

Patricia O'Connor
Forest Supervisor
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P.O. Box 1880
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Jackson, Wyoming 83001

Re: DEIS: Snow King Mountain Resort On-Mountain Improvements Project

30 March 2020

Dear Ms. O'Connor:

We submit the following comments on the USDA Bridger-Teton National Forest's (BTNF) Draft Environmental Impact Statement: Snow King Mountain Resort On-Mountain Improvements Project (DEIS). Our background and knowledge about the raptor species evaluated within the DEIS are unparalleled, with a collective 102 years of direct experience studying and providing management recommendations for these species in western Wyoming and on the Bridger-Teton National Forest.

After reviewing the DEIS in detail, it is our professional finding that this DEIS failed to incorporate data and recent scientific literature on sensitive raptor species that were readily available and/or previously provided to BTNF. Several analyses provided within the DEIS are inaccurate and/or incorrect regarding sensitive raptor species within and surrounding the project area. Thus, several conclusions based on these analyses and findings within the DEIS are inaccurate and/or incorrect. We request that these factual errors be corrected in the DEIS, and that a revised DEIS include another alternative that specifically includes stronger protections for sensitive raptors and other wildlife within and adjacent to the project area. In summary, we believe this DEIS is deficient because it does not offer a range of possible alternatives based on the best available scientific information which NEPA requires.

Bridger-Teton National Forest has been, and will remain, a valuable partner for us in our raptor research and monitoring efforts. We would be happy to work with your staff to help assure the updated DEIS is accurate and complete.

Summary of Our Findings

The alternatives proposed within this DEIS fail to provide a suite of options to minimize and/or mitigate the significant impacts this project would have on US Forest Service sensitive raptor species. The DEIS does not follow BTNF's goals outlined in the 2019 revisions of the Species Conservation Assessments (SCA) for Northern Goshawks, Great Gray Owls, Boreal Owls, or Flammulated Owls.

We find that the expansion of the boundary to the east and associated increase of human use during the breeding season (March 15 – August 1) would significantly impact Northern Goshawks and potentially lead to negative population-level impacts to the species on BTNF. The "protective measure" of not removing a nest tree is insufficient to reduce the significant impacts to Northern Goshawks. We also find that the year-round recreation activities and infrastructure may affect both breeding and wintering Great Gray Owls.

The DEIS does not use, acknowledge, or follow the conservation goals defined by the BTNF SCA for the Northern Goshawk (6/10/2019 revision). Within the SCA, the conservation actions identified to achieve Goal 1 include small, dispersed forest openings consistent with historic forest patterns at the core area and post-fledging area (PFA). Goal 2 calls for the conservation of existing conditions within the core nest area. Adding new runs and/or glading within the core nesting area and PFA directly contradict these conservation measures defined by BTNF. The DEIS does not calculate the core nesting area for Northern Goshawks correctly, as defined by both the SCA and recent scientific literature. Goal 3 of the SCA is to provide hiding/escape cover for fledglings and prey in a 420-acre PFA (736 m radius from the center of the core nesting area). The DEIS fails to assess impacts at all within the PFA scale, as directed by the SCA. The core nesting area and PFA should be calculated using all known and alternate nests used within the past 10 years. Finally, Goal 4 of the SCA is to maintain security of breeding pairs, nesting, and nestling/fledgling Northern Goshawks where roads and trails pass through a nesting area by closing the roads from March 15 – August 1. The DEIS directly contradicts the SCA by *adding* trails and a road within the core nesting area (Figure 1).

The DEIS fails to offer a reasonable alternative that does not include the eastern boundary expansion and/or alternative road and trail locations that avoid the Northern Goshawk core nesting area as defined by Bridger-Teton's SCA. An alternative without a boundary expansion would significantly offset the negative impacts of this project to US Forest Service sensitive species. We also find the DEIS lacking in the analysis regarding increased human presence across and directly adjacent to the project area in the spring and summer when sensitive raptors are breeding. Finally, the DEIS fails to address potential impacts of increased lighting to sensitive owl species or roosting diurnal species.

