

Swan View Coalition Nature and Human Nature on the Same Path



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Third Supplement to Keith Hammer's "Roads to Ruin" and "TMRD" Reports

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February 6, 2018

This paper and its attachments provide supplementary documentation of matters discussed in two of my previous reports: 1) "Roads to Ruin: The Flathead National Forest Shirks its Road Reclamation Duties" dated May 2016 and 2) "Only Decommissioned Roads Removed from the Forest Development Road System May be Omitted from Calculations of Total Motorized Route Density [TMRD] on the Flathead National Forest" dated 6/4/15 and updated 2/7/16.

My TMRD report is included as Appendix A in my Roads to Ruin report, which can be found at: http://www.swanview.org/reports/Roads_to_Ruin.pdf. These reports detail Flathead Forest Plan requirements that the Flathead National Forest, in order to lower TMRD, must both remove roads from the Forest Development Road System (System) and re-vegetate those roads so they no longer function as a road or trail.

On December 5, 2017, I issued a Supplement to these reports that includes further discussion and documents demonstrating the Flathead used the term road "reclamation" to also mean the road must be "decommissioned" and removed from the road System in the 1995 Flathead Forest Plan Amendment 19 (A19). It details how A19 also requires that reclaimed/decommissioned roads be re-vegetated after having all of their stream-aligned culverts removed so they can't plug and blow out. The road can't simply be physically blocked off or strewn with logs and rocks. My First Supplement can be found at: http://www.swanview.org/reports/Supplement_to_Roads_to_Ruin_171205.pdf.

On January 31, 2018 I issued a Second Supplement to the above reports, which looks at Fish and Wildlife Service's Biological Opinions on A19, their reporting requirements, and the Flathead's responsive annual A19 reports. These documents confirm that both agencies understood road "reclamation" to be synonymous with road "decommissioning" under A19 and that A19 was to cap the miles of road on the portions of the Flathead National Forest where A19 is applied. My Second Supplement is at: http://www.swanview.org/reports/Second_Supplement_to_TMRD_Report.pdf

Third Supplement: Total Motorized Route Density Evolved from Total Road Density

This Third Supplement helps remind reviewers of the context within which TMRD developed and evolved from Total Road Density (TRD) and why A19 put a cap on the

amount of roads that could exist in grizzly bear habitat. This evolution began in part on the Flathead National Forest as it sought to clarify its 1986 Forest Plan standards for Open Road Density (ORD).

In 1990, the Flathead initiated an ORD Draft Environmental Impact Statement (ORD DEIS) (Federal Register Vol. 55, No. 41, 3/1/90, 7351-7352):

This notice revises the original notice in that it now only addresses vehicle use on roads . . . The Forest Service will prepare an EIS for a proposal to amend the Flathead National Forest Land and Resource Management Plan (LRMP) of January 1986. Purpose of the amendment is to establish and clarify Forest wide standards relative to managing vehicle travel on roads. The amendment will clarify assumptions, definitions and applications procedures for an average open road density standard.

The ORD DEIS, though never completed, contended with issues regarding “what size area should be used to compute average ORD” and “can limited vehicle use occur on a road and still accomplish the objectives of protecting wildlife habitat?” (See the 1990 Flathead National Forest “Open Road Density Standards Proposal”, Attachment 1).

The April 1993 South Fork Grizzly Bear Project Progress Report for 1992 provided answers to these questions (Mace and Manley 1993, pages 25-26):

Techniques for calculating road densities that average over large blocks of land (e.g. a BMA), inclusive of both high and low elevations, result in inadequate assessments of grizzly bear response to road densities . . . For example, our entire analysis area has an average open road density of 0.63 mi/mi² and meets current road density standards. Our precise [“moving window” GIS] open road density technique produces the same average open road density. However, from our method we know that 26% of the analysis area (70 mi² of habitat) exceeds the 1.0 mi/mi² standard. When all roads are included in calculations for our analysis area, the average total road density is 1.13 mi/mi² with 22% (58 mi²) of the area having >2 mi/mi². This 58 mi² of habitat was used less than expected by radio-instrumented bears . . .

Apparently, grizzly bears adjust their habitat use patterns in part to both precise open road densities and precise total road densities. Unless a road has completely revegetated, managers should assume that some level of human use is occurring along closed roads, and grizzly bears will respond to that use . . . The preponderance of adult females in the population suggests that survival of individual bears is directly related to their selection for unroaded areas. To date, the data suggest that if unroaded habitats are reduced in quantity and size, the number of adult females will eventually decline.

