



**ROCKY MOUNTAIN
ELK FOUNDATION**

March 2, 2023

Kimberly Smolt, Interdisciplinary Team Leader
Bitterroot National Forest
1801 N. First Street
Hamilton, MT 59840

Re: Environmental Assessment for the Bitterroot National Forest Plan Programmatic Amendment for Elk Habitat, Old Growth, Snags, and Coarse Woody Debris

The Rocky Mountain Elk Foundation (RMEF) appreciates the opportunity to comment on the draft Environmental Assessment (EA) for the Bitterroot National Forest Plan Programmatic Amendment for Elk Habitat, Old Growth, Snags, and Coarse Woody Debris.

The mission of RMEF mission is to ensure the future of elk, other wildlife, their habitat and our hunting heritage. We represent more than 225,000 members nationwide with nearly 40 chapters across Montana and Idaho. Since its inception in 1984, RMEF has permanently conserved or enhanced more than 8.6 million acres of North America's most vital habitat for elk and other wildlife, including more than 1.5 million acres in Montana and Idaho.

RMEF recognizes the need to periodically update Plan objectives in order to meet current recommendations and we appreciate the effort to revise management actions based on the most recent research. RMEF appreciates the Bitterroot National Forest's (Forest) recognition of elk as a biologically and socially important species.

RMEF strongly supports the following principles in all plans/proposals related to elk management:

- Science-based wildlife management
- Healthy elk populations maintained at both biologically and socially sustainable levels
- Hunting as the primary tool for managing elk populations
- Impactful programs designed to increase hunter access to elk on both public and private lands
- Appropriate distribution of elk on public and private lands
- Maximizing hunting opportunity and quality
- Recognition of the role private landowners play in providing elk habitat during critical seasons
- Simplification of unnecessarily complex hunting regulations

RMEF agrees that the current direction for the management of elk habitat in the Bitterroot Forest Plan is based on outdated science and relies on research that is no longer the best available scientific information.

The purpose of the proposed Plan amendment is to provide programmatic management direction that is feasible, reasonable, and based on recent relevant scientific information regarding multiple aspects of natural resource management. The proposed action also replaces existing standards with guidelines. Unlike standards, guidelines can be adapted to unique ecosystem needs and varying vegetative conditions to facilitate the development of site-specific treatments. RMEF works with Forest Service partners across the U.S. and understands today's challenges of applying inflexible standards across an incredibly diverse landscape. The result can sometimes actually prohibit forest management work that is critical for elk habitat – such as the case with the current Plan standards. RMEF understands that through this change (shifting from standards to guidelines), proper assessments can be made at the project level, where public review is still available.

RMEF supports the purpose and need and proposed action to amend the Plan - to align the Plan's goals and objectives of maintaining viable populations, providing optimal habitat on elk winter range, maintaining current level of big game hunting, and maintaining vegetative diversity based on recent and relevant scientific information, including elk habitat assessment methods that have become available since completion of the 1987 Forest Plan.

Elk Population Status

RMEF appreciates attention to the historic elk population trends in the Bitterroot hunting districts. Over the past several decades, elk populations have generally increased throughout the planning area. However, the Wildlife Effects Analysis (and the Scoping Letter) suggests that elk populations are over objective in most units. RMEF encourages review of the Montana Fish, Wildlife and Parks (FWP) elk population status reports showing a mixed status of within, below, and above elk population objectives in the Bitterroot National Forest. Much of the perception of over objective populations may be driven by the changing distribution of elk in the Bitterroot Valley. RMEF encourages consideration of recent research conducted by FWP showing increased elk use of lower-elevation private lands in the North Sapphire area (Proffitt et al. 2017). Elk distribution on private lands during the hunting season limits the effectiveness of public hunting efforts to help move the population toward objective. RMEF suggests working in collaboration with FWP to enhance nutritional resources on Forest lands, while developing hunter-based strategies to help redistribute elk onto public land where management through hunting can be more effective.

