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<https://cara.ecosystem-management.org/Public/CommentInput?project=ORMS-2619> – Your comment has been received on 10/24/2020; Your letter ID is ORMS-2619-3567-5490.

These comments are regarding the proposed FSM 7700 and 7710 E-bikes directives (FR Doc. 2020–21128).

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Introduction

The Chief of the Forest Service in 2003 identified “*unmanaged recreation*” as one of the Four Threats that jeopardize the health of the National Forests, the quality of recreation experiences, and essential ecosystem functions. Unmanaged recreation presents a challenge to both researchers and managers because it is shrouded in uncertainty resulting from disagreement over the definition of the problem, strategies for resolving the problem, and outcomes of management; and incomplete knowledge about recreation visitor’s values and relationships with each other and the land. The Forest Service in 2006 provided the following facts about unmanaged recreation:

Growing outdoor recreation –

- A 2000 survey showed that 202 million Americans over the age of 15 participate in some form of outdoor recreation, or about 97.5 percent of the population.
- Between 1983 and 1995, percentage of Americans over the age of 15 who:
 - Participated in active outdoor recreation sometime during the year grew from 32 to 56 percent.
 - Traveled to recreation destinations grew from 70 to 90 percent.
- From 1946 to 2000, the number of National Forest System (NFS) visitors grew 18 times. In 2002, the numbers of visitors to national forests and grasslands reached 214 million. Another 215 million people drove through and/or stopped at overlooks and scenic

pullouts to enjoy the vistas but did not use Forest Service facilities. As the US population is expected to more than double from 275 to 571 million by the next century (2100), the number of visitors to NFS lands is expected to dramatically increase.

- Pressures on undeveloped natural land for recreation purposes due to growth in U.S. population is:
 - Moderate to heavy through most of the West
 - Heavy through most of the Southwest and the Rockies

Impacts of unmanaged recreation –

- Erosion, user conflicts, spread of invasive species, damage to cultural sites, disturbance to wildlife, destruction of wildlife habitat, and risks to public safety can result from unmanaged recreation, including cross-country OHV use.

To address motor vehicle use issues the Forest Service established a Travel Management Rule (36 CFR § 212) in 2005 and supporting FSM 2350, FSM 7700, and FSM 7710 directives in 2008.

Secretarial Memorandum to the Chief of the Forest Service on June 12, 2020, discusses increasing access to the National Forests stating, *“It is imperative for the Forest Service to manage the National Forests and Grasslands for the benefit of the American people. These lands provide a multitude of public benefits, including diverse recreational opportunities, access to world-class hunting and fishing, and forest products that support America’s traditions and way of life. Accordingly, the Forest Service will increase access to Forest Service lands by streamlining the permit process for recreational activities and embracing new technologies and recreation opportunities....”*

The Secretarial Memorandum could have mentioned the need to provide for a spectrum of recreation opportunities on National Forest System lands and how the Forest Service uses the Recreation Opportunity Spectrum (ROS) planning framework to provide for an appropriate mix of those opportunities. The Secretary should have recognized that Primitive and Semi-Primitive ROS settings restrict motor vehicle use and limits social encounters in more primitive settings to help ensure that quality experiences are realized. Furthermore, the direction could have addressed the need to be fair with the allocation between commercial use permits and general public use of limited recreation opportunities in Primitive and Semi-Primitive Non-Motorized ROS settings where user capacity must be managed if quality experiences are to be realized.

“Serving our customers and honoring our multiple-use mission is at the heart of how we propose to manage e-bike use,” said Forest Service Chief Vicki Christiansen in a September 24, 2020, news release. *“Developing consistent, straightforward guidance on this increasingly popular recreational activity will protect resources, promote safety, and increase access to national forests and grasslands for a wider range of users.”* The news release also recognized that e-bikes are currently allowed on nearly 60,000 miles of trails, but describes that the Forest Service still wants to increase access and facilitate e-bike use.

