TO: Acting Aspen-Sopris District Ranger, Jennifer Schuller
RE: Objection to the Twin Peaks project environmental assessment (68876).

FROM: Delia G. Malone on behalf of Colorado Wild, and Mary Harris on behalf of Roaring Fork Audubon submit the following **Objection to the Project and Support for the No Action Alternative in the Twin Peaks Project area under which vegetation management would not occur** (USFS 2026).

ColoradoWild and Roaring Fork Audubon object to the vegetation management activities proposed in the Twin Peaks Project. Proposed project activities include "utilizing silvicultural prescriptions such as single tree selection, group selection, sanitation and PODs treatments (USFS 2026). Implementation methods for the proposed vegetation management action include conventional ground-based logging systems and may include mechanized harvesters, rubber-tired skidders, track skidders, log loaders, bulldozers and road graders which may occur year-round (USFS 2026)".

Each of these actions has the high potential of degrading ecosystem processes and function as well as negatively impacting the sustainability of any special status plant and animal species' populations and natural communities that may occur in or near the project area. Thus we object to the Twin Peaks Proposed DEA and vegetation management plan for the following reasons:

1. Botanical surveys were not conducted according to established protocols. As conducted the surveys are inadequate to detect the presence or absence of special status plant species.
2. Avian surveys are inadequate to find and protect raptors and cavity-nesting neotropical migrant avian species from direct anthropogenic mortality that may be caused by the loss of their nest trees to the proposed Twin Peaks silviculture treatments .
3. Conclusions regarding the impact from this project on special status mammal species in the project area are not supported by best scientific information.
4. Conclusions regarding the impact from this project on fen wetlands in or adjacent to the project area are not supported by best scientific information.

For these reasons, ColoradoWild and Roaring Fork Audubon object to Twin Peaks Project Draft Environmental Assessment and request the preparation of an Environmental Impact Statement.

I. INTRODUCTION.

As stated in the U.S.F.S.' Botanical Survey report "the purpose of this biological evaluation is to analyze and determine the likely effects of the alternatives on federally listed species (endangered, threatened, and proposed) and Forest Service sensitive species (FSM 2670.31-2670.32) (USFS 2026). As described below, as conducted, the biological surveys are inadequate to accomplish this purpose. Thus the conclusions regarding impacts from the project are not substantiated.

Plant and animal surveys are required under the auspices of the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and USDA Forest Service policy (USDA 2014) . The purpose for these survey is to locate any threatened, endangered or sensitive plant or animal species within the project area that might be affected by the proposed project (USDA 2014). Further, Forest Service policy requires that a review of programs and activities, through a biological evaluation (BE), be conducted to determine their potential effect on threatened and endangered species, species proposed for listing, and sensitive species (USFS 2026).

Appropriate and approved survey protocols are essential to reliable data collection and the valid determination of impacts to these species from the proposed project. Roaring Fork Audubon has documented species of concern in the project area but that were not included in the Twin Peaks DEA. In our opinion, the DEA attempts to justify destruction of breeding bird habitat that is one the main contributors to the loss of over one-third of our bird species in North America. This loss is not recognized or addressed by the USFS' DEA. These harmful anthropogenic developments exacerbate avian declines and disregard imperative protections thereby increasing a dangerous downward spiral into loss of all our avian species.

II. OBJECTION JUSTIFICATION.

A. Twin Peaks Project Biological Botanical surveys were insufficient. Botanical surveys conducted for this Environmental Assessment were insufficient to make a valid determination of the impact of this proposed development on any special status plant species that may occur in the project area. As stated in the Botanical Biological Evaluation report "***Since there was not time to do a complete survey and a randomized sample survey was necessary to meet project time constraints, presence of sensitive species is assumed…***".

