° N, 110.391° W	Coniferous forest and stream margins along trail; substrate calcareous. Elev. 7400-9400 ft. Phenology: flowering & fruiting.	Ronald L. Hartman, 46893. (Rocky Mountain Herbarium 2020)
7/7/1994	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Area: Along ridge southeast 0.25 mile from Pinnacle Peak, just east of Little Granite Creek. 43.3853° N, 110.5281° W	Alpine calcareous ridge. Elev. 10200-10600 ft. Phenology: flowering & fruiting.	Ronald L. Hartman, 47364. EO #29 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/11/1994	Unknown	U.S.A., Wyoming, Sublette County: West Slope Wind River Range: Kendall Warm Springs, on east side of Green River, ca 30 air mi NNW of Pinedale. 43.2852° N, 110.0189° W; uncertainty 1 mi.	Travertine outcrop on open, rocky sandy bank of falls; soil whitish, fine-textured; with scattered <i>Potentilla fruticosa</i> and <i>P. plattensis</i> . Elev. 7800-7900 ft. Phenology: fruiting.	Walter Fertig, 15042. (Rocky Mountain Herbarium 2020)
7/11/1994	Unknown	U.S.A., Wyoming, Sublette County: West Slope Wind River Range: Kendall Warm Springs, on east side of Green River, ca 30 air mi NNW of Pinedale. 43.2852° N, 110.0189° W; uncertainty 1 mi.	<i>Artemisia tridentata</i> var. <i>vaseyana</i> and <i>Danthonia/Festuca</i> grassland on sandy-gravel terraces. Elev. 7800-7900 ft Phenology: fruiting.	Walter Fertig, 15013. (Rocky Mountain Herbarium 2020)
7/12/1994	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Area: ridges 1.3 air mi N of	Calcareous substrate, mostly open, with some patches of	Ronald L. Hartman, 47938. (Rocky

		Cache Peak, NW to base of Jackson Peak. 43.4425° N, 110.6065° W	Engelmann spruce and whitebark pine. Elev. 9600-10000 ft. Phenology: fruiting.	Mountain Herbarium 2020)
7/27/1994	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Area: Granite Creek, ca 0.3 stream mi N of Bunker Creek, then E up to summit of ridge extending S from Packsaddle Pass and Pyramid Peak. 43.4283° N, 110.4498° W	Rocky (dolomite) slopes. Elev. 8600-10200 ft Phenology: fruiting.	Ronald L. Hartman, 48383. with Tom Cramer. EO #31 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/9/1994	Unknown	U.S.A., Wyoming, Sublette County: Gros Ventre Area: Tepee Creek Ridge W to Red Hills; 6-9 air mi SW of Mosquito Lake. 43.3567° N, 110.2148° W	Grassy ridge with patches of Engelmann spruce and whitebark pine. Elev. 9600-10400 ft. Phenology: flowering & fruiting	Ronald L. Hartman, 47529. (Rocky Mountain Herbarium 2020)
8/2/1994	Unknown	U.S.A., Wyoming, Sublette County: Gros Ventre Area: Hodges Peak and along base, east side. 43.3281° N, 110.2735° W	Rocky alpine areas. Elev. 10400-11180 ft. Phenology: fruiting.	Ronald L. Hartman, 49238. with Tom Cramer. EO #32 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
9/1/1995	Unknown	U.S.A., Wyoming, Teton County: Snake River Range: boundary between Targhee National Forest and Bridger-Teton National Forest , ridgetop and slopes on both sides, extending 0.5 mi S of Teton Pass; ca 10 air mi W of Jackson. 43.5042° N, 110.9542° W; uncertainty 2 mi.	Sparsely vegetated low forb communities with <i>Arenaria congesta</i> , <i>Linanthus nuttallii</i> , <i>Sedum lanceolatum</i> , <i>Astragalus miser</i> , <i>Leucopoa kingii</i> , and <i>Cymopterus terebinthinus</i> . Elev. 8500-8700 ft. Phenology: fruiting.	Stuart Markow, 11190b. (Rocky Mountain Herbarium 2020)
7/31/1996	Unknown	U.S.A., Wyoming, Teton County: Near or overlapping Bridger-Teton National Forest boundary. Teton Range East Slope: Rendezvous Mountain: ridge between Granite Canyon and Jackson Hole, ca 1 mi SW of Apres Vous	Limestone cliffs and ridges with sparse, forb-dominated vegetation. Elev. 9500-9800 ft.	Stuart Markow, 11360. (Rocky Mountain Herbarium 2020)