Sincerely,



Bryan Bedrosian, M.S.
Research Director, Teton Raptor Center



Roger Smith, M.S.
Founding Board Member, Teton Raptor Center



Susan Patla, M.S.
Retired; Wyoming Game and Fish Department Non-Game Biologist
Advisory Council Member, Teton Raptor Center



Katherine Gura
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Below are specific comments:

- **Section 3.6.2.2.7- Affected Environment Flammulated Owl**

Flammulated owls have only been documented within the past few years in Wyoming and Teton County. We first discovered this species breeding within the region in 2016. In cooperation with BTNF, we have conducted multiple years of surveys for this species and have documented more breeding individuals than suspected, albeit still in relatively low numbers. TRC has been the only organization surveying for this species. We have not surveyed within 1.75 miles of the DEIS project area. The statement that “there is one record within 2 miles of the project area...” is misleading since the areas within 1.75 miles have *never* been surveyed. One year of survey used in this DEIS for a raptor species is insufficient to determine the species is not present within the project area.

- **Section 3.6.2.2.8 - Affected Environment Great Gray Owl**

TRC has directed the most intensive study ever conducted on Great Gray Owls in the United States, much of which is in BTNF. The DEIS cites our data but omits key information. First, the call-response data referenced in the DEIS do not just indicate presence, they indicate nesting. We documented multiple responses on different survey nights from both male and female Great Gray Owls in the forest patch directly adjacent to the project footprint. This is indicative of a nesting pair and nesting habitat. As outlined in annual reports dating to 2013 provided to BTNF, Great Gray Owls do not breed every year, with some years having nearly 100% nesting success and other years when virtually all territories did not initiate nests. It is incorrect to infer that owls are not nesting within the project area based on one year of spring acoustic surveys.

We have documented winter use of the project area by multiple individual owls using GPS tracking, in addition to the owls detected via callback surveys. Further, young owlets were also detected in 2014 directly adjacent to the project area, indicating successful nesting that year and existing nesting habitat.

- **Section 3.6.2.2.9 – Affected Environment Northern Goshawk**

States that a nest has been documented within the DEIS assessment area in 2019 by TRC. Surveys conducted by consultants in 2018 documented Northern Goshawk presence, but they did not locate a nest. TRC field biologists first located recent fledgling goshawks in the proposed expansion area in 2013. TRC was commissioned by Snow King to conduct raptor surveys in this area in 2015. In a TRC report provided to Snow King and BTNF in March of 2015 stated that a breeding pair of Northern Goshawks were detected within this area. We subsequently found the nest in 2015 and have monitored it every year since (coincidentally except for 2018). These data were also provided to BTNF biologists prior to the release of this DEIS but the data were not included. The pair has had active nests in both nests identified in Figures 1-2 within this document and have successfully produced young in 2013, 2015, 2016, 2017, and 2019 (Table 1).

Section 3.6.2.2.9 also lacks recent publications and data regarding Northern Goshawk territory sizes, nesting stand areas, post-fledging areas (PFA), and habitat needs. For example, it has been documented that the habitat within PFAs consist of mature forests with dense canopies and small openings (Squires and Kennedy 2006). The BTNF SCA also set conservation goals designed

to protect both the core nesting area and the PFA. Neither of these spatial scales are accurately described or assessed within this DEIS.

Table 1. Productivity of known Northern Goshawk nests monitored for ≥ 3 years in Jackson Hole, Wyoming. Territory location names withheld due to data sensitivity. Data from Teton Raptor Center.

Territory	2013	2014	2015	2016	2017	2018	2019	Avg/Years Monitored
A			3	1		0	0	1.0
B			2	3			0	1.7
C				2		1	0	1.0
D	0	0	0	2		0	0	0.3
E		0	0	3		2	2	1.4
Snow King	2	0	3	3	3		3	2.3
F				3		0	0	1.0
G	0	0	0	3		2	1	1.0

- **3.6.3.2.2 Direct and Indirect Effects, Forest Service Sensitive Species (all alternatives)**

Boreal Owl – There is no justification given for the statement that creating forest openings would “likely increase forage availability.” There is no analysis within the DEIS regarding the effects that use and increase of nighttime lighting will have to owls or other roosting raptor species. Increasing lighting will most certainly affect owl habitat use within and adjacent to the project area.