Floristic Botanical Survey Methodology is the standard protocol for conducting rare plant surveys. Because the botanical surveys for this project did not follow established protocols, the report's stated assumption that (because grazing already occurs in the project area) "there may be cumulative effects to species under both the no action and proposed action alternatives to undetected occurrences of sensitive species. However, these effects are not likely to result in a trend towards federal listing or loss of viability in the planning area", is not supported by any evidence. Botanical surveys did not adhere to established methodology for rare plant surveys. Thus, these data are insufficient to make a determination of the effect of the proposed action on special status plant species that may be in the project area.

Consequently, the Twin Peaks Project Biological Evaluation (BE) does not conform to legal requirements set forth under section 7 of the Endangered Species Act (ESA) (19 U.S.C. 1536 (c), 50 CFR 402.12 (f) and 402.14). Section 7(a) (1) of the ESA requires federal

agencies to use their authorities to further the conservation of listed species. Section 7(a)(2) requires that federal agencies ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of federally listed species, or destroy or adversely modify designated critical habitat (USFS 2026).

Rare plant surveys are undertaken to ascertain the presence or absence of rare plant species in a particular area. Essential to the detection of special status species is 1) an appropriate level of survey intensity for the project and 2) conducting surveys throughout the growing season (USFWS 2011). The U.S. FWS (2011) rare plant survey protocols states that the objective of clearance surveys, such as those conducted for this project, is to cover 100% of a given project area to determine presence of target species, and their distribution and abundance prior to ground disturbing activities. Further, clearance surveys must include an assessment of all potential habitat within the project area, including a buffer - the standard buffer for clearance surveys is 300 feet from the project area (USFWS 2011).

Although rare plant survey standards call for Floristic Survey Methodology, the Twin Peaks rare plant surveys were conducted using a Vegetation Survey Sampling Method (USFS 2026). As stated in the USFS' Twin Peaks Project Botanical report only a very small percentage of the project area was surveyed which is contrary to standard protocols: "… given the limited time frame to survey for the project, a random sample of the project area was produced in ArcGIS Pro with fifty random points with a 300-foot circular buffer. In total, these fifty randomized points with a 300 ft. radius came to 14,137,150 square feet, approximately 10% of the initial project area".

Although a later iteration of the project footprint reduced the size of the project to 2,617 acres, which excluded many but not all the wetlands and fens that are present in the initial project area, still only 12% of the project area was surveyed for rare plant species. The Vegetation Survey Sample protocol that was used in this project is not the approved protocol and is inadequate to determine the presence or absence of special status plant species.

Floristic Survey methods are essential to detect the presence of rare species (CDFW 2018). Floristic survey methods are required because rare plant species are typically sparsely distributed in the landscape, appearing infrequently and often in specialized habitats. These characteristics require complete site coverage of suitable habitat and, because flowering phenology often differs among species, several field visits throughout the growing season are necessary to adequately capture the floristic diversity of a project area (CDFW 2018). Floristic Survey procedures then direct that botanical field surveys be conducted by traversing the entire project area to ensure thorough coverage, documenting all plant taxa observed.

Because only a small fraction of the project area was surveyed, the likelihood of missing and not detecting special status plant species is high. Additionally, although the exclusion

of some wetlands from the project area reduces the chances of negative effects on WRNF sensitive species that rely on fens and wetlands, vegetation alteration adjacent to wetlands will negatively impact wetland hydrology and consequently plant and plant community viability.

Meander surveys are recommended in many inventory protocols (Alberta Native Plant Council 2012; Goff et al. 1982; Johnson-Groh 2004; Pennsylvania Department of Conservation and Natural Resources 1992; Whiteaker et. al. 1998; Wisconsin Department of Natural Resources. 2015, among others). In this protocol, it is recommended that intuitive meander surveys (meander searches) be employed, especially over large heterogeneous study areas. During meander searches, the surveyor covers a larger area than they would if they were using other techniques such as transects or grids. This geographic coverage is important because rare species are often associated with features that are not evenly distributed over the landscape.