		Peak, ca 1.5 air mi NW of Teton Village, ca 8 air mi NW of Jackson. 43.6052° N, 110.8553° W		
8/3/1996	Unknown	U.S.A., Wyoming, Teton County: Near or overlapping Bridger-Teton National Forest boundary. Teton Range East Slope: Rendezvous Mountain, ridge below and ca 300 yds N of tram tower, ca 1.5 air mi NW of Teton Village, ca 8 air mi NW of Jackson. 43.6052° N, 110.8553° W	Limestone boulders, ledges and talus with low forbs and shrubs including <i>Salix reticulata</i> , <i>Astragalus kentrophyta</i> , <i>Silene acaulis</i> and <i>Antennaria media</i> . Elev. 10200 ft.	Stuart Markow, 11445. with Jim Ozenberger. (Rocky Mountain Herbarium 2020)
8/3/1996	Unknown	U.S.A., Wyoming, Teton County: Near or overlapping Bridger-Teton National Forest boundary. Teton Range East Slope: Rendezvous Mountain: S slope of Pipers Ridge, ca 0.5 air mi N of tram tower, ca 1.5 air mi NW of Teton Village, ca 8 mi NW of Jackson. 43.6052° N, 110.8553° W	Clearing in whitebark pine community, sparsely vegetated with <i>Ligusticum filicinum</i> , <i>Poa nervosa</i> and <i>Eriogonum umbellatum</i> . Elev. 10000 ft.	Stuart Markow, 11446. with Jim Ozenberger. (Rocky Mountain Herbarium 2020)
8/7/1997	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Range: west slope of Corner Mountain, ca 2 air mi E of Granite Falls, above tributary wash of Swift Creek; ca 1 air mi W of MacLeod Lake. 43.371° N, 110.391° W; uncertainty 0.5 mi.	Rocky limestone slope below timberline in avalanche chute with scattered small <i>Picea engelmannii</i> and <i>Shepherdia canadensis</i> ; on limey-clay soils with 25-50% rock cover. Elev. 8900 ft. Phenology: fruiting.	Walter Fertig, 17951. EO #36 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/4/1998	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Range: east slope of Darwin Peak, ca 1.5 mi N of Brewster Lake. 43.3853° N, 110.3127° W; uncertainty 0.5 mi.	Limestone talus slope near drainage in area of recent snowmelt. Sparsely vegetated with <i>Sausurea weberi</i> , <i>Arabis</i> , and <i>Draba</i> . Soil coarse, muddy-clay.	Laura Welp, 7911. EO #40 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)

			Elev. 11400 ft. Phenology: fruiting.	
8/4/1998	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Range: southeast flank of Darwin Peak, ca 0.3 mi N of Brewster Lake. 43.3853° N, 110.2931° W; uncertainty 0.25 mi.	Flat, sparsely vegetated forb meadow in openings in subalpine fir/whitebark pine zone. Elev. 10080 ft. Phenology: fruiting.	Laura Welp, 7892. EO #40 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/3/1998	Unknown	U.S.A., Wyoming, Teton Co., Gros Ventre Range: Dry Fork trail on north side of Clear Creek just before footbridge and junction with Clear Creek trail, ca. 0.3 mile southwest of Darwin Ranch and ca. 0.5 mile west of Red Bluff Ridge. 43.4139, -110.1756 +- 969m.	Elevation: 8200 ft Red clay/sandy terrace above creek at edge of Lodgepole pine grove and streamside willow/spruce thicket; soil gravelly with irregular red and white sandstone chips. Phenology: fruiting.	W. Fertig 18477 EO #44 (SEINet 2020; WYNDD GIS 2019)
8/3/1998	Unknown	U.S.A., Wyoming, Teton County: Gros Ventre Range: Dry Fork Trail just beyond junction with Ouzel Falls Trail, ca 2.5 mi W of Darwin Ranch and 2 mi NE of Lunch Lake. 43.3996° N, 110.2148° W; uncertainty 1 mi.	Semi-barren gray sandstone gravel below limey sandstone outcrops on SE-dipping slopes of large meadow within lodgepole pine forest. Low cushion plant community with scattered bunchgrass and <i>Artemisia tridentata</i> var. <i>vaseyana</i> . Vegetative cover 30-35%. Elev. 9200 ft. Phenology: flowering & fruiting.	Walter Fertig, 18478. EO #42 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
8/4/1998	Unknown	U.S.A., Wyoming, Sublette County: Gros Ventre Range: saddle at north end of Doubletop Mountain and lower slopes on north side of Doubletop Peak, ca 1.5 mi S of Brewster Lake. 43.3567° N, 110.2931° W; uncertainty 0.25 mi.	Cushion plant community on gravelly dolomite rim of saddle above steep wall of limestone; vegetative cover up to 50%, rock cover ca 40%; dominants include <i>Phlox pulvinata</i> , <i>Astragalus kentrophyta</i> ,	Walter Fertig, 18514. EO #44 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)