Flammulated Owls - Glading will not improve foraging opportunities for Flammulated Owls. Flammulated Owls nest in old, decadent trees that have cavities and their primary prey are nocturnal moths. It is likely the trees removed during glading will be potential nesting trees and those providing habitat for their primary prey. Flammulated Owls have only recently been discovered as nesting in Wyoming and the population status is unknown. Therefore, the finding that impacting individuals is not likely to cause a trend towards listing or loss of viability cannot be stated.

Great Gray Owls – The DEIS does not include conservation actions as defined by the BTNF Species Conservation Assessment for Great Gray Owls (6/10/2019 revision). The SCA calls for a 300m buffer around known nest sites. While a nest site has not been recorded, the presence of nesting habitat directly adjacent to the project area has recorded and no protections are assessed or provided within the DEIS. Goal 5 of the SCA clearly states that “recreation and project-based activities do not reduce the reproductive success, foraging ability, or winter survival of great gray owls.” While data exist and have been provided to BTNF on the nesting and winter habitat within the project area, they were not adequately assessed (Figure 3). Alternatives to reduce this disturbance and/or protection measures were not provided within the DEIS.

No assessment has been made within this EIS to BTNF sensitive raptor species regarding the increased lighting of the existing and proposed project areas. Increasing lighting would preclude owls from using these areas. There is no credible justification for the statement that creating openings will increase forage availability. Based on data from Teton County, this species prefers unfragmented forest stands for nesting.

“Should a great gray owl choose to locate its nest in an area within the adjusted permit area boundary, it is not likely that summer hiking and biking activities would negatively impact it since the period of high use (June through September) would not coincide with the nesting period (March through May; Duncan and Franklin 1993).” This excerpt from the DEIS is incorrect. First, March – April in Teton County corresponds to the courtship period. May – July is the nesting period, and July – September is the post-fledging period. These dates have been well established for this population and are readily available in the annual reports provided to BTNF and Wyoming Game and Fish Department from 2014–2019. Summer biking, hiking, yurt camping, and other human activities may have significant negative impacts to nesting owls within and adjacent to the existing and proposed boundary areas. Our recent modeling of Great Gray Owl habitat selection in western Wyoming indicates an avoidance of developed areas by nesting owls. The DEIS fails to analyze the impacts of increased noise related to new developments, as identified in the BTNF SCA.

This and the other raptor sections of this DEIS do not account for basic biology of raptors and their territoriality. Raptors cannot always readily adapt to or use adjacent forest patches. The statements “Given the large amount of forested habitat that would remain outside of, but adjacent to, the adjusted permit boundary, great gray owls would likely be able to utilize the surrounding habitat for nesting and the habitat within the permit boundary for foraging.” This over simplification of raptor ecology does not account for habitat selection, preferences, territoriality of neighboring nesting pairs, or presence of intra-specific raptors that likely preclude use of adjacent forest patches.

Northern Goshawks - The DEIS does not follow the BTNF existing conservation guidelines for Northern Goshawks. There is no scientific evidence for the statement that opening the forest would increase forage availability. The statement that the nesting Northern Goshawks could readily move to adjacent forest patches is misleading, and likely incorrect (see above). The surrounding habitat may be too steep for nesting, may not provide the proper forest structure, be occupied by other competing species, or may preclude nesting or reduce fecundity for any other suite of reasons.

Northern Goshawks are highly sensitive to disturbance at nest sites. The citation of the species account here is misleading and does not include the many other studies showing the sensitivity of nesting Northern Goshawks to disturbance. But even as stated: “sporadic activities generally do not produce nest desertion or failure...”, the DEIS finding is incorrect. The proposed action will certainly be more than sporadic within the expanded area, with multiple visitors per day for the entire year, including courtship, nesting, and post-fledging periods.

