Snake River Fund and Protect our Water Jackson Hole Comments on the Bridger-Teton Draft and Supplemental Assessments

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Comments submitted electronically at:
https://cara.fs2c.usda.gov/Public/CommentInput?project=63628

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Re: Bridger-Teton National Forest Plan Revision #63628

The Snake River Fund (SRF) is a 501(c)(3) not-for-profit organization dedicated to promoting stewardship of and access to the Snake River watershed in Wyoming, with an emphasis on partnerships, education, and public outreach. Protect our Water Jackson Hole (POWJH) is a 501(c)(3) nonprofit organization dedicated to serving as a powerful advocate and catalyst to protect and restore Teton County's water resources. Our two organizations appreciate the opportunity to comment on the Draft and Supplemental Assessments for the Bridger-Teton National Forest (BTNF). We recognize the thorough work conducted by Forest and Planning Staff and offer these comments in the spirit of cooperation to ensure a comprehensive Final Assessment.

Executive Summary of Recommendations

1. **Designate Bonneville Cutthroat Trout (BCT), Yellowstone Cutthroat Trout (YCT) Bluehead Suckers, and Greenhead Suckers as Species of Conservation Concern (SCC).**
2. **Ensure Wild and Scenic Rivers (WSR) planning integrates Outstandingly Remarkable Values (ORVs), management challenges, and climate-driven hydrologic change.**
3. **Strengthen Watershed assessments with climate projections, GDE integration, and downstream drinking water connections and legal constraints. Better acknowledge the significance of the Forest as a recharge zone for the Eastern Snake River Plain Sole Source Aquifer (ESRPA).**
4. **Augment Water Resources sections with quantitative flow/temperature data, sediment and turbidity monitoring, and groundwater-surface water linkages.**

5. **Address cumulative impacts in Aquatic, Wetland, and Riparian ecosystem assessments, including recreation pressure, non-native species, and inconsistent integrity ratings.**

Species of Conservation Concern

Fish Exclusions

Both Draft and Supplemental Assessments acknowledge that Bonneville Cutthroat Trout (BCT) and Yellowstone Cutthroat Trout (YCT) are native to BTNF and face persistent threats including: - Hybridization with non-native trout - Habitat fragmentation and degradation - Sedimentation from grazing and recreation - Altered flows due to water development - Climate change (warming streams, altered runoff) (Draft Assessment, pp. 24–27; Supplemental Assessment, pp. 165–167). The Snake River Fund would also like to strongly suggest the inclusion of Green Suckers and Bluehead Suckers as Species of Conservation Concern.

Key Points: - **Bonneville Cutthroat Trout (BCT):** While Lake Alice populations remain stable, the larger Central Bear population (90+ miles of habitat on BTNF) is under significant hybridization and climate stress. Nearly 60% of conservation populations are at high or very high climate risk (Supplemental Assessment, Table 24, p. 165).

Yellowstone Cutthroat Trout (YCT): Range contraction continues despite some localized gains. Even “genetically pure” populations are isolated and at risk. NatureServe ranks YCT as *S2 – Imperiled* in Wyoming; it is also Tier II SGCN by WGFD (SCC Evaluation Yellowstone Cutthroat Trout Table 2, p. 6)

Green and Bluehead Suckers: Wyoming Game and Fish Departments State Wildlife Action Plan (SWAP) identify Green and Bluehead Suckers as NSS1 species.

Recommendations: 1. Designate BCT, YCT and all SWAP identified NSS1 aquatic species (Green and Bluehead Suckers) as SCC to ensure proactive management. 2. Undertake consistent monitoring of genetic purity, population trends, and climate vulnerabilities. 3. Revise summary sections to reflect full threats, including increased recreation pressures and ongoing grazing pressures.

Wild and Scenic Rivers

Outstandingly Remarkable Values (ORVs)

- Explicitly enumerate ORVs for all 12 rivers (19 segments, 315 miles) using the 2014 CRMP.
- Identify threats to ORVs and ensure plan direction explicitly “protects and enhances” those values (Draft Assessment, Table 12, p. 60; Supplemental Assessment, Table 62, p. 354).

- Identify management successes and challenges related to eligible and designated Wild and Scenic Rivers to ensure those management prescriptions are addressed, as needed, in the Need for Change document.

Climate Integration

- Incorporate hydrologic analyses showing earlier snowmelt (21-day advance since 1975; Supplemental Assessment, Figure 8b, p. 26) and increased winter flood peaks.
- Revise desired conditions to include climate resilience measures such as riparian buffer enhancement and cold-water refugia.

Watersheds

Identified Gaps

1. **Climate projections missing:** No spatially explicit projections for wildfire, drought, or runoff shifts at the sub-watershed scale (Supplemental Assessment, Figure 17, p. 114). The text acknowledges climate change, invasive species, and wildfire as broad stressors, but does not present any spatially explicit projections (e.g., wildfire risk maps, precipitation-runoff model outputs) for sub-watersheds. Incorporate outputs from the Northern Rockies Climate Vulnerability Assessment or local climate models to identify sub-watersheds where projected increases in wildfire frequency or summer drought are likely to shift them from Class 1 to Class 2 in the future.