			<i>Castilleja pulchella</i> , <i>Smelowskia</i> , <i>Carex nardina</i> , and <i>Dryas</i> . Elev. 11000-11600 ft. Phenology: flowering & fruiting.	
8/5/1998	Unknown	U.S.A., Wyoming, Sublette County: Gros Ventre Range: south side of Triangle Peak, ca 0.4 mi E of Brewster Lake; ca 2 mi SW of Lunch Lake. 43.3567° N, 110.2735° W; uncertainty 0.5 mi.	South-facing steep talus slope of calcareous boulders and rubble and bedrock cliffs. Elev. 10700-11000 ft. Phenology: flowering & fruiting.	Walter Fertig, 18505. EO #44 (Rocky Mountain Herbarium 2020; WYNDD GIS 2019)
7/27/1999	Unknown	U.S.A., Wyoming, Teton County: Snake River Range: Bridger-Teton National Forest: ca 1 mi S of Teton Pass, ca 5 mi W of Wilson. 43.49° N, 110.9549° W; uncertainty 1 mi.	Openings in spruce-fir forest with <i>Ligusticum filicinum</i> , <i>Helianthella quinquenervis</i> , and <i>Castilleja miniata</i> . Elev. 8700 ft. Phenology: flowering & fruiting.	Erwin F. Evert, 37280. (Rocky Mountain Herbarium 2020)
7/26/2000	Unknown	U.S.A., Wyoming, Teton County: Teton Range: Bridger-Teton National Forest: Jackson Hole Mountain Resort on Rendezvous Mountain, ca 3/4 air mi W of top of tram along Skyline Foot Trail, in saddle just N of Cody Bowl, ca 11 air mi NNW of Jackson. 43.5908° N, 110.8952° W; uncertainty 1 mi.	Rocky, semi-barren ridgetop with scattered cushion plants. Elev. 10200 ft. Phenology: fruiting.	Charmaine Delmatier, 8263. (Rocky Mountain Herbarium 2020)
8/2/2000	Unknown	U.S.A., Wyoming, Teton County: Teton Range: Bridger-Teton National Forest: Jackson Hole Mountain Resort on Rendezvous Mountain in saddle W of Cody Bowl, ca 12 air mi NNW of Jackson. 43.5908° N, 110.8753° W; uncertainty 1 mi.	Cushion plant community on rocky, semi-barren alpine slope with <i>Potentilla ovina</i> var. <i>decurrens</i> , <i>Arabis nuttallii</i> , <i>Luzula spicata</i> , and <i>Antennaria media</i> . Elev. 9900 ft. Phenology: fruiting.	Charmaine Delmatier, 8352. (Rocky Mountain Herbarium 2020)
8/20/2000	Unknown	U.S.A., Wyoming, Teton County: Teton Range: Bridger-Teton National	Cushion plant community on rocky, semi-barren alpine	Charmaine Delmatier, 8373.

		Forest: Jackson Hole Mountain Resort on Rendezvous Mountain on ridgetop/saddle immediately S of Cody Bowl, ca 13 air mi NNW of Jackson. 43.5908° N, 110.8952° W; uncertainty 1 mi.	ridge, with <i>Antennaria media</i> and <i>Agoseris glauca</i> var. <i>glauca</i> . Elev. 10200 ft. Phenology: fruiting.	(Rocky Mountain Herbarium 2020)
8/22/2000	Unknown	U.S.A., Wyoming, Teton County: Teton Range: Bridger-Teton National Forest: Jackson Hole Mountain Resort on Rendezvous Mountain at top of tram, ca 11 air mi NNW of Jackson. Ctr 43.5908° N, 110.8753° W; uncertainty 1 mi.	Semi-barren alpine ridgetop with cushion plants including <i>Antennaria media</i> and <i>Draba oligosperma</i> . Elev. 10300 ft. Phenology: flowering & fruiting.	Charmaine Delmatier, 8122. (Rocky Mountain Herbarium 2020)
Unknown	Unknown	U.S.A., Wyoming, Sublette County: Northern Wyoming Range: Cliff Creek, ca 0.7 mi S of junction of Cliff Creek Road and U.S. Hwy 189-191. 43.2423° N, 110.5085° W; uncertainty 1 mi.	Floodplain on banks of creek and adjacent disturbed roadside areas on sandy loam with moderate to sparse gravel; edge of <i>Artemisia tridentata</i> / <i>Pinus contorta</i> meadow and <i>Populus angustifolia</i> zone. Elev. 6440 ft. Phenology: flowering & fruiting.	Walter Fertig, 15778. (Rocky Mountain Herbarium 2020)

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___

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?