Even if a nest tree was not removed, the forest patch within the proposed expansion would functionally eliminate the entire area for nesting under the proposed alternatives within this EIS. Glading would reduce canopy and forest structure in such a way that would likely preclude nesting and degrade the habitat too much for use as a PFA. Opening the forest completely for additional ski runs would exacerbate this effect. Further, year-round activity and the road would certainly add to the disturbance within the degraded forest stand. Movement and home range data from the breeding male Northern Goshawk within the project area clearly avoids the existing ski runs on Snow King (Figures 1-2) and inferring that new ski runs and/or glad would increase foraging opportunities is incorrect. Further, the avoidance of existing ski runs clearly indicates that modifying habitat for skiing will significantly reduce or completely eliminate use by breeding and fledgling Northern Goshawks.

The finding that two of the four Northern Goshawk conservation goals would be met are incorrect. This DEIS fails to incorporate movement data for the nesting adult male Northern Goshawk from the nest described within the DEIS that was provided by TRC to BTNF biologists before the release of the DEIS. The boundary expansion to both the east and west are clearly important for nesting and post-fledging habitat (Figures 1, 2). The options provided in this DEIS will certainly not meet Goal 1 because they functionally remove the nesting stand as they reduce canopy cover, remove all trees within proposed ski runs and roadway, reduce basal area, and increase human presence. The options also ignore the alternate and inactive nest sites and do not incorporate existing data provided to BTNF. The options do not meet Goal 2 because they do not conserve conditions within the core nest areas. The goal is to conserve habitat in the core nest areas (plural) around recently occupied nests areas within each foraging area. As defined in Goal 1, recent is defined by BTNF as past 10 years. All alternate nests identified within the DEIS are clearly within the PFA and foraging area (Figures 1,2). In the absence of 10 years of monitoring, BTNF must assume the alternate nests were occupied within the past 10 years because *Accipiter* stick nests almost never remain for > 5 years. Goal 3 is not met under the current alternatives of this DEIS. Most of entire eastern expansion area is key PFA habitat, as evidenced by the GPS movement data (Figure 2). The western boundary expansion also hosts important PFA habitat. Reduction in forest structure will significantly impact PFA habitat [see Squires and Kennedy (2006) for PFA habitat requirements]. Goal 4 is not currently met within the proposed alternatives within the DEIS. There is no mitigation plan for maintaining security of the breeding pair for the new roadway or trail system within the DEIS.

The finding that “Given the importance of quality nesting habitat for nest success, Alternative 2 may impact individuals but is not likely to cause a trend toward federal listing or loss of viability” is incorrect. The pair of Northern Goshawks in the project area are consistently producing the most young in the valley and on BTNF lands (Table 1). Loss of this pair, nesting area, or reduced fecundity may have significant impacts on our local-area population and the population of goshawks on BTNF.

- **3.6.3.2.4 Specialized Habitat**

This DEIS fails to incorporate an analysis of specialized habitat for Great Gray Owls, a sensitive species for BTNF and Wyoming Game and Fish Department. Recreation activities that reduce

winter survival for Great Gray Owls should be avoided, restricted, relocated, or minimized according to the BTNF SCA for Great Gray Owls. Data indicates that winter habitat in western Wyoming is limited for this population and is critical for the species survival and persistence in Wyoming and the BTNF. Further, the availability of high-quality winter habitat impacts breeding success in the subsequent summer. There is important wintering habitat for Great Gray Owls in the southern portion of the project area (Figure 3). Existing GPS movement data from multiple individuals and winter habitat models were not incorporated in this analysis (Figure 3).

- **Table 3-20 - Cumulative effects on wildlife species affected by Alternatives 2–4.**

There was no assessment of Snow King Lower Elk Lighting, increased human presence, or increased noise to breeding owls in the DEIS. Therefore, the finding of no impact to Boreal Owls, Flammulated Owls, or Great Gray Owls cannot be made.

- **3.6.5 Design Criteria**

The design criteria for nesting birds is not consistent with other BTNF design criteria for nesting raptors (see Teton-to-Snake as an example) or the Species Conservation Assessments. These design criteria do not adequately address nesting raptors that initiate nests earlier than May 15 and protect the Northern Goshawk PFA. The design criteria protect individual nest trees but do not address USDA Forest Service goals to minimize disturbance near all active and inactive Northern Goshawk nests. The design criteria do not protect nesting and fledgling raptors (Northern Goshawks or Great Gray Owls) from human disturbance during the nesting and post-fledging periods.