Further, because surveys were conducted only during a period of one week in July, the likelihood of not detecting plant species that were not flowering is high. Numerous special status plant species that potentially occur in the project area flower later in the growing season and are difficult to detect or identify unless they are flowering. According to Lancaster (2000), one of the minimum requirements for a defensible rare vascular plant survey is conducting fieldwork at least twice during a growing season. Thus, Rare Plant Surveys must be conducted when the diagnostic features of the potential plants are most visible which usually involves both early- and late-season field surveys to detect different species (MECCS 2018).

In sum, ascertaining presence or absence can be done with confidence only if a number of factors are appropriate: the time of year, time of day, weather conditions, and experience level of observer. Additionally, some species such as orchids and some wildlife species go through yearly population fluctuations and multiple years go may be required to definitively determine absence (Cutko 2009). Because the sampling method used in the DEA Twin Peaks Botanical surveys were only conducted during one very small time period, and only over a very small percentage of the project area, the surveys are inadequate to capture the presence or absence of rare and special status plant species that may be in the area. Because of the failure of surveys to be conducted adequately to confirm the presence or absence of special status species we object to the USFS's Twin Peaks project.

B. The Draft Environmental Assessment (DEA) makes conclusions regarding animal species impact resulting from the Twin Peaks proposed logging that are not supported by best scientific information.

The DEA identifies eight forest sensitive species with suitable habitat in the project area that are known or suspected to occur in the project area (USFS 2026). These species include Hoary Bat, Pacific Marten, Pygmy Shrew, American Goshawk, Boreal Owl, Flammulated Owl, Olive-sided Flycatcher and Purple Martin. Seven of the species were

analyzed for the Twin Peaks DEA. We examine three of the species and one natural community, fen wetland, and conclude that the DEA assertions regarding minimum impacts to these sensitive species and communities is not supported.

The Twin Peaks DEA states that "The proposed action may temporarily alternate (alter?) habitat for a particular sensitive species in habitats in aspen, or spruce-fir types. Individuals of those species are not expected to require larger territories or home ranges in order to meet all their survival needs. As a result, the density of individuals will decline in that reduced quality habitat temporarily. *On a landscape scale however, the impacts from these proposed actions will have minimum impacts to sensitive species' habitat quantity or quality overall*".

The Twin Peaks DEA provides no scientific support for the assertion that "*on a landscape scale however, the impacts from these proposed actions will have minimum impacts to sensitive species' habitat quantity or quality overall*". Conversely, according to metapopulation ecology (van Nouhuys 2016, Chesson 2013, Hanski 1999) landscape-scale populations of species, will be harmed if the component populations are lost. Consequently, we reject the notion that harming the individuals and component populations will not harm populations at the landscape scale. Given the harm that the Twin Peaks project will likely inflict on the sustainability of populations of special status species we object to the Twin Peaks project.

Further, the Migratory Bird Treaty Act of 1918 as amended in 2023 protects all migratory birds to which the Act applies from direct anthropogenic mortality. Nest habitat loss that may result from this project could result in direct mortality. However, avian breeding bird surveys were insufficient to identify cavity nesting birds and their nest trees.

Several migratory bird species that are present in the project area are highly vulnerable to climate warming and may lose more than half of their current range due to climate warming in Colorado (Audubon 2026). Logging in the project area will destroy nesting habitat. The cumulative effects of climate warming and loss of nesting habitat to logging will increase their vulnerability extirpation, further driving the decline of these vulnerable species including Williamson's Sapsucker, Red-naped Sapsucker, Broad-tailed Hummingbird, and Pine Grosbeak.

In summary, the Twin Peaks logging project will remove nesting, denning and foraging habitat for many native wildlife species in the project area. We provide best scientific information regarding maintenance of sustainable populations of two of the special status animal species identified in this report, the avian community present in this project area, and one special status natural community in and near the project area fen wetlands. Best scientific information informs that the Twin Peaks project will harm the long-term viability of these species' populations and the sustainability of the fen wetlands. Given the science which informs that the Twin Peaks project will result in harmful impacts to the native

species' populations and protected natural fen wetland communities, we object to the Twin Peaks project.

