# USFS Ebike FSM 7700 and 7710 E-bikes #ORMS-2619

Ebikes are “new” and rapidly evolving, therefore a solid understanding of their current and future state is needed. This may be best obtained via close coordination with the industries that support these motorized bicycles. The technologies powering ebikes are dynamic and rapidly progressing and evolving. With this comes greater power output, increases in accessibility (due to decreasing costs) and a wide range of available ebike products and technologies. As components are made smaller and lighter, the industry is creating ebikes that are difficult to discern from traditional human powered bicycles. This presents a challenge for management and users as the distinction between the motorized use and human powered use is further blurred.

Despite these trends on the industry and sales/marketing side of ebikes, there is a dearth of research on the topic of ebike use in the public land settings. Making decisions regarding the appropriateness and extent of access for ebikes on public lands in light of the absence of comprehensive data and scientifically informed knowledge is irresponsible. For the USFS’ approximately 160,000 miles of trails, studies need to be undertaken to understand key impacts of these new technologies and uses on traditional natural surface trails. These include bio-physical impacts to wildlife, water, soils, vegetation and social and managerial impacts shaping health, safety, conflict, crowding and user experiences on these trails. Given the USFS’ lack of resources to address maintenance on theses trails, care must be taken not to introduce undue impacts from a new motorized use technology, or additional wear from new users or altered user patterns.

USDOT’s Transportation Research Board (TRB) has a committee focused on transportation needs of parks and public lands (Committee AEP20). AEP20’s sub-committee on research recently fielded a research needs statement on ebikes and emerging technologies on public lands that has now been funded and is being implemented with western federal lands division of FHWA. Both the USFS and the BLM have representatives on this research project. This effort should help to identify key gaps in the knowledge surrounding the use of ebikes on public lands, trails and greenways. I believe that the outputs from this research effort will begin to form a foundation of data and knowledge from which the USFS can make informed and strategic decisions about managing ebikes on trails. Additional research efforts to address key knowledge gaps may be needed, and given the dynamic nature of the technology space, ongoing research and monitoring to stay abreast of the space.

In June of 2020, senior staff of The International Mountain Bike Association (IMBA), Rich Edwards explained to the Wayne National Forest (region 9) that current mountain bike trails under development would need to “be redesigned to allow for eMTB use to accommodate higher speeds and mitigate safety issues”. Edwards’ comment highlights the need to develop criteria and TMOs that will allow for safe and complementary use of trails between human-powered users and ebiek powered/assisted users. Development of these criteria needs to be informed by a critical and comprehensive examination of the behaviors and impacts related to the new ebike use, including ecological, health, social, experiential and managerial contexts. As a trail planner and researcher, I am optimistic trails for ebikes can be designed and built, and that legacy trails may be able to be retrofit, or maintained to a specification that allows for integration of ebikes where and when the land managers decide it si appropriate. However, I feel we need to develop and foster studies of the characteristics and impacts associated with use of these new technologies to illuminate and shape specific design, maintenance and management criteria from which to proactively manage such use. I hope the USFS will postpone any blanket decisions around ebike use on USFS lands until there is data and scientific knowledge in place to support such decisions. Further, I hope the USFS will engage in the research space and contribute to experimental and trial applications of ebike use to foster study of this new and emerging motorized use on natural surface trails and roads.

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