Therein lies the scientific basis for requirements limiting TRD, not just ORD. It is also the basis for requirements that “reclaimed” roads be fully revegetated to no longer function as a road or trail, motorized or non-motorized, in order to not be included in calculations of TRD/TMAD/TMRD. It is also the basis for requirements that the total amount of roads in bear habitat be capped and that roadless lands not be roaded. All of

these requirements are found in A19 and its implementation from 1995 - 2011, as described in my TMRD report and my two prior Supplements of it. As researchers, land management and wildlife management agencies worked to also include the effects of motorized trails into management standards, ORD and TRD evolved from Road densities into Motorized Access densities OMAD and TMAD, and into Motorized Route densities OMRD and TMRD.

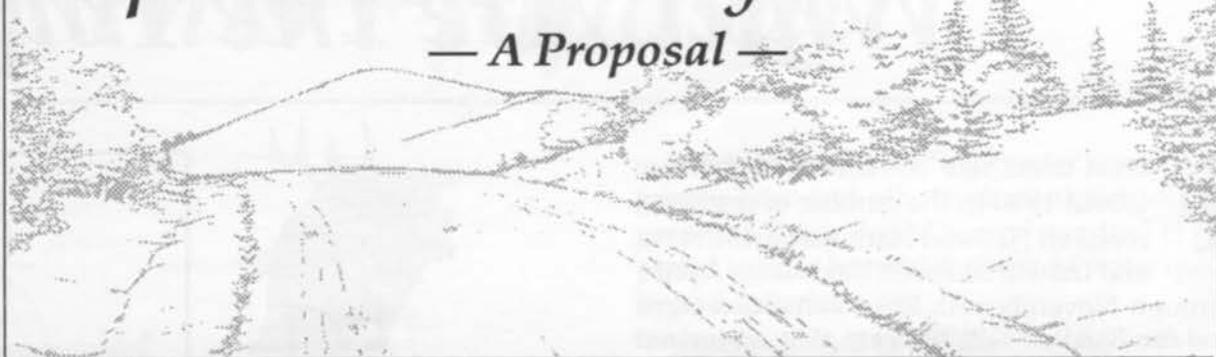
A 3/31/94 letter from Bridger-Teton Forest Supervisor Brian Stout addressing the Interagency Grizzly Bear Committee's Access Management Taskforce Report's definition of "reclaimed/obliterated road" is instructive here (Attachment 2):

Unnecessary definition. Once a road is reclaimed/obliterated, it becomes a part of the landscape and should be measured vegetatively. Road densities are what is important and reclaimed/obliterated roads are measured by removing them from the open or restricted road categories. Calculated road densities will measure the change.

In other words, a reclaimed/obliterated road should no longer be called a road and be fully revegetated in order to lower TRD/TMAD/TMRD. It is by no mistake that the Flathead National Forest interpreted A19 to require that a reclaimed road must also be decommissioned, revegetated and removed from the road "system" in order to not be included in calculations of TMRD.

Open Road Density Standards

— A Proposal —



FLATHEAD National Forest

The need for increased management of motor vehicle use on Forest roads has been evolving over the last few decades. The Flathead National Forest Land and Resource Management Plan, released in 1986, included guidelines for a maximum Open Road Density (ORD) standard which would provide habitat security for grizzly bear and other wildlife, such as elk.

Attempts to implement the Open Road Density standard have been difficult because of differences in the public's interpretation of how it should be calculated. Some interpretations would require restricting access on more roads for the sake of wildlife security, while others tend to restrict fewer roads for greater vehicle recreation access. This proposal was drafted to clarify how Open Road Density standards would be applied.



Sample Road Restriction Sign

The Issue

What is the appropriate ORD in areas occupied by grizzly bear and elk? The following questions were considered in drafting this proposal:

- What is a "road"?
- Should only roads under National Forest jurisdiction be used in ORD calculations?
- What size area should be used to compute the average ORD?
- During what time period will the ORD standard be applied?
- Can limited vehicle use occur on a road and still accomplish the objectives of protecting wildlife habitat?
- What should the ORD standard be in critical grizzly bear habitat?
- How will timber harvests and other management activities be affected by the ORD standards?

