

WILDLIFE-FRIENDLY FENCE POLICY ON FEDERAL PUBLIC LANDS MANAGED BY THE U.S. FOREST SERVICE AND BUREAU OF LAND MANAGEMENT

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OVERVIEW



Photo Credit: Earthisland.org

- Research Purpose: Create a resource summarizing the laws, regulations, and policies relevant to wildlife and fences to help wildlife advocates better advocate for wildlife-friendly fencing on USFS and BLM lands.
- Questions guiding this presentation
 - What is “wildlife-friendly fencing” and why is it important?
 - What, exactly, did I research and what did I find?
 - What can wildlife advocates do with this information?



Photo Credit: USFWS



Photo Credit: RMEF

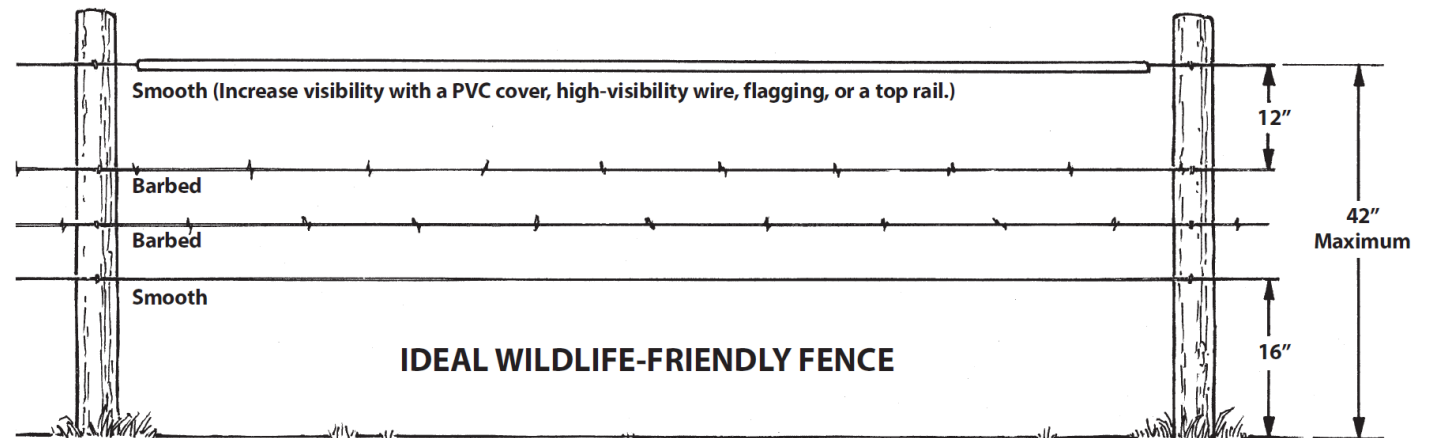
<https://www.rmef.org/elk-network/fencing-with-wildlife-in-mind/>

BACKGROUND: WHAT IS WILDLIFE-FRIENDLY FENCING AND WHY IS IT IMPORTANT?

- History
 - Barbed wire patented in 1873
 - Fences ubiquitous across the west w/in decades (grazing focus)
 - Last 3 decades – steadily increasing understanding of the effects of fencing on wildlife
- Wildlife issues associated with traditional fences
 - Direct injury/mortality (e.g., ungulate entanglement, sage-grouse fence strikes)
 - Habitat fragmentation
 - Migration disruption
 - Separation of young from adults

BACKGROUND: WHAT MAKES A FENCE WILDLIFE-FRIENDLY?

- Examples of what decreases the threat to wildlife*
 - $\leq 42''$ tall (increase ability of most ungulates to jump over)
 - Top wires $\geq 12''$ apart (decrease entanglement hazard)
 - Smooth bottom wire $\geq 16-18''$ above ground (pronghorn/fawn/calf permeability)
 - Flagged top wire (increase visibility for low flying avian species)
 - Maintenance (loose wires increase hazard)



Wendy Hanophy, *Fencing with Wildlife in Mind* (Denver, CO: Colorado Division of Wildlife, 2009).

* Actual construction specifications depend on type of livestock being contained and wildlife species present in the area.

BACKGROUND: HOW SIGNIFICANT IS THE THREAT POSED BY FENCING TO WILDLIFE?

- Scale of the issue
 - ~1 million km of fence in the western U.S.
 - CO/UT study: 1 ungulate death per 4 km of fence annually (~250k deaths/year)
 - NM/OK study: fence strikes leading cause of death for lesser prairie chicken (40%)
 - Compounded by climate change as wildlife stress increases and migration routes shift

BACKGROUND: HOW DO PUBLIC LANDS FACTOR INTO THE LANDSCAPE-SCALE ISSUE OF WILDLIFE-FENCE CONFLICT?