Elk Nutrition/Forage

RMEF supports the proposed Plan components that reflect current best available scientific information by emphasizing management for elk forage/nutrition in vegetation management projects. A proposed forest-wide guideline states that vegetation management should increase elk forage in winter and spring foraging areas (FW-GDLWLF-ELK-02). Additional proposed Unit-specific guidelines help improve forage in areas that are experiencing elk distribution

challenges or low forage productivity. Other guidelines direct the Forest to include vegetation management activities in future site-specific project planning to increase elk forage quantity and nutritional quality on National Forest System land to help reduce elk conflicts with adjacent landowners in important Units. RMEF is very supportive of active management on our public lands to benefit wildlife habitat and fire risk management. Executing active forest management techniques such as prescribed burns, thinning, and other treatments helps prevent catastrophic wildfires and assists in long-term ecosystem resilience (Prichard et al. 2020, Schultz and Moseley 2019). In addition, managing natural ignitions can help achieve fuels and vegetation goals. Early seral forest provides important habitat for elk and other wildlife and is often achieved following disturbance such as fire and mechanical thinning. Active forest management encourages growth of grasses, forbs, young shrubs, and trees that provide critical forage for elk and other species (Swanson et al. 2011). RMEF supports this work that complements Forest Service fire, fuels, and vegetation management goals.

Cover

RMEF appreciates the attention to clarify language regarding thermal cover, canopy cover, elk habitat effectiveness, winter cover, hiding cover, etc. These terms were used in conflicting ways throughout the 1987 Plan.

The concept of habitat effectiveness is heavily referenced in the literature (Lyon 1983, Lyon et al. 1985, Christensen et al. 1993), but until recently has been mostly measured in terms of the amount of motorized routes present, where nonmotorized areas were assumed to be more effective than roaded areas. An important note is that the term “elk habitat effectiveness” has generally been misused in reference to elk habitat needs. Elk habitat effectiveness was defined by Lyon and Christensen (1992) as the percentage of available habitat that is usable by elk outside the hunting season. Whereas Hillis et al. (1991) defined elk security around large blocks of contiguous habitat for elk to use during hunting season.

The Draft Environmental Assessment discusses the difficulty in measuring thermal cover and provides scientific publications showing that thermal cover is not a limiting factor that should be heavily managed for. RMEF supports the updated science findings and the associated removal of Plan standards to manage for thermal cover within the Plan area. RMEF’s 2020 Scoping comment letter provided similar references (Cook et al. 1998, 2005) and highlighted the need to incorporate other habitat attributes such as forage quality/nutrition (Cook et al. 2013, Rowland et al. 2018, Lehman et al. 2019, Spitz et al. 2019) as well as elk security (Ranglack et al. 2017, Wisdom et al. 2018). There have been significant advancements in understanding elk habitat needs since the establishment of existing Plan components. As mentioned in our 2020 Scoping comment letter, new research highlights the importance of forage, particularly during summer. These studies, including one conducted within/near the Bitterroot National Forest (DeVoe et al. 2018), emphasize the need for active forest management to support sustainable forests and healthy elk populations.

RMEF generally supports the broader vegetative and travel management descriptions that improve clarity about what is needed to provide quality elk habitat across the forest (cover, security, etc.). Several of the proposed forest-wide guidelines direct travel management projects and activities associated with vegetation management projects to minimize disturbance to elk on winter range during the winter and in calving areas during the reproductive season and to avoid impeding migration corridors (FW-GDL-WLF-ELK-02, FW-

GDL-WLF-ELK-03). Additional proposed guidelines for specific Units restrict new permanent road construction to administrative use only (GA-GDL-RC-WLF-ELK-07, GAGDL-SAPH-WLF-ELK-10), and/or stipulates no net increase in motorized route density at the project scale (GA-GDL-SAPH-WLF-ELK-09). This suite of proposed Plan components is intended to provide a flexible, holistic approach to the relationship between travel management and the ecological conditions required for elk. RMEF supports the intent of these guidelines to maintain or restore contiguous blocks of elk habitat that provide security and connectivity both between Federal and non-Federal surrounding lands, in addition to preserving or reducing current road densities in certain areas.