The purpose of this statement is unclear, but it might suggest that the Forest Service wants to allow e-bikes in Primitive and Semi-Primitive Non-Motorized Recreation ROS settings. I believe that e-bikes should not be allowed in these more primitive ROS settings. Primitive means “*of or relating to an earliest or original stage or state*” and e-bikes are not primitive in nature.

Asymmetric impacts between e-bikes and traditional nonmotorized users will tend to displace hikers and equestrians. The asymmetric or one-way nature of conflict indicates that active management is needed to maintain the quality of recreation for visitors who are sensitive to conflicting uses. Visitors who are sensitive to conflict are likely to be dissatisfied or ultimately displaced.¹

A Forest Service web story by Korey Morgan on October 7 describes that, “*The gravel popping under the bicycle’s tires had a familiar sound. The trail would soon make an abrupt turn upwards, marking the beginning of a grueling climb up miles of steep terrain. In anticipation, I pressed the button on the bike’s onboard computer, engaging the pedal assist. Immediately the motor silently relieved some of the burden of what would have been a heart-pounding ascent on a traditional trail bike... Perhaps more importantly, e-bikes are opening the door to a beloved recreational activity for older adults and seniors. Simply put, pedal assisting electric motors lower the high physical hurdle of even modest rides.*”

I recognize that E-bikes (and motorcycles) allow for single-track trail riding for some older adults and seniors that do not want to be burdened by inclines. However, many older adult mountain bike riders including myself do not feel that heart-pounding ascents on a mountain bike is a burden. A burden to me is reengaging in a climb after clearing the path for an aggressive e-bike rider. Simply put, pedal assisting electric motors lower the high physical hurdle of even modest rides allowing all riders to ride with the power of a professional rider. Fortunately, the Forest Service has 60,000 miles of designated motorcycle trails and Semi-Primitive Motorized and Roaded Natural ROS settings available for recreationist seeking a motor assist in their trail related activities. Several year-round resorts operating under a special use permit have established e-bike and e-MTB use within their permit boundary.

Recreation Opportunity Spectrum

The e-bike Federal Register Notice states, “*the proposed revisions would add a paragraph to Forest Service Manual (FSM) 7702 to establish promotion of e-bike use on NFS lands as an objective.*” This unconstrained objective as written appears to be inconsistent with the planning rule and planning directives which requires that Recreation Opportunity Spectrum (ROS) settings be established through forest planning processes. If this objective is to be retained, it should be constrained by describing that, “*E-Bike use is promoted, but in only those areas where*

¹ Manning, R.E. (2010). Studies in Outdoor Recreation: Search and Research for Satisfaction. Studies in Outdoor Recreation: Search and Research for Satisfaction. Page 218.

E-Bike use is compatible with the established ROS setting.” To be consistent with ROS as used in the Forest Service planning rule and planning directives, electric bikes (a motorized vehicle) should not be allowed in established Primitive and Semi-Primitive Non-Motorized ROS settings.

A recreation opportunity is an opportunity to participate in a specific recreation activity in a particular recreation setting to enjoy desired recreation experiences and other benefits that accrue. Recreation opportunities include non-motorized, motorized, developed, and dispersed recreation on land, water, and in the air.

Recreation setting is the social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The Forest Service uses the recreation opportunity spectrum to define recreation settings and categorizes them into six distinct classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban.

The Forest Service Planning Handbook describes that the Interdisciplinary Team uses the recreation opportunity spectrum to define recreation settings and categorize them into the six distinct classes as the structure to describe recreational settings. At the forest scale, sustainable recreation is derived through the integrated planning process and emerges as the resultant set of desired recreation opportunity spectrum classes. Each setting provides opportunities to engage in activities (motorized, nonmotorized, developed, or dispersed on land, water, and in the air) that result in different experiences and outcomes. Plans must include desired conditions for sustainable recreation using mapped desired recreation opportunity spectrum classes. A plan should include specific standards or guidelines where restrictions are needed to ensure the achievement or movement toward the desired recreation opportunity spectrum classes.