Open Road Density (ORD)

Refers to the number of miles of open roads, divided by the area in square miles in which they are located. ORD is expressed in terms of the average number of road miles per square mile.

What Are the Impacts

Forest users will see a modest increase (about 15%) in the number of restricted roads on Flathead National Forest, State, and Industrial Forest lands from April 1 through November 30. Road restriction signs and/or barriers will indicate that motorized vehicles are not permitted beyond that point. However, by hiking, horseback riding, or bicycling, users can still access areas restricted to motor vehicles.

Studies on grizzly bear and elk indicate that those species are sensitive to road traffic. The primary impact is the associated use that occurs on the roads and in adjacent areas. The problem doesn't appear to be the physical presence of the road itself. Therefore, restricting use of some roads in critical big game habitat areas protects grizzly bear, elk and deer during those times when Forest use by humans is at its peak. By providing greater habitat security, this proposal would improve wildlife population dispersal and foster an increase in the number of big game animals—a benefit to hunters.



Miles of Road Open For Motorized Use*
Existing Situation vs. the Proposal

	Existing Situation	Proposal	Amount of Change
Early Spring 4/1-5/14	1513	1340	-173
Late Spring 5/15-6/30	1577	1416	-161
Summer 7/1-8/31	2055	1763	-292
Fall 9/1-10/14	1744	1475	-269
Hunting 10/15-11/30	1578	1416	-162

*National Forest System roads on National Forest System lands

TABLE 1

This proposal will reduce the number of motorized access compared to the previous consultation with the U.S. Fish and Wildlife Service. The proposal should provide security for the species, such as elk, is also enhanced through the proposal. The effects on hunters, fishermen, and other types of Forest users are summarized in the following table.

ts of This Proposal?



In addition to providing greater security for grizzly bear and elk, implementation of the proposed Open Road Density standard is expected to have beneficial effects on water quality and fisheries.

Road management in the Flathead area is a co-operative effort between the U.S. Forest Service, the U.S. Fish and Wildlife Service, the State Department of Lands, the Montana Department of Fish, Wildlife, and Parks, Plum Creek Timber Co., and Champion International. The new road restriction signs reflect that joint effort.



The Forest Service and the U.S. Fish and Wildlife Service are jointly responsible for the recovery of threatened and endangered species on National Forest Service lands. The Forest Service implements habitat management activities; the U.S. Fish and Wildlife Service regulates those recovery activities and acts as an advisor on management activities related to the Endangered Species Act.



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Effects of the Proposal on Public Motorized Use

User Type	1000 mile-days*	
	Existing Situation	Proposal
Spring Bear Hunter	46	-2%
Recreation Driver	362	-18%
Fisherman	277	-17%
Woodcutter	362	-16%
Berry Picker	121	-18%
Fall Hunter	139	-17%

*Mile-days: the product of days available times miles of road open to public motorized use.

TABLE 2

The Proposal



Nine alternatives were developed to clarify ORD standards relative to travel management, taking into account the major issues and concerns identified through public input.

This proposal, based on the preferred alternative, sets the following travel management guidelines in response to the issue identified on page 1:

- A road is defined as "a route, constructed or evolved, more than 300 feet in length that is reasonably and prudently driveable with a conventional passenger car or pickup." Features such as trails are not considered in the ORD calculation. The ORD standard will apply only to roads as defined above.
- Areas 5,000 to 15,000 acres in size will be used to calculate ORD in critical grizzly bear habitat, and will include National Forest System lands, State lands, and Industrial Forest lands.
- The ORD standard will apply from April 1 through

November 30 in critical grizzly bear habitat.

- A road is considered "restricted" if restriction devices limit the use, including administrative use, to no more than an average of 5 vehicles per week.
- A maximum ORD standard of two miles of open road per square mile will apply in some areas of less critical grizzly bear habitat, while an ORD standard of one mile per square mile will apply in all areas of critical grizzly bear habitat.
- The proposed ORD standard will not apply during major project activity such as a timber harvest. The appropriate road access direction for these projects will be determined through site-specific analysis.

Public Comment Invited

Comments on this proposal must be received
no later than

January 31, 1991

by the:

Forest Supervisor
Flathead National Forest
1935 Third Avenue East
Kalispell, MT 59901

A copy of the Draft Environmental Impact
Statement can be obtained at the same address.