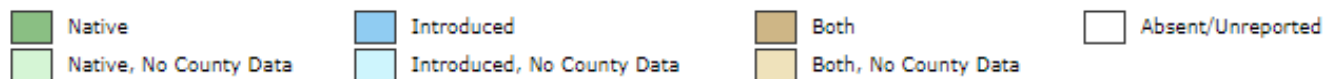
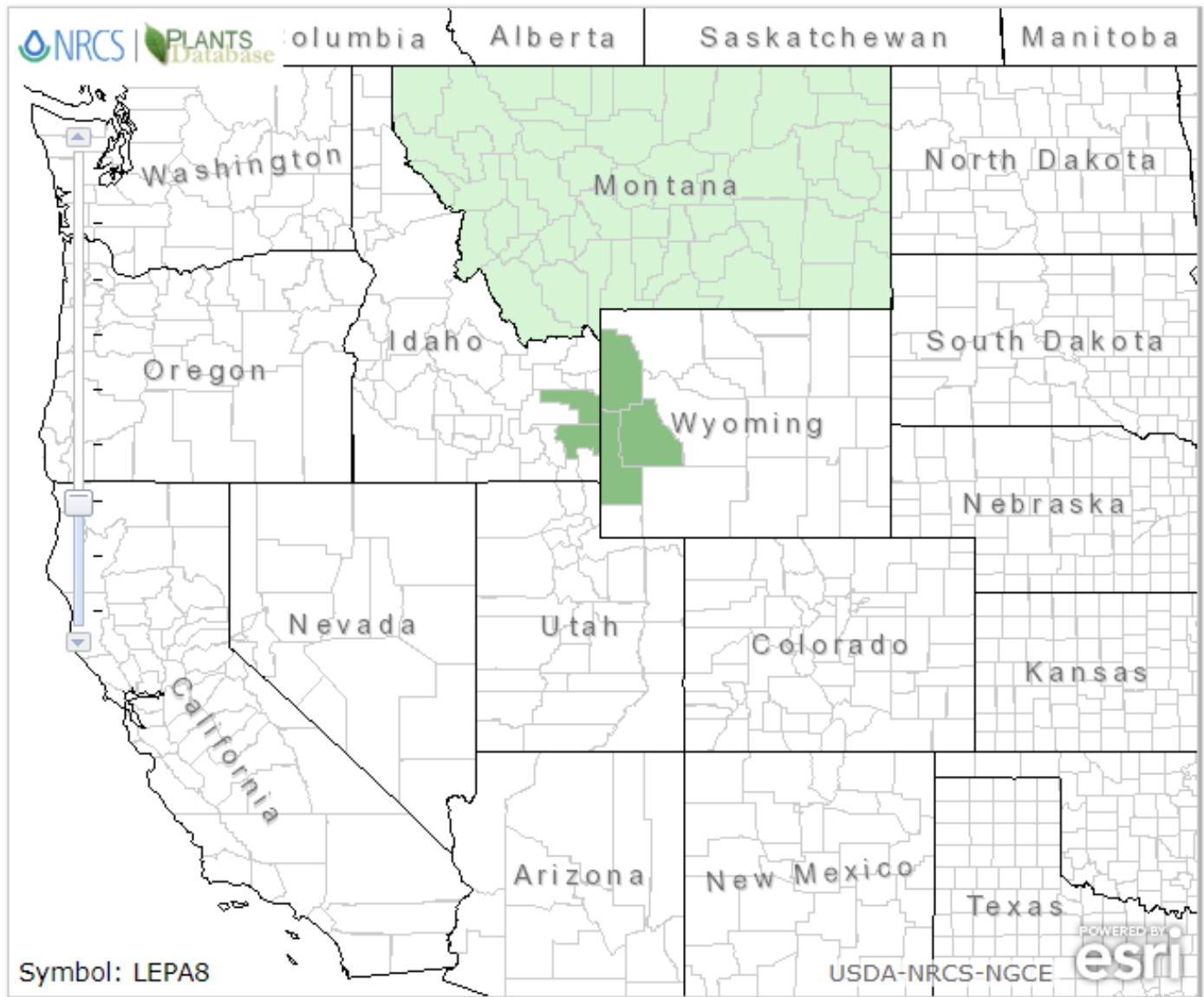
Yes___ No___

Provide explanation for determination

N/A—Occurrences have been documented since 1990.