“The recreation opportunity spectrum has been an effective land management planning tool since 1982. The recreation opportunity spectrum is a framework for identifying, classifying, planning, and managing a range of recreation settings. The setting, activity, and opportunity for obtaining experience are arranged along a spectrum of classes from primitive to urban. In each setting, a range of activities is accommodated... Through this framework, planners compare the relative tradeoffs of how different patterns of settings across the landscape would accommodate (or not accommodate) recreational preferences, opportunities, and impacts (programmatic indirect environmental effects) with other multiple uses....” (Forest Service Planning Rule, PEIS, page 209).

The 1986 ROS Book is included as **Attachment A** for reference.

Visitor use management planning should follow the policies and practices described by the Interagency Visitor Use Management Council.² A specific concern is that visitor use management practices need to be sensitive to situations where there is an asymmetric nature of a conflict (e.g., e-bike users and equestrians). Asymmetric impacts between e-bikes and traditional nonmotorized users will tend to displace hikers and equestrians. Manning states, *“The asymmetric or one-way nature of conflict suggests that active management is needed to maintain the quality of recreation for visitors who are sensitive to conflicting uses. Visitors who are sensitive to conflict are likely to be dissatisfied or ultimately displaced.”*³ In those situations, monitoring and adaptive management actions should ensure that the e-bike use does not substantially degrade non-motorized use. Implementation of visitor use management principles would assist the agencies in the planning and management of the recreation resource and facilitate addressing unmanaged recreation concerns, issues, and opportunities on Federal lands.

E-bikes increase uphill flow rates, which will affect encounter rates with non-motorized users. I have been irritated by aggressive e-MTB riders on the Deschutes National Forest when riding on the North Fork trail needing to stop to let them pass and then having a difficult restart of my ascent. I have also been surprised when an e-bike silently and quickly overtook me ascending with little effort on paved recreation paths on the White River National Forest. Some of these RecPath e-bike riders demonstrate little skill or awareness that riders of all ages and abilities may be descending towards them on a twisty path after being dropped off on Vail Pass by a permitted shuttle service. The advantages of e-bikes are clear for the user: you ride more and cover more ground with less effort. However, these advantages for e-bike riders affect other users resulting in degraded experiences for non-motorized recreationists on shared use trails.

National Trails System Act

Electric bikes are motorized vehicles, which in general is not allowed along a National Scenic Trail: *“The use of motorized vehicles by the general public along any national scenic trail shall be prohibited.”*⁴ The proposed policy states, *“E-bikes are not allowed on a National Scenic Trail unless a regulatory exception authorized by the National Trails System Act is met or there is an exception in the enabling legislation for the trail.”* This proposed policy statement should be deleted since it is unclear and does not strictly align with all the requirements of the National

² <https://visitorusemanagement.nps.gov/>

³ Manning, R.E. (2010). Studies in Outdoor Recreation: Search and Research for Satisfaction. Studies in Outdoor Recreation: Search and Research for Satisfaction. Page 218.

⁴ *“National scenic or national historic trails may contain campsites, shelters, and related-public-use facilities. Other uses along the trail, which will not substantially interfere with the nature and purposes of the trail, may be permitted by the Secretary charged with the administration of the trail... Efforts be made to avoid activities incompatible with the purposes for which such trails were established. The use of motorized vehicles by the general public along any national scenic trail shall be prohibited.”* (16 U.S.C. § 1246(c))

Trails System Act. Instead, FSM 7700 policy should simply state, *“E-Bikes are motor vehicles for the purpose of addressing the requirements of the National Trails System Act.”*

Travel Management Rule

Designation of e-bike routes and areas should follow the requirements of 36 CFR § 212, including 36 CFR § 212.55 - Criteria for designation of roads, trails, and areas. E-bike designation decisions must include adequate site-specific analysis under NEPA and the required application of the minimization criteria and other travel management requirements.

