

# Predicting trail choices based on off-highway vehicle drivers' motivations

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It's certainly easy to do, but not very useful, to stereotype outdoorsy people based on the types of recreation they choose. What kind of person takes a side-by-side vehicle up a dusty mountain road, for

instance? And why? In reality, off-highway vehicle (OHV) recreation attracts a variety of people with diverse motivations for hitting the trail. And those motivations define, in part, the way they drive, according to new research from Jordan Smith, director of Utah State University's Institute of Outdoor Recreation and Tourism in the S.J. & Jessie E. Quinney College of Natural Resources.

OHV drivers move across the terrain in distinctly different patterns depending on the kind of experience they want from the outdoors, Smith said. In the high desert of the Sheeprock Mountains in central Utah where the research was conducted, drivers reported one of three motivations for showing up on the mountain: spending time with friends and family in the outdoors, facing a physical challenge, or learning something new. Survey data about these motivations were paired with GPS data from routes used by the different groups. Distinct patterns emerged—recreationists' internal drive was correlated with where they drove, literally.

This kind of information can help managers predict which routes OHV drivers are going to choose, based on what their motivations are for participating. This also allows managers to ensure recreationists get the kind of benefits they are seeking from public lands, according to the research. The predictability can support better communication with recreationists.

"It's important to get the right messages in front of the recreationists most likely to engage with those messages," said Smith. "This study shows that while OHV recreationists' motivations may be diverse, those motivations do appear to be related to distinct spatial behaviors. This information can be used to craft more meaningful, and spatially targeted, communication strategies."

Spatially visualizing recreationists' motivations is a unique strategy

managers can use to create more relevant messages for different visitor groups. Spatially targeted signs and other on-site information for recreationists seeking achievement or stimulation may focus on rider safety and be geared towards more advanced riders. Similarly, signs in places where families recreate could include educational materials to instill a responsible riding ethic. Other interpretive messages could stress the importance of resource stewardship and may be more likely to encourage conservation-minded behavior.

A spatial representation of recreation motivations can provide managers with practical information to guide OHV planning and management. It offers a unique opportunity for resource managers to develop spatially relevant communication for a targeted audience. As the popularity of OHV [recreation](#) continues to grow, managers can use this research to ensure more meaningful, direct messages are seen by specific users in the right places, Smith said.

**More information:** Jordan W. Smith et al, Motivations and spatial behavior of OHV recreationists: A case-study from central Utah (USA), *Journal of Outdoor Recreation and Tourism* (2021). [DOI: 10.1016/j.jort.2021.100426](#)

Provided by S.J. & Jessie E. Quinney College of Natural Resources,  
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