Travel Management

There is one proposed Guideline that RMEF would like the Forest to consider adjusting. Under the proposed Amendment language, FW-WLF-ELK-GDL-01 would direct the Forest to design travel management decisions to maintain elk residency on National Forest System land during the archery and rifle big game hunting seasons by maintaining contiguous blocks of habitat in locations elk traditionally use at times when they are vulnerable to disturbance from hunting or other recreation that may cause displacement from public lands. No additional roads, trails, or areas should be designated for motor vehicle use if hunting district-specific elk trend data (5- or 10-year) suggests the population is below State objectives and declining, or if elk use of National Forest System land in the specific Hunt District has declined independent of population size.

RMEF recognizes the intent with this Guideline but is not in support. It is unlikely that the Forest will be able to effectively measure hunting district-specific elk trend data and/or elk use of the National Forest System land in the long-term. Without clear methodology or approaches of measurement, the Forest would not likely be able to meet the Guideline. In addition, as stated, this Guideline would allow for additional roads, trails, or other motorized use if the elk population is above objective and increasing. The second caveat to this Guideline is related to declining elk use of the Forest land. Again, this would allow for additional roads, trails, or other motorized use if elk use of the Forest land is increasing/stable. Elk security is not a concept that is tied to elk population levels or increasing/decreasing use of an area; but rather disturbance levels and appropriate areas to escape that disturbance. Regardless of how many elk are on the landscape, they will respond to additional open motorized roads in a similar manner (by avoiding disturbance). The Plan should focus on maintaining stabilized use of Forest lands.

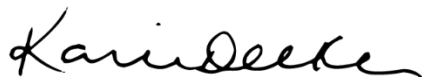
RMEF recognizes that the current seasonal motorized route closures across the Forest during the rifle season result in all hunt districts having greater than 41% secure areas (following Hillis et al. 1991). RMEF also appreciates the Forest's recognition of new research suggesting that the influence of open motorized roads on elk may extend farther during specific seasons. RMEF supports continued discussions with FWP regarding potential disturbance thresholds and looks forward to engaging in these discussions should project-level analyses require travel management adjustments. In the interim, RMEF recommends inclusion of a Guideline to minimize open road, trail, or other motorized disturbance when elk are using the forest for critical periods (e.g., calving) as the FW-GDL-WLF-ELK-01 Guideline also does not address disturbance during other critical times of the year.

To address FW-GDL-WLF-ELK-01 RMEF recommends alternative strategies using Hillis et al. (1991) along with more recent research (Lowrey et al. 2020; Proffitt et al. 2009; Ranglack et al. 2017 & 2022; Smith et al. 2022; Wisdom et al. 2004 & 2018) to identify appropriate security measurements. While the language is confusing in the current Plan, most current research considers a combination of canopy cover measurements and distance to roads in identifying elk security. A suggested adjustment to FW-GDL-WLF-ELK-01 would include, for example: 'Travel management decisions should be designed to minimize disturbance to elk during critical periods (such as calving) *and* to maintain elk residency on National Forest System lands during the big game hunting seasons by maintaining contiguous blocks of habitat in locations elk traditionally use at times when they are vulnerable to disturbance from hunting or other recreation that may cause displacement from public lands. No additional roads, trails, or areas should be designated for motor vehicle use if project-level analysis indicates a likelihood of disturbance significantly affecting elk behavior or distribution. Canopy cover should be compatible with current research recommendations to address elk cover needs, given conditions within the scope of the project analysis area.' This, combined with elk nutrition/forage considerations and other proposed actions should provide for sustainable elk habitat conditions.

In general, RMEF supports the proposed action to alter management strategies on a site-specific basis in the future; however, other current Forest Plan forest-wide standards would remain intact across the suite of resources, in addition to specific Management Area (MA) standards and guidelines that direct management in elk habitat. RMEF understands that no actions would be authorized without future site-specific project analysis and the existing condition would continue to change throughout time as individual projects are implemented; thus, there would likely be no direct effects to elk at the Amendment level. However, direct effects to elk would be analyzed during future site-specific project planning and implementation.