- Two largest land managers in U.S.
 - BLM = 247.3 million acres
 - USFS = 193 million acres
- Critical wildlife habitat, important for biodiversity and connectivity
- Most fences on these public lands are used for managing livestock
 - Private grazing permitted on roughly 2/3 of BLM land and 1/2 of USFS land
 - Fences are used for other purposes (e.g., recreation) but these typically lack the scale required to significantly impact wildlife



Photo Credit: Javier Gonzalez



BACKGROUND: EXISTING EFFORTS

- Many organizations are working to promote wildlife-friendly fencing at the landscape level
 - This can include public lands, but is typically focused on private lands
- Literature review did not reveal a comprehensive study of BLM and USFS fence policies and practices
- My research fills this void, including recommendations for improving wildlife-friendly fence policies
- Optimistically, through the hard work of wildlife advocates, this work will ultimately
 - Lead to exemplary and enforceable wildlife-friendly fence policies within both agencies
 - Shift fencing norms in such a way that other federal agencies, state agencies, and private landowners follow suit

WHAT DID I RESEARCH AND WHAT DID I FIND?

- Research Questions
- Methods, Scope, and Limitations
- General Legal and Policy Context
- USFS Statutes, Regulations, Directives, and Planning
- BLM Statutes, Regulations, Directives, and Planning



RESEARCH QUESTIONS



Photo Credit: B.J. Baker

1. What **laws, regulations, and directives** (including agency manuals and handbooks and executive orders) are most relevant and potentially useful to making wildlife-friendly decisions about fencing on federal public lands administered by the USFS and BLM?
2. What fence-related guidance is provided in USFS and BLM regulations and directives related to forest/field office **planning**, allotment management plans, and grazing permit/lease decision making?
3. Can these laws, regulations, and directives be drawn upon to **consider, justify, and/or compel** the use of wildlife-friendly fencing by the USFS and BLM?
4. Within the current statutory framework governing USFS and BLM management, what **policy-level changes** can be made to better encourage and compel the use of wildlife-friendly fencing on federal lands managed by the USFS and BLM?

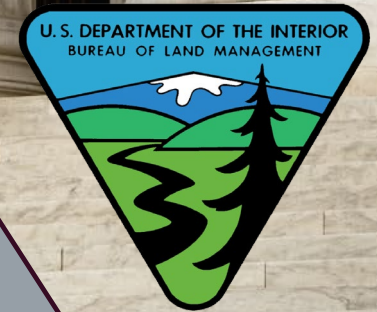


METHODS, SCOPE, AND LIMITATIONS

- Research Methods
 - Academic Literature Review
 - Wildlife Biology
 - Public Land Policy
 - Statutes, Regulations, Directives
 - Planning and Implementation
 - Informal conversations with land managers
- Scope and Limitations
 - Focus exclusively on USFS and BLM policies
 - Reviewed publicly available directives (agency manuals, handbooks, orders)
 - Reviewed a limited number of planning/decision documents within western U.S. for analytical purposes
 - Pertinent to policy at time of research (2021)
- Note on the ESA
 - ESA provides compelling hooks to prevent harm to listed species
 - Most species known to be impacted by fences are not listed
 - Consequently, this research focuses on policies outside the purview of the ESA that guide fencing decisions



GENERAL LEGAL AND POLICY CONTEXT



STATUTES

NFMA
MUSYA
FS Organic Act

FLPMA
PRIA
TGA

REGULATIONS

2012 Planning Rule
(36 C.F.R. Part 219)
Range Management
(36 C.F.R. Part 222)

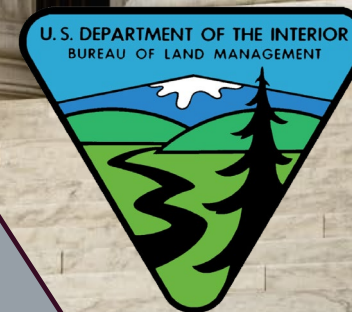
1983 Regulations
(43 C.F.R. Chapter II)

DIRECTIVES

Forest Service Manual (FSM)
Forest Service Handbook (FSH)
Executive Orders

BLM Manual
BLM Handbook
Executive Orders

GENERAL LEGAL AND POLICY CONTEXT (PLANNING)