If determination is no, stop assessment

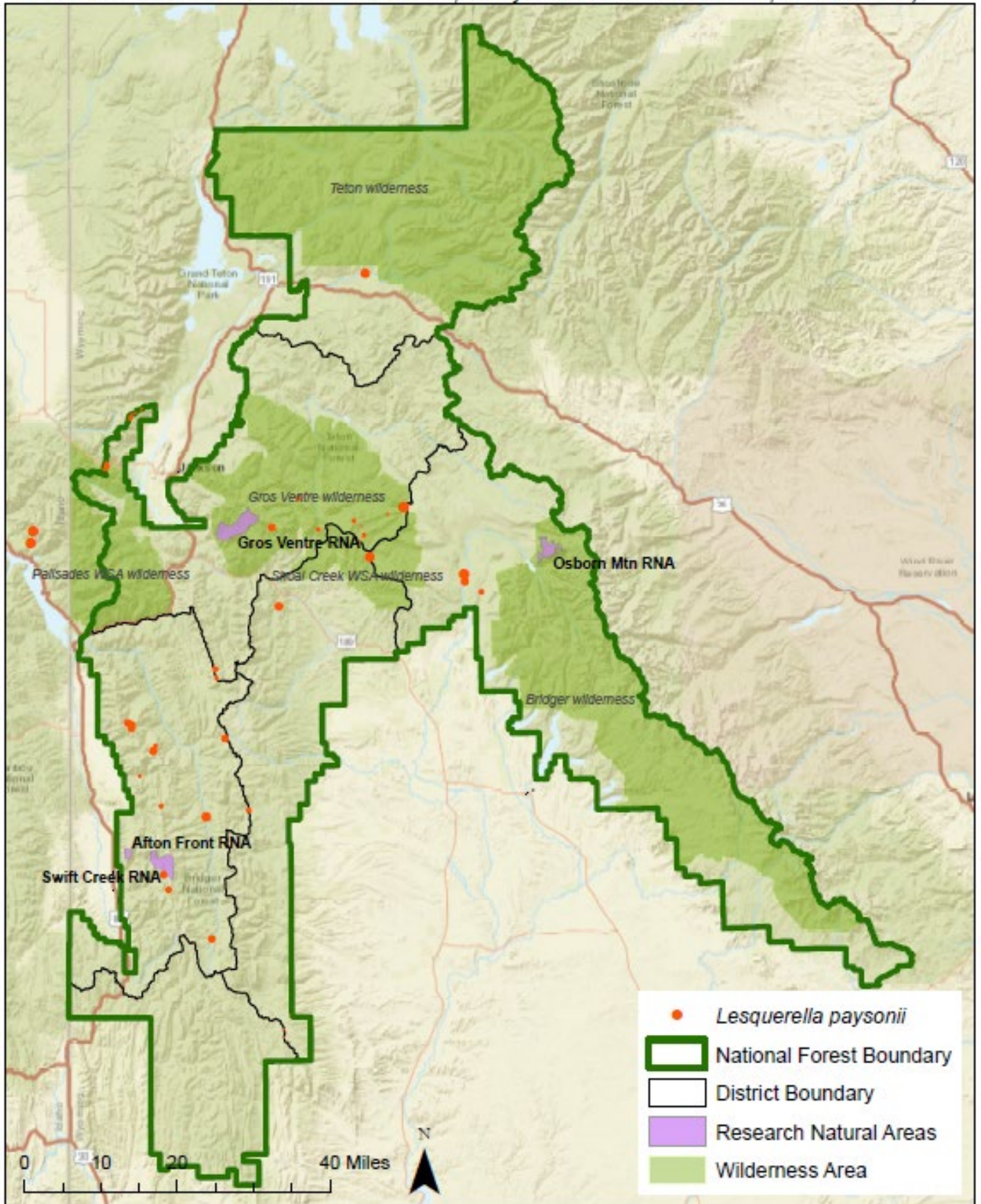
Map 1, *Lesquerella paysonii* range in Wyoming and surrounding states (NRCS 2020).



Native Status:



Map 2, *L. paysonii* occurrences in Bridger-Teton National Forest vicinity (SEINet 2020; Consortium of Pacific Northwest Herbaria 2020; Rocky Mountain Herbarium 2020, WYNDD 2019).