In addition, e-MTB (and MTB) use should not result in *“constructing, placing, or maintaining any kind of road, trail, structure, ... significant surface disturbance, or other improvement on National Forest System lands”* (36 CFR § 261.10 Part A).

FSM 2310, 2350, and 7700

FSM 2310 (Sustainable Recreation Planning), FSM 2350 (Trail, River, and Similar Recreation Opportunities), and FSM 7700 (Travel Management). The FSM 7700/7710 proposed e-bike direction should be revised based on the comments received. Afterwards, the Forest Service through a Federal Register Notice should invite comments to address e-bikes for all changes proposed for FSM 2310, FSM 2350, and FSM 7700/7710. This would provide the public with an opportunity to review the full extent of the proposed e-bike direction being considered by the Forest Service.

The following are two examples of FSM 2350 policies that may affect e-bike use:

- FSM 2353.05 should include an e-bike definition that clearly defines an e-bike as a motor vehicle.
- FSM 2353.28 Management of Motor Vehicle Use and OSV Use should be amended to address e-bikes.

FSM 2350 is not posted on the Forest Service website and is not available upon request. So, I have included FSM 2350 (2300-2020-1) as part of these comments as **Attachment B** for reference.

The formulation and issuance of FSM 2310 and FSM 2350 should follow the Public Participation requirement of FRRRPA and the Public Notice and Comment for Standards, Criteria, and Guidance Applicable to Forest Service Programs (16 U.S.C. § 1612(a), 36 CFR § 216).

FSM 7700/7710 Specific Recommendations

Following are specific comments on the proposed FSM 7700/7710 proposed direction.

7701.2c - Other Authorities.

Recommend adding to the list FSM 2310.

7702 – OBJECTIVES.

3. To provide an appropriate range of recreation opportunities on NFS lands and to minimize conflicts among uses of NFS lands.

I recommend modifying the objective to address the Recreation Opportunity Spectrum: *“To provide a range of recreation opportunities on NFS lands consistent with Recreation Opportunity Spectrum settings to minimize conflicts among uses of NFS lands.”*

8. To consider emerging technologies (such as e-bikes) that are changing the way people access and recreate on NFS lands. For example, where suitable for use, e-bikes may provide new opportunities for individuals who might otherwise be prevented from experiencing an NFS trail without assistance from an electrical motor.

I recommend modifying this objective to recognize the need to manage recreation use including use associated with new technologies.⁵ The following statement should be added to this part: *“The Forest Service uses the Recreation Opportunity Spectrum for planning and management of visitor use for the purpose of providing for diverse opportunities on NFS lands. Forest plan assessments and monitoring should identify new uses and address changed conditions through planning revision and amendment processes as appropriate. Recognize that all routes and areas may not be open to a specific use. For example, e-bikes provide individuals an opportunity on portions of the NFS trails system, but that all trails are not available to motor vehicle use.”*

7705 – Definitions

I support the definition of a “bicycle” as a, “...solely human-powered device...” and the definition of an “electric bicycle (e-bike)” as, “...a type of motor vehicle...equipped with...an electric motor...” I commend the Forest Service for taking this approach, rather than exempting e-bikes from the definition of a motorized vehicle to allow e-bikes on non-motorized trails.

7711.3 - MVUMs and OSVUMs.

6. Use the following eight categories to identify classes of motor vehicles on an MVUM:

g. Trails Open to E-Bikes Only. Specify the class or classes of e-bikes allowed (Class 1, 2, and/or 3).

I recommend that the direction address whether *Trails Open to E-Bikes Only* can also be closed to hiker/pedestrian use for safety purposes.

Prior to designating routes for e-bikes there needs to be an enforcement strategy prior to implementation. How would Forest Service staff recognize the three classes of e-bikes? How would staff know if Class 1 e-bike parameters have been defeated/tuned to provide for the

⁵ <https://www.fs.fed.us/projects/four-threats/facts/unmanaged-recreation.shtml>

power of a Class 2 or 3 e-bike? Possibly, the Forest Service should assume for decision making that any route designated for e-bike use will be subject to some level of use by all classes of e-bikes.