1. Hoary Bat (*L. cinereus*).

The Twin Peaks DEA correctly states that:

- According to the Colorado Bat Working Group, timber harvest is estimated to have a low-to moderate effect on *L. cinereus* because of the loss of potential tree bole/branch roost sites. This effect is considered to be localized (Colorado Bat Working Group 2010).
- After revegetation and mature timber is established, hoary bats are expected to inhabit trees in the newer formed forest edges.
- Adequate suitable habitat occurs in the immediate landscape, across the White River National Forest.

The Twin Peaks DEA does not consider the time necessary for the bat's preferred nest trees to reach sufficient size to provide suitable nesting habitat for Hoary Bats. Neither does the DEA consider that adjacent suitable habitat is likely already occupied and thus unavailable to additional occupants.

Hoary bats primarily inhabit mature forests (BCI 2026). Engelmann spruce seedlings grow very slowly. One-year-old seedlings are seldom over 1 inch (2.5 cm) tall, and 5-year-old seedlings are usually 1 to 4 inches (2.5-10 cm) tall. In light shade or full sun trees may grow to 4 or 5 feet (1.2-1.5 m) in height in about 20 years (Uchytil 1991).

Because Hoary Bats require mature forest for nest habitat, the time required for forest recovery to provide the mature trees that Hoary Bats need for nesting will likely take at least 150 years (USU 2026). This time frame is beyond any meaningful time to sustain populations in the face climate warming impacts and nationwide biodiversity declines (WWF 2024, IPBES 2019**)**.

Further, although adequate suitable habitat may occur in the immediate adjacent landscape, that habitat is likely already occupied by Hoary Bats making it unavailable to colonization by additional Hoary Bats.

We object to the Twin Peaks project. In consideration of best scientific information which indicates that the proposed project will diminish the abundance of the larger population, which will negatively impact the larger Hoary Bat population, we object to the Twin Peaks project.

2. Pacific Marten (*Martes caurina*)

The Twin Peaks DEA correctly states that:

- Pacific martens generally avoid habitats that lack overhead cover.

- The Pacific marten is sensitive to habitat fragmentation, which includes loss of stand area, loss of stand edge, and changes in relative or absolute amounts of stand edge (Buskirk and Ruggiero 1994). Additionally, the Pacific marten may be impacted by timber harvesting resulting in: **early seral conditions, changes to the prey community, removal of overhead cover and large-diameter coarse woody debris, and the conversion of mesic sites to xeric sites**
- Their diet consists of pine squirrels, red-backed voles, other small mammals, bird eggs and nestlings, fish, insects, berries, and other fruits
- Removal of suitable habitat would cause a reduction in key habitat elements: overstory, resting habitat (such as the branches on large lodgepole trees), and coarse woody debris that provides cover, denning habitat, and access to prey.
- Removing cone bearing trees would temporarily reduce the population of red squirrels, one of the marten's prey species in the units that are clear cut.

The DEA states that "In consideration of the potential impacts, a determination for the action alternative was made of **may adversely impact individuals, but is not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability range wide is made for the Pacific marten"**. This determination is based on the notion that adequate suitable habitat occurs in the immediate landscape and across the district. Best scientific information does not support the contention that this habitat is either accessible or available to martens displaced by logging. Further, because the logging project would inhibit dispersal, the viability of the marten metapopulation would be diminished thereby decreasing viability of the entire population.

As a result of continued disturbance and habitat loss, Pacific martens have declined over the last century and have been designated as a sensitive species by the U.S. Forest Service (Pauli Lab 2026). Cumulative impacts of ongoing habitat modifications (logging and forest thinning) and stressors such as changing climate conditions and wildlife regimes, which can affect their movement, in combination with marten' anatomy and physiology, which requires that they forage frequently, makes martens especially sensitive to changes in community and forest structure and susceptible to intraguild predation which is a substantial source of natural mortality (Martin et al. 2022).