PLANNING REGULATIONS

2012
Planning Rule
(36 C.F.R. § 219)

1983 Planning
Regulations
(43 C.F.R. § 1600)

UNIT-LEVEL PLANS

Land and Resource
Management Plans
(LRMPs) – Forest Level

Resource Management
Plans (RMPs) – Field
Office Level

PROJECTS AND ACTIVITIES

Allotment Management Plans (AMPs)
Grazing Leases and Permits
Annual Operating Instructions (AOIs)
Range Improvement Projects

USFS STATUTES

- Forest Service Organic Administration Act of 1897 (Organic Act)
- Multiple-Use Sustained-Yield Act of 1960 (MUSYA)
- National Forest Management Act of 1976 (NFMA)





Organic Act

- Established the National Forest System
 - Authorized agency to manage the occupancy and use of national forest lands
- Identified specific purposes of national forests
 - “to improve and protect the forest”
 - to secure “favorable conditions of water flows”
 - “to furnish a continuous supply of timber”
 - Wildlife not considered

MUSYA

- Congress’s 1st attempt to reign in focus on timber harvest
- Directs USFS to manage lands for “outdoor recreation, range, timber, watershed, and wildlife and fish purposes.”
- Lengthy multiple-use definition “breathe[s] discretion at every pore” (*Perkins v. Bergland*, 608 F.2d 803 (9th Cir. 1979))
 - Statute grants USFS great *authority* to manage for “wildlife and fish” purposes, but does not *compel*



NFMA

- Requires planning at the forest level
- Wildlife diversity mandate: plans are required to “provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.”
- Consistency provision: USFS to promulgate **regulations** consistent with the statute, plans must be consistent with the regulations, forest projects and activities must be consistent with the plan

2012 Planning Rule

USFS REGULATIONS

- 2012 Planning Rule (36 C.F.R. § 219)
 - Lays out detailed planning process that includes assessment, plan development, and monitoring phases
 - Process concurrent with NEPA EIS
 - Both NFMA and NEPA require opportunities for public involvement
 - Plans must contain specific plan components (Desired Conditions, Objectives, Standards, Guidelines, Goals, Suitability of Lands)
 - Collectively, plan components must address
 - Sustainability (§ 219.8)
 - Diversity of plant and animal communities (§ 219.9)
 - Ecological integrity, connectivity
 - Multiple Use (§ 219.10)
 - Planners must use the “best available scientific information” [BASI] to inform the planning process (§ 219.3)
- Range Management (36 C.F.R. §§ 222.3 and 222.4)
 - USFS has great authority over grazing permits and grazing management





USFS DIRECTIVES

- FSH 1909.12 – Land Management Planning Handbook
 - Expands on 2012 Planning Rule concepts of ecological integrity, connectivity, sustainability, and healthy wildlife populations
- FSM 2200 – Range Management Manual
- FSM 2600 – Wildlife, Fish, and Sensitive Plant Habitat Management Manual
 - Policy to coordinate fish and wildlife management “with other uses and activities to accomplish habitat management objectives and to *reduce detrimental effects on wildlife and fisheries*,” (FSM 2630.3(2), emphasis added) and
 - “[m]itigate the negative effects of other resource projects on wildlife...” (FSM 2630.3(3))
- USDA Departmental Regulation 9500-004: “It is the policy of the Department to assure that the values of fish and wildlife are recognized, and that their habitats...are recognized, and enhanced, where possible, as the Department carries out its overall missions.”

USFS STATUTES, REGULATIONS, DIRECTIVES SUMMARY



- Ample *authority* for land managers to make decisions about fencing
- Ample language requiring land managers to *consider* wildlife needs and the effects of infrastructure on wildlife
- Full agency *discretion* retained (lack of compulsory language)
- Wildlife-friendly fencing is not explicitly considered at any of these levels

PLANNING AND IMPLEMENTATION

Reviewed 6 Forest Plans (and associated documents) revised under the 2012 Planning Rule (4 complete, 2 nearly complete)

- Plans varied significantly in their treatment of wildlife-fence conflict
- Better job of considering fence impacts on ESA listed species and species of conservation concern than others
- Relevant components pertain to new fencing. What about existing?
- Deferred fencing decisions to AMP level