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>G3G4—Vulnerable/Apparently Secure</p> <p>G3—<i>At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.</i></p> <p>G4— <i>Uncommon but not rare; some cause for long-term concern due to declines or other factors.</i></p>
NatureServe State Status	<p>S3— Vulnerable</p> <p><i>At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.</i></p>
WYNDD	<p>Plant Species of Potential Concern</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 Concern)</p>
USDA Forest Service	<p>Region 4: Sensitive Species</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> <p><i>a. Significant current or predicted downward trends in population numbers or density.</i></p> <p><i>b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.</i></p> <p>(FSM 2670.5 – Threatened, Endangered & Sensitive Species)</p>
USDOI FWS	Not listed
USDOI BLM	Not listed
IUCN	Not listed

Sources: WYNDD 2020; 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	<i>Lesquerella paysonii</i> is known from numerous (~64) records on the Bridger-Teton National Forest. Occurrences are mainly on the central to lower east portion of the Forest on open, rocky areas (Table 1, Map 2). Numerous occurrences suggest the species is broadly distributed across the Bridger-Teton National Forest.
Distribution outside the Bridger-Teton National Forest	<i>Lesquerella paysonii</i> is a regional endemic of west-central Wyoming and eastern Idaho. In Wyoming, it is known from the Gros Ventre, Salt River, Snake River, Teton, Wind River, and Wyoming Ranges, the northern Green River Basin, and Jackson Hole (Lincoln, Sublette, and Teton counties). It was also reported in Scott (1997) from the east slope of the Wind River Range (Fremont County), but this may represent <i>L. fremontii</i> (WYNDD 2020).
Abundance on the Bridger-Teton National Forest	Censused populations range in size from 10-1500 individuals in areas between 1-30 acres. The total population size is conservatively estimated at 20,000 individuals (Fertig 1997; Heidel and Fertig 2008; WYNDD 2020). Abundance on the Bridger-Teton National Forest cannot be assessed due to lack of data.
Population Trend on the Bridger-Teton National Forest	Trend data are lacking for nearly all occurrences, but at least 3 are known to have persisted since the 1920s. Short-term observations suggest that population size may change notably from year to year based on climatic conditions (Fertig 1997; Heidel and Fertig 2008; WYNDD 2020). Populations may also be variable on the Bridger-Teton National Forest, but further surveys are need for verification.
Habitat Trend on the Bridger-Teton National Forest	<p><i>Lesquerella paysonii</i> grows on windswept, gravelly or rocky, calcareous ridgecrests and slopes, also on talus, rocky floodplains, disturbed roadsides, dried stream channels, rocky clearings within conifer forests, and travertine outcrops at 5500-10,600 feet. Vegetation includes sparse <i>Artemisia tridentata</i> ssp., vaseyana grassland and cushion plant communities (Fertig 1997; Heidel and Fertig 2008; WYNDD 2020).</p> <p>To analyze trends in occupied habitat, aerial imagery and a USFS GIS database of invasive plant populations, historical wildfires, trails, roads, Wilderness Areas, and Research Natural Areas was assessed at each contemporary occurrence on the Forest (USFS GIS 2019, Google Earth Pro 2020).</p> <p>The following occurrences are within the Gros Ventre wilderness: Hartman, 47938, Hartman, 47364, Fertig, 17951, Hartman, 46893, Welp, 7911, Welp, 7892., Fertig, 18478, Fertig, 18477, Hartman, 47529, Fertig, 18505, Fertig, 18514, Hartman, 49238, Payson, 3032, and Hartman 48383. Evert, 37280 is within Palisades WSA wilderness, and Payson, 4551 is within Bridger wilderness. Hence, these populations are generally displaced from open roads and motorized trails and habitat is not subject to effects from motor vehicle use, though some effects from non-motorized trails may occur. They are also mostly outside of active RMUs and</p>