2. **Groundwater-Dependent Ecosystems (GDEs):** GDEs are mentioned elsewhere, but their connection to watershed condition and baseflow sustainability is not integrated here. Springs and fens often control late-season flows in headwater catchments. Declines in groundwater recharge can push watersheds into Class 2 by reducing baseflow permanence. It would be helpful to identify sub-watersheds with known GDEs, overlay recharge vulnerability (e.g., from reduced snowpack), and recommend monitoring spring discharge as an early warning of watershed decline.

3. **Downstream drinking water:** American Rivers National Protected Rivers Assessment (NPRA) can be used to assess and explore climate, species, and drinking water vulnerability on the BTNF. The NPRA may be useful, in conjunction with the Watershed Condition Framework, to inform management actions and restoration priorities based on existing protection mechanisms and opportunities to increase protections in key areas. It also provides an important throughline quantifying the contribution protected watersheds on the BTNF make to downstream drinking water quality and availability beyond those identified as municipal watersheds.

4. **Acknowledge Forest as Source Area for ESRPA:** Teton County sits atop the mighty Snake River, which provides water for drinking, irrigation, and recreation. The surface water and groundwater resources which originate in our valley, many of them from the BTNF, comprise the Source Area for the Eastern Snake River Plain Sole Source Aquifer (ESRPA). Sole Source is a special designation by the Environmental Protection Agency, bestowed upon particularly important and distinct groundwater resources. An aquifer is "sole source" if it supplies at least 50% of the drinking water for people living above the aquifer and if there is no alternative source of drinking water that could physically, legally, and economically supply all those that depend on the aquifer. In other words, the waters flowing through Teton County which originate in the BTNF supply irreplaceable drinking water resources for hundreds of thousands of Idahoans. Groundwater users who pump from the ESRPA produce food and fuel which are used by millions of Americans.

Recommendations: - Incorporate Northern Rockies Climate Vulnerability Assessment and local models to identify high-risk watersheds. - Map GDEs, overlay with recharge vulnerability, and monitor spring discharge as early indicators. - Integrate NPRA tools to quantify watershed protection contributions to downstream water supplies. - Incorporate EPA's Sole Source aquifer program language and account for the ESRPA's national significance.

Water Resources

Identified Gaps

- **Flow/Temperature Trends:** No quantitative long-term records (SNOTEL/USGS) are included, despite available datasets. Supplemental Assessment Figure 6 (p. 24) already documents >2°F warming since 1990.
- **Downstream Demand/Legal Constraints:** No analysis of how senior water rights and Wild & Scenic instream flows may conflict under climate stress.
- **Sediment/Turbidity:** Post-fire and recreation-driven erosion is not assessed with measured data (Supplemental Assessment, Table 20, p. 139).
- **Cyanobacteria:** Only anecdotal bloom reports; lacks quantification of frequency, duration, and toxin concentrations.
- **Groundwater-Surface Water:** Absent analysis of how pumping and snowpack decline affect baseflows and springs.
- **Nutrient Loading:** No quantified nitrogen/phosphorus data linked to recreation and grazing sites (Supplemental Assessment, Table 21, p. 140).

Recommendations: 1. Include flow and temperature time-series trends from regional gauges. 2. Map water-right priority dates relative to key fisheries/WSR segments. 3. Incorporate turbidity and nutrient monitoring, especially in recreation hotspots. 4. Reference cyanobacteria bloom advisories and propose monitoring protocols.

Aquatic, Wetland, and Riparian Ecosystems

Cumulative Threats

- Current integrity ratings understate risk by assessing stressors in isolation. Climate-driven hydrologic shifts, recreation disturbance, and invasive species should be analyzed synergistically. Integrity ratings summarized in Supplemental Assessment (Table 10, p. 56) risk underestimating cold-water trout vulnerability.

Identified Gaps

- **Recreation impacts:** No quantified link between dispersed recreation and sediment/nutrient loading (Draft Assessment, pp. 37–43).
- **Integrity ratings:** “Moderate” lacks ecosystem-specific criteria; alpine lakes differ from rivers and should be evaluated separately.
- **Non-native fish:** Stocking impacts on native species in alpine lakes are omitted (Supplemental Assessment, pp. 505–506).
- **GDEs:** High-value sites (e.g., Kendall Warm Springs; Supplemental Assessment, Appendix C, p. 511) should be spatially identified and assessed for recharge vulnerability.

Recommendations: 1. Use macroinvertebrate indices, temperature trends, and sedimentation rates as indicators. 2. Incorporate WGFD stocking records in lacustrine analyses. 3. Map and prioritize high-value GDEs for protection and monitoring.

Conclusion

The Draft and Supplemental Assessments provide a valuable foundation. However, without addressing the concerns above, SRF and POWJH fear that the Final Assessment risks underestimating vulnerabilities.

We look forward to continued partnership with Bridger-Teton National Forest staff and planning team to ensure the resilience of our critical headwater riverine and watershed systems for generations to come.

Respectfully,

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