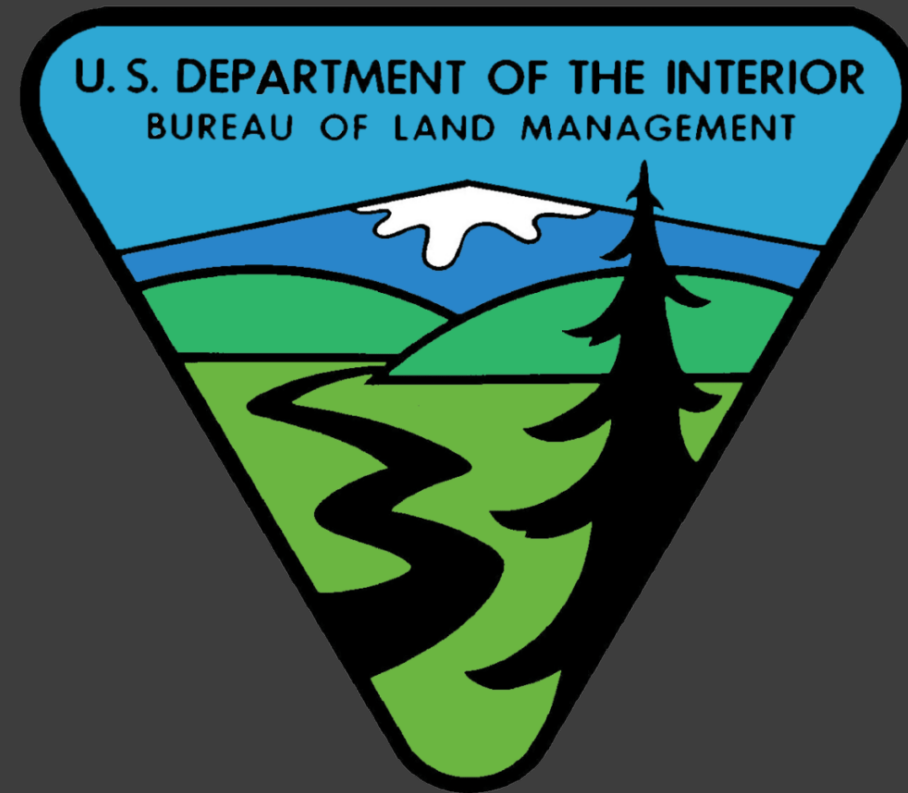
Reviewed 10 NEPA documents associated with grazing allotment management plans (AMPs) – 5 states, 6 forests, 2009-2021

- Highly variable in acknowledgement/treatment of wildlife-fence conflict



BLM STATUTES

- Taylor Grazing Act of 1934 (TGA)
 - Authorizes Secretary to issue grazing permits (Section 3) and grazing leases (Section 15)
- Federal Lands Policy and Management Act of 1976 (FLPMA)
- Public Rangelands Improvement Act of 1978 (PRIA)
 - Funding for range improvements
 - Formula for grazing fees





FLPMA

- Multiple-use mandate: includes “wildlife and fish” as a use, extremely discretionary (43 U.S.C. § 1702(c))
- Planning requirement (43 U.S.C. § 1712)
 - Shall give priority to designation and protection of ACECs (43 U.S.C. § 1712(c)(3))
 - ACEC definition: “areas within the public lands where special management attention is required...to protect and prevent irreparable damage to...fish and wildlife resources...” (43 U.S.C. § 1702(a))
- AMPs shall describe how livestock operations will meet multiple-use objectives (43 U.S.C. § 1702(k)(2))
- UUD standard: “In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent **unnecessary or undue degradation** of the lands.” (43 U.S.C. § 1732(b))



Photo Credit: Simon Buzzard



BLM REGULATIONS

- Planning Regulations (43 C.F.R. § 1600)
 - Interdisciplinary approach required (§ 1610.1(c))
 - ACECs shall be identified and considered (§ 1610.7-2)
- Definitions (43 C.F.R. § 3809.5)
 - UUD – Basically says degradation is unnecessary or undue if other laws are violated
 - Missed opportunity for substantive interpretation that explicitly includes wildlife
- Grazing Regulations(43 C.F.R. § 4100)
 - AMPs are to be “prepared in careful and considered consultation, cooperation, and coordination with...the interested public.” (§ 4120.2(a))
 - Fence construction requires a permit (§ 4120.3-3(a)), permits must specify the type and location of fences (§ 4120.3-4), and wildlife considerations must be taken into account (§ 4100.0-5)



BLM DIRECTIVES

- BLM Manual 6840 – Special Status Species Management
 - No mention of fences
- **BLM Handbook H-1741-1 – Fencing**
 - Detailed guide covering how to construct wildlife-friendly fencing
 - Provides guidance for fence removal/modification
 - 1989 (needs updated)
 - No consideration of avian species
- SO #3362 (2018)
 - Directs the BLM to “[e]valuate and appropriately apply site-specific management activities... that conserve or restore habitat necessary to sustain local and regional big-game populations through measures that may include...working cooperatively with private landowners and State highway departments to achieve permissive fencing measures, including potentially modifying (via smooth wire), removing (if no longer necessary), or seasonally adapting (seasonal lay down) fencing if proven to impede movement of big game through migration corridors.”
- Departmental Manual 516, Chapter 11 (BLM implementation of NEPA)
 - Fences not identified as a CE (minor and reasonable exceptions)