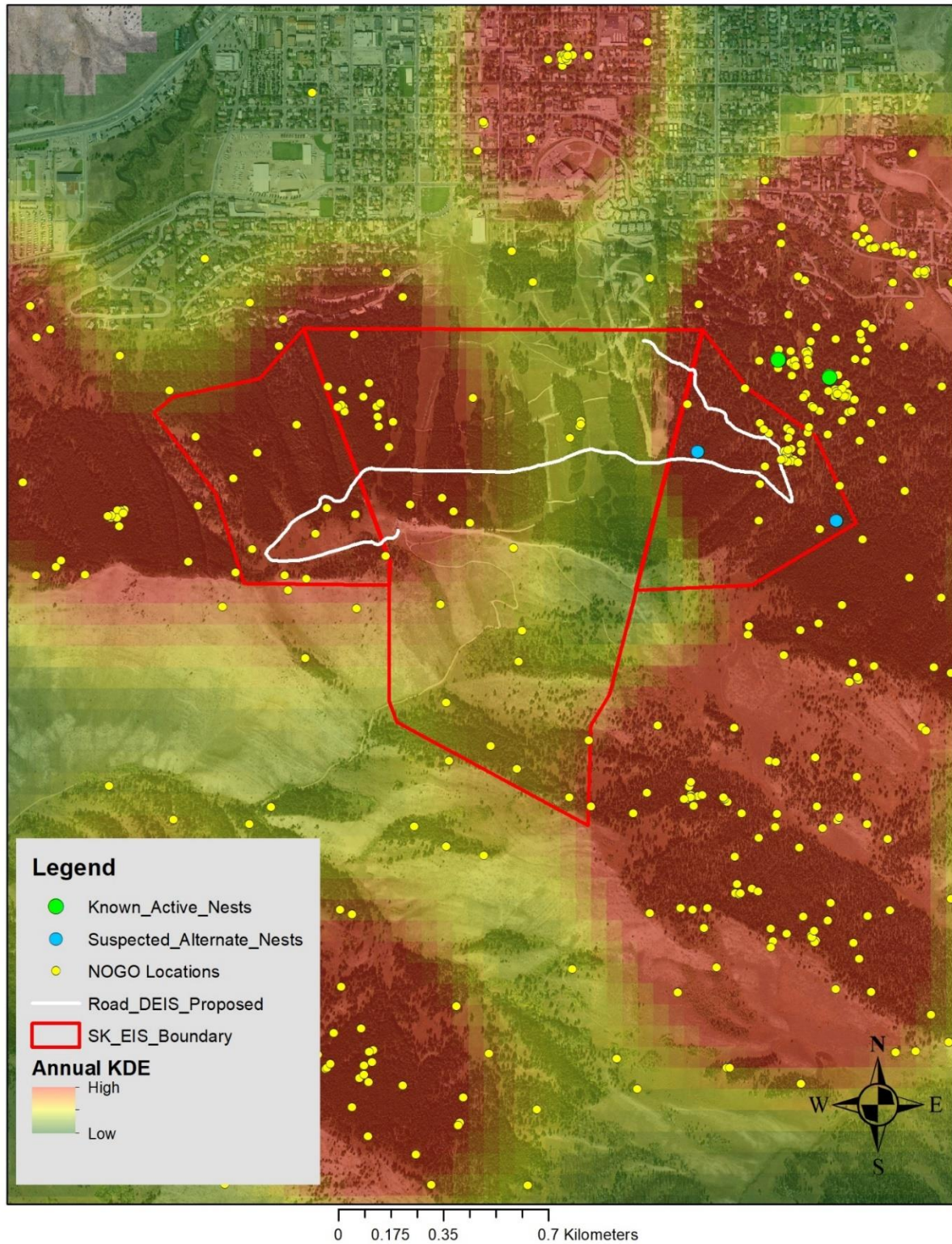


Figure 1. Annual kernel density home range estimate and GPS locations of the male Northern Goshawk nesting within the proposed Snow King Mountain Resort expansion area.