Thank you for the opportunity to comment on the draft EA for the Bitterroot National Forest Plan Programmatic Amendment for Elk Habitat. RMEF looks forward to future collaboration with the Forest.

Sincerely,

A handwritten signature in black ink, appearing to read 'Karie Decker', with a stylized, cursive script.

Karie Decker
Director of Wildlife and Habitat

References

Cook, J.G., L.L. Irwin, L.D. Bryant, R.A. Riggs, and J.W. Thomas. 1998. Relations of forest cover and condition of elk: a test of thermal cover hypothesis in summer and winter. *Wildlife Monographs* 141:1-61.

Cook, J.G., L.L. Irwin, L.D. Bryant, R.A. Riggs, and J.W. Thomas. 2005. Thermal cover needs of large ungulates: a review of hypothesis tests. Pages 185-196 in Wisdom, M.J., technical editor, *The Starkey Project: a synthesis of long-term studies of elk and mule deer*. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.

Cook, R.C., J.G. Cook, D.J. Vales, B.K. Johnson, S.M. McCorquodale, L.A. Shipley, R.A. Riggs, L.L. Irwin, S.L. Murphie, B.L. Murphie, K.A. Schoenecker, F. Geyer, P.B. Hall, R.D. Spencer, D.A. Immell, D.H. Jackson, B.L. Tiller, P.J. Miller, and L. Schmitz. 2013. Regional and Seasonal Patterns of Nutritional Condition and Reproduction in Elk. *Wildlife Monographs* 184:1-45.

Dertien, J.S., C.L. Larson and S.E. Reed. 2021. Recreation effects on wildlife: a review of potential quantitative thresholds. *Nature Conservation* 44: 51-68.

DeVoe, J.D., K.M. Proffitt, M.S. Mitchell, C.S. Jourdonnais, and K.J. Barker. 2019. Elk forage and Risk Tradeoffs during the fall archery season. *The Journal of Wildlife Management* 83:801-816.

Eliason, S.L., 2020. A place to hunt: some observations on access to wildlife resources in the western United States. *Human Dimensions of Wildlife* 26:491-471.

Lehman, C.P., C.T. Rota, and J.J. Millspaugh. 2019. Nutritional condition and physiological stress levels of elk in the Black Hills, South Dakota. *PeerJ* 7:e7185

Lukacs, P.M., Mitchell, M.S., Hebblewhite, M., Johnson, B.K., Johnson, H., Kauffman, M., Proffitt, K.M., Zager, P., Brodie, J., Hersey, K., Holland, A.A., Hurley, M., McCorquodale, S., Middleton, A., Nordhagen, M., Nowak, J.J., Walsh, D.P. and White, P.J. 2018. Factors influencing elk recruitment across ecotypes in the Western United States. *Jour. Wild. Mgmt.*, 82: 698-710.

Marion S., A. Davies, U. Demsar, R.J. Irvine, P.A. Stephens and J. Long. 2020. A systematic review of methods for studying the impacts of outdoor recreation on terrestrial wildlife. *Global Ecology and Conservation* 22: e00917.

Middleton, A.D., M.J. Kauffman, D.E. McWhirter, J.G. Cook, R.C. Cook, A.A. Nelson, M.D. Jimenez, R.W. Klaver. 2013. Rejoinder: challenge and opportunity in the study of ungulate migration amid environmental change. *Ecology* 94: 1280-1286.

Miller, A.B, D. King, M. Rowland, J. Chapman, M. Tomosy, C. Liang, E.S. Abelson, R.L. Truex. 2020. Sustaining wildlife with recreation on public lands: a synthesis of research findings, management practices, and research needs. Gen. Tech. Rep. PNW-GTR-993. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 226 p.

Prichard, S.J., N.A. Povak, M.C. Kennedy, and D.W. Peterson. 2020. Fuel treatment effectiveness in the context of landform, vegetation, and large, wind-driven wildfires. *Ecological Applications* 30: e02104.