Criteria	Rationale
	<p>displaced from non-native plant invasions, and thus habitat is protected from effects of livestock grazing and non-native plants.</p> <p>The remaining occurrences are within RMUs, and generally in the vicinity of open roads, motorized trails, and non-motorized trails. Habitat for these occurrences is likely experiencing effects associated with motor vehicle use and grazing, such as trampling, erosion, and sediment compaction. Some of these occurrences are also near invasions of non-native plants such as <i>Cirsium arvense</i>, <i>Linaria vulgaris</i>, and <i>Euphorbia esula</i>, and may experience effects such as competition or habitat degradation.</p> <p>Payson, 4551 (8/5/1925) is near the perimeter of the 1988 Natural Bridge Fire; Payson, 3074 (8/19/1922), Fertig, 15778 (unknown date), and Hartman, 32113 (5/9/1992) are near or on the border of the 2016 Cliff Creek fire; and these populations and their habitat may have been damaged or altered from fire.</p> <p>The above analysis suggests that habitat for <i>L. paysonii</i> likely experienced low to moderate effects from natural and anthropogenic disturbances, and trends may be stable on the forest. Habitat for those populations within wilderness areas has likely seen fewer impacts and trends may be stable, whereas habitat for populations outside of wilderness areas has likely had greater levels of impacts and trends may be stable to declining. Climate change effects could exacerbate conditions, as described below.</p>
<p>Threats to the Species and its Habitat on the Bridger-Teton National Forest</p>	<p>Potentially threatened by ski development, off-road vehicle use and mining. Threats associated with oil and gas development are low as projected for 2030 (WYNDD 2020). Overall, however, threats are low to most occurrences (Heidel and Fertig 2008).</p> <p>In general, nonforest ecosystems of the Intermountain West have been affected by agriculture, livestock grazing, and invasive species (Halofsky et al. 2018). Climate change is likely a significant threat to nonforest ecosystems of the Intermountain West. Projections for the Intermountain Adaptation Partnership region estimate that average annual minimum and maximum temperatures are likely to increase by 5 to 12 deg F, mean annual precipitation will remain the same or increase slightly, extreme events (e.g., drought and extreme precipitation events) will occur more frequently and be more severe, and greenhouse gas concentrations will continue to increase through the end of the 21st century. Increased minimum daily temperatures have resulted in longer frost-free periods. Projections vary by subregion, but even where precipitation is projected to increase slightly, higher temperatures are likely to increase effective drought and soil water deficit (Halofsky et al. 2018).</p> <p>Rare plant populations that may be small, isolated, tied to snowpack abundance and distribution timing changes of spring thaw and fall frost cycles, and/or have limited dispersal capacity, are highly vulnerable to impacts from environmental change including reductions in pollination (Ellstrand and Diane 1993, Halofsky et</p>

Criteria	Rationale
	<p>al. 2018). Changes in temperature and precipitation may lead to greater variability in forb flowering, which could create an asynchronistic effect with native pollinator emergence (Halofsky et al. 2018; Miller-Struttman et al. 2015), leading to decreased reproduction in native plants. The value of pollinators in natural systems is difficult to quantify, but as pollinators are critical for successful reproduction and seed set for approximately 85% of flowering species globally (Hatfield et al. 2012), this asynchronistic effect may have profound implications.</p> <p>Rare plant populations that may be small, isolated, tied to snowpack abundance and distribution timing changes of spring thaw and fall frost cycles, and/or have limited dispersal capacity, are highly vulnerable to impacts from environmental change including reductions in pollination (Ellstrand and Diane 1993, Halofsky et al. 2018). Changes in temperature and precipitation may lead to greater variability in forb flowering, which could create an asynchronistic effect with native pollinator emergence (Halofsky et al. 2018; Miller-Struttman et al. 2015), leading to decreased reproduction in native plants. The value of pollinators in natural systems is difficult to quantify, but as pollinators are critical for successful reproduction and seed set for approximately 85% of flowering species globally (Hatfield et al. 2012), this asynchronistic effect may have profound implications.</p> <p>Invasive plants have been identified as a major threat to the biological diversity and ecological integrity within and outside the BTNF. 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>
Life history and demographic characteristics of the species	<p><i>Lesquerella paysonii</i> is a densely pubescent perennial herb with decumbent stems 5-15 cm long from an unbranched caudex. Basal leaves are silvery-hairy with elliptic to triangular blades and short petioles. Stem leaves are shorter, with nearly sessile elliptic blades. Flowers have 4 yellow petals 8-10 mm long. The pubescent, elliptic fruits are borne on S-curved stalks and are slightly flattened at a right angle to the partition separating the two halves of the fruit (the margins and face of the fruit are rounded, rather than sharp-pointed from a raised keel). The styles in fruit are 2-4 mm long. The flowering/fruitlet period is from May to early September (Fertig 1997; Fertig and Heidel 2008; WYNDD 2020).</p>
Date: April 20, 2020 Reviewer: L. Chipman	

Summary and Recommendations

Species (Scientific and Common Name): *Lesquerella paysonii*

Lesquerella paysonii (Payson's bladderpod) is listed as S3 (Vulnerable) and G3G4 (Vulnerable/Apparently Secure) globally. Wyoming Natural Diversity Database lists the species as a Species of Potential Concern. It is a FS R4 Sensitive species. It grows on windswept, gravelly or rocky, calcareous ridgecrests and slopes, also on talus, rocky floodplains, disturbed roadsides, dried stream channels, rocky clearings within conifer forests, and travertine outcrops at 5,500 – 10,600 feet. It is a regional endemic of west-central Wyoming and eastern Idaho. The species is known from numerous records (~64) on the Forest, indicating the species is broadly distributed on the Forest.