BLM STATUTES, REGULATIONS, DIRECTIVES SUMMARY

- Ample *authority* for land managers to make decisions about fencing
- Ample language requiring land managers to *consider* wildlife needs and the effects of infrastructure on wildlife
- Full agency *discretion* retained (lack of compulsory language)
- Fencing Handbook H-1741-1 – right idea, but it’s outdated, incomplete, and its use is discretionary



PLANNING AND IMPLEMENTATION

Reviewed 6 Field Office Resource Management Plans (and associated documents) – 6 Districts, 4 States

- Plans varied significantly in their treatment of wildlife-fence conflict
- ESA listed and special status species received significantly more attention in plans (e.g., sage-grouse)
 - GRSG ARMPAs – regional plan amendments to create adequate regulatory mechanisms
- Inconsistent reference to Fencing Handbook
- Deferred fencing decisions to AMP level

Reviewed 7 EAs associated with grazing allotment management plans (AMPs) – 7 states, 7 FOs, 2015-2020

- Consistent acknowledgement of wildlife-fence conflict and requirements for new fences
- Most AMPs referenced Fencing Handbook
- Consistent lack of consideration of existing fences (remove, modify, replace)



CONCLUSIONS (1 OF 2)

- Policies for both agencies give ample authority and discretion to land managers regarding wildlife-friendly fencing decisions
 - This discretion without any enforceable standards leads to an inconsistent, piecemeal approach that is inappropriate for the scale of the issue
 - Wildlife consideration required, but nothing to compel
- Forest and Field Office plans are wildly inconsistent in their fencing requirements
- Nonetheless, most new fences on USFS and BLM lands seem to be constructed in a wildlife-friendly manner*
 - Wildlife-friendly fences also benefit public land ranchers
 - Consistent with other uses
 - Wildlife-friendly fencing itself is not controversial, but related agency discretion may be



Photo Credit: Kathy Lichtendahl



CONCLUSIONS (2 OF 2)

- Why policy improvements are needed despite fence construction practices
 - Formalize practices that have become the new norm
 - Reduce public uncertainty
 - Set a strong precedent for other agencies, private landowners, and the ranching industry
 - Deal with existing fences not meeting wildlife-friendly standards (funding)

- So, what can wildlife advocates and the interested public do?

Photo Credit: Paul Winterman



RECOMMENDATIONS FOR WILDLIFE ADVOCATES



POLICY



PLANNING



PARTNERSHIPS



POLICY RECOMMENDATIONS

- Clear agency-wide standards (Directive Level)
 - BLM – update Fencing Handbook H-1741-1
 - USFS – adopt similar directive
- ...and make them enforceable, non-discretionary (Regulation Level)
 - Regulations to require adherence to fencing directive
- Windows of opportunity
 - Periodic revisions to: grazing regulations, directives, unit-level plans, AMPs, grazing permits
 - America the Beautiful, 30 x 30 – define what counts as “conserved” – avenue for range reform?
- Executive or Secretarial Order (expand on SO 3362)
- Budget/Funding (existing fence)



PLANNING INVOLVEMENT

- Last level to impact landscape-scale policy
- Capitalize on agency authority and ample requirements to consider wildlife
- Opportunities for local involvement and relationship building
 - Plan revision structure for both agencies facilitates public involvement
- Early involvement (USFS – assessment phase, BLM – scoping period)
- Appendices
 - Appendix A – Suggested Plan Component Language for USFS Forest Plans and BLM Resource Management Plans
 - Goal: enforceable, non-discretionary language
 - Appendix B – Condensed Summary for USFS LRMP Involvement
 - Appendix C – Condensed Summary for BLM RMP Involvement



PARTNERSHIP RECOMMENDATIONS

- Chronic funding/resource constraints
- Advocates can partner with the USFS and BLM to help in numerous ways
 - Volunteer to remove/modify existing fence
 - Leverage power of member-based organizations and private interests
 - Partnering with research institutions (i.e., universities)
 - Match BASI with agency decisions
 - Match research with agency needs
- Leverage authorities, knowledge, and privileged role of state and tribal wildlife agencies in planning processes
 - State and tribal wildlife action plans (SWAPs) required for State and Tribal Wildlife Grants Program (P-R and D-J)
 - Ensure SWAPs articulate fencing impacts on wildlife
 - Work with states/tribes and agency planners to incorporate information from SWAPs into unit-level plans



THANK YOU!

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- Committee: Professor Michelle Bryan and Dr. Brian Chaffin
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