For further information, contact:
Chuck Snyder or Tom Wittinger
(406) 755-5401

FLATHEAD NATIONAL FOREST
1935 Third Avenue East
Kalispell, MT 59901



United States
Department of
Agriculture

Forest
Service

Bridger-Teton
National
Forest

P.O. Box 1888
Jackson, WY 83001

REPLY TO: 2670

Date: May 24, 1994

SUBJECT: Grizzly Bear/Access Management Taskforce Report

RECEIVED BY
WILDLIFE & FISHERIES

MAR 31 1994

TO: National Grizzly Bear Coordinator, R1

Access management is one of the toughest issues the Forest Service deals with. We do not envy your task. Our comments are based on lessons learned while working on Forest Plans and Travel Management Plans.

Striving for consistency among land management agencies is essential. Though it was not your assigned task, we believe a more universal product should be envisioned while still allowing the measurement of the effects of human access on grizzly bears. There should not be a separate set of definitions for grizzly bears, for elk modeling, for recreation travel management, etc. There should be a set of definitions which meet all planning needs, where one or a combination of those definitions would provide the needed grizzly bear data. What is needed is a set of definitions to implement ecosystem management which could be used universally in planning documents for consistency.

When finalizing the definitions, recreation planners, law enforcement personnel, and engineers should be included on the team to ensure the above happens while avoiding inconsistency with other definitions commonly used in land management.

As an example, a restricted road is already defined for use in Forest Service land management as a road where travel is restricted a part of the year. Perhaps in the overall planning scheme we need to retain that definition, yet have various levels of restricted roads entered into the roads database for special management needs or measurement. Then anyone updating the roads data layer for the CEM could go to the agencies' access data base, locate the roads defined as restricted roads, level X (your proposal) and attribute them as such and remaining roads with motorized travel would be attributed as open roads and CEM data and land management planning data needs would both be met.

Specific comments on the definitions.

ROAD

Suggest replacing "prudently drivable with a" which is subjective with "currently being driven on by" or "passable by"

CLOSED ROAD

Looks like multiple objectives are being addressed with this definition. Suggest that you insert "currently" before physically and a period after "legally prohibited." A closed road is then defined. Wheeled motorized access does not occur. A need exists to develop a definition for over-snow vehicles to address your motorized travel concern. The definition should not only include the road bed, which in our case it becomes a motorized trail as over-snow vehicles are involved, but any area where over-snow motorized travel will impact the bear.

RESTRICTED ROAD

Replace with RESTRICTED ROAD, NONMOTORIZED, OR MOTORIZED TRAIL and define as "roads and trails which use is restricted seasonally or yearly. Dates of restriction coincide with specific



resource concerns such as: grizzly bear security, elk calving, crucial big game winter range, potential erosion areas, etc.' The specific levels of restriction with their more specific language can be developed under the broad definition (see paragraph 4 of this letter).

RECLAIMED/OBLITERATED ROAD

Unnecessary definition. Once a road is reclaimed/obliterated, it becomes a part of the landscape and should be measured vegetatively. Road densities are what is important and reclaimed/obliterated roads are measured by removing them from the open or restricted road categories. Calculated road densities will measure the change.

TRAIL

Rename NONMOTORIZED TRAIL. Replace 'are not ... or pick up' with 'where motorized travel is prohibited.'

MOTORIZED TRAIL

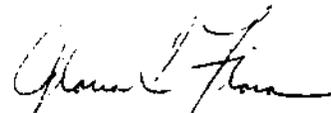
Replace with 'a created or evolved access route identified for travel by motorized vehicles such as 4-wheel drive pickups, off highway vehicles, trail bikes, and snowmobiles.' Key to this definition is *identified* which means the vehicles must stay on the designated route. Another definition is needed for areas where the types of motorized vehicle listed above are allowed to travel cross country which would have an entirely different effect on the bear.

Again, I must emphasize that we feel it is key that the definitions utilized to measure the effects of human access on bears be compatible with the overall definitions of access management in a ecosystem based land management context is key.

Addressing the methodology and procedures section, the concept is good. We suggest that it be more far reaching than grizzly bear or other species. There are other resource concerns which require road density analyses and they should be included.

The highlighted sections conceptually work to evaluate habitat security. To allow for our suggested definition changes and access management to be dealt with in an ecosystem management philosophy, the text would have to be rewritten.

If you have any questions, contact Bill Noblitt (307) 739-5525 or Lis Novak (307) 739-5522 of my staff.



BRIAN E. STOUT
Forest Supervisor