The analysis suggests that habitat for *L. paysonii* likely experienced low to moderate effects from natural and anthropogenic disturbances, and trends may be stable on the forest. Habitat for those populations within wilderness areas has likely seen fewer impacts and trends may be stable, whereas habitat for populations outside of wilderness areas has likely had greater levels of impacts and trends may be stable to declining. Climate change effects could exacerbate conditions. Potentially threatened by ski development, off-road vehicle uses and mining. Threats associated with oil and gas development are low as projected for 2030 (WYNDD 2020). Overall, however, threats are low to most occurrences (Heidel and Fertig 2008).

Given the abundance of records and the relatively broad distribution on the Forest with habitat that likely experiences low to moderate effects, it is recommended that *Lesquerella paysonii* not be included as a SCC. Also the species likely should be considered for removal from the R4 Sensitive list. These changes would be consistent with WYNDDs status of the plant as a Species of Potential Concern.

Evaluator: Rose Lehman Date: 10/14/2020

References

- Consortium of Pacific Northwest Herbaria. 2020. Specimen data search. Available at: <http://pnwherbaria.org>.
- Ellstrand C. E., and Diane R. E. 1993. Population Genetic Consequences of Small Population Size: Implications for Plant Conservation. Annual Review of Ecology and Systematics. Vol. 24:217-242. Internet website: <http://web.nateko.lu.se/courses/ngen03/Ellstrand-Elam-1993.pdf>.
- Fertig, W. 1997. Status Report for *Lesquerella paysonii* in Northwest Wyoming. Wyoming Natural Diversity Database. Laramie, WY.
- Fertig, W. and Heidel, B. 2008. State Species Abstract-*Lesquerella paysonii* – Payson's bladderpod. Wyoming Natural Diversity Database, Laramie, WY.
- Google Earth Pro, 2020. Aerial photo and mapping analysis. Software version 7.3.2.5776 (64-bit).

Halofsky, Jessica E.; Peterson, David L.; Ho, Joanne J.; Little, Natalie, J.; Joyce, Linda A., eds. 2018. Climate change vulnerability and adaptation in the Intermountain Region. Gen. Tech. Rep. RMRS-GTR-375. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. Part 1. pp. 1–197.

Hatfield, R., Jepsen, S., Mader, E., Black, S.H., Shepherd, M. 2012. Conserving bumble bees: guidelines for creating and managing habitat for America's declining pollinators. The Xerces Society for Invertebrate Conservation.

Heidel, B. 2012. Sensitive and rare plant species inventory in the Salt River and Wyoming Ranges, Bridger-Teton National Forest. Wyoming Natural Diversity Database. Laramie, WY.

Heidel, B., M. Andersen and J. Handley. 2014. Evaluating potential threats to Wyoming Threatened, Endangered and Sensitive plants. Wyoming Natural Diversity Database, Laramie, WY.

Mancuso, M. and B. Heidel. 2008. Wyoming Plant Species of Concern on Caribou-Targhee National Forest: 2007 Survey Results Teton and Lincoln counties, Wyoming. Prepared for Caribou-Targhee National Forest by Wyoming Natural Diversity Database, Laramie, WY.

Miller-Struttmann, N.E., Geib, J.C., Franklin, J.D., Kevan, P.G., Holdo, R.M., Ebert-May, D., Lynn, A.M., Kettenbach, J.A., Hedrick, E., Galen, C. 2015. Functional mismatch in a bumble bee pollination mutualism under climate change. *Science*, 349(6255): 1541-1544.

NatureServe. 2020 NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Internet website: <http://explorer.natureserve.org>.

Rocky Mountain Herbarium Specimen Database. 2020. University of Wyoming, Department of Botany. Laramie, WY. Internet website: <http://rmh.uwyo.edu/data/search.php>.

SEINet. 2020. SEINet data portal. Available at: <http://swbiodiversity.org/seinet/collections/index.php>.

USDA, National Resources Conservation Service (NRCS). NRCS. 2020. The PLANTS Database. Available at <http://plants.usda.gov>. National Plant Data Team, Greensboro, NC 27401-4901 USA.

Wyoming Natural Diversity Database (WYNND). 2020. Wyoming Natural Diversity Database; Data Explorer. Laramie, WY: University of Wyoming.

WYNND. 2020. *Lesquerella paysonii* – Payson's bladderpod. Wyoming Field Guide. University of Wyoming. Available at: <http://fieldguide.wyndd.org/>

WYNDD GIS 2019. GIS data of Wyoming Natural Diversity Database. Bridger Teton National Forest, U.S Forest Service. Department of Agriculture. Data received April 25, 2019.