7715.03 – Policy.

9. Consider emerging technologies (such as e-bikes) that are changing the way people access and recreate on NFS lands. For example, where suitable for use, e-bikes may provide new opportunities for individuals who might otherwise be prevented from experiencing an NFS trail without assistance from an electrical motor.

I recommend the following revision to this part: *“The Forest Service uses the Recreation Opportunity Spectrum for planning and management of visitor use for the purpose of providing for diverse opportunities on NFS lands. Forest plan assessments and monitoring should identify new uses and address changed conditions through planning revision and amendment processes as appropriate. Recognize that all routes and areas may not be open to a specific use. For example, e-bikes provide individuals an opportunity on portions of the NFS trails system, but that all trails are not available to e-bikes.”*

7715.5 – Criteria.

3. Specific Criterion for Trails. In addition to the general and specific criteria in FSM 7715.5, paragraphs 1 and 2, consider and document existing Trail Management Objectives (TMOs) before making designations of motor vehicle use under Subpart B or OSV use under Subpart C that would add vehicle classes on NFS trails.

Designations must be consistent with the established ROS class and compatible with National Scenic and Historic Trail nature and purposes and the established carrying capacity.

4. Specific Criteria and Guidance for Designating E-Bike Use on Trails. In addition to the general and specific criteria in FSM 7715.5, paragraphs 1 through 3, when designating trails for e-bike use (FSM 7705), consider and document the following:

a. Whether and the extent to which the trails are managed for bicycle use or bicycle use is allowed (FSM 7705).

Recommend changing to: *“Whether e-bike use would be consistent with established ROS class, if e-bike use would be consistent with the provisions of the National Trails System Act, and if bicycle use is allowed under the applicable TMOs.”*

b. For trails that are managed for bicycle use or where bicycle use is allowed, the extent to which effects from e-bike use are comparable to effects from existing bicycle use, accounting for, as appropriate, differences in speed; potential effects from increased or concentrated use; and any site-specific considerations.

Baseline analyses should address whether existing mountain bike use is being managed consistent with the established ROS class and if existing bicycle use is protecting desired experiences for those seeking quality hiking and horseback riding experiences on shared use trails.

c. Whether a programmatic environmental analysis may be feasible and more efficient due to similarities in effects of bicycle use and e-bike use.

Any analysis of e-bike designation decisions must include adequate site-specific analysis under NEPA and the required application of the minimization criteria and other travel management requirements. A key safety consideration is the speed differential between bikers, equestrians, and pedestrians.

Part 4 continued: **Consider designating a class or classes of e-bike use, as appropriate, on NFS trails managed for bicycle use or where bicycle use is allowed, where effects from e-bike use would be comparable to effects from bicycle use.**

Existing use may not be achieving desired ROS setting characteristics. Bicycles are not currently being effectively managed on many shared use trails, which has led to conflicts among users. Therefore, using existing bicycle use as the benchmark for analyses is inappropriate. In addition, National Forests and Grasslands face a unique set of conditions and challenges and that is why site-specific and not programmatic analyses is critical to the e-bike designation process. I am opposed to broad programmatic analyses for e-bike designation decisions.

Part 4 continued: **E-bikes are not allowed on a National Scenic Trail unless a regulatory exception authorized by the National Trails System Act is met or there is an exception in the enabling legislation for the trail.**

FSM 7715 policy should instead simply state, *“E-bikes are defined as motor vehicles for the purposes of addressing the requirements of the National Trails System Act. FSM 2350 has more information about National Scenic and Historic Trails.”*

NEW – 5. E-Bikes are not allowed in established Primitive and Semi-Primitive Non-Motorized ROS settings. FSM 2310 has more information about the Recreation Opportunity Spectrum.

The Forest Service uses the recreation opportunity spectrum to define recreation settings and categorizes them into six distinct classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban. The 1986 ROS Book which informed the planning rule and planning directives describes that *“motorized use is not permitted”* in Primitive and Semi-Primitive Non-Motorized ROS settings.