Martens avoid harvested areas making little or no use of clearcuts for several decades following harvest (Stone 2010, Buskirk and Zielinski). Timber harvest may lead to lower marten densities, larger home ranges, home range shifts, higher natural mortality, higher dispersal rates, greater daily movements, greater distances between core use areas within a home range, and shifts in daily activity patterns (Stone, 2010).

Although the Twin Peaks DEA recognizes that the Twin Peaks logging project would diminish suitable habitat for the marten, the DEA does not consider that human disturbances, such as logging or fire management, often result in martens needing to migrate to new habitat to seek adequate prey. However, extraterritorial movement is dangerous: Peaks in mortality of

male martens correspond with mating season when males make extra-territorial movements to access other females (Martin et al. 2022). Thus, martens typically avoid traveling across land that is free of tree cover – likely because the lack of a canopy makes them vulnerable to predation from raptors (Moriarty 2022). By opening the forest, this project would increase marten vulnerability to predation, diminish population viability.

Neither does the DEA consider that dispersal is essential to maintain viable metapopulations which is essential to long-term large-scale population viability (USFWS 2023). Logging-induced habitat alteration diminishes marten dispersal ability (USFWS 2023).

Finally, the DEA states that "removing cone bearing trees would temporarily reduce the population of red squirrels, one of the marten's prey species in the units that are clear cut. However, the DEA does not consider the time needed for forest recovery to provide suitable habitat for martens and forage for red squirrels. Engelmann spruce (*Picea engelmannii*) seedlings grow very slowly and only begin producing cones when 15 to 40 years old and 4 or 5 feet (1.2-1.5 m) tall but within natural stands, most seed is produced by dominant trees greater than 15 inches (38 cm) d.b.h. (Uchytil 1991). Thus this project would eliminate habitat for red squirrels and martens for at least the next 15- 40 years.

The DEA's conclusion that, although the project may adversely affect individuals but not the population, is not supported by best scientific information. The DEA incorrectly states that martens are not territorial; best scientific information documents that martens (*M. caurina*) are extremely territorial (Stone 2010). Thus, given that suitable habitat is likely already occupied, that habitat will likely not be available to dispersing martens. Additionally, dispersal across logged landscapes is dangerous (Martin et al, 2022). But dispersal is essential to the maintenance of metapopulation viability (USFWS 2023). Thus, human activities that disable the ability of martens to successfully disperse, such as the logging that this project proposes, also diminishes viability of the larger metapopulation.

3. AMERICAN GOSHAWK (*Astur atricapillus*)

The Twin Peaks DEA correctly states that:

- The goshawk's population trend appears to be stable and large (BirdLife International 2016). Nests are typically in mature to old-growth forests composed primarily of large trees, high (60– 90%)
- Goshawk habitat exists throughout the project area. American Goshawk specific surveys were completed in the harvest units in the summer of 2025 with no detections. An incidental observation of a goshawk occurred west of the project area in September 2025
- Timber and fire management practices that alter goshawk habitat are the primary threats to the species (Kennedy 2003).
- The treatment areas are all composed of spruce/fir and can reduce nesting and foraging opportunities for goshawks.

Although the Twin Peaks DEA reports that American Goshawk populations appear to be stable, data from migration counts over the last two decades and show DECLINING MIGRATION COUNTS (RPI 2026). American Goshawk migration count data across North America show 46% of 26 sites are declining (RPI 2026). Further, The Breeding Bird Survey has recorded a survey-wide decline of American Goshawk from 1966 to 2019 (BBS).

Habitat loss is considered the primary threat for Northern Goshawks (Audubon 2026, Stone 2013). The DEA acknowledges that timber and fire management practices that alter goshawk habitat are the primary threats to the species and that the treatment areas are all composed of spruce/fir and can reduce nesting and foraging opportunities for goshawks. The DEA does not adequately address the fact that loss of prey populations may also contribute to the declines.