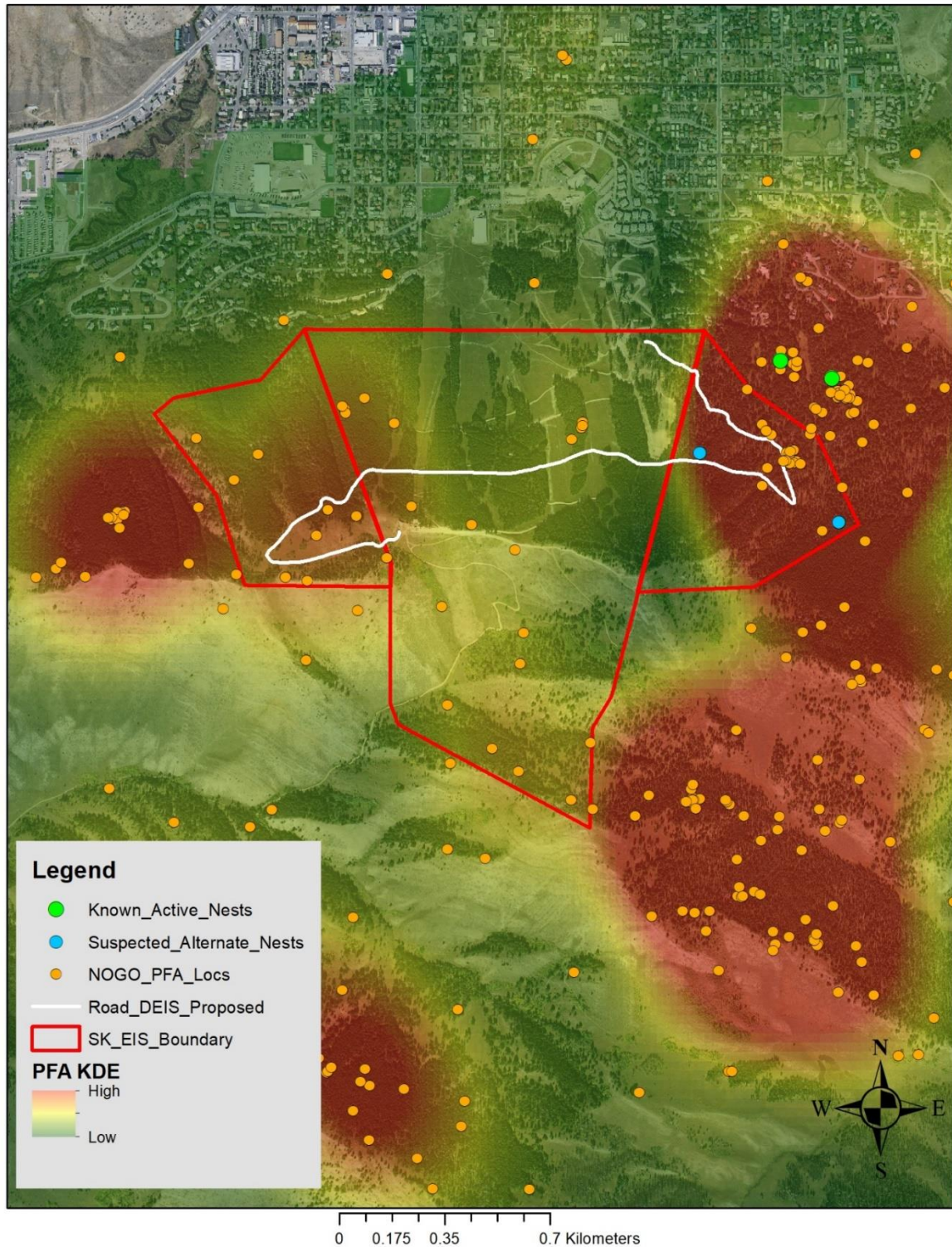


Figure 2. 2019 Post-fledging period (15 July- 31 August) kernel density home range estimate and GPS locations of the male Northern Goshawk nesting within the proposed Snow King Mountain Resort expansion area.