Proffitt, K M., J.A. Gude, K.L. Hamlin, and M.A.Messer. 2013. Effects of hunter access and habitat security on elk habitat selection with a public and private land matrix. *The Journal of Wildlife Management* 77:514-524.

Proffitt, K., R. Mowry, M. Lewis, R. Durham, T. Hayes, C. Jourdonnais, P. Ramsey, K. Barker, J. DeVoe, and M. Mitchell. 2017. North Sapphire Elk Research Report. Montana Fish Wildlife and Parks, Helena, MT. Retrieved from <http://fwp.mt.gov/fwDoc.html?id=93166>.

Quigley, T.M., and M.J. Wisdom. 2015. The Starkey Project: Long-term research for long-term management solutions. Pages 9-16 in Wisdom, M.J., technical editor, *The Starkey Project: a synthesis of long-term studies of elk and mule deer*. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.

Ranglack, D.H., K.M. Proffitt, J.E. Canfield, J.A. Gude, J.Rotella, and R. Garrott. 2017. Security areas for elk during archery and rifle hunting seasons. *Journal of Wildlife Management* 81:778-791.

Rowland, M. M., M. J. Wisdom, B. K. Johnson, and M. A. Penninger. 2005. Effects of roads on elk: implications for management in forested ecosystems. Pages 42-52 in Wisdom, M. J., technical editor, *The Starkey Project: a synthesis of long-term studies of elk and mule deer*. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.

Rowland, M.M., M.J. Wisdom, R.M. Nielson, J.G. Cook, R.C. Cook, B.K. Johnson, P.Coe, J.M. Hafer, B.J. Naylor, D.J. Vales, R.G. Anthony, E.K. Cole, C.D. Danilson, R.W. Davis, F. Geyer, S. Harris, L.L. Irwin, R. McCoy, M.D. Pope, M. Vavra. 2018. Modeling Elk Nutrition and Habitat Use in Western Oregon and Washington. *Wildlife Monographs*. 199. 1-69.

Sawyer, H., M.J. Kauffman, A.D. Middleton, T.A. Morrison, R.M. Nielson and T.B. Wyckoff. 2013. A framework for understanding semi-permeable barrier effects on migratory ungulates. *Journal of Applied Ecology* 50:68-78.

Schultz, C.A., and C. Moseley. 2019. Collaborations and capacities to transform fire management. *Science* 366:38-40.

Spitz, D.B., M.M. Rowland, D.A. Clark, M.J. Wisdom, J.B. Smith, C.L. Brown, and T. Levi. 2019. Behavioral changes and nutritional consequences to elk (*Cervus Canadensis*) avoiding perceived risk from human hunters. *Ecosphere* 10(9): e02864.

Swanson, M.E., J.F. Franklin, R.L. Beschta, C.M. Crisafulli, D.A. DellaSala, R.L. Hutto, D.B. Lindenmayer, F.J. Swanson. 2011. The forgotten stage of forest succession: early successional ecosystems on forest sites. *Frontiers in Ecology and the Environment* 9:117-125.

Wisdom, M.J., technical editor. 2005. *The Starkey Project: a synthesis of long-term studies of elk and mule deer*. Alliance Communications Group, Lawrence, Kansas, USA.

Wisdom, M. J., A. A. Ager, H. K. Preisler, N. J. Cimon, and B. K. Johnson. 2005. Effects of Off-Road Recreation on Mule Deer and Elk. Pages 67-80 in Wisdom, M. J., technical editor, *The Starkey Project: a synthesis of long-term studies of elk and mule deer*. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.

Wisdom, M.J., H.K. Preisler, L. Naylor, R.G. Anthony, B.K. Johnson, M.M. Rowland. 2018. Elk responses to trail-based recreation on public forests. *Forest Ecology and Management* 411:223-233.

Wisdom, M.J., H.K. Preisler, L. Naylor, R.G. Anthony, B.K. Johnson, M.M. Rowland. 2018. Elk responses to trail-based recreation on public forests. *Forest Ecology and Management* 411:223-233.