Factors limiting northern goshawk populations may include food availability, availability of nest sites, and territoriality (Stone 2013). Managing for prey species is a major component of habitat recommendations for the northern goshawk. American goshawk populations may experience reduced fitness and reproduction, greater interspecific competition for food, and greater susceptibility to predators when food resources are limited. Prey species prevalent in the diet of northern goshawks throughout their range include tree squirrels, ground squirrels, lagomorphs, Phasianidae, Corvidae, Picidae and Turdidae (Stone 2013). ALL WHICH WILL BE NEGATIVELY IMPACTED BY LOGGING

Forest management for timber extraction can directly impact the structure, function and quality of both nesting and foraging habitat by removing nests and nest trees, modifying or removing entire nest stands, and removing the canopy and mature trees, snags, and downed wood that support prey populations (Kennedy 2003). The cumulative impacts of logging and territoriality, which precludes Goshawks from moving into adjacent habitat, interact to diminish the survivability of individuals as well as the larger population.

The statement that the removal of timber may adversely impact individuals, but is not likely to result in a loss of viability on the planning area is not supported by population ecology. Population viability depends on survivability and reproductive success at the individual level (Cooch et al. 2001, Taylor et al. 2012, Manlik et al. 2016).

4. Fen Wetlands. Fens are classified as Resource Category 1 by the U.S. Fish and Wildlife Service Mitigation Policy (USFWS 1999) signifying that every reasonable effort should be made to avoid impacting this habitat. In 2002, the U.S. Forest Service Rocky Mountain Region issued a statement to avoid impacts to fens on National Forest Lands due to their irreplaceability (USFS 2002).

Numerous fen wetlands occur adjacent to and in the Twin Peaks project area. The Twin Peaks logging project would alter hydrology to fens thereby impacting fen sustainability.

Fens have a strong connection to and are dependent on groundwater. Fens only develop and persist where soils are saturated or where the water table is within 30 cm (12 inches) of

the soil surface through July and August. Fens take thousands of years to form thus their loss is irreplaceable. Colorado fens are tightly connected to complex groundwater systems thus any alteration to groundwater quality or quantity threatens fens. Further, Colorado's dry climate causes increased sensitivity to drought modifications to the groundwater supply. Hydrologic alteration from drainage ditches, groundwater pumping and stream diversions lower the water table in fens (Malone et al. 2011).

Human activities and development that alter hydrologic processes and vegetation characteristics will impact the sustainability of fen wetlands. Once the water table is lowered, peat oxidization and subsequent decomposition occurs quickly thereby reducing peat depth, altering hydrological patterns, and resulting in a change of vegetation species composition (Malone et al. 2011).

Organic soil wetlands, known as fens, are an irreplaceable resource. Fens are groundwater-fed wetlands with organic soils that typically support sedges and low stature shrubs (Mitsch & Gosselink 2015). The strict definition of an organic soil (peat) is one with 40 cm (16 in) or more of organic soil material in the upper 80 cm (31 in) of the soil profile (Soil Survey Staff 2014). Accumulation of organic material to this depth requires constant soil saturation and cold temperatures, which create anaerobic conditions that slow the decomposition of organic matter (Lemly et al. 2018).

In Colorado's mountains, peat accumulation occurs very slowly, as little as 20 cm (8 in) per 1,000 years (Chimner 2000; Chimner and Cooper 2002). By storing organic matter in their soils, fens act as carbon sinks. Fens also help to regulate local and regional hydrology by stabilizing base flow through the slow release of groundwater. In addition, fens throughout the Southern Rockies support numerous rare plant species that are often disjunct from their main populations (Cooper 1996; Cooper et al. 2002). The long-term maintenance of fens requires protection of both the hydrology and the plant communities that enable fen formation (Lemly et al. 2018).

The Draft EA purports that "Short-term hydrologic effects would last 0–5 years through the duration of the project. Longterm hydrologic effects would last 6–15 years from project completion to successful revegetation of disturbed areas". Best scientific information regarding fen wetlands does not support this assertion. Rather, as informed by best fen wetland science, the likely impact to fens from logging on adjacent slopes is the irreversible degradation and ultimate loss of these fen wetlands.

Respectfully submitted,

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