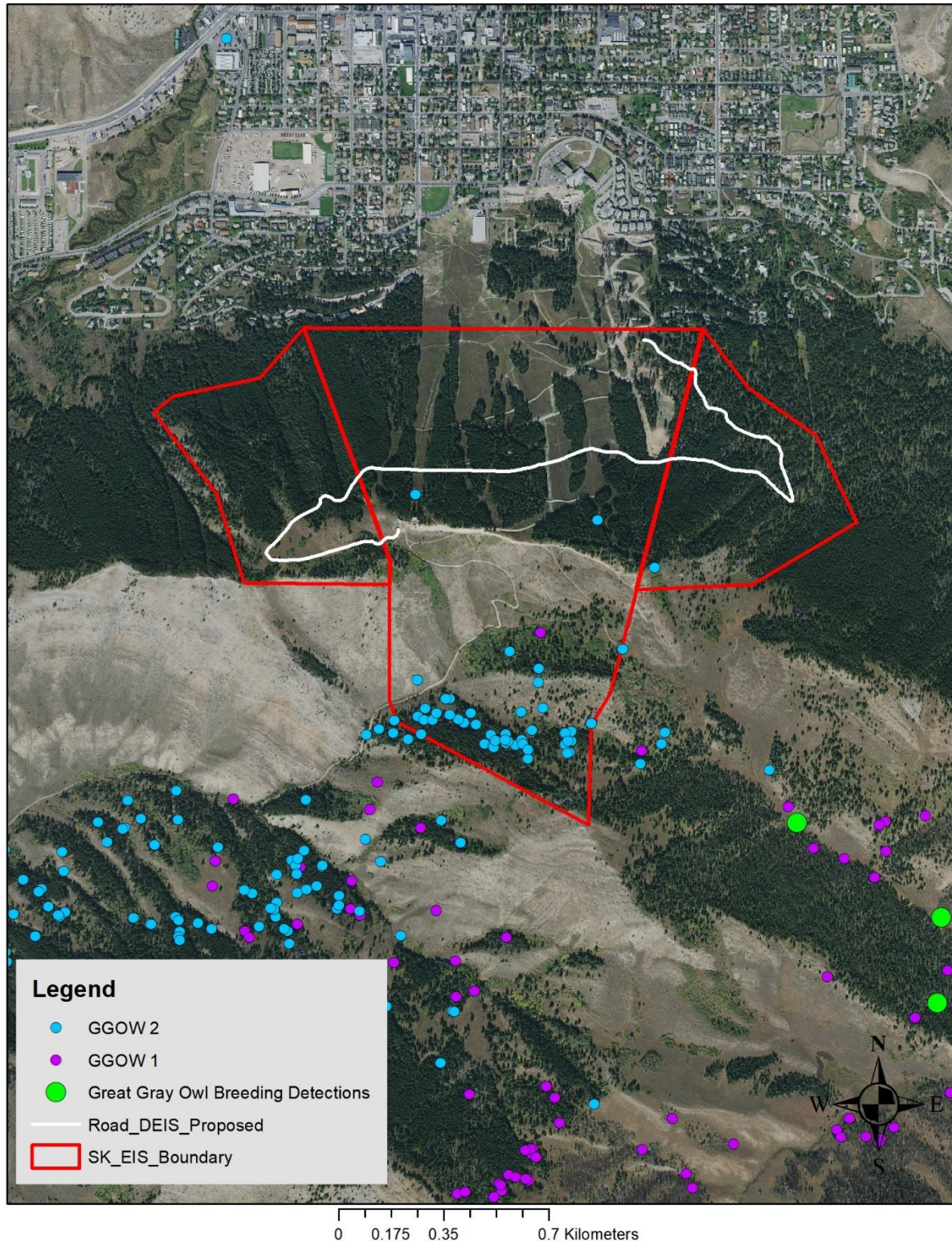


Figure 3. Winter GPS locations of two adult Great Gray Owls marked with GPS transmitters (winter of 2018/19) and spring call-back detections in 2014.