I wish to thank the Forest Service for clearly recognizing that e-bikes are motor vehicles subject to the requirements of 36 CFR § 212 Travel Management regulations, and thank you for this opportunity to comment on the proposed FSM 7700/7710 directives.

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Your comment has been received by our system on 10/26/2020; Your letter ID is ORMS-2619-3567-7208.

These comments supplement letter ORMS-2619-3567-5490 regarding the proposed FSM 7700 and 7710 E-bikes directives (FR Doc. 2020-21128).

Federal Register Notice (Vol. 85, No. 186) states, *“E-bikes have become increasingly popular nationwide among outdoor recreationists on NFS and other federal lands. E-bikes expand recreational opportunities for many people, particularly the elderly and disabled, enabling them to enjoy the outdoors and associated health benefits.”*

This simple statement could be misleading or is at least incomplete. The 45-65-year-old is the biggest demographic for e-bikes, but there are many younger enthusiasts who want to add an electric mountain bike to their collection and the younger category has become mainstream. The e-mountain bike is growing rapidly as the younger generation shows great interest in trekking and recreation activities. There is an increasing interest of people toward performance-based adventurous sports, which, in turn, is projected to increase the demand for e-MTB. Long rides over the hills are becoming easier, and steep terrain can be conquered with much less effort. Longer distances can be achieved with the same amount of effort as that on flat ground and all of this is attracting even keen mountain bikers to the e-MTB. Marketing of e-MTBs as dirt-throwing adrenaline machines dominates with no indication that the elderly and disabled market is important.

Steve Anderson in Cycle Volta describes, *“To get some perspective for what power means in human terms, we can look at how many watts a typical rider uses on a standard bicycle. Just pedaling along at a typical cruising speed for a non-sporting rider (about 9 mph) takes about 30 watts, about the same energy as normal walking. Go up to 20 mph, and thus rapidly increasing aerodynamic loads, and 220 watts is needed—more than most non-athletes can sustain. Riding up a mild 10 percent grade at just faster than a walking pace takes 150 watts—enough to have most riders breathing and sweating heavily. Tour de France quality racers, though, can put out 400 watts for an hour. The 750 watts allowed for e-bikes under US regulations means we can all have the legs and lungs of a professional bicycle racer.”*

Joe Vadeboncoeur, retired from Trek Bicycle Corporation and president of a user group, said that the existing e-bike legislation doesn't take mountain bike trails into account; he favors the

creation of a fourth class for trail use. Class 1 e-bikes in the U.S. have power assist up to 20 mph and a maximum motor size of 750 watts. Vadeboncoeur believes the speed and power are too much for trails, at least the narrow, limited sight distance, two-way trails. He supports something like Europe's Class 1, which limits power assist to 15 mph and motor size to 250 watts. Many of the existing e-bike systems meet the European specification.⁶ Also, missing from the current e-bike Class specifications, is limiting torque which has a direct bearing on bicycle performance. I agree with Joe Vadeboncoeur's assessment that a new lower-powered e-bike class should be recognized. However, in all cases, e-bikes need to be managed as motor vehicles subject to the requirements of 36 CFR § 212.

E-Bikes are motor vehicles. The recent decision by the Bureau of Land Management to exempted e-MTBs from the requirements of Executive Order 11644 and 11989 will lead to increased user conflicts and degradation of natural resources circumventing the requirement *"...that the use of off-road [motorized] vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands..."* I believe that the Forest Service appropriately recognizes that e-bikes, including e-MTBs, are motor vehicles.

I wish to again thank the Forest Service for clearly recognizing that e-bikes are motor vehicles subject to the requirements of 36 CFR § 212 Travel Management regulations, and thank you for this opportunity to comment on the proposed FSM 7700/7710 directives.

⁶ <https://www.pinkbike.com/news/ridden-and-rated-four-best-e-bike-motor-systems-2020-bosch-brose-shimano-fazua.html>